



Conference on ENTERprise Information Systems / International Conference on Project
MANagement / Conference on Health and Social Care Information Systems and Technologies,
CENTERIS / ProjMAN / HCist 2016, October 5-7, 2016

Main motivations for CRM adoption by large Portuguese companies – a Principal Component Analysis

João Varajão^{a,b}, Maria Manuela Cruz-Cunha^{b,c,*}

^a University of Minho, Department of Information Systems, Campus de Azurém, 4804-533 Guimarães, Portugal

^b ALGORITMI Research Centre, University of Minho, Campus de Azurém, 4804-533 Guimarães, Portugal

^c Polytechnic Institute of Cávado and Ave, Campus do IPCA, Vila Frescaíinha S. Martinho, 4750-810 Barcelos, Portugal

Abstract

The motivations for an organization to adopt Customer Relationship Management (CRM) systems can be very varied, which brings an additional complexity to the adoption decision. It is important to understand the main drivers of CRM adoption so that companies can better target their investment efforts. This paper presents and discusses the main findings of a study undertaken among a sample of large Portuguese companies, identifying and discussing the main motivations for CRM systems adoption. A survey was carried out for data collection, and a Principal Component Analysis was made to identify the main motivations. The study concludes that the main motivations for adopting CRM systems are related to cost reduction, improving overall customer satisfaction, improving processes, achieving competitive advantages and improving information quality. The findings of this study can help the academic and professional community to better understand the main motivations of companies for adopting CRM systems, and also for CRM systems vendors and consultants to better address the needs of their potential clients.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the organizing committee of CENTERIS 2016

Keywords: Customer Relationship Management; CRM; motivations; large companies; survey; principal component analysis.

* Corresponding author.

E-mail address: mcunha@ipca.pt

1. Introduction

Over the last 20 years CRM (Customer Relationship Management) has developed into an area of major significance¹, and despite major interest from both academics and practitioners, CRM remains a huge investment with little measured payback². Gartner's reports clearly show that importance^{3, 4, 5, 6}.

CRM has fostered economic development ever since the world has been in a transition from a transaction-based economy to a relationship-based economy, and businesses have changed from being product-driven to customer-driven⁷ (where customers are considered to be the central element of all marketing actions⁸).

CRM is a priority, as recognized in several studies that highlight the impact of CRM adoption on firm performance⁹. However, some commercial market studies and literature refer to the high failure rate of CRM projects^{2, 9-13}. Paradoxically, regardless of their size, business firms continue to make huge investments in CRM applications¹⁴, which justifies the need to understand the main motivations of CRM systems adoption.

From another perspective, the literature is rich in studies on CRM systems adoption in different countries and sectors of economic activity over the past fifteen years. Studies argue that local cultures influence organizations in the adoption of technologies, in the use of IT products and services, and also in the way IT work is done^{15, 16}. Erumban and Jong¹⁷ suggest that the national culture and the ICT adoption rate of a country are closely related. Also a study by van Everdingen & Waarts¹⁸ on ERP software adoption in ten European countries revealed that variables describing national culture have a significant influence on the country adoption rates. However, in a cross-cultural and multi-industry study of CRM, Reinartz¹⁹ suggested that CRM benefits do not have major variations across industries or countries, as had earlier been thought.

In summary, the diversity of cultures and contexts suggested in the above-mentioned references, has an impact on IT adoption and IT management; however, whether this is applicable to CRM adoption in Portugal is unclear.

This study was based on a sample of large Portuguese companies, and was aimed at understanding (1) the main motivations of the large Portuguese companies to adopt CRM systems and (2) whether the results matched other realities/cultures/contexts.

This study makes three contributions to the IT/IS literature: (1) it allows the academic and professional community to better understand the main motivations of large companies for adopting CRM systems as well as the results in Portugal; and (2) it assists CRM systems vendors and consultants to better address the needs of their potential clients.

The next section frames the main concepts associated to CRM and CRM adoption, the third section introduces the methodology followed in the study, section four discusses the results, the last two sections present a brief cross-country and cross industry discussion of the results, and the main limitations and conclusions.

2. Background

Broadly speaking, CRM is currently a combination of business and marketing strategies that integrates people, processes, technology and business activity for the purpose of attracting and retaining customers, providing analytical capabilities, reducing costs and increasing profitability, by consolidation of the principles of customer loyalty²⁰; as stated by Chen & Popovich²¹, it is supported by technology that seeks to understand the company's customers.

The term CRM, emerged in the information technology (IT) vendor community in the mid-nineties, often used to describe technology-based customer solutions such as sales force automation²³. For Payne & Frow^{23, 24}, the way CRM is defined is not only a semantic issue, because the picture that a business has of this system significantly affects the way the entire organization accepts and practices CRM. CRM is a strategy, not a solution, and can provide an enormous competitive advantage if implemented in a co-operative environment^{25, 26}; the success of its implementation requires the committed involvement of senior management in promoting and supporting the concept of customer relationship management within the organization²⁶.

2.1. Motivations for CRM Adoption

This section presents the main motivations for CRM adoption based on a literature review of studies undertaken over the last ten years. Among the several motivations for CRM adoption mentioned in literature^{2, 8, 9, 21, 24, 27-47} the most significant ones are:

- To increase company knowledge regarding customers, in order to better understand their needs and expectations, to maintain a customized relationship, to improve customer loyalty and retention, and to provide a quick response to customer requests;
- To help understand customers in order to anticipate their needs and offer value-added services;
- To develop and offer customized products and services differentiated from products and services offered by competitors;
- To establish a close and fluid communication channel with current and potential customers;
- To reduce the cost of sales and of after-sales services, increasing the effectiveness of vendors in acquiring new customers;
- To contribute to improving internal processes within an organization: improving decision-making processes, sales efficiency, increasing productivity and improving IT architecture;
- To aggregate value for the client, rationalizing the internal processes of new product development, allowing the company to identify the customer's needs not addressed and the characteristics of the product desired by customer segments, and to administer the flow of demands so as to reduce customer buying time and psychological and physical effort, optimizing after-sales service through the offer of specialized quality services, aligning the business with the market.

These motivations can be disaggregated and synthesized into the following items, which are found in the study:

- Improve the quality of information;
- Search for more effective sales/transactions;
- Improve overall customer satisfaction;
- Improve processes;
- Improve customer service;
- Increase business results;
- Improve customer loyalty;
- Possibility of individualized marketing messages;
- Provide more effective customer acquisition;
- Not be outdone by competitors;
- Implement a new business model;
- Reduce cost in sales;
- Reduce cost in after-sales;
- Create customized products and services.

2.2. *Brief characterization of Portuguese companies*

The Commission Recommendation 2003/361/EC of 6 May 2003⁴⁸ defines micro, small and medium-sized enterprises according to their staff headcount and turnover or annual balance-sheet total. A medium-sized enterprise is defined as an enterprise which employs fewer than 250 people and whose annual turnover does not exceed EUR 50 million, or whose annual balance-sheet total does not exceed EUR 43 million.

According to the Portuguese National Institute of Statistics⁴⁹, in 2008, the Portuguese business sector was comprised of 1,121,472 enterprises, of which 1,096,255 belonged to the non-financial sector, with single-owner enterprises representing almost 68% of the total number. Excluding the single-owner firms, the distribution of the remaining 350,871 firms, corresponds to 300,000 micro firms, 43,000 small firms, 6,500 medium sized firms and 1,115 large firms.

The average turnaround of large firms was EUR 147 million, which represented 42% of non-financial Portuguese firms, with an average of 720 employees.

3. Methodology

In order to understand various aspects of CRM adoption by Portuguese companies, a survey was carried out involving an online questionnaire sent via e-mail to a stratified random sample of 500 of the 1000 largest national companies in terms of turnover, according to the Portuguese National Institute of Statistics (INE).

The questionnaire was made available on an online platform in the period from 09/Feb/2009 to 11/May/2009 and comprehended four rounds of response. It was organized in thematic groups of questions and included several types of questions (multiple choice, free text). It was pre-tested and underwent an iterative process of content and clarity validation to get the final version. A total of 85 valid responses were obtained, corresponding to a 17% response rate.

The first group of questions was aimed to characterize the companies participating in the study. The characterization of the participating companies is presented in Table 1. To note that most companies have less than 2,000 employees, with only 11% having more than 2,000 employees. In terms of turnover, companies are distributed across the intervals shown in Table 1. Note that a significant proportion of companies (44%) had a turnover of between 50 and 250 million Euros per year. The number of responses "Do not know/did not answer" had a 12% response rate.

From a set of 85 valid responses, only 21 companies claim they use CRM systems (25%). Its characterization is presented in Table 2. This is quite a small percentage when compared with the results obtained from other studies of CRM adoption. For instance, a survey conducted in 2008 in Austria reported that 62% of the surveyed enterprises use a CRM system⁵⁰ and a study based on the Korean industry reported a 50% adoption rate in 2007⁵¹.

The authors looked for a link between the characteristics of the companies (size and turnover) and the use of CRM systems within the set of 85 participating companies and as a result no such relationship was found. This finding is in accordance with Alshawi's study⁴⁴ as mentioned above.

The list of the variables used in this study is presented in Table 3. The participants in the survey were asked to rate each variable (based on the main motivations and drivers identified from the literature and presented in section 2) using an ordinal scale (from 0 to 5, indicating the level of importance).

Table 1. Characterization of participant companies

Number of employees	Percentage
1 to 200	26%
201 to 500	31%
501 to 2000	32%
2001 to 5000	8%
More than 5000	3%
Turnover (euros)	Percentage
Less than 5 000 000	0%
5 000 000 to 10 000 000	1%
10 000 001 to 50 000 000	29%
50 000 001 to 250 000 000	44%
250 000 001 to 500 000 000	5%
More than 500 000 000	9%
Do not know / did not answer	12%

Table 2. Characterization of companies using CRM systems

Number of employees	Percentage
1 to 200	24%
201 to 500	32%
501 to 2000	29%
2001 to 5000	5%
More than 5000	10%
Turnover (euros)	Percentage
10 000 001 to 50 000 000	29%
50 000 001 to 250 000 000	42%
250 000 001 to 500 000 000	5%
More than 500 000 000	10%
Do not know / do not answer	14%

Table 3. Variables used in the statistical analysis

Code	Description	Type and Values
M1	Provide more effective customer acquisition	
M2	Improve customer loyalty	Type:
M3	Improve overall customer satisfaction	Metric,
M4	Search for more effective sales/transactions	Ordinal,
M5	Possibility of individualised/personalised marketing messages	Likert - 0 to 5
M6	Improve customer service	
M7	Create customized products and services	Values:
M8	Improve processes	0 = Unimportant
M9	Improve the quality of information	1 = Residual importance
M10	Reduce cost in sales	2 = Less important
M11	Reduce cost in after-sales	3 = Important
M12	Increase business results	4 = Very important
M13	Not be outdone by competitors	5 = Fundamental
M14	Implement a new business model	

After the data collection, a statistical analysis was carried out. The research method used for analyzing the data consisted of two steps. The first step evaluated the reliability of the measurement tool. According to Forza⁵², reliability indicates dependability, stability, predictability, consistency and accuracy, and refers to the extent to which a measuring procedure yields the same results in repeated trials. Reliability can be assessed in four different ways: test-related method; alternative form method; split halves method; and internal consistency method. This study used an internal consistency method by calculating Cronbach's Alpha, which is the most popular test for internal consistency⁵³. Secondly, a Principal Component Analysis was performed, aiming at identifying the main motivations for CRM adoption.

4. Motivations for CRM adoption

This section presents the data from the survey and discusses the results after the application of Principal Component Analysis.

4.1. Data Analysis

Table 4 presents the results of the internal consistency test of the variables calculated using SPSS®. According to Forza⁵², since Alpha is greater than 0.8, the measurement instrument used in this study is very reliable. After confirming the reliability of the measurement instrument it is possible to proceed to the analysis of the data.

Table 4. Internal consistency of the variables

Cronbach's Alpha	No. of Items
0.847	14

Figure 1 shows the level of importance for each motivation, considering the variables presented in Table 3. It can be seen that the motivations M4 (Search for more effective sales/transactions) and M3 (Improve overall customer satisfaction) are the most significant, since they are more often marked by respondents as “5 – Fundamental”.

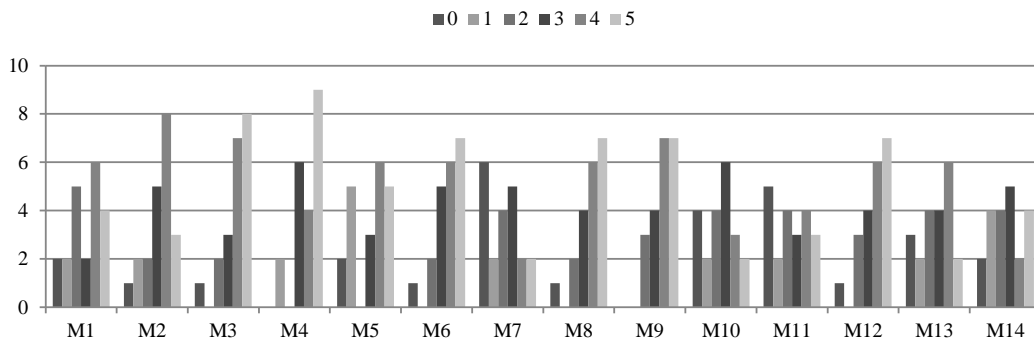


Figure 1 - Level of importance of each motivation

4.2. Discussion of results

There are several motivations for implementing CRM, as identified in the third section. To study whether the motivations for CRM adoption could be explained by a smaller number of variables, a Principal Component Analysis was performed using SPSS®. It was found that five components can explain 82.470% of the cases of CRM systems adoption, as presented in Table 5.

Table 6 shows the rotated component matrix for the five components. The rotation method used was the Varimax method with Kaiser Normalization; rotation converged in 7 iterations.

The first component is related to cost reduction. It comprises motivations M10 (Reduce cost in sales) and M11 (Reduce costs in after-sales). From almost the beginning of computing, cost reduction has been one of the key drivers for IT investment. Today it continues to be extremely important in the context of the decision to implement new business systems, and the adoption of CRM systems is no exception. This component explained 35.7% of the situations, as seen in Table 5.

The second component involves improvement of customer satisfaction. It comprises motivations M2 (Improve customer loyalty), M3 (Improve overall customer satisfaction) and M6 (Improve customer service), and explained 19.5% of the cases. Since CRM systems focus, as the name itself suggests, on optimizing customer interaction, it is natural that an important group of motivations would be related to customer satisfaction. Implementation of a CRM system is expected to facilitate improved customer service, thus contributing to the improvement of overall customer satisfaction and loyalty to the company.

Table 5. Principal Component Analysis

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.995	35.678	35.678
2	2.730	19.500	55.178
3	1.680	12.003	67.181
4	1.111	7.933	75.114
5	1.030	7.356	82.470
6	.681	4.861	87.331
7	.575	4.104	91.436
8	.361	2.578	94.014
9	.277	1.980	95.994
10	.237	1.695	97.689
11	.134	.958	98.647
12	.094	.671	99.317
13	.065	.462	99.779
14	.031	.221	100.000

Table 6. Rotated component matrix

	Component				
	1	2	3	4	5
M1	.035	-.129	.895	.208	-.202
M2	.055	.877	-.026	.301	-.060
M3	.215	.920	-.124	.019	.044
M4	.190	.042	.718	.309	.365
M5	-.079	-.016	.334	.773	.281
M6	.366	.813	.048	-.049	-.018
M7	.570	.143	.406	.249	.095
M8	.194	.008	.825	-.328	.309
M9	.032	.000	.129	.152	.933
M10	.868	.239	.226	.140	.171
M11	.917	.158	-.104	-.015	.068
M12	.245	.520	.110	.481	.122
M13	.343	.298	-.118	.825	-.047
M14	.784	.278	.188	.105	-.230

The third component concerns improving processes, including motivations M1 (Provide more effective customer acquisition) and M8 (Improve processes). The implementation of a CRM system can and should be a moment of conceptualization and action on the processes implemented in the company, not only with the process of direct interface with the customer, but also in all business processes. This is the only way it can become more effective in attracting customers.

The fourth component is explained as motivation M13 (Not be outdone by competitors). The increasing competitiveness of markets requires companies to become more proactive in improving their processes and implementing new technologies that allow them to obtain competitive advantages. CRM systems are fundamental tools in this assertion, enabling companies to better understand their customers' needs and profiles.

Finally, the fifth component is explained as motivation M9 (Improve the quality of information). The implementation of a CRM system enables the creation of consolidated databases with information on all the customer aspects to be used and shared by every communication channel of a company.

As mentioned in the beginning of this section, these five components are the justification for 82.470% of the cases.

5. Cross-country and cross-industry discussion

Our findings are aligned with many cross-sector and cross-cultural studies that highlighted and confirmed drivers for CRM systems implementation.

In a deep literature review, Richards and Jones² state that CRM benefits do not vary greatly across industries or countries, as had been earlier thought. In their research, they developed a list of core drivers of CRM initiatives from relevant literature, where “improved pricing” together with “improved customer service efficiency and effectiveness” appear as the most often mentioned, which somewhat correspond to the first two components identified in the present study.

In Ozgener and Iraz⁵⁴ the two main goals identified at a higher level for CRM adoption in Turkey were “acquiring new customers” and “sustaining competitive advantage”, which corresponds to our third and fourth components. “Increasing profits,” “customer retention” and “improving customer services” appear on the second level, more or less with the same value and cover the other three components of our study.

A comparative study conducted in 2009⁵⁵, with samples of large Portuguese and Spanish companies found that the five most prevalent motivations for the adoption of IT/IS in Portugal and in Spain were “To improve business operations or processes”, “To improve the quality of products or services”, “To reduce operational costs”, “To increase the productivity of employees”, and “To improve customer service.” These results (of the present study and those mentioned in Trigo et al. ⁵⁵) did not present any significant difference.

Ko et al.⁵¹ identified the perceived benefits for CRM adoption by the Korean industry which were to manage existing customers, increase profits, and acquire new customers, in that order.

A survey of firms conducted by Chen & Chen³⁹ in the USA on perceived benefits arising from CRM presented “Increased revenues and profitability” as the top tangible benefits and “increased customer satisfaction” as the top intangible benefit. Among the other ranked reasons for CRM adoption are those identified in the present study, with quite a similar distribution. This leads the authors to suppose that their results can be globally accepted.

However, it is recognized that there are differences in particular sectors, such as the financial sector. A study by Karakostas *et al.*²⁷ on CRM adoption by financial services in the UK showed that an organization's main driver for making a CRM implementation was internal efficiency, and that most of the companies agreed that CRM systems would assist in the co-ordination of sales and services to their customers. Cost reduction was strongly recognized as a main driver for making a CRM implementation by only 24% of companies, while this was identified as a main driver in our study.

6. Main limitations and conclusions

The findings of this study contribute to a better understanding of the motivations that underlie the investments in CRM. In addition, we found that the dimension and turnover of the company had no influence on CRM systems adoption, even though this finding was obtained from a sample of large companies.

The main limitation of this study is the size of the sample, due to the reduced number of Portuguese companies that have CRM systems.

To identify the main motivations prevailing in the adoption of CRM, a survey was conducted among large enterprises. After the data collection, the reliability of the measurement tool was evaluated, followed by a Principal Component Analysis. The study revealed that apart from the broader set of motivations underlying the adoption of CRM systems, it can be explained by a smaller number of variables.

Figure 2 shows the main motivations for CRM adoption in larger companies: cost reduction, improvement of customer satisfaction, improvement of processes, gaining competitive advantages and improvement of the quality of information.

With regard to our sample and analysis, the main findings are consistent with many cross sector and cross-cultural studies on the drivers for CRM systems implementation, and also align with the findings of some authors who conclude that CRM drivers do not vary greatly across industries or countries.

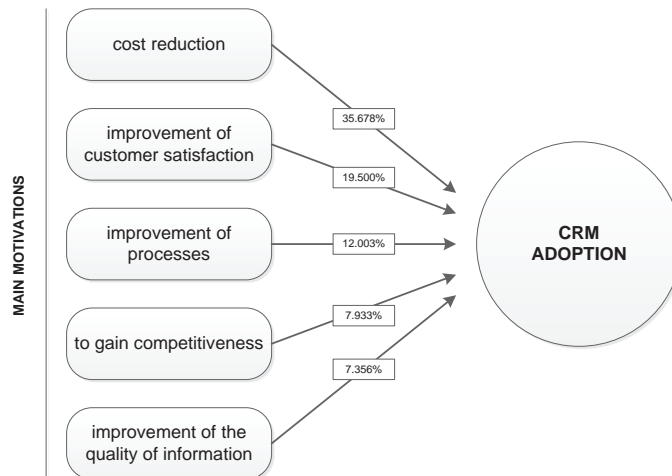


Figure 2 - Main motivations for CRM adoption

References

1. Frow P, Payne A. Customer Relationship Management: A Strategic Perspective. *Journal of Business Market Management*. 2009;3:7-27.
2. Richards KA, Jones E. Customer relationship management: Finding value drivers. *Industrial Marketing Management*. 2008;37:120-30.
3. Gartner. Gartner Says Worldwide CRM Market Grew 12.5 Percent in 2008. Gartner Inc.; 2009 [updated 2009; cited 2011 March 14]; Available from: <http://www.gartner.com/it/page.jsp?id=1074615>.
4. Band W. The Forrester wave: Enterprise CRM suites. Forrester Research, Inc.; 2007 [updated 2007; cited 2009 20th February]; Available from: <http://www.microsoft.com/presspass/itanalyst/docs/02052007ForrCRMSuites.pdf>.
5. Band W. The Forrester wave: Enterprise CRM suites. Forrester Research, Inc.; 2008 [updated 2008; cited 2011 14th March]; Available from: http://www.forrester.com/rb/Research/crm_best_practices_adoption/q/id/44179/t/2?src=46169pdf.
6. Gartner-Inc. Gartner Survey Shows CRM Software Spending Is Expected to See the Largest Increase of all Application Software Markets. Gartner, Inc.; 2011 [updated 2011; cited 2011 December 26]; Available from: <http://www.gartner.com/it/page.jsp?id=1556714>.
7. Keen PGW. Competing in chapter 2 of internet business. Delft University of Technology; 1999.
8. Keramati A, Mehrabi H, Mojir N. A process-oriented perspective on customer relationship management and organizational performance: An empirical investigation. *Industrial Marketing Management*. 2010;39:1170-85.
9. Coltman T, Devinney TM, Midgley DF. Customer relationship management and firm performance. *Journal of Information Technology*. 2011:1-15.
10. Foss B, Stone M, Ekinci Y. What makes for CRM system success - Or failure? *Journal of Database Marketing & Customer Strategy Management*. 2008;15:68-78.
11. Kale SH. CRM failure and the seven deadly sins. *Marketing Management*. 2004;13:42-6.
12. King SF, Burgess TF. Understanding success and failure in customer relationship management. *Industrial Marketing Management*. 2008;37:421-31.
13. Frow P, Payne A, Wilkinson IF, Young L. Customer management and CRM: addressing the dark side. *Journal of Services Marketing*.

- 2011;25:79-89.
14. Ngai EWT. Customer relationship management research (1992-2002): An academic literature review and classification. *Marketing Intelligence & Planning*. 2005;23:582-605.
 15. Weisinger JY, Trauth EM. Situating culture in the global information sector. *Information Technology & People*. 2002;15:306-20.
 16. Dorothy EL, Timothy K. Review: a review of culture in information systems research: toward a theory of information technology culture conflict. *MIS Q*. 2006;30:357-99.
 17. Erumban AA, de Jong SB. Cross-country differences in ICT adoption: A consequence of Culture? *Journal of World Business*. 2006;41:302-14.
 18. van Everdingen YM, Waarts E. The Effect of National Culture on the Adoption of Innovations. *Marketing Letters*. 2003;14:217-32.
 19. Reinartz W, Krafft M, Hoyer WD. The Customer Relationship Management Process: Its Measurement and Impact on Performance. *Journal of Marketing Research*. 2004;41:293-305.
 20. Wahab S, Al-Momani K, Noor NAM. The Relationship between E- Service Quality and Ease of Use On Customer Relationship Management (CRM) Performance: An Empirical Investigation In Jordan Mobile Phone Services. *Journal of Internet Banking and Commerce*. 2010;15:1-15.
 21. Chen JJ, Popovich K. Understanding customer relationship management (CRM): People, process and technology. *Business Process Management Journal*. 2003;9:672-88.
 22. Ryals L, Payne A. Customer relationship management in financial services: towards information-enabled relationship marketing. *Journal of Strategic Marketing*. 2001;9:3-27.
 23. Payne A, Frow P. A Strategic Framework for Customer Relationship Management. *Journal of Marketing*. 2005;69:167-76.
 24. Payne A, Frow P. Customer Relationship Management: from Strategy to Implementation. *Journal of Marketing Management*. 2006;22:135-68.
 25. Kotorov R. Customer relationship management: strategic lessons and future directions. *Business Process Management Journal*. 2003;9:566-71.
 26. Roberts ML, Liu RR, Hazard K. Strategy, technology and organisational alignment: Key components of CRM success. *The Journal of Database Marketing & Customer Strategy Management*. 2005;12:315-26.
 27. Karakostas B, Kardaras D, Papathanassiou E. The state of CRM adoption by the financial services in the UK: an empirical investigation. *Information & Management*. 2005;42:853-63.
 28. Garrido-Moreno A, Padilla-Meléndez A. Analyzing the impact of knowledge management on CRM success: The mediating effects of organizational factors. *International Journal of Information Management*. 2011;31:437-44.
 29. Paguio R. CRM technology: can adoption increase service quality and perceived value in maintenance services? *International Journal of Services Sciences* 2010;3:250-68.
 30. Ahn JY, Kim SK, Han KS. On the design concepts for CRM system. *Industrial Management & Data Systems*. 2003;103:324-31.
 31. Shamsuddoha M, Nasir T, Alamgir M. Determinants of Customer Relationship Management (CRM): A Conceptual Analysis Fascicle of The Faculty of Economics and Public Administration. 2010;10.
 32. Ernst H, Hoyer W, Krafft M, Krieger K. Customer relationship management and company performance—the mediating role of new product performance. *Journal of the Academy of Marketing Science*. 2010;39:290-306.
 33. Becker JU, Greve G, Albers S. The impact of technological and organizational implementation of CRM on customer acquisition, maintenance, and retention. *International Journal of Research in Marketing*. 2009;26:207-15.
 34. Krasnikov A, Jayachandran S, Kumar V. The Impact of Customer Relationship Management Implementation on Cost and Profit Efficiencies: Evidence from the U.S. Commercial Banking Industry. *Journal of Marketing*. 2009;73.
 35. Bull C. Customer Relationship Management (CRM) systems, intermediation and disintermediation: The case of INSG. *International Journal of Information Management*. 2010;30:94-7.
 36. Smith AD. Strategic Leveraging Total Quality and CRM Initiatives: Case Study of Service-Orientated Firms. *Services Marketing Quarterly*. 2011;32:1 - 16.
 37. Peelen E, van Montfort K, Beltman R, Klerkx A. An empirical study into the foundations of CRM success. *Journal of Strategic Marketing*. 2009;17:453-71.
 38. Bose R. Customer relationship management: key components for IT success. *Industrial Management & Data Systems*. 2002;102:89-97.
 39. Chen Q, Chen H-M. Exploring the success factors of eCRM strategies in practice. *The Journal of Database Marketing & Customer Strategy Management*. 2004;11:333-43.
 40. Osarenkhoe A, Bennani A-E. An exploratory study of implementation of customer relationship management strategy. *Business Process Management Journal*. 2007;13:139-64.
 41. Saini A, Grewal R, Johnson J. Putting market-facing technology to work: Organizational drivers of CRM performance. *Marketing Letters*. 2010;21:365-83.
 42. Hillebrand B, Nijholt J, Nijssen E. Exploring CRM effectiveness: an institutional theory perspective. *Journal of the Academy of Marketing Science*. 2011:1-17.
 43. Kumar V, Sunder S, Ramaseshan B. Analyzing the Diffusion of Global Customer Relationship Management: A Cross-Regional Modeling Framework. *Journal of International Marketing*. 2011;19:23-39.
 44. Alshawi S, Missi F, Irani Z. Organisational, technical and data quality factors in CRM adoption -- SMEs perspective. *Industrial Marketing Management*. 2011;40:376-83.
 45. Bull C. Strategic issues in customer relationship management (CRM) implementation. *Business Process Management Journal*. 2003;9:592-602.

46. Wilson H, Daniel E, McDonald M. Factors for Success in Customer Relationship Management (CRM) Systems. *Journal of Marketing Management*. 2002;18:193-219.
47. Hendricks KB, Singhal VR, Stratman JK. The impact of enterprise systems on corporate performance: A study of ERP, SCM, and CRM system implementations. *Journal of Operations Management*. 2007;25:65-82.
48. European_Commission. Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises: European Commission 2006. Report No.: Official Journal L 124 of 20.05.2003 Contract No.: Document Number].
49. INE. *Empresas em Portugal 2008*. Lisboa, Portugal: Instituto Nacional de Estatística; 2008 Contract No.: Document Number].
50. Torggler M. The Functionality and Usage of CRM Systems. *International Journal of Social Sciences*. 2009;4:164-72.
51. Ko E, Kim SH, Kim M, Woo JY. Organizational characteristics and the CRM adoption process. *Journal of Business Research*. 2008;61:65-74.
52. Forza C. Survey research in operations management: a process-based perspective. *International Journal of Operations & Production Management*. 2002;22:152-94.
53. Ferreira AMD, Laurindo FJB. Outsourcing decision-making aspects considered by IT departments in Brazilian companies. *International Journal of Production Economics* 2009;122:305-11.
54. Ozgener S, Íraz R. Customer relationship management in small-medium enterprises: The case of Turkish tourism industry. *Tourism Management*. 2006;27:1356-63.
55. Trigo A, Varajão J, Barroso J, Soto-Acosta P, Molina-Castillo FJ, Gonzalez-Gallego N. Enterprise Information Systems Adoption in Iberian Large Companies: Motivations and Trends. In: Tavana M, editor. *Managing Adaptability, Intervention, and People in Enterprise Information Systems*. Hershey, PA: Information Science Reference; 2011. p. 204-28.