

THE IMPACT OF THE IMPLEMENTATION OF CRM STRATEGY ON CONSUMER BEHAVIOUR

Miguel, M. D., Crespo, C. F.*

Abstract: Currently, firms are trying to improve customer relationships by investing in CRM strategies to gain a competitive advantage and influence consumer behaviour. The current study contributes to attenuate a gap identified in the literature, namely the lack of an integrated conceptual model that assesses the effect of a combined implementation of the different dimensions that compose a CRM strategy, respectively, customer management, organizational alignment, CRM technology and CRM strategy implementation, on consumer behaviour, instead of carrying out an isolated analysis of them. Additionally, the present research intends to overcome the lack of studies in the CRM literature focused on the company's perspective since a large part of the previous studies were carried out from the consumer perspective. An online survey was conducted among Portuguese companies, collecting 128 valid responses. Data were analysed using structural equation modelling with partial least squares (PLS-SEM). Our findings demonstrate that an integrated implementation of CRM dimensions significantly and positively influences WOM, customer satisfaction, and customer retention. In addition, it was possible to confirm that innovation orientation and brand equity directly impact consumer behaviour. Therefore, the present investigation shows that the dimensions of CRM, namely, customer management, organizational alignment, CRM technology and CRM strategy implementation, work together to improve the customer experience.

Keywords: CRM (Customer Relationship Management), word-of-mouth (WOM), satisfaction, retention, brand equity

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Introduction

Nowadays, customer relationship management is a progressively more differentiating factor. Consequently, implementing a CRM (Customer Relationship Management) strategy is perceived as increasingly important. According to Payne and Frow (2005), CRM is a strategy that seeks to create, develop, and improve relationships with consumers, focusing on maximizing the value and profitability of the company. From the perspective of Kumar and Reinartz (2018), CRM can be defined as the strategic methodology for selecting customers from whom the

* **Margarida Domingues Miguel**, School of Technology and Management, Polytechnic of Leiria, Portugal, ✉ email: 2201564@my.ipleiria.pt
ORCID: 0000-0003-2886-7370

Cátia Fernandes Crespo, CARME, School of Technology and Management, Polytechnic of Leiria, CSG/ADVANCE, Portugal, ✉ email: catia.crespo@ipleiria.pt
ORCID: 0000-0003-2886-7370

company can obtain greater profit and, therefore greater current and future value, as well as customize customer interactions and foster relationships.

The main objective of this study is to understand how the implementation of a CRM strategy plays a key role in the company-customer relationship. This research intends to investigate how this relationship can lead to satisfaction, promote customers' experience sharing within their close circle (word-of-mouth) and lead to customer retention. Furthermore, the present investigation analyses the moderating effect of two variables that can play a fundamental role in the relationship between CRM strategy and consumer behaviour: innovation orientation and brand equity.

The current research intends to contribute to attenuate a gap identified in the literature (Azad and Ahmadi, 2015; Krizanova et al., 2018), namely the lack of a comprehensive and integrated conceptual model that evaluates the effect of a combined implementation of the different dimensions of a CRM strategy on consumer behaviour. Most of the existent studies in the area do not analyse the impact resulting from the joint and integrated implementation of the different dimensions underlying a CRM strategy, adding that only a few evaluate this implementation from a company's perspective (Pohludka and Štverková, 2019; Rafiki et al., 2019; Selamat, and Windasari, 2021). To address these gaps, the present study aims to expand the knowledge concerning the relationship between CRM dimensions and consumer behaviour, considering the moderating effect of both innovation orientation and brand equity.

Literature Review

CRM is a customer relationship management approach or strategy that seeks to create, develop, and enhance this relationship with the intention of directing it towards maximizing customer value and corporate profitability (Payne and Frow, 2005). Although the term CRM did not come into use until the latter part of the 90s, the principles upon which it was built have been around since the dawn of commerce. Thus, the CRM concept is mainly based on the principles of relationship marketing, involving the construction of relationships of mutual value between suppliers and customers. CRM is still today the chosen tool for identifying, satisfying, retaining, and maximizing the value of the company's best customers (Rapp et al., 2010). Considering the assumptions addressed by Zablah et al. (2004), the concept of CRM can be presented as the creation of customer knowledge that serves as the fundamental basis for companies to develop a customer portfolio in which their relationships reach the maximum possible profitability.

In the CRM literature (Ernst et al., 2011; Nguyen and Mutum, 2012), activities are aggregated in four dimensions of CRM, namely i) customer management, ii) organizational alignment, iii) CRM technology and iv) CRM implementation strategy, which according to Kumar and Reinartz (2018), have the ultimate goal of improving customer relations. According to Dalla Pozza et al. (2018), CRM dimensions should not be analysed in isolation since they all contribute to organizational performance in different proportions, acting as an orchestra. Keramati

et al. (2010) defend that to successfully implement a CRM strategy. The company needs to be competitive in each CRM dimension, stimulating interaction and integration processes between the dimensions that create value, both for the company and the customer.

With the evolution of technologies, companies expanded their knowledge about their customers, allowing firms to monitor customers and create customized offers for each specific profile. This active management of the company-customer relationships fosters companies' competitive advantage. Consequently, companies should follow the fundamental principle that different clients require different treatments. Peppers and Rogers (2004) argue that the company should adapt and create different strategies considering the life cycle stage in which the customer is, thus customizing its management and creating value to meet the customer's needs. More efficient segmentation of customers based on their values and needs helps to meet the specific needs of individual customers in a fast and customized manner, thus improving the company's profitability goals (Ernst et al., 2011).

In accordance with Beer and Eisenstat (1996), organizational alignment refers to the complexity and interdependence of its open systems, that is, the agreement of all hierarchical levels with the strategy defined by the company, which allows everything to be aligned with the objectives, the company's mission, and vision. The interdependence of this system includes formal elements such as technology, strategy and structure and informal elements such as people, leaders, and company values, which require adjustment to achieve effectiveness in the strategy implementation.

Technologies have contributed over time to improve knowledge management and customer interactions to build profitable long-term relationships (lifetime value) with customers. The emergence of CRM software has leveraged the growth and development of the company-customer relationship, as it interconnects front and back-office systems, enabling efficient management of customer interactions (Chen, 2003). Moreover, CRM software makes it possible to perform database analysis, collect relevant information from customers and organizing it in order to transform it into knowledge, which will be used by the different company departments (Gartner, 2020).

As a first step towards the success of CRM strategy implementation, companies must focus on effectively establishing the customer's strategy, which is a prerequisite for obtaining high-quality information about the customer to improve processes (Raman et al., 2006). The quality of information will be extremely relevant to improve communication and support change management since if communication is well worked out between the company, employees and customers, change will be accepted more easily (Keramati et al., 2010). Moreover, to contribute to the effectiveness of CRM strategy implementation, it is also important that top management performs an active role, demonstrating to employees the benefits associated with the expected results of this change (Mendoza, 2007).

Consumer behaviour is a continuous process that starts with the consumer's desire or needs, encompassing the entire purchase process, including consumer questions and reactions before, during and after the purchase (Solomon, 2017). Consumers are currently much more aware and, consequently, more demanding, which makes them compare different competitors to ensure that they can obtain the greatest satisfaction and the best value at the time of purchase. Consequently, it is fundamental for companies to increase the value inherent to the purchase to gain a competitive advantage (Weerasinghe, 2018).

Word-of-mouth (WOM) has been addressed for many years and is one of the largest and most influential sources of information for consumers (Katz and Lazarsfeld, 2017). WOM is the informal communication directed to other consumers, which refers to the use, ownership, or characteristics of a given product or service, or even its sellers and the brand itself (Chang et al., 2012). Katz and Lazarsfeld (2017) attested that WOM effectiveness was seven times superior to newspaper advertisements, four times superior to direct sales and twice superior to radio advertising. More recent studies continue to show the superiority of WOM effectiveness in relation to advertising (Kim and Hanssens, 2017). According to Hong and Yang (2009), the increase in the volume and reach of WOM communication, mainly due to the emergence of new communication technologies on the Web, such as blogs and social networks, gives greater importance to the promotion of positive WOM as a way for companies to gain competitive advantage. Customer satisfaction is a response (which can be emotional or cognitive) that occurs after a particular moment, more precisely after consumption, based on the accumulated consumer experience (Giese and Cote, 2000). Kotler (2003) considers that satisfaction and dissatisfaction come from the feeling of pleasure or disappointment arising from comparing the perceived result of a given product with the expectations the consumer had previously created. Therefore, satisfaction concerns consumers' assessment of product attributes performance effectiveness in addressing customers' needs and desires (Byun and Jang, 2019).

Previous studies have established consumer satisfaction as one of the main antecedents of retention (Kim et al., 2020; Guping et al., 2021). Customer retention can be defined as the continuity of a commercial relationship between a customer and a company, representing the customer's unchanged preference for a given supplier or service provider, ultimately leading to repetition over time (Henning - Thureau, 2004). Kyei and Bayoh (2017) argue that in the current competitive environment, customer retention is extremely important for the sustainable growth of a business.

Conceptual Model and Hypotheses

The dimensions of CRM allow a powerful communication channel that turns into an excellent source of consumer data and their preferences (Almeida et al., 2017). According to Malthouse et al. (2013), CRM dimensions lead to the acquisition of knowledge about the behaviour, attitudes, and thoughts of the consumer, facilitating the entire value chain management. Gummesson (2011) stated that CRM dimensions

are specific business management mechanisms that allow for maintaining and improving the relationship with the consumer by focusing on relationship marketing, advertising, knowledge, and information management. Moreover, with the increasing use of social networks as a tool for acquiring information, the company is allowed to react quickly to questions of consumer interest and counter-argue negative information, thus having social CRM as a means of providing good business management (Siriwardana and Dissanayake, 2018). Consequently, Lee Thomas et al. (2011) suggested that strategically aligned CRM relationships can improve positive WOM recommendations. Thereby, the following hypothesis is proposed:

H1: CRM dimensions are positively associated with word-of-mouth.

By storing relevant information, CRM dimensions make it possible to fill in the flaws found in products and internal processes to meet customer expectations, increasing customer satisfaction (Almeida et al. 2017). CRM allows the company to adapt its offer according to the needs and expectations of the consumer, customizing the commercial relations between the customer and the company to satisfy the customer and establishing long-term partnerships. CRM emerges as a tool capable of providing a competitive advantage for companies, as it promotes customer satisfaction and loyalty (dos Santos and Leite, 2022). In view of the above, the following hypothesis is formulated:

H2: CRM dimensions are positively associated with customer satisfaction.

Rios (2006) argues that the use of CRM, associated with a relationship marketing mechanism, culminates in customer retention. The adoption of CRM systems is associated with increased customer confidence in the brand and customer retention (Lelis et al., 2021). CRM, when used as a tool to facilitate the efficient management of information, provides a relevant competitive advantage, allowing the company to transform this information into key actions for attracting and retaining customers (Crivellaro, 2018). Becker et al. (2009) proposed that customer retention is a fundamental purpose of CRM. Crivellaro (2018) defends that with CRM implementation, the company is provided with a better understanding of the customer, as it facilitates understanding issues such as the focus, need and objective of each customer in the relationship with the company. Thus, it is possible for the company to create more customized offers for each customer, reaching their interests and anticipating their needs (Crivellaro, 2018). Considering the above, the following hypothesis is proposed:

H3: CRM dimensions are positively associated with customer retention.

CRM integrates customer-oriented activities, including processes, systems, and technologies, which, using emerging media applications, include customers in collaborative conversations, improving their relationships (Trainor et al., 2014). The coordination between customer relationship strategy and innovation allows companies to gain insights into consumers' practices and succeed in innovation. Sadik-Rozsnyai (2016) argues that the willingness to pay for high-tech innovations is positively related to perceived value, highlighting the impact of innovation in virtual communication (WOM). According to Heller Baird and Parasnis (2011),

CRM emerges as a new approach that explores social networks as a unique source of information for innovation. Given the above and considering that previous studies have endorsed that CRM positively influences WOM, this study intends to investigate whether innovation orientation can intensify this relationship. As such, the following hypothesis is formulated:

H4a: Innovation orientation positively moderates the relationship between CRM dimensions and word-of-mouth.

The ability to innovate provides a crucial competitive advantage for the company, which through the information collected in the CRM database, can offer a more competitive product or service that stands out through innovation, contributing to increased customer satisfaction (Al-Battaineh, 2018). According to Vasconcelos et al. (2021), innovation is a current market need that allows differentiation between companies with similar products. Based on the above and considering previous studies (e.g. dos Santos and Leite, 2022) that argue that CRM positively influences customer satisfaction, this study investigates whether innovation orientation can intensify this relationship. For this purpose, the following hypothesis is proposed:

H4b: Innovation orientation positively moderates the relationship between CRM dimensions and customer satisfaction.

Lin et al. (2010) defend the existence of a relationship between CRM and innovation capacity. With the implementation of CRM, companies can develop strong and long-term relationships and customer retention, which can be influenced by the company's ability to innovate. According to Foroudi et al. (2016), innovation capacity stimulates the ability to build customer loyalty and retention. Thus, CRM systems represent a stimulus for process improvements, mainly customer information-related, improving long-term retention relationships (Koziol et al., 2014). Vasconcelos et al. (2021) argue that implementing innovation strategies allows greater flexibility to attract and retain customers. Consequently, and considering previous studies claiming that CRM positively influences consumer retention (e.g. Crivellaro, 2018), this study intends to investigate whether innovation orientation can intensify this relationship. Thus:

H4c: Innovation orientation positively moderates the relationship between CRM dimensions and customer retention.

According to Chahal and Bala (2010), the relationship between the consumer and the brand is reflected in the consumers' actions, interactions between them and their environment (WOM), and the consumers' activities with the brand. The positive associations intrinsic to brand equity promote positive WOM since the company using the information collected through the implementation of customer relationship management strategies, can customize the offer to the customer needs (Chahal and Bala, 2010; Huang et al., 2016). The brand awareness, achieved as a result of the previously created customer relationships, increases brand equity, which can positively impact WOM and significantly influence consumer purchase intention (Adhyka et al., 2019). Considering that previous studies claim that CRM positively

influences WOM (e.g. Lee Thomas et al., 2011), this study intends to investigate whether brand equity can intensify this relationship. More formally:

H5a: Brand equity positively moderates the relationship between CRM dimensions and word-of-mouth.

Information technologies, organizational alignment and service quality in customer relationship management contribute significantly to brand equity and lead to customer satisfaction (Lingavel, 2015). Pinto (2019) concluded that there is an evident relationship between the brand equity perceived by consumers and their degrees of satisfaction, commitment and brand trust. Al-Suraihi et al. (2020) defended that CRM influences consumers' buying behaviour through factors such as sales, technology, customer service and customer satisfaction. These factors influence customers' perceptions in the long term, contributing to an increase in brand equity. Therefore, considering that previous studies concluded that CRM positively influences customer satisfaction, this study intends to investigate whether this relationship can be intensified by brand equity. More formally:

H5b: Brand equity positively moderates the relationship between CRM dimensions and customer satisfaction.

Becker et al. (2009) recognized three fundamental objectives of a customer relationship management process: acquisition, maintenance and customer retention. According to Lingavel (2015), CRM is widely used by companies for purposes such as customer acquisition and retention. In addition to these benefits, CRM also allows for building brand equity and a good reputation to foster customer retention (Lingavel, 2015). Considering that CRM positively influences customer retention, this study intends to investigate whether this relationship can be intensified by brand equity. Thus:

H5c: Brand equity positively moderates the relationship between CRM dimensions and customer retention.

After the previously developed hypotheses, the following conceptual model is presented in Figure 1.

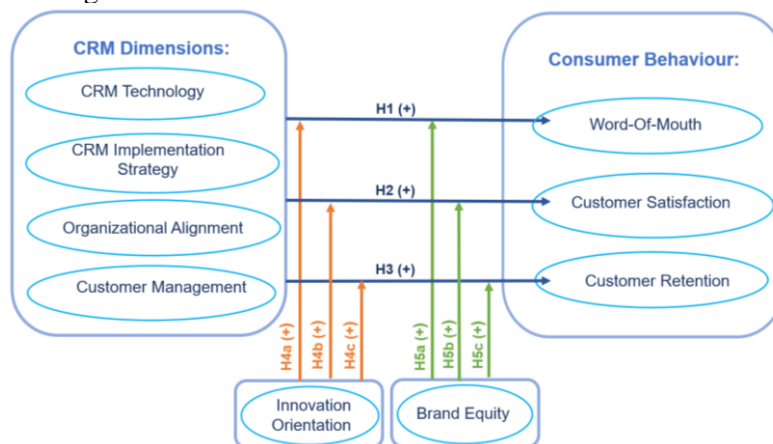


Figure 1: Conceptual Model

Research Methodology

Data were collected through an online survey. In the first phase, the questionnaire was sent to companies listed on the Informa DandB - Dun and Bradstreet database that met the following criteria: more than 50 workers and had been operating in the Portuguese market for at least 5 years. The survey was sent to companies listed on the SABI Bureau Van Dijk database in a second phase, considering the same criteria. Participation in this study was entirely voluntary. The survey was implemented during the months of January and February 2022, and 128 valid responses were collected. Before its implementation, the questionnaire was pre-tested to verify its clarity and ability to be understood by the respondents (Hunt, Richard, Sparkman, and Wilcox, 1982). The pre-test was carried out on eight companies with similar characteristics to those of the sample (Tull and Hawkins, 1976), resulting in a small writing correction.

In terms of sample characterization, 46.1% of the companies have more than 25 years of activity, and 49.2% have more than 500 workers. The activity sectors with the strongest representation in the sample are information technology (13.3%), textile and retail (10.2%) and telecommunications (9.4%). Regarding sales volume, 25.8% of the respondent companies have an average annual sales volume of more than 1 billion euros, 24.2% a sales volume of fewer than 10 million Euros and 21.1% between 500 and 999 million Euros.

To test the presence of non-response bias, the procedure proposed by Armstrong and Overton (1977) was applied. A comparison between the first and last respondents, defined as the first 75% and the last 25% to answer the questionnaires, respectively, in all the key variables of the model and the variables characterizing the sample, was implemented. The results allow us to conclude that there are no significant differences between early and late respondents.

To control the presence of common method bias, the authors followed the procedures recommended by Podsakoff et al. (2003), namely guaranteeing the anonymity of respondents, certifying the lack of knowledge of the respondents regarding the study's conceptual model and assuring the use of a simple and clear language in the questionnaire. Additionally, exploratory factor analysis was performed to assess the presence of common method bias (Podsakoff and Organ, 1986). The results show that no single factor explains most of the data variance. This analysis resulted in six factors with eigenvalues greater than one, where the first-factor accounts for approximately 47% of the data variance.

To measure the four dimensions of CRM, namely customer management, organizational alignment, CRM technology and CRM strategy implementation, the measures proposed by Dalla Pozza, Goetz, and Sahut (2018) were used. WOM was measured with a scale proposed by Hong and Yang (2009), satisfaction with a scale developed by Oliver (2010) and retention with a scale proposed by Henning-Thurau (2004). A scale developed by Yoo, Donthu and Lee (2000) was used to measure brand equity. Innovation orientation was measured using a scale proposed by Hurley and Hult (1998). For all measures, a 7-point Likert scale was used (ranging from

“1=strongly disagree” to “7=strongly disagree”). All the items used to measure the conceptual model variables are presented in Table 1.

Research Results

Data were analysed using structural equation modelling with partial least squares (PLS-SEM) using SMARTPLS 4.0 M4 software (Ringle, Wende, and Becker, 2022), as it allows to calculate complex models and identifying relationships between variables determined through various items, without creating estimation problems (Hair et al., 2017). CRM was assessed as a second-order construct using Dalla Pozza, Goetz and Sahut's (2018) previously validated four first-order dimensions: CRM technology, CRM strategy implementation, organizational alignment and customer management. To assess the quality of the measurement model, the indicator reliability was evaluated (Hair et al., 2017). The standardized factor loadings of all items (see Table 1) exceed the reference value of 0.70 (Bagozzi and Yi, 2012), providing evidence of the individual indicator's reliability.

Table 1. Measurement scales

Scale items	Factor Loading
CRM technology ($\alpha=0.947$; $CR=0.966$; $AVE=0.904$)	
We have implemented applications such as data warehousing, analytics, knowledge management, and business intelligence, OLAP (Analytical CRM).	0.952
We have implemented applications such as campaign management, sales force automation, call centre optimization, and incentive management (Operational CRM).	0.959
We have implemented applications such as content management, personalization, mobile CRM solutions, website implementation	0.941
CRM strategy implementation ($\alpha=0.847$; $CR=0.897$; $AVE=0.687$)	
The top management is involved in defining the customer-oriented strategy at the company level but not at the departmental level (top management involvement).	0.705
The company created objectives and set customer-oriented metrics for the CRM project, such as retention, acquisition rate and customer satisfaction (performance management).	0.857
The company created a unified view of the customer across the enterprise by creating a shared data warehouse (data strategy).	0.874
The company focuses on the customer's experience.	0.867
Organizational alignment ($\alpha=0.924$; $CR=0.946$; $AVE=0.814$)	
Processes have been synchronized to maximize value for the customer (process synchronization).	0.893
Processes have been re-engineered and aligned with customer-based objectives.	0.924
Employees have been trained and coached to maximize value for the customer.	0.900

Incentives and rewards have been defined to empower customer-focused behaviour.	0.893
Customer management ($\alpha=0.855$; CR=0.902; AVE=0.696)	
Customers have been tiered according to their value for the enterprise.	0.806
Customers have been grouped according to their needs (differentiation by needs).	0.807
We have introduced customer portfolio (segment) managers.	0.829
We have implemented different strategies for the different stages of the customer lifecycle (acquisition, growth and retention) (lifecycle management).	0.893
Innovation orientation ($\alpha=0.940$; CR=0.961; AVE=0.892)	
We actively seek innovative product and service ideas.	0.934
Innovation is readily accepted in program/project management.	0.953
Innovation in our organization is encouraged.	0.947
Brand equity ($\alpha=0.955$; CR=0.968; AVE=0.883)	
My customers prefer to purchase my product/service instead of any other, even if they are the same.	0.929
Even if another brand has the same features as my company's brand, my customers would prefer to buy from my company.	0.977
If there is another brand as good as my company's brand, my customers prefer to buy from my company.	0.961
If another brand is not different from my company's brand in any way, my customers continue to prefer to buy from my company.	0.890
WOM ($\alpha=0.932$; CR=0.951; AVE=0.829; R²=0.299)	
My customers recommend my company to friends.	0.934
My customers recommend my company to family/relatives.	0.920
My customers get their friends/family to buy my products.	0.925
My customers talk favourably about my company.	0.863
Customer satisfaction ($\alpha=0.913$; CR=0.958; AVE=0.920; R²=0.467)	
Overall, my customers have a high level of satisfaction.	0.961
My product/service meets or exceeds my customers' expectations, generating a good level of satisfaction.	0.958
Customer retention ($\alpha=0.778$; CR=0.900; AVE=0.818; R²=0.555)	
My company is the first choice when customers select a similar product/service.	0.894
My customers tend to repeat the purchase of my product/service.	0.914

To assess convergent validity, Cronbach's Alphas (α), composite reliability and the AVE (Average Variance Extracted) (Fornell and Larcker, 1981) were evaluated. All variables present Cronbach's Alphas values higher than 0.7 (Hair et al., 2017), evidencing internal consistency and content validity. The composite reliability values for all constructs exceed the cut-off value of 0.7 (Bagozzi and Yi, 2012). Additionally, all the variables presented values for AVE above the minimum threshold of 0.50 (Fornell and Larcker, 1981). Consequently, these results confirm convergent validity. To assess discriminant validity, the approach recommended by

Fornell and Larcker (1981) was implemented. Since the square root of the AVE for each construct exceeds the correlations of that specific construct with any other variable in the study (Table 2), discriminant validity is confirmed.

Table 2. Correlation matrix

	1	2	3	4	5	6	7	8	9	10
1. Org. Alig.	0.902									
2. Brand Equity	0.543	0.940								
3. CRM	0.938 ^a	0.581	0.783							
4. CRM strat.	0.831 ^a	0.504	0.912 ^a	0.829						
5. Cust. manag.	0.777	0.549	0.883 ^a	0.731	0.834					
6. Innovation	0.550	0.444	0.561	0.522	0.466	0.945				
7. Retention	0.554	0.727	0.556	0.466	0.522	0.415	0.904			
8. Satisfaction	0.691	0.671	0.683	0.628	0.597	0.510	0.762	0.959		
9. CRM tech.	0.702	0.476	0.838 ^a	0.692	0.651	0.456	0.431	0.502	0.951	
10. WOM	0.507	0.692	0.518	0.484	0.436	0.437	0.637	0.637	0.410	0.911

Note: The scores on diagonal are the square roots of the AVE. ^aLower-order components of the higher-order construct CRM.

The model fit was evaluated by assessing the explained variance of the dependent variables (R^2) (Hair et al., 2017). All the dependent variables of the conceptual model present a value of the explained variance (R^2) higher than the minimum threshold of 10 percent (Falk and Miller, 1992). The results of the hypothesized relationships are presented in Table 3. CRM dimensions are positively associated with WOM, supporting H1. Similarly, CRM dimensions are positively associated with customer satisfaction, supporting H2. Moreover, CRM dimensions are positively associated with customer retention, thus supporting H3. Concerning hypotheses H4a, H4b and H4c, the moderating effect of innovation orientation on the relationships between CRM dimensions and WOM, customer satisfaction and customer retention was non-significant, and consequently, there was no support for H4a, H4b and H4c. However, although the moderating effect of innovation orientation was not statistically supported, the positive direct effect of innovation orientation on the consumer behavioural variables is supported, suggesting that stronger levels of innovation orientation are associated with higher levels of positive WOM, customer satisfaction and retention. Regarding hypotheses H5a, H5b and H5c, the moderating effect of brand equity on the relationships between CRM dimensions and the consumer behavioural variables was non-significant. However, although the moderating effect of brand equity was not statistically supported, the positive direct effect of brand equity on the consumer behavioural variables is supported, suggesting brand equity enhances WOM, customer satisfaction and retention.

Table 3. Results of the structural model

Hypotheses	T-value	Path Coefficient	Conclusion
H1: CRM dimensions are positively associated with word-of-mouth.	5.965***	0.516	Supported
H2: CRM dimensions are positively associated with customer satisfaction.	11.417***	0.683	Supported
H3: CRM dimensions are positively associated with customer retention.	7.899***	0.561	Supported
H4a: Innovation orientation positively moderates the relationship between CRM dimensions and word-of-mouth.	0.194	0.846	Not Supported
H4b: Innovation orientation positively moderates the relationship between CRM dimensions and customer satisfaction.	0.312	0.755	Not Supported
H4c: Innovation orientation positively moderates the relationship between CRM dimensions and customer retention.	0.032	0.974	Not Supported
H5a: Brand equity positively moderates the relationship between CRM dimensions and word-of-mouth.	0.890	0.373	Not Supported
H5b: Brand equity positively moderates the relationship between CRM dimensions and customer satisfaction.	0.825	0.409	Not Supported
H5c: Brand equity positively moderates the relationship between CRM dimensions and customer retention.	0.007	0.994	Not Supported

* $p < .05$; ** $p < .01$, *** $p < .001$.

Discussion and Conclusion

Main findings

This research aimed to contribute to a better understanding of the influence of CRM strategies on consumer behaviour. It is important to point out that the current study integrates the different dimensions of CRM into a single conceptual model instead of carrying out an isolated analysis. Moreover, the current study intended to contribute to overcoming the lack of studies in the CRM literature focused on the company's perspective since a large part of the previous studies were carried out from the consumer perspective. Our findings demonstrate that CRM dimensions, namely customer management, organizational alignment, CRM technology and CRM strategy implementation, significantly and positively influence WOM (H1). The present study thus confirms the positive influence exerted by CRM dimensions on WOM, as defended in previous literature (Hakim et al., 2017).

Moreover, our results demonstrate that an integrated implementation of CRM dimensions positively influences customer satisfaction (H2). This result aligns with previous literature, emphasising the importance of improving the efficiency of CRM dimensions to increase customer satisfaction. Almeida et al. (2017) point out that CRM dimensions help to overcome gaps in products and internal processes, enabling the organizational ability to meet customer expectations and increase customer satisfaction. Thus, the present study concludes that CRM leverages customer satisfaction.

Furthermore, the results confirm that an integrated implementation of CRM dimensions positively and significantly influences customer retention (H3). This result is aligned with the study of Crivellaro (2018), who defended the CRM's role as a source of competitive advantage for attracting and retaining customers. Therefore, CRM allows the development of more efficient strategies to retain customers (Madhovi and Dhliwayo, 2017).

The current study complemented the analysis of an integrated implementation of CRM dimensions with the investigation of the role of two extremely strategically relevant variables, innovation orientation and brand equity, which, however, continue to be scarcely analysed in the literature from the point of view of its relationship with the implementation of a CRM strategy. Although the moderating effect of innovation orientation was not supported, it was possible to confirm that it has a direct positive impact on WOM. This result is aligned with the study of Milaković et al. (2020), who defended the existence of a positive effect of innovation on the propagation of WOM. Furthermore, the present study demonstrated a positive direct effect of innovation orientation on customer satisfaction, as defended by previous studies (Nkemkiafu et al., 2019). In addition, it was possible to validate the existence of a positive direct effect of innovation orientation on customer retention, as predicted by Falahat (2018).

Regarding brand equity, although it was not possible to confirm its moderating effect, the present investigation supported the existence of a direct positive impact on WOM. This result is aligned with the predictions of Sun et al. (2021). Additionally, it was also confirmed the existence of a direct positive relationship between brand equity and customer satisfaction in line with the conclusions of Hsu (2012). Moreover, the relationship between brand equity and customer retention was supported, as previously defended by Marvelous et al. (2019).

Theoretical and managerial implications

The present investigation shows that the dimensions of CRM, namely, customer management, organizational alignment, CRM technology and CRM strategy implementation, work together to improve organizational performance while at the same time improving the customer experience. This contributes to generating favourable customer behaviour, since the customers' expectations are exceeded, increasing their satisfaction, stimulating the company's recommendations to its environment (WOM) and contributing to long-term retention.

Consequently, companies are suggested to implement CRM strategies in their organizations, to improve their performance, not only in terms of customer satisfaction and retention but also in increased sales due to positive WOM. Additionally, it should be noted that the orientation towards innovation has a direct relationship with WOM, satisfaction and retention, suggesting that it is fundamental to promote innovation, whether of processes or products. Furthermore, brand equity performs a crucial role in the generation of positive outcomes in WOM, satisfaction and retention, stimulating the company's competitiveness.

In terms of implications for management, the present study allows us to conclude that companies should carry out an integrated implementation of the different dimensions of CRM. Therefore, to generate a positive impact on consumer behaviour, implementing the technological component of CRM is not enough. There should be an integrated execution of CRM implementation strategy, customer management and organizational alignment supported by technologies. It is therefore concluded that companies should consider the importance of implementing the underlying dimensions of a CRM strategy and how they contribute to improving the company's performance by increasing efficiency in process management, leveraging the ability to meet the customers' needs and stimulating long-term customer retention. Additionally, considering the impact of CRM on promoting positive WOM, which facilitates the acquisition of new customers, the company's market growth can be fostered using CRM as a competitive advantage. It is also relevant to bear in mind that the company's orientation towards innovation and brand equity can act as important factors in the improvement of customers' behaviour.

Limitations and future research

All studies have limitations, and this one is no exception. The fact that the study is cross-sectional and uses self-reported data supplied by one source can imply the risk of contamination by common method variance. The procedural remedies recommended by Podsakoff et al. (2003) were implemented to avoid potential sources of method bias, and the statistical tests implemented demonstrated that common method variance is not a major concern. Nevertheless, future research could implement a different methodological approach, namely a longitudinal design, to investigate how the effects of CRM dimensions on consumer behaviour evolve over time. Therefore, future studies should consider the CRM dimensions' temporal integration to investigate synergies over a given period and if the temporal space somehow influences consumer behaviour. Additionally, the present study focused only on companies operating in the Portuguese market, thus limiting the power of generalization to other contexts. To this end, conducting further studies allowing cross-cultural comparisons would be interesting. Furthermore, future investigations could consider the role of other variables as moderators to determine which factors can intensify the relationships between CRM dimensions and consumer behaviour. For this purpose, it would be interesting to extend the study to variables such as organizational culture or employee incentives to understand whether these would moderate the relationship between CRM and consumer behaviour.

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References

- Adhyka, N., Lita, R. P. and Semiarty, R., (2019). Linkage Model of Brand Equity and Word of Mouth Toward Purchase Intention in Surgery Speciality Hospital Ropanasuri Padang, Indonesia. *Indian Journal of Public Health Research and Development*, 10(9).
- Almeida, G. R., Cirqueira, D. R. and Lobato, F. M., (2017). Improving Social CRM through electronic word-of-mouth: a case study of ReclameAqui. In *Anais Estendidos do XXIII Simpósio Brasileiro de Sistemas Multimídia e Web*, 107-110.
- Al-Suraihi, W., Al-Suraihi, A., Ibrahim, I., Al-Tahitah, A. and Abdulrab, M., (2020). The Effect of Customer Relationship Management on Consumer Behavior: A Case of Retail Industry in Malaysia. *International Journal of Management and Human Science*, 4(3), 32-40.
- Armstrong, J. S., Overton, S. T., (1977). Estimating Nonresponse Bias in Mail Surveys. *Journal of Marketing Research*, 396-402.
- Azad, N., Ahmadi, F., (2015). The customer relationship management process: its measurement and impact on performance. *Uncertain Supply Chain Management*, 3(1), 43-50.
- Bagozzi, R. P., Yi, Y., (2012). Specification, Evaluation, And Interpretation Of Structural Equation Models. *Journal of the Academy of Marketing Science*, 8-34.
- Becker, J. U., Greve, G. and Albers, S., (2009). The impact of technological and organizational implementation of CRM on customer acquisition, maintenance, and retention. *International Journal of Research in Marketing*, 26(3), 207-215.
- Beer, M., Eisenstat, R. A., (1996). Developing an Organization Capable of Implementing Strategy and Learning. *Human Relations*, 49(5).
- Byun, J., Jang, S., (2019). Can signaling impact customer satisfaction and behavioral intentions in times of service failure?: Evidence from open versus closed kitchen restaurants. *Journal of Hospitality Marketing and Management*, 28(7), 785-806.
- Chahal, H., Bala, M., (2010). Confirmatory study on brand equity and brand loyalty: a special look at the impact of attitudinal and behavioural loyalty. *The Journal of Business Perspective*, 14(1-2), 1-12.
- Chang, L., Lee, Y. J. and Huang, C. C. L. (2012). The influence of E-Word-Of-Mouth on the Consumer's Purchase Decision: a Case of Body Care Products. *Journal of Global Business Management*, 6, 1-7.
- Chen, I. J., Popovich, K., (2003). Understanding customer relationship management (CRM): People, process and technology. *Business Process Management Journal*, 9(5), 672-688.
- Crivellaro, F. F., (2018). *Gestão da informação em ferramentas de CRM para captação e retenção de clientes*.
- Dalla Pozza, I., Goetz, O. and Sahut, J. M., (2018). Implementation effects in the relationship between CRM and its performance. *Journal of Business Research*, 89, 391-403.
- dos Santos, K. H., Leite, Y. G. d. S., (2022). Impacto do sistema CRM e como as empresas atuais utilizam as ferramentas para um melhor relacionamento com o cliente. *Gestão de*

- Marketing: Construção de estratégias mercadológicas e direcionamento de objetivos institucionais*. 1ªed. 2(3), 33-46.
- Ernst, H., Hoyer, W. D., Krafft, M. and Krieger, K., (2011). Customer relationship management and company performance - The mediating role of new product performance. *Journal of the Academy of Marketing Science*, 39(2), 290–306.
- Falahat, M., Tehseen, S. and Van Horne, C. (2018). Entrepreneurial innovativeness and its impact on SMEs' performances. *International Journal of Entrepreneurship*, 22(3), 1-9.
- Falk, R. F., Miller, N. B., (1992). *A Primer for Soft Modelling*. Akron, OH: U. of A. Press, Ed.
- Fornell, C., Larcker, D. F., (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39–50.
- Foroudi, P., Jin, Z., Gupta, S., Melewar, T. C. and Foroudi, M. M. (2016). Influence of innovation capability and customer experience on reputation and loyalty. *Journal of Business Research*, 69(11), 4882-4889.
- Giese, J. L., Cote, J. A., (2000). Defining consumer satisfaction. *Academy of Marketing Science Review*, 1(1), 1-22.
- Gummesson, E., (2011). *Total relationship marketing*. Routledge, 3rd edition.
- Guping, C., Cherian, J., Sial, M. S., Mentel, G., Wan, P., Álvarez-Otero, S. and Saleem, U., (2021). The relationship between CSR communication on social media, purchase intention, and e-wom in the banking sector of an emerging economy. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(4), 1025-1041.
- Hair, J. F., Hult, G. T. M., Ringle, C. and Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed. Sage, Thousand Oaks.
- Hakim, L., Ujianto and Susanti N., (2017). Influence of Customer Relationship Management, Brand Equity, Perceived Product Quality, Perceived Price on Customer Value and Purchase Intention. *International Journal of Economics and Finance*, 9(7), 122-131.
- Heller Baird, C., Parasnis, G., (2011), From social media to social customer relationship management, *Strategy and Leadership*, 39(5), 30-37.
- Hong, S. Y., Yang, S. U., (2009). Effects of reputation, relational satisfaction, and customer-company identification on positive word-of-mouth intentions. *Journal of Public Relations Research*, 21(4), 381-403.
- Hsu, K. T., (2012). The advertising effects of corporate social responsibility on corporate reputation and brand equity: Evidence from the life insurance industry in Taiwan. *Journal of Business Ethics*, 109(2), 189–201.
- Huang, S., Fang, S., Fang, S. C. and Huang, C., (2016). The influences of brand benefits on brand loyalty: Intermediate mechanisms. *Australian Journal of Management*, 41(1), 141-160.
- Hunt, S. D., Richard, D., Sparkman, J. and Wilcox, J. B., (1982). The Pretest in Survey Research: Issues and Preliminary Findings. *Journal of Marketing Research*, 269–273.
- Katz, E., Lazarsfeld, P. F., (2017). *Personal influence: The part played by people in the flow of mass communications*. Routledge.
- Keramati, A., Mehrabi, H. and Mojir, N., (2010). A process-oriented perspective on customer relationship management and organizational performance: An empirical investigation. *Industrial Marketing Management*, 39(7), 1170–1185.
- Kim, H., Hanssens, D. M., (2017). Advertising and Word-of-Mouth Effects on Pre-launch Consumer Interest and Initial Sales of Experience Products. *Journal of Interactive Marketing*, 37(August), 57–74.

- Kim, J., Lee, H. and Lee, J., (2020). Smartphone preferences and brand loyalty: A discrete choice model reflecting the reference point and peer effect. *Journal of Retailing and Consumer Services*, 52, 101907.
- Kotler, P., (2003). *Marketing Management*. 11th Edition, Prentice-Hall, Upper Saddle River.
- Krizanova, A., Gajanova, L. and Nadanyiova, M., (2018). Design of a CRM level and performance measurement model. *Sustainability*, 10(7), 2567.
- Kumar, V., Reinartz, W., (2018). *Customer Relationship Management*. Concept, Strategy, and Tools (3rd ed.). Springer.
- Kyei, D. A., Bayoh, A. T. M., (2017) Innovation and Customer Retention in the Ghanaian Telecommunication Industry. *International Journal of Innovation*, 5(2), 71-183.
- Lee Thomas, M., Mullen, L. G. and Fraedrich, J., (2011). Increased word-of-mouth via strategic cause-related marketing. *International Journal of Nonprofit and Voluntary Sector Marketing*, 16(1), 36-49.
- Lin, R., Chen, R. and Chiu, K., (2010). Customer relationship management and innovation capability: an empirical study. *Industrial Management and Data Systems*, 110(1), 111-133.
- Lingavel, D., (2015). Impact of customer relationship management on brand equity: Private hospitals in Jaffna. *European Journal of Business and Management*, 7(4), 69-79.
- Madhovi, P., G., Dhliwayo, S., (2017). The relationship between customer relationship management (CRM) and performance in the hotel industry. *African Journal of Hospitality, Tourism and Leisure*, 6(1), 1-13.
- Malthouse, E. C., Haenlein, M., Skiera, B., Wege, E. and Zhang, M., (2013). Managing customer relationships in the social media era: Introducing the social CRM house. *Journal of interactive marketing*, 27(4), 270- 280.
- Marvelous, M., Asphat, M. and Roy Malon, S., (2019). The Influence of Customer-Based Brand Equity on Customer Satisfaction and Brand Loyalty: Evidence from South African Mobile Telecommunications Industry. *International Journal of Business and Management Studies*, 11(2), 32-47.
- 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*, 49(8), 913-945.
- Milaković, K., Anić, I. D. and Mihić, M., (2020). Drivers and consequences of word of mouth communication from the senders' and receivers' perspectives: the evidence from the Croatian adult population. *Economic research-Ekonomska istraživanja*, 33(1), 1667-1684.
- Nguyen, B., Mutum, D. S., (2012). Customer relationship management: advances, dark sides, exploitation and unfairness. *International Journal of Electronic Customer Relationship Management*, 6(1), 1-19.
- Nkemkiafu, A., Asah, N., Felix, N. and Sylvie, F., (2019). Strategic Process Innovation Practices On Customer Satisfaction and Market Share. *Journal of Marketing Development and Competitiveness*, 13(2).
- Oliver, R. L., (2010). *Satisfaction: A behavioral perspective on the consumer* (2nd ed.). New York, NY: Routledge.
- Payne, A., Frow, P., (2005) A strategic framework for customer relationship management. *Journal of Marketing*, 69(October), p. 167-176.
- Peppers, D., Rogers, M., (2004). *Managing customer relationships. A strategic framework*. New Jersey: John Wiley and Sons (516 pp.).

- Pinto, C. M. L. M., (2019). *A influência do branding e da comunicação no brand attachment e comportamento do consumidor: um caso de estudo Super Bock* (Doctoral dissertation).
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y. and Podsakoff, N. P., (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *The Journal of Applied Psychology*, 879–903.
- Podsakoff, P. M., Organ, D. W., (1986). Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management*, 531–544.
- Pohludka, M., Štverková, H., (2019). The best practice of CRM implementation for small and medium-sized enterprises. *Administrative Sciences*, 9(1), 22.
- Rafiki, A., Hidayat, S. E. and Al Abdul Razzaq, D., (2019). CRM and organizational performance: A survey on telecommunication companies in Kuwait. *International Journal of Organizational Analysis*, 27(1), 187-205.
- Raman, P., Wittmann, M. and Rauseo, N., (2006). Leveraging CRM for sales: the role of organizational capabilities in successful CRM implementation. *Journal of Personal Selling and Sales Management*, 26(1), 39-53.
- Rapp, A., Trainor, K. J. and Agnihotri, R. (2010). Performance implications of customer linking capabilities: Examining the complementary role of customer orientation and CRM technology. *Journal of Business Research*, 63(11), 1229–1236.
- Ringle, C.M., Wende, S. and Becker, J.-M. (2022). *SmartPLS 4. Oststeinbek: SmartPLS GmbH*, <https://www.smartpls.com>.
- Sadik-Rozsnyai, O., (2016). Willingness to pay for innovations: An emerging European innovation adoption behaviour. *European Journal of Innovation Management*, 19(4), 568-588.
- Selamat, M. A., Windasari, N. A., (2021). Chatbot for SMEs: Integrating customer and business owner perspectives. *Technology in Society*, 66, 101685.
- Siriwardana, A., Dissanayake, D. M. R., (2018). Social customer relationship management (SCRM) in contemporary business era. *International Journal Business and Management Invention (IJBMI)*, 7(9), 59-64.
- Solomon, M. R., (2017). *Consumer behavior: Buying, having and being* (12th ed.). Prentice Hall.
- Sun, Y., Gonzalez-Jimenez, H. and Wang, S., (2021). Examining the relationships between e-WOM, consumer ethnocentrism and brand equity. *Journal of Business Research*, 130, 564-573.
- Trainor, K., Andzulis, J., 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*, 67, 1201–1208.
- Tull, D.S., Hawkins, D.I., (1976). *Marketing Research: Meaning, Measurement, and Method: a Text with Cases*. New York: Macmillan.
- Vasconcelos, R., Santos, J. and Andrade, J., (2021). Inovação em Micro e Pequenas Empresas: Recursos e Capacidades, *Revista de Administração Contemporânea*, 25(2).
- Weerasinghe, K. D. R., (2018). Impact of content marketing towards the customer online engagement. *International Journal of Research in Business, Economics and Management*, 2(3), 217–224.
- Yoo, B., Donthu, N. and Lee, S., (2000). An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28(2), 195-211.

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*, 33(6), 475-489.

WPLYW WDROŻENIA STRATEGII CRM NA ZACHOWANIA KONSUMENTÓW

Streszczenie: Obecnie firmy starają się poprawić relacje z klientami, inwestując w strategię CRM, aby uzyskać przewagę konkurencyjną i wpłynąć na zachowania konsumentów. Obecne badanie przyczynia się do złagodzenia luki zidentyfikowanej w literaturze, a mianowicie braku zintegrowanego modelu koncepcyjnego, który ocenia efekt połączonego wdrożenia różnych wymiarów składających się na strategię CRM, odpowiednio, zarządzania klientami, dostosowania organizacyjnego, technologii CRM i Wdrażanie strategii CRM, na zachowania konsumentów, zamiast przeprowadzania ich pojedynczej analizy. Dodatkowo niniejsze badanie ma na celu przewyższenie braku badań w literaturze CRM skoncentrowanych na perspektywie firmy, ponieważ duża część dotychczasowych badań była prowadzona z perspektywy konsumenta. Wśród portugalskich firm przeprowadzono ankietę internetową, w której zebrano 128 ważnych odpowiedzi. Dane analizowano przy użyciu modelowania równań strukturalnych z częściowymi najmniejszymi kwadratami (PLS-SEM). Nasze odkrycia pokazują, że zintegrowane wdrożenie wymiarów CRM znacząco i pozytywnie wpływa na WOM, zadowolenie i utrzymanie klientów. Ponadto udało się potwierdzić, że orientacja na innowacje i wartość marki bezpośrednio wpływają na zachowania konsumentów. Dlatego niniejsze badanie pokazuje, że wymiary CRM, a mianowicie zarządzanie klientami, dostosowanie organizacyjne, technologia CRM i wdrażanie strategii CRM, współpracują ze sobą w celu poprawy doświadczenia klienta.

Słowa kluczowe: CRM (Customer Relationship Management), poczta pantoflowa/marketing szeptany (WOM), satysfakcja, utrzymanie, wartość marki

实施 CRM 战略对消费者行为的影响

摘要: 目前, 公司正试图通过投资 CRM 策略来改善客户关系, 以获得竞争优势并影响消费者行为。目前的研究有助于缩小文献中确定的差距, 即缺乏一个综合的概念模型来评估组合实施构成 CRM 战略的不同维度的影响, 分别是客户管理、组织调整、CRM 技术和 CRM 战略实施, 基于消费者行为, 而不是对他们进行孤立的分析。此外, 目前的研究旨在克服 CRM 文献中缺乏关注公司角度的研究, 因为以前的大部分研究都是从消费者的角度进行的。对葡萄牙公司进行了在线调查, 收集了 128 份有效答复。使用具有偏最小二乘法 (PLS-SEM) 的结构方程模型分析数据。我们的研究结果表明, CRM 维度的集成实施对 WOM、客户满意度和客户保留有显著和积极的影响。此外, 可以确认创新导向和品牌资产直接影响消费者行为。因此, 目前的调查

表明，CRM 的维度，即客户管理、组织调整、CRM 技术和 CRM 战略实施，共同改善客户体验。

关键词：CRM（客户关系管理）、口碑（WOM）、满意度、保留率、品牌资产