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A CRM-based pathway to improving organisational responsiveness: an empirical study

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Abstract

Successful organisations are characterised by how they adjust their organisational practices in response to the external environment. The concept of organisational responsiveness has been used to describe this ability to respond to market changes. The role played by customer relationship management (CRM) in supporting this process is considered, with a focus on the contribution made by how CRM is approached and embedded in the organisation, effective information systems, and staff empowerment. Drawing on data from an empirical study of financial services firms in Brazil, the findings show that improved organisational responsiveness is more effectively enabled by a ‘CRM approach – systems effectiveness – staff empowerment’ pathway, rather than the simple ‘CRM approach – systems implementation’ pathway adopted by many firms. The theoretical and managerial implications of the findings are explored.

Keywords: organisational responsiveness; CRM; IS effectiveness; staff empowerment

Introduction

The ability to adjust organisation practices to reflect the external environment is critical to firms’ success (White *et al.*, 2003; Ketchen *et al.*, 2007; Wei and Wang, 2011). The concept of organisational responsiveness describes an organisation’s ability to respond to market changes through reactive and proactive interactions with the external environment (Homburg *et al.*, 2007). Remaining customer oriented in the face of external change is crucial (Heinrich, 2005). For organisations that base their competitive advantage on how these relationships are managed (Bhatt *et al.* 2010), effective customer relationship management (CRM) is a major consideration (Zikmund *et al.*, 2003; Hult *et al.*, 2005). The approach that is taken to CRM and the way it is operationalised are integral to these firms’ market responsiveness. Understanding how CRM can improve organisational responsiveness to market dynamism is therefore highly relevant to management theory and practice. This issue is addressed by considering the impact on organisational responsiveness of the CRM approach, the empowerment of staff and the information systems that contribute to effective CRM initiatives.

It has been argued (particularly in the literature up to around 2010) that a lack of knowledge about the link between CRM systems and organisational responsiveness has arisen because of a narrow concentration on the role of information technology in the CRM process (Krauss, 2002; Zikmund *et al.*, 2003; Yim *et al.*, 2004), and a poor understanding of how people and processes

are integrated across the organisation (Jain *et al.*, 2007; Finnegan and Currie, 2010). Consequently, authors have recently argued that a greater understanding of how CRM strategies are connected with customers, employees, IT infrastructure and channels is vital (e.g. Sen and Sinha, 2011). Firm-specific resources and capabilities in these areas are needed to aid organisational responsiveness (Mithas *et al.*, 2011; Mithas *et al.*, 2012). A major challenge, therefore, is how best to integrate the people, processes and technology through which CRM is delivered (e.g. Coltman *et al.*, 2011). Information systems are at the heart of this challenge because they support the integration of CRM processes across the organisation (Vrechopoulos, 2004), yet how to effectively empower key organisational members with customer insights has until recently been overlooked. There is now a greater interest in the actions and capabilities of the organisation (Morgan, Slotegraaf and Vorhies, 2009; Jaakkola *et al.*, 2016) and in placing CRM projects in context by paying full attention to the firm's industry sector and customer expectations (Steel, Dubelaar and Ewing, 2013; Chong *et al.*, 2016).

CRM is enabled by a combination of social and structural aspects such as staff empowerment and by following an approach that supports relationship building, as well as technological aspects such as the effectiveness of the IS processes that facilitate customer data use (Dibb and Meadows, 2004; Boulding *et al.*, 2005; Payne and Frow, 2006; Rapp *et al.*, 2010). Using CRM to improve organisational responsiveness therefore requires the careful coordination of how CRM is approached and embedded in the organisation, information systems processes and the empowerment of staff. An integrated framework is proposed that traces the path between the organisations' CRM approach and organisational responsiveness, and sheds light on the relationship among these constructs. Two main research questions guide our enquiry:

- 1) What are the relationships among these elements in the CRM approach?
- 2) What is the impact of these elements on organisational responsiveness?

Reporting empirical findings from the financial services sector, it is shown that supporting staff with relevant CRM approaches and information systems processes empowers them to be responsive to the market. This improved responsiveness is enabled by organisational initiatives following a 'CRM approach-systems-staff empowerment' pathway, rather than the more widely used 'CRM approach-systems' pathway that overlooks the human dimension.

In the next section, the theoretical basis for the research is specified and the theoretical framework and related hypotheses are developed. The study's methodology is then described and the research findings are presented. A discussion of the main results and the theoretical and managerial implications follows. The paper concludes by considering research limitations and relevant areas for future research.

Literature review and development of hypotheses

Organisational responsiveness and CRM

Wei and Wang (2011: 270) highlight organisational responsiveness "as a firm-level strategic action" that represents the firm's market-sensing activities. This responsiveness results from firms' gathering, sharing, and interpretation of environmental information. Kohli and Jaworski

(1990) regard it as related to the concept of market orientation, comprising three essential elements: intelligence generation, intelligence dissemination and responsiveness. The information that is gathered enables firms to adapt to market change (Jaworski *et al.*, 2000; Priem and Butler, 2001). One important dimension of an organisation's approach to the use of information is the extent to which *customer* information is used when responding to customer needs, preferences, and behavioural trends in the market, and how this response is facilitated by information systems. The effective use of such information is potentially an important route through which CRM can contribute to organisational responsiveness, providing the customer-oriented strategy and the necessary systems and processes to marshal environmental information (Wang and Ahmed, 2007). The consequence is that firms are better able to change their organisational practices to address market dynamism (Priem and Butler, 2001; Wang and Ahmed, 2007). Strong organisational responses empower organisations to more effectively answer to competitive change and evolving customer needs (Malik *et al.*, 2012). The business activities that are supported by CRM information systems and processes are ultimately the means for achieving strategic goals and improving business performance (Richard *et al.*, 2007; Kim and Kim, 2009).

CRM has a broad base of origin, with a range of definitions and conceptualizations (Ryals and Payne, 2001; Reinartz *et al.*, 2004; Meadows and Dibb, 2012). Originating mainly from the relationship-based approach to management, the concept rests on an assumption that building and maintaining long-term customer relationships is an effective way to achieve loyalty (Kincaid, 2003; Zablah *et al.*, 2004). CRM draws heavily on ideas from relationship marketing, customer orientation and database management (Osarenkhoe and Bennani, 2007; Plakoyiannaki *et al.*, 2008). Payne and Frow (2005: 168) suggest that "CRM can be defined from at least three perspectives: narrowly and tactically as a particular technology solution, wide-ranging technology, and customer centric". Recent conceptualisations tend to favour a customer centric perspective as it has been recognised that CRM projects that are viewed from a limited technological perspective, or undertaken on a fragmented basis, are likely to fail (Osarenkhoe and Bennani, 2007).

CRM is viewed as the strategic use of information, processes, technology and people to manage the customer relationships with the firm. This definition acknowledges that CRM adoption requires the cross-functional integration of processes, people, and marketing capabilities enabled by information systems (Payne and Frow, 2005; Coltman, 2007; Chang *et al.*, 2010). Specifically, the focus is on *organisational responsiveness* as the subject of analysis concerning marketing capability; *information system effectiveness* as the element enabling process integration; and *staff empowerment* as the human dimension of an effective *CRM approach*. The theoretical framework that is presented examines the linkages between these elements, in order to pinpoint the pathway between CRM approach and organisational responsiveness.

Effective CRM approach

CEOs of multinational corporations worldwide acknowledge that becoming more customer focused, increasing customer satisfaction, and improving customer loyalty are among the primary challenges their companies face (Haverila *et al.*, 2013). CRM leverages customer knowledge to increase loyalty to create value for the firm (Richards and Jones, 2008). Every interaction with a

customer produces data, and many authors have begun to address the potential of new channels such as social media technologies to revolutionize the ways in which firms interact with, engage and manage their customers (e.g. Stone and Woodcock, 2013; Choudhury and Harrigan, 2014; Trainor *et al.*, 2014). A main functionality of CRM information systems is to make inferences from this data so that customer knowledge can be generated from the identification of consuming behaviours, customer profiles, needs and preference patterns (Ling and Yen, 2001). As CRM is essentially customer data intensive (Hansotia, 2002), it would not be possible to implement it without the use of information systems technologies. Even so, approaching CRM as a purely technological solution is a common cause of failure (Rigby *et al.*, 2002; Buttle, 2008); with evidence suggesting that organisational culture is significantly related to the achievement of desirable CRM outcomes (Iriana *et al.*, 2013). Other impediments include a lack of executive sponsorship, too much organisational change, mismatched technology infrastructure (Bull, 2003), and the lack of an actionable CRM strategy (Rigby *et al.*, 2002; Bohling *et al.*, 2006; Buttle, 2008; Mueller and Nyfeler, 2011; Chuang and Lin, 2013). On the other hand, CRM can be highly effective if implemented in a strategic and holistic manner. Hence, Chuang and Lin (2013) suggest that infrastructure capability, especially when coupled with a customer-orientated business strategy, relates positively to the quality of customer information, which enhances customer relationships and the overall firm performance.

Many scholars have acknowledged that CRM requires a customer centric strategy, whether the organisation concerned is small or large (Alshawi *et al.*, 2011; Harrigan *et al.*, 2011), and that CRM is a strategic matter that stretches beyond the application of information technology (Ryals, 2003; Zikmund *et al.*, 2003; Zablah *et al.*, 2004; Payne, 2006; Pedron and Saccol, 2009). Rigby and Ledingham (2004), for example, suggest that CRM adoption and implementation should be based upon clearly defined strategic thinking; and should involve a company-wide effort that starts with customer-oriented strategies, which are then implemented with the support of enabling information systems and associated processes (Ling and Yen, 2001). Ko *et al.* (2008) note that the CRM adoption process is influenced by a range of organisational characteristics, including the maturity of information systems. Graf *et al.* (2013) explore the levels of customer satisfaction that result from outsourcing CRM activities, concluding that the firms that “knew the centrality of their CRM and acted accordingly had more satisfied customers than those who did not” (p. 79). Along these lines, other authors have looked at the complementary role of technological capabilities and customer orientation at the centre of a firm’s strategy and how these factors impact on information processing (Rapp *et al.*, 2010; Chuang and Lin, 2013). These studies show that infrastructure capability, especially when coupled with a customer-orientated business strategy, relates positively to the quality of customer information, which enhances customer relationships and thereby positively impacts on overall firm performance.

The first hypothesis examines the relationship between CRM approach and the effectiveness of the information systems processes. CRM approach is considered in this paper to be the extent to which CRM is accepted and is embedded within the organisation. For instance, Ko *et al.* (2008) find evidence of the relationship between CRM adoption and use of CRM technologies, and Karakostas *et al.* (2005) advocate the integration of CRM data and applications, IS infrastructure and business processes in order to achieve competitive advantage. The following hypothesis is proposed:

H₁. The CRM approach has a positive impact on the effectiveness of information systems and related processes that are implemented to improve customer relationships.

The human dimension is another important component because the relationships between the firm and its customers are central to the CRM approach (Pedron and Saccol, 2009). The shape and character of these relationships are reflected in the actions taken to serve customers and in how information technology is used by staff to achieve these ends. The responsibility for customer orientation is best shared across functions (Kennedy *et al.*, 2003; Gronholdt and Martensen, 2005). Such sharing leads to an exchange of information that provides a unified view of the customer to employees (Payne, 2006). Some studies suggest that CRM initiatives pay insufficient attention to this human dimension (Plakoyiannaki *et al.*, 2008), insofar as they fail to consider the role of employees who are charged with making CRM successful (Kale, 2004; Boulding *et al.*, 2005). In the same vein, Cooper *et al.* (2008) argue that cross-functional working is virtually mandatory if the objectives of CRM projects are to be met, and point to the tensions that can arise, such as at the interface between IS and marketing/sales staff.

Therefore, the successful implementation of CRM requires that customer interests are placed above those of organisational agents and beyond any 'power games' within the organisation (Bentum and Stone, 2005). Such an organisational mindset is important in bringing together different organisational 'subcultures', so that customer knowledge is integrated into the firm's core processes flowing across sectors and linking back-office and front-office (customer-facing) employees (Ryals and Knox, 2001; Raman *et al.*, 2006). Failure to engage customer-facing employees may result in 'information islands'; fragmented approaches to customer requirements, and employee resistance to effective CRM adoption (Pedron and Saccol, 2009).

Becker *et al.* (2009) found that CRM implementation success also depends heavily on employee support for CRM. The greater the employees' support for new technological systems, the stronger will be the impact on performance of these new technologies. Hence, appropriate organisational structures and motivated, well-trained sales personnel can improve CRM performance. This observation reinforces that implementing CRM involves people as well as processes. Some authors suggest that the performance of technological implementations is moderated by the support of users (Jayachandran *et al.*, 2005; Coltman *et al.*, 2011). In the case of CRM, the skills and know-how of employees in converting data to customer knowledge are therefore likely to be crucial (Mendoza *et al.*, 2007). Efforts by firms to orientate and empower employees to integrate the use of CRM into their work are likely to positively influence the way information is gathered and used, and the value that is created from it. (Plakoyiannaki *et al.*, 2008). The expectation is for this orientation and empowerment process to be shaped by how CRM has been approached and embedded within the organisation. Accordingly, the following hypothesis is offered:

H₂. The CRM approach has a positive impact on the effectiveness of staff empowerment initiatives that are established to improve customer relationships.

Effectiveness of information systems (IS) and processes

An effective CRM approach usually requires that improvements are made to a firm's information systems to integrate timely and useful customer information (Wang and Ahmed, 2007; Rootman

et al., 2008; Mueller and Nyfeler, 2011). The systems and approaches for handling customer data must align with the business strategy (e.g. Valos and Bednall, 2010) and consider the purpose of the CRM system, the data required, the level of access to data and sharing, and the scope of cross-sector integration (Pedron and Sacco, 2009). Rapp *et al.* (2010) suggest that firms must be in harmony with resource-strategy variables to extract higher quality customer information. Chuang and Lin (2013: 271) regard CRM systems as the backbone of customer relationship development that advance customer information processing capabilities. The significance of these systems' impact, they argue, largely depends on the quality of customer information. Attention to these managerial aspects when implementing CRM has been shown to increase employee empowerment and reduce staff resistance to the implementation of CRM (Corner and Hinton, 2002).

The deployment of CRM entails the improvement and sometimes the re-design of customer-facing business processes that are integrated with core enterprise information systems to make them efficient, consistent and timely (Wei and Wang, 2011). Hansotia (2002) argues that an organisation should develop the ability to efficiently and effectively leverage customer information in order to design and implement customer-oriented strategies. Where an effective information system is in place, this strategic resource is made available through processes that empower employees to gather and share customer information across the organisation. This, in turn, leads to common understanding within the organisation, enabling management to take more informed strategic action in support of organisational responsiveness (Wei and Wang, 2011). Ultimately, the process of intelligence generation and dissemination entails the effective use of information to enable adaptations to market change (Jaworski *et al.*, 2000; Priem and Butler, 2001).

Bhatt *et al.* (2010) argue that to obtain full value from information systems, the technological infrastructure needs to have a high degree of flexibility in terms of data access and sharing so that it is responsive to environmental changes. Such flexibility means that organisations are better equipped to capitalize on existing staff competencies and explore long-term relationship opportunities. In some cases, organisations continue to invest significantly in CRM systems that are redundant by the time they are launched, because these systems are designed for stable environments (Braganza *et al.*, 2013), or that customer management decisions continue to be made based on simple heuristics rather than more sophisticated analytics (Persson and Ryals, 2014). Recent studies acknowledge the relationship between IS, 'staff empowerment' and 'organisational responsiveness' (Garrido-Moreno and Padilla-Meléndez, 2011; Leidner *et al.*, 2011; Singh and Koshy, 2011). According to Garrido-Moreno and Padilla-Meléndez (2011), IS strategy does not directly impact 'organisational responsiveness', instead it directly enables 'staff empowerment' which in turn impacts upon 'organisational responsiveness'; thereby making customer information quality an indirect antecedent to firm performance. These insights provide useful clues about the likely relationship between the information systems and processes used to manage customer relationships and how empowered staff feel, as hypothesised below:

H₃. The effectiveness of information systems (IS) and related processes implemented to improve customer relationships is positively associated with higher levels of staff empowerment.

H₄. The effectiveness of information systems (IS) and related processes implemented to improve customer relationships is positively associated with higher levels of organisational responsiveness.

Staff empowerment, CRM capabilities and organisational responsiveness

In addition to the improvements needed to information systems and processes, creating long-term relationships with customers requires careful management of organisational structure and human resources. The ‘people’ dimension of CRM has attracted much attention from scholars (Rigby *et al.*, 2002; Chen and Popovich, 2003; Reinartz *et al.*, 2004; Mendoza *et al.*, 2007; Hsieh *et al.*, 2012). Plakoyiannaki *et al.* (2008) provide insights into the positive relationship between employee orientation and aspects of CRM performance by showing that employee-oriented behaviours (in terms of training and development of employees) have a positive influence on aspects of performance measurement as well as on the information and value creation sub-processes of CRM. Successful CRM implementation therefore needs employees to buy in to the initiative and to recognise its value (Corner and Rogers, 2005; Bosch *et al.*, 2006). Integrating relevant human resources issues into the design of the CRM approach is likely to contribute to the achievement of expected objectives in the longer term (Kim and Kim, 2009). Systems for evaluating and rewarding staff should be connected to the CRM approach, and appropriate employee selection approaches need to be established (Pedron and Saccol, 2009). The implication is that implementing CRM involves not only processes but also people (Becker *et al.*, 2009).

The organisation’s mission, vision and technology must also take account of CRM objectives (Ryals and Knox, 2001; Chalmers, 2006), such that organisational goals reflect those goals being pursued by departments and employees. The extent to which these goals and the available customer information support a strategic, rather than a transactional, approach to sales and relationships is of particular concern (e.g. Cooper, 2006; Crie and Micheaux, 2006). For example, if staff working in sales are evaluated and rewarded according to sales metrics, they become preoccupied with increasing the number of achieved sales transactions. These employees may not regard it as their responsibility to develop and maintain close relationships with customers in the longer term. According to Anderson and Huang (2006: 139), as part of the staff empowerment process, firms must “...provide supporting structures, processes and incentives for customer-oriented behaviour”. Therefore, if staff are to fulfil their central role in delivering effective CRM, they need access to relevant data, provided via a coordinated and organisation-wide CRM system; and they must feel sufficiently empowered to use this information when carrying out their roles. In this context, empowering employees facilitates the flow of information and customer value sub-processes of CRM by increasing their self-efficacy and adaptability (Plakoyiannaki *et al.*, 2008). These are the imperatives reflected in the call by Kelemen and Pappasolomou (2007: 745) for a “unified culture around the values of customer service, employee empowerment and service quality”.

Some authors advocate the implementation of motivational theories to overcome problems associated with negative staff attitudes and to increase levels of empowerment. An example is psychological empowerment – a motivational construct manifested in four cognitions: meaning,

competence, self-determination, and impact – which has been shown to have strong links to task performance gains (Castro *et al.*, 2008; Hall, 2008; Chan *et al.*, 2008; Pieterse *et al.*, 2010).

Homburg *et al.* (2007) discuss the psychological empowerment of staff in a system which they refer to as an ‘affective system’. The affective organisational system empowers employees to develop perceptions of the environment that allow them to respond more effectively to new customer requirements. For White *et al.* (2003), organisational responsiveness depends on how individual staff respond to environmental developments. Thus, the affective organisational system is likely to have an impact upon organisational responsiveness. By definition, customer-oriented affective systems are anchored in organisational values, beliefs, structures and norms that pay special attention to customer needs (Homburg *et al.*, 2007). Initiatives that empower staff to gather customer information and to use it to support their decision making are likely to enhance customer-related responsiveness.

The knowledge level of employees is a key aspect of empowerment; CRM can fail if employees are insufficiently knowledgeable (Rootman *et al.*, 2008), lack commitment to the initiative (Payne and Frow, 2005), or do not feel sufficiently empowered; as negative attitudes hinder interactions and, ultimately, relationships with customers. When the knowledge levels of employees increase, the CRM effectiveness is also likely to improve. Overall, the evidence suggests that increasing employees’ sense of empowerment can ultimately improve the effectiveness of the CRM approach, and this will include their level of knowledge, decision-making and co-ordination with colleagues.

From the considerations above, the following hypothesis is given:

H₅. Staff empowerment initiatives are positively associated with higher levels of organisational responsiveness.

The theoretical framework linking the five hypotheses and the core theoretical dimensions considered above, i.e. ‘CRM approach’, ‘IS (information systems) effectiveness’, ‘staff empowerment’ and ‘organisational responsiveness’, is presented in Figure 1.

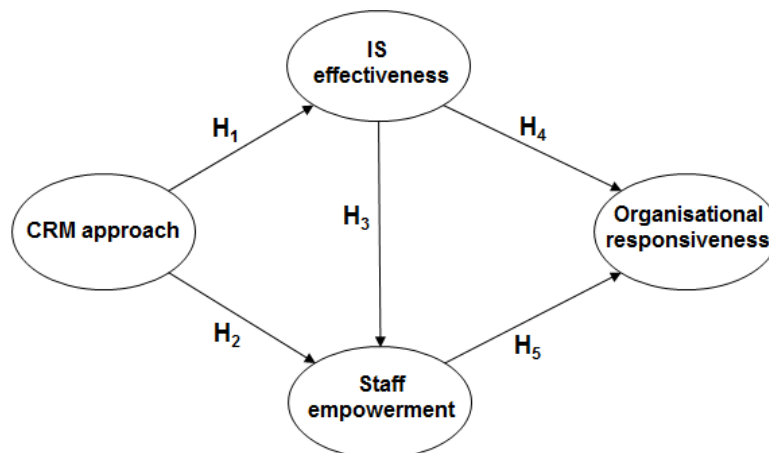


Figure 1. Theoretical framework and hypotheses

Research method

The study investigates the relationships linking the constructs ‘CRM approach’, ‘IS effectiveness’, and ‘staff empowerment’ from the perspective of initiatives that explore the embeddedness of CRM in the organisation, and considers the joint impact of these elements on the construct ‘organisational responsiveness’ (Figure 1). To test the theoretical hypotheses, a positivist approach was adopted based upon quantitative methods. Following typical quantitative research techniques, a survey was conducted to collect primary data which were analysed through SEM (structural equation modelling), a well-established scientific research method to advance understanding of complex relationships among theoretical constructs (Schumacker and Lomax, 2010). In practice, SEM allows simultaneous examination of the pre-specified dependence relationships between the constructs of the study.

The data were collected in the Brazilian financial services sector. Brazil is an appropriate setting for the research as it is a fast-growing economy which was not strongly affected by the banking crisis that hit Europe and the USA years ago. Moreover, a report examining the outlook for CRM in Latin America (Icon Group International, 2011) identifies Brazil as having the greatest market potential for CRM support and services in the region. It is therefore relevant to consider whether this potential translates into efficient practice for firms in the financial services sector of the Brazilian economy. Furthermore, since CRM has hitherto been widely studied in the more developed economies worldwide (Griffin *et al.*, 2011), the Brazil-based investigation creates valuable insights and a reference point for future comparative studies, which may shed light on the extent to which whether findings from developed economies can be generalized to emerging markets (Akroush *et al.*, 2011).

Access to a database of financial services institutions in the region of Sao Paulo, Brazil, where the industry is highly concentrated, was given by the University of Sao Paulo, which also conducted the local data collection. The database comprised contact details of over a thousand managers working at strategic level of financial services firms such as banks, investment funds, credit cards, credit unions, insurance and stock brokerage institutions. Due to cost and time constraints, a convenience sample of approximately a quarter of the managers in the database was approached. Although the sample size was conveniently reduced to 250 managers, the selection of the specific managers to be approached in the survey followed a random sampling method. That is, 250 managers were randomly selected from the large database. The final sample comprised managers from different functional areas commonly present in financial services institutions, such as marketing, customer services, operations management, information management, human resources, and finance & accounting. From this group, 116 managers fully answered questionnaires were returned, representing a response rate of 46.4%. One-way ANOVA was used to verify whether the managers’ positions had significantly influenced their views. The F-ratio with significance $p > 0.05$ showed no statistically significant differences between the answers provided by managers from different functional areas, suggesting a convergence of views at strategic managerial levels across different departments in the firms studied.

The research instrument was adapted from a cross-sector study by Meadows and Dibb (2012), in which CRM adoption in UK service organisations was investigated. The utilization of scales (i.e. measurement items) from previous research is a very common approach to operationalize constructs (Kline, 2015). This practice is corroborated by Hair *et al.* (2014), who

argue that many research studies today utilize prior scales published in previous studies, i.e. researchers quite often have several scales to choose from, each with a slight variation from the others. This is usually the case when a subject has been in the field for a number of years.

Most importantly, Meadows and Dibb's (2012) instrument, the structure of which is shown in Table 1, comprises a wide range of measurement items referring to overall CRM implementation aspects. The items logically connect with 'harder' factors such as the technology, structure and performance, and with 'softer', less tangible, factors related to strategic focus and customer-oriented mindset. This instrument therefore provided a very useful basis for a measurement comprising the four dimensions considered in this study (Figure 1).

Table 1. Structure of the Meadows & Dibb's research instrument

Section	Topics covered
Respondent's profile	Job title, experience of and involvement with strategic planning
Organisation's profile	Location, turnover, number of staff, industry sector(s), perceptions of speed of change in their industry sector(s)
Pre-requisites for CRM	Whether senior management and organisational culture are supportive of CRM; degree of belief in the 'one-to-one' future.
The Company	Whether there is a stated desire for relationship management and a belief that better relationships can deliver competitive advantage; extent to which marketing is customer-driven and event-led; whether focus is on individuals or on groups of customers, and on life events or on transactional marketing.
The Customers	Extent to which the focus is on value today or over the customers' lifetime; balance between 'traditional' (face-to-face) channels and 'remote' (technology based) channels; degree of customer contact.
The Technology	Whether IT is used as a strategic tool or simply to record transactional data; range of customer data available to staff; degree of integration of systems and processes; suitability of systems for contact management.
The People	Extent to which communication which 'connects' with customers is emphasized; level of staff empowerment; the role of reward systems and staff training in supporting a relationship-based approach.
Performance measurement	Use of customer facing performance measures, such as loyalty and satisfaction; key performance measures used.

Source: Meadows & Dibb (2012).

However, not all aspects of the above research instrument were judged to be equally important to the present study. For example, the final section included questions on performance measurement which were not directly relevant. Similarly, the first seven items of the original research instrument focused on organisational vision, which was out of scope for the present study. Therefore, a revised survey questionnaire was designed by logically mapping the items in Meadows and Dibb's (2012) instrument into the four latent variables representing the main dimensions in the study. A similar approach was adopted to that used by Daunt and Harris (2014) when adapting Harris and Ogbonna's (2006) service sabotage measure into a format for assessing employee service deviance. As such, it is in line with other studies that use judgement to support scale development (for example, see Hodgkinson, Hughes and Hughes, 2012). Several members of the research team took part in the process, which involved using from the original instrument the measurement items that had a meaningful connection with one of the dimensions in the current study. Variables with ambiguous or unclear connections were not considered. Table 2 shows the outcome of this logical mapping process, presenting the composition of the four dimensions used in terms of their respective measurements items. The process allowed the number of measurement items originally considered by Meadows and Dibb (2012) to be systematically reduced from 66 to 28 variables. The same 7-point Likert scale format used in the original questionnaire was retained (see Meadows and Dibb, 2012, for the original questionnaire, and Appendix 1 for the version used in this study). Content and face validity were established on the basis of expert judgement (Walsh et al., 2007; Hodgkinson et al., 2012; Rafiq et al., 2013). Content validity was determined by distributing the questionnaire to academics and PhD students who had a good knowledge of the literature from which the constructs were derived, and who were able to comment on the degree to which the measures used capture the aforementioned constructs. Similarly, distributing the questionnaire to several managers, with the objective of ensuring that the measures employed were appropriately worded and understood by the respondents, helped ensure face validity. The respondents were asked to provide comments on the relevance and wording of the questionnaire items, the length of the survey, and the time taken to complete it. Their recommendations were used to guide item additions and deletions, and to improve the wording of items. A Portuguese translation of the questionnaire was then used to collect the data in Brazil.

Table 2. The four dimensions of the study and respective measurements items

Latent variable	Measurement items*
<i>CRM approach</i>	<ul style="list-style-type: none"> - CRM is an important strategic issue for the organisation (Q11H) - Responsibility for CRM lies with many organisational functions, i.e. shared across many functions (Q11I) - Our approach to customers is strongly linked to the organisational vision (Q11M) - There is strong desire within the organisation for relationship marketing (Q12A) - CRM has a strong champion at the top of the organisation (Q12C) - Product development focuses on high relationship products (Q13E)

	<ul style="list-style-type: none"> - Senior management actively supports CRM on a day-to-day basis (Q16E) - Senior management always sets objectives which reflect the company stance on CRM (Q16F)
<i>IS effectiveness</i>	<ul style="list-style-type: none"> - Effective communication channels often support the implementation of CRM (Q13G) - Remote and traditional channels are well integrated (Q14E) - Systems are highly integrated (Q15B) - Computer system design and implementation are driven by external customer needs (Q15D) - Details of customer contacts are always logged and shared by staff (Q15H) - Our CRM systems are always reviewed and updated (Q15I)
<i>Staff empowerment</i>	<ul style="list-style-type: none"> - The emphasis is on using information as a strategic tool rather than to record transactions (Q15A) - When handling customer enquiries, front line staff have full access to customer data (Q15C) - Systems have full access to attitudinal/buying behaviour data required to identify life events (Q15F) - Those handling customer direct marketing always co-ordinate their activities with front line staff (Q15G) - Staff always use day-to-day contacts with customers as a market research opportunity (Q16A) - Staff training places more emphasis on communication to build customer relationships (Q16C) - Front line staff are generally empowered to make decisions when dealing with customers (Q16D)
<i>Organisational responsiveness</i>	<ul style="list-style-type: none"> - The company is very good at anticipating and reacting to customer needs (Q14F) - Our company is very good at exploring and anticipating possible future customer needs (Q17A) - We constantly scan external sources to learn about the customer of the future (Q17B) - We always take into account future social trends when designing systems and procedures (Q17C) - We are very good at assessing key uncertainties in the external environment (Q17E) - Our organization is highly responsive to respond to changes in the external environment (Q17G) - Our CRM activities have a very positive impact on our customer facing

	performance measures (Q18H)
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* The original variable names adopted by Meadows and Dibb (2012) are informed between parentheses

As the logical mapping of the measurement model was developed using a subjective approach, it was not appropriate to assume validity or reliability of the measurement items. Confirmatory factor analysis (CFA) was therefore used to assess the construct validity and reliability of the latent variables and their respective underlying indicators, i.e. the measurement items. According to Hair *et al.* (2014), CFA should be used when correspondence between indicators and constructs is previously established by the researcher. In this process, the researcher must specify both the number of factors for a set of variables and which factors each variable is expected to load on before results can be computed. CFA is therefore “*applied to test the extent to which a researcher’s a-priori, theoretical pattern of factor loadings on prespecified constructs (variables loading on specific constructs) represents the actual data*” (Hair *et al.*, 2014, p.603).

Research findings

Measurement model

Data from the 116 completed responses were analysed, and the hypotheses tested with the support of the SPSS software package and its SEM statistical analysis functionalities provided by AMOS 18.0. The two-step process that involves the assessment of two conceptually distinct latent variable models, the measurement model and the structural model, was adopted (Anderson and Gerbing, 1988). Model identification issues were handled by fixing one of the loadings in each construct to 1.0 and having a minimum of three indicators for each latent variable (Hu and Bentler, 1995). Maximum likelihood estimation of parameters tested the predictive power of the structural model and fitness was checked through observation of the most usual model fitness indicators, such as Chi-square, *P*-value, Akaike’s Information Criterion (AIC), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Normal Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root-Means-Square Error of Approximation Index (RMSEA) (Baumgartner and Homburg, 1996; Byrne, 2010; Hair *et al.*, 2014; Schumacker and Lomax, 2010).

Factor loadings and modification indexes were estimated to identify the best indicators or items for the latent variables in the theoretical model (Figure 1) prior to testing the structural model (Schumacker and Lomax, 2010). As mentioned, CFA was initially conducted on all questionnaire items shown in Table 2 in order to check for their loading factors into their respective latent variables. The number of factors was pre set to 4 (as indicated in Table 2) and the results for Eigenvalues and loading factors that load into 4 factors are shown in Appendix 2.

Considering suggested thresholds of Eigenvalue > 1 and factor loading ≥ 0.40 (Hair *et al.*, 2014), the results show satisfactory Eigenvalues above 1.5 for the 4 factors. However, the initial measurement composition for the factors (Table 2) was not confirmed. The results in the ‘Rotated Factor Matrix’ (Appendix 2) show that only the variables Q11H, Q11I, Q12A and Q12C

clustered together into one factor with satisfactory loadings. Similarly, only variables Q14E, Q15H and Q15I satisfactorily loaded together into a second factor. The other two factors confirm satisfactory loadings for variables Q15A, Q15F, Q15G and Q17A, Q17E, Q17G, Q18H respectively.

Based on the initial results, all measurement items which did not cluster together with other variables into their respective predicted constructs (factors), and which had factors loadings below 0.40, were removed. Proceeding with the initial estimation for the model, the following composition for the measurement model was: CRM approach (Q11H, Q11I, Q12A, Q12C), IS effectiveness (Q14E, Q15H, Q15I), Staff empowerment (Q15A, Q15F, Q15G) and Organisational responsiveness (Q17A, Q17E, Q17G, Q18H).

The initial estimation for the measurement model revealed fit indices below acceptable thresholds. Following the model modification technique of eliminating variables with low factor loadings from the measurement model (Hair *et al.*, 2014; Schumacker and Lomax, 2010), the two variables Q11H and Q18H with factor loadings close to 0.40 were eliminated. A subsequent estimation for the reduced measurement model exhibited excellent fit and respective best AIC value of 1.94. The confirmed measurement model with the 12 measurement items for the four underlying dimensions of the theoretical framework is shown in Table 3. To facilitate understanding, the measurement variables for each construct were renamed as shown in the table.

Table 3. Factors and items of the confirmed measurement model

Latent variable	Measurement items *
<i>CRM approach</i>	<ul style="list-style-type: none"> - cap1 = Responsibility for CRM lies with many organisational functions, i.e. shared across many functions (Q11I) - cap2 = There is strong desire within the organisation for relationship marketing (Q12A) - cap3 = CRM has a strong champion at the top of the organisation (Q12C)
<i>IS effectiveness</i>	<ul style="list-style-type: none"> - ise1 = Remote and traditional channels are well integrated (Q14E) - ise2 = Details of customer contacts are always logged and shared by staff (Q15H) - ise3 = Our CRM systems are always reviewed and updated (Q15I)
<i>Staff empowerment</i>	<ul style="list-style-type: none"> - ste1 = The emphasis is on using information as a strategic tool rather than to record transactions (Q15A) - ste2 = Systems have full access to attitudinal/buying behaviour data required to identify life events (Q15F) - ste3 = Those handling customer direct marketing always co-ordinate their activities with front line staff (Q15G)
<i>Organisational responsiveness</i>	<ul style="list-style-type: none"> - orp1 = Our company is very good at exploring and anticipating possible

	future customer needs (Q17A) - orp2 = We are very good at assessing key uncertainties in the external environment (Q17E) - orp3 = Our organization is highly responsive to respond to changes in the external environment (Q17G)
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The descriptive statistics for each factor and respective measurement items are shown in Table 4. All indicators have loaded highly, i.e. with standardized estimates > 0.50 (Hair *et al.*, 2014) into their relative constructs with significance levels $p < 0.05$ and $p < 0.01$.

Table 4. Measurement model

Factors and items	Mean	Standard deviation	Estimated loading	Standardized loading	t-value	AVE	CR	Cronbach's Alpha (α)	R ²
CRM approach						0.58	0.74	0.75	0.71
cap1	5.09	1.94	1.00	0.62	..				
cap2	5.84	1.52	1.24***	0.83	5.05				
cap3	5.75	1.53	1.23***	0.82	5.00				
IS effectiveness						0.53	0.86	0.74	0.57
ise1	4.44	1.81	1.00	0.54	..				
ise2	4.16	2.05	2.18**	0.65	2.01				
ise3	4.88	1.75	2.68**	0.94	2.08				
Staff empowerment						0.52	0.72	0.73	0.72
ste1	4.43	1.89	1.00	0.68	..				
ste2	4.47	1.97	1.13***	0.72	2.70				
Ste3	4.53	1.89	1.20***	0.77	2.81				
Organisational responsiveness						0.57	0.72	0.80	0.88
orp1	4.63	1.59	1.00	0.77	..				
orp2	4.76	1.88	1.33***	0.86	4.66				
orp3	4.71	1.94	0.97***	0.61	4.39				

** $p < 0.05$; *** $p < 0.01$

Several procedures were followed to check for construct validity and reliability. Initial analysis of negative variance and high item correlations (Anderson and Gerbing, 1988) revealed no areas of concern. Convergent validity was supported for all items ($t > 2$) (Bagozzi and Yi, 1988) and the average variance extracted (AVE) was greater than the minimum level necessary of 0.50 for all constructs (Hair *et al.*, 2014). Finally, the composite reliability (CR) and Cronbach alpha values for all factors were above the 0.7 threshold (Schumacker and Lomax, 2010), providing evidence for good construct reliability.

Discriminant validity was assessed by comparing the AVE for each construct with the variance shared (the squared correlation) between the constructs (Hair *et al.*, 2014; Fornell and Larcker, 1981). The results shown in Table 5 provide evidence of discriminant validity.

Table 5. Squared correlations between constructs and AVE for each construct

Construct	1	2	3	4	AVE
1. CRM approach	1.00				0.58
2. IS effectiveness	0.16	1.00			0.53
3. Staff empowerment	0.10	0.12	1.00		0.52
4. Organisational responsiveness	0.28	0.17	0.20	1.00	0.57

Structural model

The fit indices for the structural model are shown in Table 6. All results meet the recommended threshold values for a good model fit, i.e. non-significant ($p > 0.05$) low Chi-square value relative to the degrees of freedom, P -value ≥ 0.05 , GFI ≥ 0.95 , AGFI ≥ 0.95 , NFI ≥ 0.95 , CFI ≥ 0.95 , TLI ≥ 0.95 , and RMSEA ≤ 0.05 (Hair *et al.*, 2014; Schumacker and Lomax, 2010). These results provide evidence of a favourable fit for the research model.

Table 6. Overall fit indices for the structural model

Fit measure	Value
Chi-square χ^2	32.0
Df	42
P -value	0.87
GFI	0.96
AGFI	0.97
NFI	0.96
CFI	0.99
TLI	0.99
RMSEA	0.01

Having assessed the overall model fit, the estimated coefficients linking the constructs were examined. The results for the parameter estimates for the structural model and the path coefficients for the hypothesised relationships are presented in Figure 2. The results show that the majority of constructs are related in the theoretically predicted manner, with four of the five hypotheses confirmed. In support of H₁ and H₂ respectively, statistically significant associations link ‘CRM approach’ to ‘IS effectiveness’ ($\beta = 0.24, p < 0.05$) and ‘staff empowerment’ ($\beta = 0.50, p < 0.05$). Significant relationships also link ‘IS effectiveness’ to ‘staff empowerment’ ($\beta = 0.91, p < 0.05$) and ‘staff empowerment’ to ‘organisational responsiveness’ ($\beta = 0.71, p < 0.05$),

supporting H₃ and H₅ respectively. However, hypothesis H₄ is not significant, suggesting that 'IS effectiveness' does not directly impact 'organisational responsiveness'. Instead, 'IS effectiveness' directly enables 'staff empowerment' which, in turn, directly impacts 'organisational responsiveness'. In summary, two pathways were identified through the model. In the first pathway, 'CRM approach' impacts upon 'staff empowerment' which then enables 'organisational responsiveness'. In the second pathway, 'CRM approach' impacts upon 'IS effectiveness' which then enables 'staff empowerment' which finally enables 'organisational responsiveness'. The outcomes from the findings and the main managerial implications are discussed in the next section.

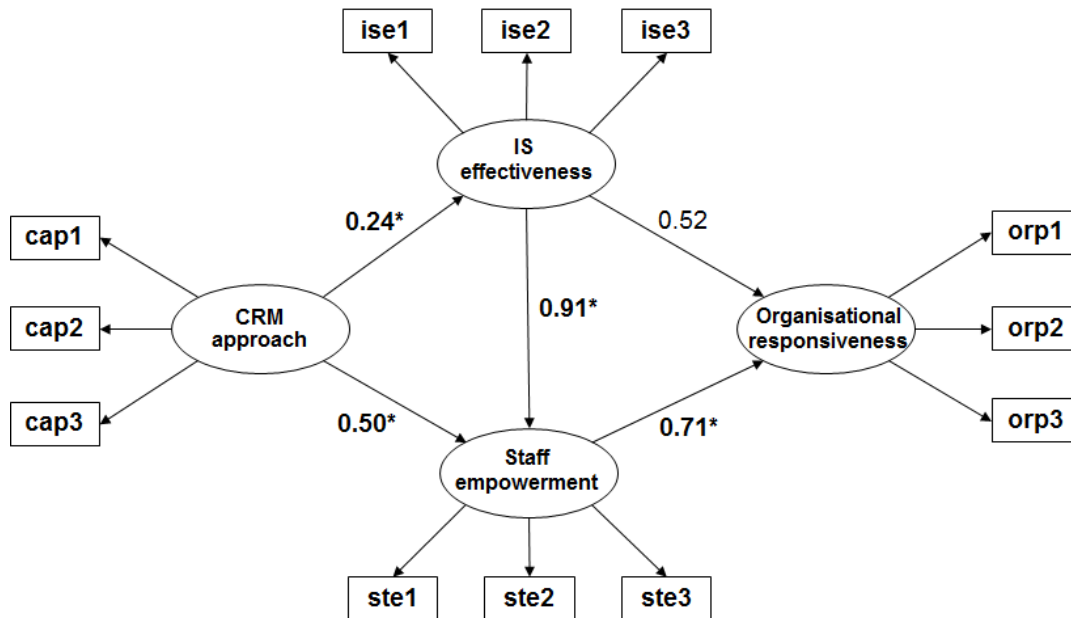


Figure 2. Parameter estimates for the structural model. * $p < 0.05$

Discussion

The main purpose of the study was to examine the relationships linking key aspects of the CRM approach, information systems and process effectiveness, and staff empowerment, as well as to consider their overall impact on organisational responsiveness. In so doing, evidence is provided acknowledging how the approach taken to CRM can contribute to organisational responsiveness. Drawing from the model constructs, their measurement items and the structural links between them, several theoretical contributions and managerial implications arise from our findings.

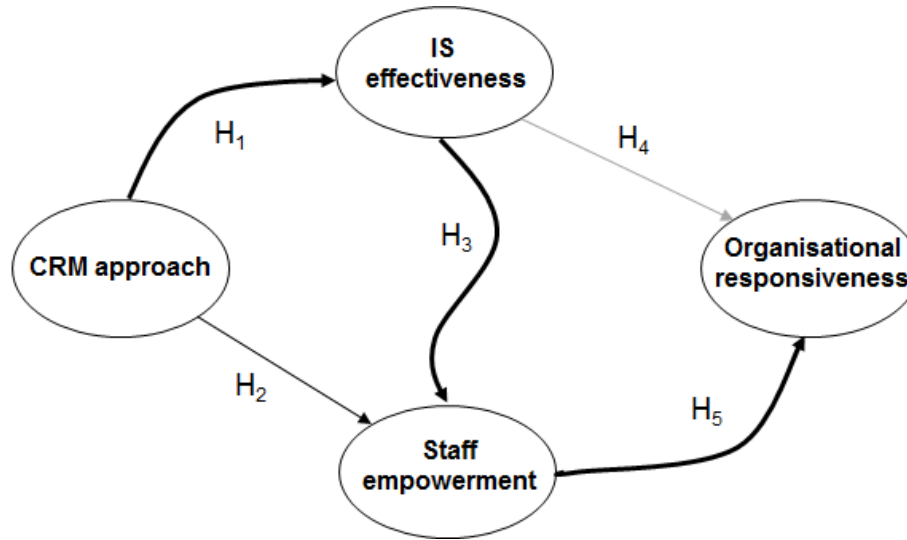


Figure 3. The 'CRM approach-systems-empowerment' pathway

A first theoretical contribution concerns the holistic approach to examining CRM adoption from an organisational responsiveness perspective, shedding light on the relationships between aspects of the adopted approach, as well as on the enabling role played by information systems and processes and, most importantly, the enabling role of people (see Figure 3).

CRM approach 'paves the way' to organisational responsiveness

The confirmation of hypotheses H_1 and H_2 shows that the development of customer relationships is a fundamental starting point to paving the way to improving organisational responsiveness. The CRM approach is found to be vital not only to improving the effectiveness of information systems and related supporting processes, but also to strengthening the level of staff empowerment to develop relationships with customers. Referring specifically to the factor items in the CRM approach construct, the findings suggest that appointing a senior champion for CRM, sharing responsibility for CRM across different organisational functions and developing a strongly stated desire within the organisation for relationship marketing support the effective deployment of CRM systems and processes and the empowerment of staff, both of which our model suggests are important for improving organisational responsiveness.

Other studies suggesting that the absence of leadership for CRM can be problematic (Agarwal *et al.*, 2004) help to explain these findings. Establishing CRM as central to the provision of a customer-oriented strategy requires strong CRM 'champions', preferably senior and sufficiently powerful individuals who can marshal the necessary cross-functional support, promote a positive mind-set towards customer relationships and widely communicate strategic benefits (Rogers *et al.*, 2008; Labus and Stone, 2010). These aspects provide plausible reasons to explain the convergence of opinions provided by managers from different functional positions across the firms studied, suggesting a strong customer-oriented mind-set and awareness of the strategic importance of CRM for their organisations.

From an operations perspective and reflecting the centrality of customer-oriented nature looking once again at the factor items in the CRM approach construct, our findings show that organisational-wide commitment to building customer relationships is associated with the establishment of effective information systems and related processes as well as staff empowerment initiatives. Earlier studies indicate that CRM requires the cross-functional integration of processes, people and marketing capabilities (Payne and Frow, 2005; Coltman, 2007). Reflecting these findings, the implication of our study is that CRM ought to be considered as an organisation-wide activity rather than as the responsibility of a single function or department.

Effectiveness of information systems and processes is crucial to empowering staff

The confirmation of hypotheses H₂ and H₃ provides strong evidence reinforcing the importance of staff empowerment. H₃ suggests that the effectiveness of information systems and related processes in facilitating access and sharing of customer data positively impacts the level of staff empowerment. Our findings indicate an important relationship between staff empowerment and effective practices in relation to information systems and processes. Firstly, it is suggested that customer information should be viewed as a *strategic tool*, rather than merely as *data about recorded customer transactions*; and that this principle should underpin the interactions between the organisation's staff and its information systems and practices. Secondly, because successful organisations are working to ensure that systems have good access to customer data around the customer's 'life events', their staff have good access to customer data around customer needs, attitudes and buying behaviour. Thirdly, organisations should seek to ensure that staff handling direct marketing to customers are also coordinating their activities with staff in front-line customer-facing roles. These notions of good access to and sharing of customer data, alongside a need to design a coordinated interface at all points where the customer comes into contact with the organisation, highlight the role of information systems and practices in supporting and enabling the empowerment of staff. Effective IS and related practices can empower staff to collect data, use it and share it in support of improving customer relationships with the organisation.

Looking at the effective IS and staff empowerment factors in more detail, our findings suggest that staff empowerment can be enabled by effective IS and related processes in a number of areas. These include the suggestion that customer relationships are enhanced if the range of delivery channels to the customer is well integrated, rather than fragmented; by ensuring that customer contacts are logged and shared on an ongoing basis; and by maintaining up-to-date CRM systems. These results are in line with previous studies which have highlighted the need to achieve integration across distribution channels (e.g. Piercy and Lane, 2003), and which have flagged the importance of regularly reviewing systems and updating customer data (e.g. Acker *et al.*, 2011). This integration across delivery channels will include remote technology-based channels (e.g. internet banking) alongside more traditional channels that rely on a human interface, (e.g. the branch network). To ensure these channels to be well integrated, details of all customer contacts need to be logged on the CRM system and shared across delivery channels amongst all staff who interact with customers. Significant demands are therefore placed on the system, as the behaviours of staff and customers may evolve over time. These factors highlight the need for organisational responsiveness to be proactively addressed on the part of the

organisation concerned. This means that the CRM system must be constantly reviewed and updated to ensure that it is fit for purpose.

In summary, the effectiveness of information systems and processes plays an important role in reinforcing staff capabilities to develop effective customer relationships. Systems that integrate technology-based channels with traditional human channels and which enable the sharing of detailed customer data among relevant staff are essential. Firms should put processes in place to ensure that these systems are continuously improved and updated. The findings suggest that when supported by established CRM strategies (hypothesis H₂) and equipped with effective systems (hypothesis H₃), staff are empowered to conduct more proactive relationships with customers. Customer-facing staff who have access to attitudinal and behavioural data linked to life events are more likely to be empowered to use this information for strategic rather than purely transactional purposes. Providing such access can only be achieved through close coordination between back-office marketing specialists and front-line staff. These findings have implications for the scope and design of staff training, which needs to involve customer facing staff as well as those handling the technological aspects of CRM; and which should focus on the behaviour necessary to develop customer relationships in the longer term.

In conclusion, based upon H₁, H₂ and H₃ it is argued that the coordination of CRM across organisational functions and the provision of access to appropriate data are key dimensions of staff empowerment.

Staff empowerment is crucial to organisational responsiveness

The confirmation of hypothesis H₅ suggests that staff empowerment initiatives are positively associated with higher levels of organisational responsiveness. Our study has characterised organisational responsiveness in terms of several aspects. As well as being adept at exploring and anticipating possible future customer needs, organisations should enhance their capabilities around assessing key environmental uncertainties, and ultimately, ensure that they are highly responsive to changes in the external environment.

The link between effective information systems and organisational responsiveness has been well established in previous investigations (Kaynak and Kara, 2004; Santos-Vijande *et al.*, 2005; Taylor *et al.*, 2008); as has the crucial role of knowledge management initiatives in influencing CRM success (Garrido-Moreno and Padilla-Meléndez, 2011). Perhaps surprisingly, in our study this link is not significant and the main element impacting organisational responsiveness is staff empowerment. A possible explanation is that previous studies may have found a significant relationship between information systems and organisational responsiveness on a '*ceteris paribus*' basis. However, when taking other dimensions such as 'staff empowerment' into account, the relationship between information systems and organisational responsiveness (H₄) is no longer significant and the strongest influence on organisational responsiveness comes from staff empowerment (H₅).

Given that H₄ has not been confirmed, a logical pathway can be established of significant relationships linking the 'CRM approach', 'systems' and 'people' dimensions of our model with organisational responsiveness. New insights are therefore provided into the pathways through

which organisational responsiveness can be achieved. More specifically, given that hypothesis H₄ was not found to be significant, the findings support a ‘CRM approach → systems and process effectiveness → staff empowerment’ pathway for improving organisational responsiveness to customers. This pathway contrasts with the simple ‘CRM approach → systems’ initiative adopted by many firms. This finding demonstrates that how organisations approach CRM and the information systems and processes they put in place to do so are crucial in empowering staff towards improved responsiveness.

These results speak to the strategic sense-making perspective of organisations (Cecez-Kecmanovic, 2004; Weick *et al.*, 2005; Wei and Wang, 2011), which addresses the issue of how organisations can interpret or make sense of information collected from the market. The strategic sense-making perspective suggests that a sound system for gathering and sharing market information is a crucial resource in helping organisations to scan and interpret the consumer environment and convert the activities of scanning and interpretation into effective organisational performance. Our findings suggest that effective information systems and processes are a necessary, but not sufficient, condition to achieve organisational responsiveness. This is because it is the ‘people’ dimension that should be ultimately empowered by IS in order to allow the organisation to make sense of customer information and define the required response initiatives.

Overall, effective CRM involves hard empowerment (IT) and soft empowerment (emphasis on strategic use of tools, access to customer information and integration between back- and front-office). As predicted by our theoretical model, the effective management of these CRM approach, technology and staff issues is associated with improved organisational responsiveness. This outcome is attributed to the greater capacity which CRM brings to exploring and anticipating customer needs and increasing responsiveness to environmental uncertainty and change.

Conclusions and future research

Several managerial implications emerge from our study. The findings provide insights for managers regarding strategic and operational (systems and processes) initiatives concerning staff empowerment towards organisational responsiveness. If organisations are to survive and thrive, they must adapt their organisational practices quickly in response to changes in the external environment. This paper has explored the relationship between organisational responsiveness on the one hand, and organisational capabilities in the areas of a strategic approach to CRM, effective systems and processes and staff empowerment, on the other. An effective CRM approach is shown to contribute directly and indirectly to staff empowerment, while improving the organisation’s ability to respond to its external environment. Our findings support the need for clear strategic direction, and the importance of the confluence of technologies, information, and employees in achieving organisational responsiveness. While many firms appear to focus on narrow CRM initiatives around technology implementation (such as introducing new software), our findings indicate that organisational responsiveness can be improved and enabled by a ‘CRM approach-systems-staff empowerment’ pathway that reflects the role of effective systems in supporting staff empowerment, and thereby impacts upon organisational responsiveness.

As previously discussed, CRM has been widely studied in some of the more developed economies such as Europe, Canada and Australia. This study contributes to the existing CRM literature by gathering and analysing data in Brazil, to gain a deeper understanding of an

important emerging market. Although our analysis is based on only 116 fully completed survey response, it is believed that this represents good coverage of the financial services sector in the geographic area in question, as well as representing a response rate of more than 46%. Our study is restricted to one regional area, so future studies are needed in a range of contexts and settings to address the generalisability of findings and to identify potential differences around the application of CRM in different markets.

Our results emerge from the application of an established survey instrument in a new context, i.e. Brazil. Future research could adopt a qualitative approach to include in-depth case studies. A single longitudinal case could be used to monitor the progress of a particular CRM project over time, so that the impact of a firm's actions (in terms of staff empowerment, and the effectiveness of systems and processes, for example) could be tracked alongside their organisational responsiveness. In addition, it is clear that CRM entails the integration of numerous processes spanning many organisational areas. In-depth case studies with multiple respondents from single organisations could therefore be used to understand how the interplay between organisational functions enables CRM and contributes to organisational responsiveness.

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Appendix 1: Questionnaire**Organisational aspects of Customer Relationship Management (CRM)****QUESTIONNAIRE****PART A: General information**

1. Which sector below better represents the one your company operates?

- Retail Investment Insurance
 Credit card Other (specify): _____

2. What is the size of your company in terms of staff numbers?

- Fewer than 50 50 to 250 250 to 1000
 1000 to 3000 More than 3000

3. What is your company's turnover?

- Less than 500k 500k to 5m 5m to 100m
 100m to 500m More than 500m

4. Which of the areas below better represents your area in the company?

- Marketing Operations HR Customer services
 Finance/Accounting Information management Other

PART B: CRM aspects

For each of the affirmations below, please register your opinion in terms of the degree of agreement or disagreement in a scale from **1 representing the strongest level of disagreement** to **7 representing the strongest level of agreement**.

Organisational aspect	1	2	3	4	5	6	7
1. CRM is an important strategic issue for the organisation							
2. Responsibility for CRM lies with many organisational functions, i.e. shared across many functions							
3. Our approach to customers is strongly linked to the organisational vision							
4. There is strong desire within the organisation for relationship marketing							
5. CRM has a strong champion at the top of the organisation							
6. Product development focuses on high relationship products							
7. Senior management actively supports CRM on a day-to-day basis							
8. Senior management always sets objectives which reflect the company stance on CRM							
9. Effective communication channels often support the implementation of CRM							
10. Remote and traditional channels are well integrated							

11. Systems are highly integrated									
12. Computer system design and implementation are driven by external customer needs									
13. Details of customer contacts are always logged and shared by staff									
14. Our CRM systems are always reviewed and updated									
15. The emphasis is on using information as a strategic tool rather than to record transactions									
16. When handling customer enquiries, front line staff have full access to customer data									
17. Systems have full access to attitudinal/buying behaviour data required to identify life events									
18. Those handling customer direct marketing always co-ordinate their activities with front line staff									
19. Staff always use day-to-day contacts with customers as a market research opportunity									
20. Staff training places more emphasis on communication to build customer relationships									
21. Front line staff are generally empowered to make decisions when dealing with customers									
22. The company is very good at anticipating and reacting to customer needs									
23. Our company is very good at exploring and anticipating possible future customer needs									
24. We constantly scan external sources to learn about the customer of the future									
25. We always take into account future social trends when designing systems and procedures									
26. We are very good at assessing key uncertainties in the external environment									
27. Our organization is highly responsive to respond to changes in the external environment									
28. Our CRM activities have a very positive impact on our customer facing performance measures									

Appendix 2: Initial CFA results

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.858	31.635	31.635	8.224	29.373	29.373	5.522	19.723	19.723
2	2.368	8.457	40.092	1.936	6.913	36.286	3.167	11.309	31.032
3	2.014	7.194	47.286	1.537	5.489	41.775	2.274	8.122	39.154
4	1.583	5.654	52.940	.845	3.019	44.794	1.579	5.640	44.794
5	1.194	4.265	57.205						
6	1.105	3.947	61.152						
7	1.041	3.719	64.871						
8	.994	3.549	68.420						
9	.917	3.276	71.695						
10	.771	2.754	74.450						
11	.748	2.671	77.121						
12	.682	2.434	79.555						
13	.612	2.185	81.740						
14	.593	2.116	83.856						
15	.562	2.007	85.864						
16	.485	1.731	87.595						
17	.453	1.616	89.211						
18	.438	1.565	90.776						
19	.414	1.477	92.253						
20	.404	1.442	93.695						
21	.342	1.222	94.917						
22	.334	1.192	96.109						
23	.245	.876	96.986						
24	.232	.830	97.816						
25	.217	.774	98.589						
26	.184	.656	99.245						
27	.117	.418	99.663						
28	.094	.337	100.000						

Extraction Method: Maximum Likelihood.

Rotated Factor Matrix^a

	Factor			
	1	2	3	4
Q11H	.071	.074	.401	.123
Q11I	.099	.031	.623	.225
Q11M	.346	-.018	.165	.160
Q12A	.263	.295	.831	-.046
Q12C	.347	.270	.822	-.084
Q13E	.327	.087	.034	.330
Q16E	.539	.295	.201	.005
Q16F	.256	.269	-.158	-.133
Q13G	.397	-.037	.137	.379
Q14E	.544	.079	.058	.222
Q15B	.330	.300	.095	.422
Q15D	.160	.308	.133	.024
Q15H	.651	.344	-.077	.159
Q15I	.940	.282	.151	.248
Q15A	.101	.683	.248	.373
Q15C	-.006	.391	.110	.115
Q15F	.207	.721	.237	.351
Q15G	.230	.768	.228	.133
Q16A	.189	.347	.046	.171
Q16C	-.041	.181	.088	.351
Q16D	.199	.355	-.075	.450
Q14F	.420	.334	.045	.318
Q17A	.271	.162	.165	.771

Q17B	.326	.073	.322	.138
Q17C	.407	.183	.177	.134
Q17E	.164	.164	.145	.857
Q17G	-.212	.261	-.026	.612
Q18H	-.187	.153	.143	.413

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 9 iterations.