

Exploring the role of knowledge management practices in fostering customer relationship management as a catalyst of marketing innovation

Exploring the
role of
knowledge
management

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Abstract

Purpose – The purpose of this paper is to propose a research model exploring the link between knowledge management processes and customer relationship management (CRM) performance. It seeks to answer two research questions: What are the effective drivers of knowledge management processes in the context of a CRM initiative? Do these processes make a real impact on CRM performance?

Design/methodology/approach – The paper is based on data obtained from a sample of 93 service companies located in Spain. The authors conducted a structural equation modeling analysis using PLS to test the proposed hypotheses.

Findings – It was observed that both technological and organizational readiness were effective drivers of knowledge management. However, it was contrasted also that the usage of social media tools was not significantly related to knowledge management. Results show a real impact of knowledge management processes on CRM performance, so companies can understand how to implement successfully those initiatives.

Research limitations/implications – The main limitations of the study are that it was based on cross-sectional data and that variables were measured based on the perceptions of general managers.

Practical implications – Service companies need to invest in technological infrastructures, and create an appropriate organizational climate (top management support, employees commitment) in order to promote effective knowledge management processes, that will enable CRM success, paving the way for the development of marketing innovations.

Originality/value – This is the first empirical work that examines in confirmatory way what are the main drivers of knowledge management processes, including in the analysis the impact of both organizational and technological readiness, and considering also the usage of social media tools, in the context of a CRM initiative.

Keywords Knowledge management, Customer relationship management, Structural equation modelling, Social media usage

Paper type Research paper

1. Introduction

Knowledge has become a key strategic factor in business success, because the firm's capability to create and utilize knowledge represents the most important source of competitiveness (Grant, 1996). Businesses that can efficiently capture the knowledge embedded in their organizations and deploy it into their operations, productions and services could gain a sustainable competitive advantage over their competitors.



Knowledge management processes are rapidly becoming an integral business activity for organizations (Grover and Davenport, 2001) and it consists of a dynamic and continuous set of processes and practices directed to identifying and leveraging the collective knowledge in an organization to help the organization compete (Alavi and Leidner, 2001). Although knowledge management has become a widely accepted business practice, companies still struggle to measure its real impact on their economic performance (Omerzel and Ruzzier, 2011).

Within the broad domain of knowledge management, customer knowledge has started to draw increased attention. Customer knowledge is a critical asset, and gathering, managing, and sharing customer knowledge is a valuable competitive activity for organizations. In this vein, the concept of customer relationship management (CRM) is gaining momentum in both business and academia (Gebert *et al.*, 2003). CRM can be defined as a strategic approach to managing customer relationships in order to create customer and shareholder value through the appropriate use of information technology (IT) and customer knowledge (Payne and Frow, 2005). CRM involves a group of information systems (IS) and business activities that enable organizations to collect, store and analyze customer knowledge to better personalize their service and create new customer experiences. CRM drives the development of new marketing methods based on customer needs, so, when properly implemented; it can be an effective catalyst for marketing innovation (Kozioł *et al.*, 2014).

Customer knowledge management is considered as the driving force behind CRM performance, because customer knowledge is needed to fully appreciate customer needs and behavior and to be able to personalize new products and services accordingly (Salojärvi *et al.*, 2010). Based on this, over the last decade, companies have attempted to integrate their CRM and knowledge management efforts because they have realized that knowledge management plays a key role in CRM success (Dous *et al.*, 2005). Previous studies have confirmed that knowledge management processes made a direct impact on CRM performance, but an integrated conceptual framework to guide companies to its successful implementation has not been developed yet. Research on the topics of CRM and knowledge management has greatly evolved in recent years, but most of the studies have focussed on relating CRM and knowledge management concepts and practices (Du Plessis and Boon, 2004; Zablah *et al.*, 2004). Others works have discussed the interaction between knowledge management and customer knowledge (Campbell, 2003; Chen and Su, 2006), and based on the combined potential of CRM and knowledge management, there have emerged theoretical models from the integration of both concepts (CKM models) (Gebert *et al.*, 2003; Tiwana, 2001). Moreover, the existing research on CRM and knowledge management is primarily conceptual and descriptive in nature, and empirical research confirming the real impact of knowledge management processes on CRM performance is still lacking.

Regarding the novelty of this study, to our knowledge, this is the first empirical work that examines in confirmatory way what are the main drivers of knowledge management processes, including in the analysis the impact of both organizational and technological readiness, and considering also the usage of social media tools, which is an emerging phenomenon. Moreover, simultaneously, we analyze the real impact of knowledge management processes on CRM performance, so companies can understand what factors they need to improve in order to develop efficient knowledge management processes and successful CRM initiatives. The present study has also relevant implications for practice, because companies all over the world are making considerable investments in implementing knowledge management processes and CRM, but they are not achieving

the expected results so there is growing skepticism about the real value of these initiatives (Reimann *et al.*, 2010; Xu and Walton, 2005). If organizations fully comprehend what drives knowledge management and CRM, they would be able to implement them successfully, creating value for their companies and fostering marketing innovations.

In order to shed light on the topic and address the existing research gap, the objective of this study is to validate a research model examining the drivers of knowledge management processes and linking those processes with CRM performance. Considering that the key factors that contribute to effective knowledge management are human and technical (Donate and Guadamillas, 2011), we will include organizational and technological readiness, and social media usage as main drivers or facilitators of knowledge management processes. Thus, this research seeks to answer two main research questions:

- RQ1.* Which organizational and technical factors are the drivers of knowledge management processes?
- RQ2.* Are knowledge management processes antecedents of the performance of a CRM initiative?

The contribution of this empirical study is two-fold. First, the investigation increases our understanding of the effective drivers of knowledge management processes, highlighting the leading role of both organizational and technological readiness. Second, it identifies the direct effect of knowledge management on the performance of a CRM innovation, confirming the synergistic potential of both initiatives.

The paper is organized in five sections. After the introduction, the research model is explained and the research propositions are developed. Next, the research methodology is presented, including sample description, research instrument and statistical methods. Data analysis results are detailed in the fourth part. Finally, research results are discussed from both theoretical and practical standpoints, and the paper concludes with the conclusions, implications and limitations of the study.

2. Theoretical framework and research hypotheses

2.1 CRM as a catalyst of marketing innovation

Nowadays, increasing competition and decreasing customer loyalty have led to the emergence of concepts promoting the nurturing of customers relationships; and CRM has become one of the hottest topics in the fields of business strategy and IT. CRM refers to all business activities directed toward initiating, establishing, maintaining and developing successful long-term relational exchanges (Özgener and Iraz, 2006). CRM allow companies to detect changes in customer needs, personalize their service, differentiate themselves from competitors and create a competitive advantage (Jain, 2005). Managing customer relationships effectively and efficiently offers numerous benefits to organizations, and CRM initiatives – when properly implemented – have resulted in increased competitiveness for many companies, as evidenced by higher revenue and lower operational costs (Chen and Popovich, 2003).

CRM involves the strategic application of people, processes and technology to improve and sustain profitable relationships with customers and partners, thus those initiatives are technology-intensive and are based on a great deal of knowledge. CRM technology infrastructures enable firms to harness the power of databases, data mining and interactive (e.g. internet) technologies to collect and store unprecedented amounts of customer data and build knowledge that are crucial to effective relationship management (Zablah *et al.*, 2004). CRM not only implies acquiring and continuously

updating knowledge about customer needs, motivations and behavior, but also applying this knowledge to innovate in marketing functions and improve hence performance (Özgener and Iraz, 2006).

CRM has been identified in the literature as one of the determinants of an organization's innovation potential in the context of marketing (Koziol *et al.*, 2014). A marketing innovation is defined as the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (European Commission, 2005). According to the Community Innovation Survey, it comprises the implementation of a new marketing concept or strategy that differs significantly from the enterprise's existing marketing methods (Eurostat, 2012). In this vein, the introduction of a personalized information system, e.g., obtained from loyalty cards, to tailor the presentation of products to the specific needs of individual customers can be considered a marketing innovation.

Nowadays, the development and implementation of marketing innovations constitutes an important innovation activity for many enterprises in terms of impact on performance (Eurostat, 2012). The implementation of CRM initiative has re-engineered the traditional marketing activities and has increasingly become essential for remaining competitive in terms of developing new commercial proposals and nurturing long-term relationships with customer (Wu and Wu, 2005). CRM is driving companies to reinvent their customer relationships, capturing valuable knowledge from the market that allows them, not only personalize communication but also be able to develop new products that best fit customer needs. For all the above, in the present study we will consider that CRM will make a positive impact on marketing innovation, so it can be consider as an effective driver or catalyst of marketing innovations.

In the following subsections we will build an integrative research model exploring what are the main drivers of knowledge management processes in the context of CRM; and we will analyze also the impact of those processes in the performance of a CRM initiative.

2.2 Organizational readiness as drivers of knowledge management processes

Based on the literature review, we will include organizational readiness as the first driver or facilitator of knowledge management processes. Implementing these types of initiatives involves a major organizational change, and successful organizational change is highly dependent on an organization's readiness (i.e. organizational climate, structure and leadership) and capacity to change. Organizational readiness refers to whether an organization has made the necessary preparations for the effective deployment of a new strategic initiative, such as CRM or knowledge management processes. This preparation is particularly demonstrated by building a favorable atmosphere for its usage, matching the organization and the system and involving the organization members in the assimilation process (Zhu *et al.*, 2010).

Knowledge management capabilities are embedded in an organizational context, so its effectiveness will depend on how knowledge is integrated within the firm's existing processes, structures and employees. In the end, an organization depends on its employees to collect and store customer information (Alavi and Leidner, 2001). The organization also depends on its employees to utilize the stored customer data, developing new practices based on analysis of the existing knowledge and so improving the customer experience (Shang and Lin, 2010). Thus, building a positive organizational climate seems crucial to motivate employees to work together and exchange knowledge (Palacios-Marqués *et al.*, 2015).

Based on previous studies (Ocker and Mudambi, 2003; Zhu *et al.*, 2010), organizational readiness in this study is conceptualized to have four dimensions: appropriate

reward system; employee commitment, top management support; and organizational structure. The organization's system for rewards can determine the effectiveness of knowledge-management activities, as this enhances staff involvement and commitment with knowledge-sharing initiatives. Incentive systems would motivate workers to take the time to generate new knowledge and to share it, breaking down functional barriers and ensuring adequate focus on customer interactions (Jayachandran *et al.*, 2005). The role of top-management support is also fundamental. Leaders should devote themselves to promoting a corporate mindset that emphasizes co-operation and knowledge sharing across the organization. They should also contribute to the creation of an environment in which knowledge creation and cross-boundary learning can flourish (Wong and Aspinwall, 2005). In a similar vein, an appropriate organizational structure can foster knowledge management processes through shaping patterns and frequencies of communication among organizational members, and stimulating interactions and knowledge sharing (Zheng *et al.*, 2010).

Previous empirical studies also confirmed this link between organizational readiness and knowledge management processes. Taylor and Wright (2004), analyzing the effectiveness of knowledge management practices in service organizations observed that organizational readiness emerge has a significant predictor of effective knowledge sharing. Donate and Guadamillas (2011) confirmed how organizational facilitators (organizational culture, leadership or human resource practices) were essential in order to capitalize on efforts made in knowledge management initiatives. Based on this, we propose the following hypothesis:

H1. Organizational readiness will have a positive effect on knowledge management processes.

2.3 Technological readiness as drivers of knowledge management processes

Technological readiness refers to the level of technological resources that are available to an organization (Croteau and Li, 2003). We include it as relevant driver in our study because previous literature has widely support that an important prerequisite to developing knowledge management capabilities rests in the IS infrastructure of an organization (Alavi and Leidner, 2001).

It is indisputable that information technologies such as document management systems, information retrieval engines, relational and object databases, groupware and workflow systems, and data mining tools can facilitate knowledge management processes (Wong and Aspinwall, 2005). Companies have thousands of customers today, and one of the principal ways to gain relevant knowledge about them is through the use of specific technological tools. The use of CRM technology to capture data and information (such as customer names, buying profiles, problems and complaints, all retained in the CRM database) is a first step in the process of getting to know customers better. CRM systems accumulate, store, maintain and distribute customer knowledge throughout the organization, so they enable firms more easily to acquire, store, analyze, transfer and use knowledge about customer behavior (Salojärvi *et al.*, 2010; Zablah *et al.*, 2004). Using these technologies at a cross-functional level, firms can obtain critical knowledge to help coordinate sales, marketing and customer-service departments to better and faster serve customers' needs (Nguyen *et al.*, 2007).

Previous empirical studies also recognized the relevance of the technological readiness of a company as a facilitator of knowledge management practices (Chen and Chen, 2004). In this vein, Croteau and Li (2003) observed that possessing a strong IT infrastructure, integrated across the different functional areas, was a key prerequisite

to developing knowledge management capabilities, because they rely strongly on this infrastructure to capture, manage and distribute customer knowledge throughout the organization. Thus, we propose the following hypothesis:

H2. Technological readiness will have a positive effect on knowledge management processes.

2.4 Social media usage as driver of knowledge management processes

Finally, we will consider social media usage as a third facilitator of knowledge management processes. In the last decade, social media has emerged as a strategic process, putting the customer at the center of the organization (Smith and Zook, 2011). One of the most accepted definitions of social media is the one proposed by Kaplan and Haenlein, (2010), which considers it as a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user generated content. Social media includes to a set of online tools that supports social interaction between users, facilitating the creation and sharing of knowledge and transforming monologue (company to customer) into dialog (Hansen *et al.*, 2011).

Firms are facing a radically different landscape nowadays, and technological advancements have created a demand for more interaction between the firm and its customers through blogs, internet forums and social-networking sites (Nguyen and Mutum, 2012). The use of social media tools support the democratization of knowledge and information, transforming individuals from mere content consumers into content producers (Berthon *et al.*, 2012; Kaplan and Haenlein, 2010). Engaged customers become partners who collaborate with sellers in the value adding process to better satisfy their needs as well as the needs of other customers. This active dialogue can notably improve customer knowledge management, allowing the understanding of customer needs and facilitating modifications to existing products or the development of new products to better satisfy their needs (Sashi, 2012).

The use of these technologies represents a revolutionary new trend for companies (Kaplan and Haenlein, 2010), and social media technologies are increasingly being integrated with CRM technologies in order to gain new levels of customer insight, engaging customers in collaborative conversations that allow personalization of services based on the knowledge generated (Greenberg, 2010). Between the main types of social media tools, similar to previous studies, we will include the following in our empirical analysis: instant messaging, blogs, microblogs (e.g. Twitter), social networking sites (e.g. Facebook), review sites (e.g. Tripadvisor); and photo and video sharing sites (e.g. Youtube) (Hansen *et al.*, 2011; Berthon *et al.*, 2012).

Although the introduction of social media tools and its organizational use is a recent phenomenon yet, Trainor *et al.* (2014) observed that firms with high social media technology use developed greater knowledge management capabilities (in terms of knowledge generation, dissemination and application) than their counterparts with low social media technology use. Consequently, we propose the following hypotheses:

H3. Social media usage will have a positive effect on knowledge management processes.

2.5 The impact of knowledge management processes in CRM performance

The challenge when developing a CRM innovation is to identify and track profitable customers, and to develop strategies to satisfy and retain them, building valuable relationships (Boulding *et al.*, 2005). To this end, the acquisition, dissemination and utilization of customer knowledge will be the cornerstone of a CRM initiative, allowing

the detection of relevant buying patterns, and market segments comprising customers with specific needs. Knowledge-management processes enable companies to collect and store unprecedented amounts of customer data and information, build knowledge from that, and disseminate the resulting knowledge across the organization. As a result, these processes will help organizations to tailor their products and services, and to personalize the entire relationship with the customer based on the latter's detected needs. This leads to increased customer satisfaction and finally to economic profitability (Nejatian *et al.*, 2011). Thus, knowledge management is deemed crucial to effective CRM (Zablah *et al.*, 2004).

In order to properly develop a CRM innovation, companies need to know who the most profitable customers are, and how to establish their loyalty. Knowledge management processes encompass the tasks of collecting, evaluating and interpreting customer information (e.g. customers' needs, satisfaction and dissatisfaction) to identify profitable customers and be able to suggest actionable intelligence (i.e. ways to create customer value and satisfaction) that will attract new customers and retain existing ones. By analyzing the data regarding these customers' purchasing history, the company can identify current customers (and predict potential ones) toward whom it should direct its attention in order to make them more profitable and loyal. Analyzing customer knowledge, companies can even anticipate desertion by analyzing past complaints and problems (Mendoza *et al.*, 2007). Firms with an ability to be more knowledgeable about how to serve their customers better than competitors should be able to generate better CRM organizational performance (Suntornpithug *et al.*, 2010).

To measure CRM performance, based on previous literature (Chen and Ching, 2004; Sin *et al.*, 2005; Chang *et al.*, 2010; Suntornpithug *et al.*, 2010), we have included in the empirical analysis several items that reflect, not only their impact in financial measures (such as profitability or sales), but also their effect on customer-related measures such as customer satisfaction, loyalty or retention.

Previous studies have confirmed how effective knowledge management processes will determine CRM performance (e.g. Campbell, 2003; Croteau and Li, 2003; Nejatian *et al.*, 2011). Campbell (2003) empirically observed the importance of harnessing knowledge-based competences when implementing CRM, because this accumulated knowledge enables firms to develop customer-specific strategies, which can become a source of competitive advantage. Croteau and Li (2003), drawing on a sample of big companies, found that knowledge management was the most significant factor affecting CRM results, which confirms that a high level of knowledge management capabilities seems to foster effective and efficient management of customer relationships. Similarly, Nejatian *et al.* (2011), observed a significant interaction effect between customer knowledge management and CRM performance. Thus, we propose our final hypothesis:

H4. Knowledge management processes will have a positive effect on CRM performance.

The proposed research model, including the four hypotheses posed, is shown in Figure 1.

3. Research methodology

3.1 Sample description

The population for this study consisted of service firms, located in Spain, which were implementing a CRM innovation. We focus on the service sector because is a key driving force behind the Spanish economic growth. According to the Spanish Statistical Office, the private service industries account for approximately 49 percent of total

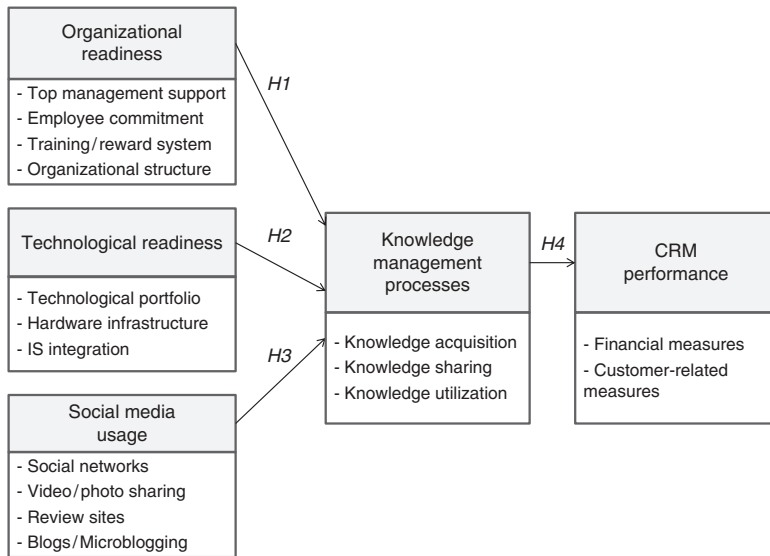


Figure 1.
Proposed
research model

economic activity in this country, directly generated 65 percent of total employment; and its impact and relevance has increased in recent years (Instituto Nacional de Estadística, 2014). In addition, other reason for choosing this sector was that CRM is extremely important for service companies, due to their necessary close relation with customer, and the specific relevance of customer service and customer satisfaction.

Data were obtained from a public database provided by the Spanish government. Based on previous literature on the topic, and after interviewed some researchers and general managers from the service sector in order to collect their insight on the topic, a web-based questionnaire was developed. The questionnaire was sent randomly to one-half of the population, 920 companies. We followed the key-informant methodology in this work, so we interviewed the general managers of the companies in order to collect the information, as previous studies did (Croteau and Li, 2003; Hernaus *et al.*, 2012; Suntuornpithug *et al.*, 2010). Likewise, we chose to survey general managers for a number of reasons: they have specialized knowledge about the entire organization; their perception of strategic factors is essential for the improvement of organizational performance; they manage a great deal of information in all departments of the company; and they are ultimately responsible not only for plotting the organization's direction but also for guiding the actions carried out to achieve organizational goals (Westphal and Fredickson, 2001).

We made several calls and sent several e-mails to each business with the goal of increasing the response rate. The general managers knew that the data obtained would be confidential and would be treated in aggregate form. We offered them the option of receiving a comparative study, specific to their firm, of the variables analyzed. This enabled us to obtain 93 valid responses, which gave an approximate response rate of 10.1 percent.

The possibility of non-response bias was checked by comparing the characteristics of the respondents to those of the original population sample. A series of χ^2 and *t*-statistics revealed no significant differences between the respondents and the sample, or between early and late respondents. Nor did we find significant differences based on the size of the firms (Armstrong and Overton, 1977).

Regarding the characteristics of the sample, sample data on companies examined (Table I) clearly indicate the predominance of small companies (73.1 percent). In addition, we also ask them about their experience in implementing CRM, and we observed a certain degree of experience (76.3 percent were using CRM for more than one year).

3.2 Research instrument

Based on the described literature review, we built the measurement scale for the variables included in the proposed research model. First, we developed an initial list that included more than 100 items. The repeated items were eliminated, and the most used previously for measuring the constructs were selected. After this refinement process, the final scale for measuring the four variables and CRM results consists of 26 items. The numbers of items for the different variables are described as follows.

Organizational readiness: eight items developed by Li (2001), Zhu *et al.* (2010), Suntuornpithug *et al.* (2010) and Chang *et al.* (2010); that addressed the following topics: top management support, employee commitment, training and reward system and organizational structure.

Technological readiness: three items developed by Chen and Ching (2004), Croteau and Li (2003) and Sin *et al.* (2005), reflecting technological portfolio, hardware infrastructure and IS integration.

Social media usage: similarly to previous studies (Haro de Rosario *et al.*, 2013), a summatory index was calculated to measure social media usage (it ranged from 0 to 7, including the use of seven most used tools: blogs, microblogs, social networking, video-sharing, photo-sharing, review sites and instant messaging).

Knowledge management processes: six items developed by Beijerse (1999), Li (2001), Sin *et al.* (2005) and Lin and Lee (2005); describing knowledge acquisition, sharing and utilization.

CRM performance: eight items developed by Chen and Ching (2004), Sin *et al.* (2005), Chang *et al.* (2010) and Suntuornpithug *et al.* (2010), including several financial and non-financial measures such as sales income, profitability, market share, and customer satisfaction, retention and loyalty.

Except for the variable social media usage, that was measured using a summative index, all multi-item measures used were based on seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), and are shown in more detail in the Table II. All variables were defined as reflective constructs.

Firm characteristics	Number	%
<i>Size</i>		
Small (less than 25 employees)	68	73.1
Medium (25-50 employees)	23	24.7
Large (more than 50 employees)	2	2.2
<i>CRM experience</i>		
Less than 1 year	22	23.7
Between 1 and 4 years	47	50.6
More than 4 years	24	25.8
Total	93	100.00

Table I.
Profile of
responding firms

Construct	Code	Items
Organizational readiness	OR1	Senior managers motivate and encourage employees to live the CRM vision
	OR2	Training programs are designed to help employees to manage customer relationships effectively
	OR3	Employee performance is measured and rewarded on the basis of their ability to effectively satisfy customer needs
	OR4	Employees are well trained in the use of CRM technologies
	OR5	Employees at all levels are committed to using CRM to achieve high levels of customer satisfaction
	OR6	Organizational structure is designed to facilitate a customer-centric approach
	OR7	The different departments work together to achieve CRM objectives
	OR8	Areas of responsibility have been reorganized to respond to customer requirements on a personal level
Technological readiness	TR1	The company has the appropriate portfolio of CRM technologies to effectively serve its customers
	TR2	The company has the appropriate hardware infrastructure to serve its customers
	TR3	The company's information systems are integrated across the different functional areas
Social media use	SM1	Blogs
	SM2	Microblogs (www.twitter.com)
	SM3	Social networking (www.facebook.com)
	SM4	Video sharing (www.youtube.com)
	SM5	Photo sharing (www.flickr.com)
	SM6	Review sites (www.tripadvisor.com)
	SM7	Instant messaging
Knowledge management processes	KM1	The company provides channels to enable ongoing two-way communication with key customers
	KM2	The company has established processes to acquire knowledge about customers
	KM3	The company fully understands the needs of its key customers thanks to its knowledge about customers
	KM4	The company encourages employees to share knowledge
	KM5	The company's organizational culture encourages the acquisition of knowledge and its sharing among employees
	KM6	The company has designed processes to facilitate knowledge transmission between the different functional areas
CRM performance	CRM1	Increased sales income
	CRM2	Improved profitability
	CRM3	Increased market share
	CRM4	Improved customer satisfaction
	CRM5	Increased customer retention
	CRM6	Improved customer loyalty
	CRM7	Improved levels of customer service
	CRM8	Personalization of products and services

Table II.
Research instrument
description

3.3 Statistical methods

Data analysis was conducted with partial least squares (PLS), a structural equation modeling (SEM) technique that uses a component-based approach to estimation. The PLS technique is oriented primarily to predictive causal analysis. In contrast to

software applications such as AMOS or LISREL (a SEM technique based on covariance), PLS is based on variance and employs a principal component-based estimation approach (Chin, 1998).

This technique has been widely used in the literatures on IS, operations management and marketing (Benitez-Amado *et al.*, 2010). In addition, several rationales support the use of PLS in this research: this technique does not require a large sample size and it is exploratory in nature, so it is applicable for early stages of theory development (Barclay *et al.*, 1995; Chin *et al.*, 1996). Based on all the above, we consider PLS especially appropriate to test our research model.

4. Data analysis

Data analysis was performed using the software SmartPLS 3.1.5 (Ringle *et al.*, 2014). Following Chin (2010) recommendations, we will follow a two-step approach to conduct PLS model evaluation. The first step involves the assessment of the measurement model. This allows the relationships between the observable variables and theoretical concepts to be specified. In a second step, we will evaluate the structural model, to test the extent to which the causal relationships specified by the proposed model are consistent with the available data.

4.1 Measurement model evaluation

Regarding the measurement model, first at all, we evaluated three kinds of validity: content validity, convergent validity and discriminant validity. Content validity of the scales was ensured by using measurement items adapted from existing scales; and also by performing a pretest with 5 general managers.

Convergent validity was assessed by examining the Cronbach's α 's, composite reliability and average variance extracted (AVE), which passed the thresholds generally accepted in the literature with values of 0.70, 0.70 and 0.50, respectively (Fornell and Larcker, 1981). Specifically, our Cronbach's α values ranged from 0.938 to 0.959, our composite reliabilities from 0.951 to 0.966 and the AVEs from 0.730 to 0.897, all providing strong evidence of reliability of the used measures. In addition, the factor loadings from constructs to indicators were > 0.7 (ranging from 0.8 to 0.968), indicating that the items had considerable individual reliability. Table III reports the number of items, Cronbach's α , composite reliability, AVE of the constructs and item reliability of each item. Consequently, our constructs meet the tests of convergent validity in our empirical context.

For testing discriminant validity, we compared the square root of the AVE with the correlations of each latent construct to other constructs and analyzed the correlations between the constructs and between the indicators and the constructs (Fornell and Larcker, 1981). On average, each construct related more strongly to its own measures

Latent construct	Number of items	Cronbach's α	Composite reliability	AVE	Items reliability
Organizational readiness	8	0.947	0.956	0.730	0.800-0.886
Technological readiness	3	0.943	0.963	0.897	0.930-0.968
Knowledge management processes	6	0.938	0.951	0.763	0.841-0.901
CRM performance	8	0.959	0.966	0.778	0.835-0.926

Note: Social Media usage is not included in the table because all the reported measures are not applicable for one-item constructs

Table III.
Measurement
properties of
constructs

than to others, so results demonstrate that our scales clearly show discriminant validity. Table IV presents the correlations between the constructs and compares them to the square root of the AVE. Finally, the correlations matrix did not indicate any exceptionally correlated variables (the highest correlation among principal constructs is $r = 0.728$). Considering that evidence of common method bias usually results in very high correlations ($r > 0.90$), we can assume that common method bias was not a serious problem in our data (Pavlou and El Sawy, 2006).

4.2 Structural model evaluation

We performed a bootstrap analysis with 500 subsamples to estimate the significance of the path coefficients (Chin, 1998). We found support for all of the proposed hypotheses except for H3. We observed that organizational readiness have a significant positive impact on knowledge management processes ($\beta = 0.431, p < 0.001$), thus supporting H1. Similarly, consistent with H2, technological readiness enables the development of knowledge management processes ($\beta = 0.452, p < 0.001$). However, social media does not have a significant positive impact on knowledge management processes (H3), although the effect is in the hypothesized direction. Finally, results confirm how knowledge management processes exert a positive effect on CRM organizational performance ($\beta = 0.675, p < 0.001$). Figure 2 shows the results of hypothesis testing related to the posed research model.

Variable	Mean	SD	1	2	3	4	5
1. Organizational readiness	5.152	0.832	<i>0.855</i>				
2. Technological readiness	5.513	0.388	0.616***	<i>0.947</i>			
3. Social media usage	2.991	1.632	0.149	0.211**	<i>1.000</i>		
4. Knowledge management processes	5.850	0.5682	0.717***	0.728***	0.209**	<i>0.874</i>	
5. CRM performance	5.319	0.578	0.695***	0.556***	0.143	0.675***	<i>0.882</i>

Table IV.
Correlations between constructs and discriminant validity

Notes: The italic numbers in the diagonal row are square roots of the AVE. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

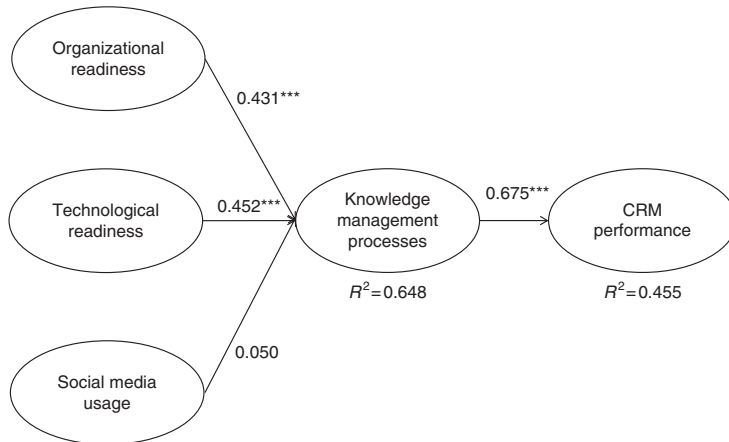


Figure 2.
Estimated causal relationships in the structural model

Note: *** $p < 0.001$

In a PLS analysis, the values of the path coefficients, their level of significance, and the R^2 values are measures of how well a model is performing (Chin, 2010). One consequence of the comparison between covariance structure analysis modeling approaches and PLS is that no proper overall goodness-of-fit measures exist for models using the latter (Hulland, 1999). Consequently, the structural model was evaluated by examining the R^2 values and the size of the structural path coefficients. The path coefficients should be around 0.20 and ideally be above 0.30 to be considered meaningful and economically significant (Chin, 1998). In our analysis, the path coefficients to test the hypotheses ranged from 0.431 to 0.675 (considering only the path coefficients of the supported hypotheses), and all of them were significant at 0.001 level. The R^2 values for the two endogenous variables (knowledge management processes and CRM organizational performance) were 0.648 and 0.455, respectively. Consequently, the evaluation indicates satisfactory explanatory power for the structural model.

Finally, the Stone-Geisser test was performed for predictive relevance to assess model fit in the PLS analysis (Geisser, 1975; Stone, 1974). When q^2 is greater than zero, a model has predictive relevance. In our study, q^2 was 0.334 for the estimated model, so its predictive relevance was found to be appropriate.

5. Discussion and conclusions

5.1 Relations to previous findings and concluding remarks

Knowledge has become the most important strategic factor in business today, and companies are attempting to integrate CRM and knowledge management processes in order to better understand their customers' needs and develop new products and services accordingly. However, despite the current economic importance of CRM initiatives, in the literature there is a lack of a simple and overall framework to integrate CRM functionalities with the management and application of customer-related knowledge, in order to increase CRM performance. To shed light on this topic, an integrative model exploring the role of knowledge management processes in the development of a CRM initiative is proposed. The research model has been tested using a PLS methodology and drawing on a sample of 93 Spanish service firms. Based on the obtained results, this study makes two important contributions: first, it highlights the role of organizational and technological readiness as the main drivers of knowledge management processes and second, it empirically confirms that knowledge management processes exerted a significant positive impact on CRM performance. Each of these points is discussed in turn.

First, the study deepens our understanding of the main drivers and enablers of knowledge management processes in the context of a CRM initiative. The findings show the leading role of organizational and technological readiness as effective drivers of those processes. Results are consistent with prior IS research that has found a positive link between organizational climate and knowledge acquisition and exchange among employees (Collins and Smith, 2006). In line with Donate and Guadamillas (2011), we have found that organizational readiness, including factors such as leadership, reward systems or training programs acted as essential elements in order to promote knowledge management processes. Regarding the role of IT, consistent with a large number of studies (Palacios-Marqués *et al.*, 2015; Chen and Chen, 2004; Croteau and Li, 2003) we confirmed how technological readiness plays a pivotal role in supporting organizational knowledge exchange processes. Similar to Salojarvi *et al.* (2010) our results confirm that technological systems do enable firms to acquire, store and analyze customer information, promoting hence customer knowledge management. Our study can be considered a novel

approach because it is the first to include in its analysis the impact of both organizational and technological readiness, while all the above mentioned studies focussed exclusively on one of those factors.

However, regarding social media tools, our results do not identify them as a relevant knowledge management driver. Contrary to Trainor *et al.* (2014), who found that social media technology usage had a positive association with knowledge management capabilities, we did not found a significant effect. A possible explanation for the lack of a significant relationship between social media usage and knowledge management processes could be related to the fact that companies have only recently started to use those tools, and they need to understand what social media is and how it should be used. Some companies seem to have the misconception that social media is just another advertising channel and they fail to socialize, respond, interact and build relationship with customers, not favoring real knowledge management processes (Chan and Guillet, 2011). In fact, in our empirical analysis, we observed that the arithmetic mean from the variable social media usage, whose scale ranged between 0 and 7, was only 3.15. So this value indicates that the examined companies showed a low use of social media tools. In order to contextualize these results, we examined other studies that focussed on the phenomenon of social media usage in the Spanish context. In this vein, Eurostat (2013), considering different types of social media tools, observed that in Spain, only 31 percent of companies used at least one type of social media in 2013. Additionally, Escobar-Rodríguez and Carvajal-Trujillo (2013) recently analyzed the topic in a subsample of service companies in Spain and confirmed that they also exhibit a low use of social media use and claimed not have fully incorporated all the possible elements of Web 2.0 in their strategy. Consequently, the preliminary stage of development and the low use of social media tools in Spanish companies can be an alternative explanation of the lack of a significant link between social media usage and knowledge management processes.

A second contribution of this study is to highlight the substantial effect of knowledge management processes on CRM performance. Considering that a firm's capability to create and utilize knowledge has become the most important source of its sustainable competitive advantage (Grant, 1996); we have confirmed that knowledge management plays a critical role when implementing a CRM initiative. Consistent with prior IS research, our findings have confirmed the direct influence of knowledge management processes on the success of CRM (Croteau and Li, 2003; Love *et al.*, 2009; Sin *et al.*, 2005).

This paper provides a very useful source for academics and managers since it investigates connections between drivers of knowledge management, knowledge management processes and CRM performance. Results are particularly interesting because they show the specific sequence that companies need to follow in order to implement successfully knowledge management and CRM initiatives, paving the way for the development of marketing innovations. The study covers a gap previously detected in the literature, providing empirical evidence on the topic, based on a confirmatory methodology. In addition, this research is the first empirical study examining social media usage and knowledge management in a Spanish context. The proposed conceptualization and measurement of social media is a first attempt to identify this novel phenomenon. However, IS academics can build on the present work developing more precise measures of social media usage and impact, and examining it in different contexts. Considering that research into social media is still at an embryonic stage (Michaelidou *et al.*, 2011), it would be interesting to better conceptualize and measure social media usage, developing more sophisticated measures that include frequency of use, relevance of the different tools implemented and strategic integration with the global customer strategy.

5.2 Research limitations and future research lines

The study does have several limitations, many of which highlight potential opportunities for future research. First, the study uses data provided by only one key informant per firm (the general manager), which could involve a degree of subjectivity. It would be interesting to develop future studies including the perspective of other agents involved in developing CRM: managers, employees and customers. Second, this research is cross-sectional, which prevents us from examining the evolution over time of the phenomenon under investigation. This is especially interesting in light of the dynamic nature of some of the variables presented. To explore this issue, future research should include longitudinal data to better explain the observed relationships and their temporal evolution. Third, the empirical study has focussed specifically on the Spanish services sector, so the results obtained here may not be entirely generalizable to other sectors of activity or other countries. Consequently, studies at the international level would be useful in order to test the validity of the model using data from other countries.

5.3 Implications

The research findings have important implications for both IT and business managers. Considering the high rate of failure observed when implementing a CRM initiative the study, both theoretically and empirically, reveals how firms can achieve organizational benefits by combining CRM with knowledge management processes. Results confirms that developing appropriate knowledge management processes are a prerequisite to be successful with CRM, both in terms of financial success (profitability, sales, market share) as well as in terms of customer satisfaction, retention and loyalty. The study's results confirm also that organizational and technological readiness acted as relevant enablers of knowledge management processes. Consequently, managers need to invest in a suitable CRM technological infrastructure, including software, hardware and analytical capabilities, which allow them to capture relevant customer information, and build knowledge from these data. In addition, IS have to be integrated across all the different functional areas, in order to share this generated knowledge and be able to quickly respond to customer needs, drawing on this knowledge. Moreover, organizational readiness has also proved to be determinant. Managers should promote an organizational culture encouraging employees to acquire, share and use knowledge effectively. They should develop a supportive leadership and introduce new reward and incentive programs consistent with the CRM objectives, motivating employees to engage in the necessary organizational change. In summary, the results suggest that, to implement a CRM initiative successfully, managers need to pay special attention to both technological and organizational readiness, because they are effective enablers of knowledge management processes, which, in turn will make a determinant impact in CRM performance. By properly implementing both knowledge management processes and CRM initiatives, they would be able to capture valuable knowledge to adapt to different customer demands and develop successful marketing innovations.

References

- Alavi, M. and Leidner, D.E. (2001), "Review: KM and KM systems: conceptual foundations and research issues", *MIS Quarterly*, Vol. 25 No. 1, pp. 107-136.
- Armstrong, J. and Overton, T. (1977), "Estimating non-response bias in mail surveys", *Journal of Marketing*, Vol. 14 No. 3, pp. 396-402.
- Barclay, D., Higgins, C. and Thompson, R. (1995), "The partial least squares (PLS) approach to causal modeling: personal computer adoption and use as an illustration", *Technology Studies*, Vol. 2 No. 2, pp. 285-309.

- Beijerse, R.P. (1999), "Questions in KM: defining and conceptualising a phenomenon", *Journal of Knowledge Management*, Vol. 3 No. 2, pp. 94-109.
- Benitez-Amado, J., Llorens-Montes, F.J. and Perez-Arostequi, M.N. (2010), "Information technology-enabled intrapreneurship culture and firm performance", *Industrial Management & Data Systems*, Vol. 110 No. 4, pp. 550-566.
- Berthon, P.R., Pitt, L.F., Plangger, K. and Shapiro, D. (2012), "Marketing meets Web 2.0, social media, and creative consumers: implications for international marketing strategy", *Business Horizons*, Vol. 55 No. 3, pp. 261-271.
- Boulding, W., Staelin, R., Ehret, M. and Johnston, W.J. (2005), "A customer relationship management roadmap: what is known, potential pitfalls, and where to go", *Journal of Marketing*, Vol. 69 No. 4, pp. 155-166.
- Campbell, A.J. (2003), "Creating customer knowledge competence: managing customer relationship management programs strategically", *Industrial Marketing Management*, Vol. 32 No. 5, pp. 375-383.
- Chan, N.L. and Guillet, B.D. (2011), "Investigation of social media marketing: how does the hotel industry in Hong Kong perform in marketing on social media websites?", *Journal of Travel & Tourism Marketing*, Vol. 28 No. 4, pp. 345-368.
- Chang, W., Park, J.E. and Chaiy, S. (2010), "How does CRM technology transform into organizational performance? A mediating role of marketing capability", *Journal of Business Research*, Vol. 63 No. 8, pp. 849-855.
- Chen, I.J. and Popovich, K. (2003), "Understanding customer relationship management-people, process and technology", *Business Process Management Journal*, Vol. 9 No. 5, pp. 672-688.
- Chen, J. and Ching, R. (2004), "An empirical study of the relationship of IT intensity and organizational absorptive capacity on CRM performance", *Journal of Global Information Management*, Vol. 12 No. 1, pp. 1-17.
- Chen, Q. and Chen, H.M. (2004), "Exploring the success factors of eCRM strategies in practice", *Journal of Database Marketing & Customer Strategy Management*, Vol. 11 No. 4, pp. 333-343.
- Chen, Y. and Su, C. (2006), "A kano-CKM model for customer knowledge discovery", *Total Quality Management & Business Excellence*, Vol. 17 No. 5, pp. 589-608.
- Chin, W.W. (1998), "Issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. 7-15.
- Chin, W.W. (2010), "How to write up and report PLS analyses", in Esposito Vinzi, V., Chin, W.W., Henseler, J. and Wang, H. (Eds), *Handbook of Partial Least Squares: Concepts, Methods and Applications*, Springer Handbooks of Computational Statistics, Berlin, pp. 655-690.
- Chin, W.W., Marcolin, B.L. and Newsted, P.R. (1996), "A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and voice mail emotion/adoption study", *Proceedings of the 17th International Conference on Information Systems, Cleveland, OH, December*, pp. 21-41.
- Collins, C.J. and Smith, K.G. (2006), "Knowledge exchange and combination: the role of human resource practices in the performance of high-technology firms", *Academy of Management Journal*, Vol. 49 No. 3, pp. 544-560.
- Croteau, A. and Li, P. (2003), "Critical success factors of CRM technological initiatives", *Canadian Journal of Administrative Sciences*, Vol. 20 No. 1, pp. 21-34.
- Donate, M.J. and Guadamillas, F. (2011), "Organizational factors to support knowledge management and innovation", *Journal of Knowledge Management*, Vol. 15 No. 6, pp. 890-914.
- Dous, M., Kolbe, L., Salomann, H. and Brenner, W. (2005), "KM capabilities in CRM: making knowledge for, from and about customers work", *Proceedings of the Eleventh Americas Conference on Information Systems, Omaha, NE, August*, pp. 167-178.

- Escobar-Rodríguez, T. and Carvajal-Trujillo, E. (2013), "An evaluation of Spanish hotel websites: informational vs relational strategies", *International Journal of Hospitality Management*, Vol. 33 No. 1, pp. 228-239.
- European Commission (2005), "Oslo manual, the measurement of scientific and technological activities", available at: www.oecd.org/science/inno/2367580.pdf (accessed October 8, 2014).
- Eurostat (2012), "Community Innovation Survey (CIS)", available at: http://ec.europa.eu/eurostat/web/microdata/community_innovation_survey (accessed April 28, 2015).
- Eurostat (2013), "Social media – statistics on the use by enterprises", available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Social_media_-_statistics_on_the_use_by_enterprises (accessed January 22, 2015).
- Fornell, C. and Larcker, D.F. (1981), "Structural equation models with unobservable variables and measurement errors", *Journal of Marketing Research*, Vol. 18 No. 2, pp. 39-50.
- Gebert, H., Geib, M., Kolbe, L. and Brenner, W. (2003), "Knowledge-enabled customer relationship management: integrating customer relationship management and KM concepts", *Journal of Management*, Vol. 7 No. 5, pp. 107-123.
- Geisser, S. (1975), "The predictive sample reuse method with applications", *Journal of the American Statistical Association*, Vol. 70 No. 350, pp. 320-328.
- Grant, R.M. (1996), "Toward a knowledge-based theory of the firm", *Strategic Management Journal*, Vol. 17 No. S2, pp. 109-122.
- Greenberg, P. (2010), "The impact of CRM 2.0 on customer insight", *Journal of Business & Industrial Marketing*, Vol. 25 No. 6, pp. 410-419.
- Grover, V. and Davenport, T.H. (2001), "General perspectives on knowledge management: fostering a research agenda", *Journal of Management Information Systems*, Vol. 18 No. 1, pp. 5-21.
- Hansen, D.L., Shneiderman, B. and Smith, M.A. (2011), *Analysing Social Media Networks with NodeXL: Insights from a Connected World*, Morgan Kaufmann, Burlington.
- Haro de Rosario, A., Gálvez-Rodríguez, M.M. and Caba-Pérez, M.C. (2013), "Development of social media and Web 2.0 in the top hotel chains", *Tourism & Management Studies*, Vol. 9 No. 1, pp. 13-19.
- Hernaus, T., Bach, M.P. and Vukšić, V.B. (2012), "Influence of strategic approach to BPM on financial and non-financial performance", *Baltic Journal of Management*, Vol. 7 No. 4, pp. 376-396.
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: a review of four recent studies", *Strategic Management Journal*, Vol. 20 No. 2, pp. 195-204.
- Instituto Nacional de Estadística (2014), "Annual services survey", available at: www.ine.es/jaxi/menu.do?type=pcaxis&path=/t37/e01&file=inebase (accessed October 9, 2014).
- Jain, S.C. (2005), "CRM shifts the paradigm", *Journal of Strategic Marketing*, Vol. 13 No. 4, pp. 275-291.
- Jayachandran, S., Sharma, S., Kaufman, P. and Raman, P.P. (2005), "The role of relational information processes and technology use in customer relationship management", *Journal of Marketing*, Vol. 69 No. 4, pp. 77-192.
- Kaplan, A.M. and Haenlein, M. (2010), "Users of the world, unite! The challenges and opportunities of social media", *Business Horizons*, Vol. 53 No. 1, pp. 59-68.
- Koziol, L., Koziol, W., Wojtowicz, A. and Pyrek, R. (2014), "Relationship marketing – a tool for supporting the company's innovation process", *Procedia – Social and Behavioral Sciences*, Vol. 148 No. 1, pp. 324-329.
- Li, P. (2001), "The critical success factors of customer relationship management (CRM) technological initiatives", Doctoral thesis, Concordia University Montreal.

- Lin, H.F. and Lee, G.G. (2005), "Impact of organizational learning and KM factors on e-business adoption", *Management Decision*, Vol. 43 No. 2, pp. 171-188.
- Love, P., Edwards, D.J., Standing, C. and Irani, Z. (2009), "Beyond the red queen syndrome: CRM technology and building material suppliers", *Engineering, Construction and Architectural Management*, Vol. 16 No. 5, pp. 459-474.
- Mendoza, L.E., Marius, A., Pérez, M. and Grimán, A.C. (2007), "Critical success factors for a customer relationship management strategy", *Information and Software Technology*, Vol. 49 No. 8, pp. 913-945.
- Michaelidou, N., Siamagka, N.T. and Christodoulides, G. (2011), "Usage, barriers and measurement of social media marketing: an exploratory investigation of small and medium B2B brand", *Industrial Marketing Management*, Vol. 40 No. 7, pp. 1153-1159.
- Nejatian, H., Sentosa, I., Piaralal, S.K. and Bohari, A.M. (2011), "The influence of customer knowledge on CRM performance of Malaysian ICT companies: a structural equation modeling approach", *International Journal of Business Management*, Vol. 6 No. 7, pp. 181-198.
- Nguyen, B. and Mutum, D.S. (2012), "A review of customer relationship management: successes, advances, pitfalls and futures", *Business Processes Management Journal*, Vol. 18 No. 3, pp. 400-419.
- Nguyen, T.H., Sherif, J.S. and Newby, M. (2007), "Strategies for successful CRM implementation", *Information Management & Computer Security*, Vol. 15 No. 2, pp. 102-115.
- Ocker, R. and Mudambi, S. (2003), "Assessing the readiness of firms for CRM: a literature review and research model", *Proceedings of the 36th Annual Hawaii International Conference on System Sciences: IEEE Computer Society, Los Alamitos, CA, January*.
- Omerzel, B.A. and Ruzzier, M. (2011), "Developing and testing a multi-dimensional knowledge management model on Slovenian SMEs", *Baltic Journal of Management*, Vol. 6 No. 2, pp. 179-204.
- Özgener, S. and Iraz, R. (2006), "Customer relationship management in small-medium enterprises: the case of Turkish tourism industry", *Tourism Management*, Vol. 27 No. 6, pp. 1356-1363.
- Palacios-Marqués, D., Soto-Acosta, P. and Merigó, J.M. (2015), "Analyzing the effects of technological, organizational and competition factors on Web knowledge exchange in SMEs", *Telematics and Informatics*, Vol. 32 No. 1, pp. 23-32.
- Pavlou, P.A. and El Sawy, O.A. (2006), "From IT leveraging competence to competitive advantage in turbulent environments: the case of new product development", *Information Systems Research*, Vol. 17 No. 3, pp. 198-227.
- Payne, A. and Frow, P. (2005), "A strategic framework for customer relationship management", *Journal of Marketing*, Vol. 69 No. 4, pp. 167-176.
- Plessis, M.D. and Boon, J.A. (2004), "Knowledge management in eBusiness and customer relationship management: South African case study findings", *International Journal of Information Management*, Vol. 24 No. 1, pp. 73-86.
- Reimann, M., Schilke, O. and Thomas, J.S. (2010), "Customer relationship management and firm performance: the mediating role of business strategy", *Journal of the Academy of Marketing Science*, Vol. 38 No. 3, pp. 326-346.
- Ringle, C.M., Wende, S. and Becker, J.M. (2014), "Smartpls 3, Hamburg: SmartPLS", available at: www.smartpls.com (accessed September 22, 2014).
- Salojarvi, H., Sainio, L.M. and Tarkiainen, A. (2010), "Organizational factors enhancing customer knowledge utilization in the management of key account relationships", *Industrial Marketing Management*, Vol. 39 No. 8, pp. 1395-1402.

- Sashi, C.M. (2012), "Customer engagement, buyer-seller relationships, and social media", *Management Decision*, Vol. 50 No. 2, pp. 253-272.
- Shang, S.S.C. and Lin, S.F. (2010), "People-driven processes in customer relationship management", *The Services Industries Journal*, Vol. 30 No. 14, pp. 2441-2456.
- Sin, L.Y.M., Tse, A.C.B. and Yim, F.H.K. (2005), "CRM conceptualization and scale development", *European Journal of Marketing*, Vol. 39 Nos 11/12, pp. 1264-1290.
- Smith, P.R. and Zook, Z. (2011), *Marketing Communications*, Kogan Page Publishers, London.
- Stone, M. (1974), "Cross-validators choice and assessment of statistical predictions", *Journal of the Royal Statistical Society*, Vol. 36 No. 2, pp. 111-147.
- Suntornpithug, N., Karaatli, G.M. and Khamalah, J.N. (2010), "Investigating relationships between organizational commitment, employee empowerment, customer intelligence and customer relationship performance among small service firms", *International Journal of Service Technology Management*, Vol. 14 No. 1, pp. 77-91.
- Taylor, W.A. and Wright, G.H. (2004), "Organizational readiness for successful knowledge sharing: challenges for public sector managers", *Information Resources Management Journal*, Vol. 17 No. 2, pp. 22-37.
- Tiwana, A. (2001), *The Essential Guide to Knowledge Management: E-Business and CRM Applications*, Prentice-Hall, Upper Saddle River, NJ.
- Trainor, K.J., Andzulis, J.M., Rapp, A. and Agnihotri, R. (2014), "Social media technology usage and customer relationship performance: a capabilities-based examination of social CRM", *Journal of Business Research*, Vol. 67 No. 6, pp. 1201-1208.
- Westphal, J.D. and Fredrickson, J.W. (2001), "Who directs strategic change? Director experience, the selection of new CEOs, and change in corporate strategy", *Strategic Management Journal*, Vol. 22 No. 12, pp. 1113-1137.
- Wong, K.Y. and Aspinwall, E. (2005), "An empirical study of the important factors for knowledge management adoption in the SME sector", *Journal of Knowledge Management*, Vol. 9 No. 3, pp. 64-82.
- Wu, I.L. and Wu, K.W. (2005), "A hybrid technology acceptance approach for exploring e-CRM adoption in organizations", *Behaviour & Information Technology*, Vol. 24 No. 4, pp. 303-316.
- Xu, M. and Walton, J. (2005), "Gaining customer knowledge through analytical CRM", *Industrial Management & Data Systems*, Vol. 105 No. 7, pp. 955-972.
- Zablah, A.R., Bellenger, D.N. and Johnston, W.J. (2004), "An evaluation of divergent perspectives on customer relationship management: towards a common understanding of an emerging phenomenon", *Industrial Marketing Management*, Vol. 33 No. 6, pp. 475-489.
- Zheng, W., Yang, B. and McLean, G.N. (2010), "Linking organizational culture, structure, strategy, and organizational effectiveness: mediating role of knowledge management", *Journal of Business Research*, Vol. 63 No. 7, pp. 763-771.
- Zhu, Y., Li, Y., Wang, W. and Chen, J. (2010), "What leads to post-implementation success of ERP? An empirical study of the Chinese retail industry", *International Journal of Information Management*, Vol. 30 No. 3, pp. 265-276.

Further reading

- Du Plessis, M. (2005), "Drivers of knowledge management in the corporate environment", *International Journal of Information Management*, Vol. 25 No. 3, pp. 193-202.

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