

2004

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Marianna Sigala

University of the Aegean, m.sigala@aegean.gr

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ECIS 2004 Proceedings. 172.

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CUSTOMER RELATIONSHIP MANAGEMENT (CRM) EVALUATION: DIFFUSING CRM BENEFITS INTO BUSINESS PROCESSES

Sigala, Marianna, University of the Aegean, Michalon 8, 82100 Chios, Greece,
m.sigala@aegean.gr

Abstract

Although CRM is one of the fastest growing management approaches being adopted across many organizations and particularly tourism and hospitality firms, the deployment of CRM applications has not always delivered the expected results while many CRM initiatives have failed. Consequently, the inability of CRM applications to deliver expected benefits has not only intensified the validity of previous findings and claims regarding the ICT productivity paradox, but it has also boosted current research. However, although the latter provides anecdotal evidence of the impact of ICT management practices on CRM effectiveness, there is a lack of empirical studies examining the relationship between CRM management and performance aspects. This study aims to fill in this gap by investigating the relation between firms' CRM applications and exploitation with their ICT management practices and CRM benefits. The investigation and validation of the former are valuable, since it would enable managers to maximize CRM benefits by identifying and allocating the appropriate resources, time and efforts to CRM implementation. Relations are tested by gathering data from Greek tourism and hospitality companies. Findings provide useful practical suggestions for CRM evaluation and implementation strategies, while implications for future research are analyzed.

Keywords: CRM, evaluation, ICT management, business processes.

1 INTRODUCTION

Customer Relationship Management (CRM) has become a strategic imperative for all companies as its effective implementation can increase customer satisfaction, loyalty and retention and so, overall sales and repeat purchases (Feinberg & Kadam 2002, Kotorov 2002, Anton & Hoeck 2002). However, although CRM is one of the fastest growing management approaches being adopted across many organisations (Adebanjo 2003) and particularly tourism and hospitality firms (Sigala 2003a), CRM deployment has not always delivered the expected results (Rigby et al. 2002), many CRM initiatives have failed (Early 2002, Feinberg & Kadam 2002), while Kekoe (2002) found that up to 20% of business executives claimed that CRM initiatives had damaged customer relationships. As a result, several companies in the tourism sector are currently questioning their CRM investments or delaying implementation of future projects (Sigala 2003a). Moreover, the inability of CRM applications to deliver expected benefits has not only intensified the validity of previous findings and claims regarding the ICT productivity paradox (Sigala 2003b), but it has also boosted current research, which is reflected in the great number of studies examining the critical success factors of CRM (e.g. Cann 1998, Rigby et al. 2002, Rheault & Sheridan 2002). However, although these studies provide anecdotal evidence of the impact of ICT management practices on CRM effectiveness, there is a lack of empirical studies examining the relationship between CRM management and performance aspects (Tu et al. 2001). Karimi et al. (2001) showed the impact of ICT management practices on customer service applications, but their study has failed to provide evidence of the relation of these constructs with performance benefits. Coupled with the lack of research measuring and confirming the CRM benefits as well as the ICT management practices that can lead to the materialisation of the former, it becomes evident that research in this area is urgent and indispensable for managers aiming to further develop, justify, monitor and successfully implement CRM projects.

This study aims to fill in this gap by investigating the relation between firms' deployment of CRM applications with their ICT management practices and CRM benefits. The investigation and validation of the former are valuable, since it would enable managers to maximise CRM benefits by identifying and allocating the appropriate resources, time and efforts to CRM implementation. To that end, after adopting a process-oriented approach for identifying and evaluating CRM benefits, a literature review is conducted for identifying the ICT management practices that were previously found to affect the materialization of CRM benefits. The impact of the latter on CRM benefits is empirically tested by gathering data from Greek tourism and hospitality companies and findings provide useful theoretical and practical implications for CRM evaluation and implementation strategies in the sector.

2 CRM: DEFINITION AND BENEFITS EVALUATION

CRM has been defined as the management approach that involves identifying, attracting, developing and maintaining successful customer relationships over time in order to increase retention of profitable customers (Bradshaw & Brash 2001, Massey et al. 2001). Fjermestad and Romano (2003) suggest that successful CRM requires attracting and keeping economically valuable customers while repelling and eliminating economically invaluable ones. Relationship marketing emphasizes building relationships that lead to customer retention and long-term customer loyalty, in juxtaposition to traditional transactional marketing, in which making a one-time, immediate sale to the customer is the primary goal (Gronroos 1994, Buttle 1996). Reicheld (1996) has shown that a small increase in retention (5%) can yield a 95% increase on the net present value delivered by customers. Consequently, CRM is increasingly being related to e-service and even defined as the exploitation of ICT for increasing the scale and scope of customer service (Kotorov 2002, Riel et al. 2001). However, although CRM implementation is heavily dependent and driven by ICT tools and advances (Bradshaw & Brash 2001), it is widely argued that CRM is a combination of hardware, software, processes, applications, and management commitment (Sigala 2003a, Rigby et al. 2002).

The exploitation of ICT tools and their integration with CRM applications are expected to bring several benefits such as (Krishnan et al. 1999, Fitzsimmons & Fitzsimmons 1997): improved product and service quality; customer satisfaction; higher productivity; improved financial performance and creation of barriers to entry; enhanced convenience and customer services through the advent of new products and various delivery/service channels. The different CRM tools enabling such benefits are classified as follows (Dyche 2001, Karimi et al. 2001): *operational* tools for improving customer service, online marketing, automating sales force etc; *analytical* for building data warehouses, improving relationships, analysing data etc; *collaborative* for building online communities, developing business-to-business customer exchanges, personalising services etc. These CRM applications automate customer service operations to cut costs of sales, boost revenue, and collect better customer data to improve support and increase selling opportunities. Such operations are also diffused in the organisation in order to enhance the benefits in several functions including operations, service, marketing, sales departments and call centre data.

The type of CRM tools and the aims of their exploitation were also used for classifying its adapters into four types (Karimi et al. 2001, Applegate et al. 1996): customer focused CRM businesses; operations focused CRM businesses; both operational and customer focused CRM businesses; and businesses that do not focus their CRM development at either front. Customer focused CRM applications enable firms in enhancing the efficiency and effectiveness of customer service, marketing and online sales, by automating: 1) sales force processes to reduce information asymmetry and delays, and to improve efficiency; 2) call centres and integrating customer databases to reduce staff requirements and the total cost of ownership of call centres; 3) e-mail interactions with customers to improve customer service and service efficiency and integrate e-mail, telephone and web interfaces; and 4) customer responses and profiles, tracking marketing campaigns through various media across a number of channels and managing quote and proposal processes from negotiations to closing. Operational focused CRM processes benefit firms in supply chain management, order management and service field by: 1) using database information and supplier pipeline processes to forecast demand more accurately and create viable scheduling applications; 2) reducing overall production costs by streamlining the flow of goods through production processes and by improving information flow; and 3) improving lead time/quality and enabling more customisation at a lower cost.

Karimi et al. (2001) also provided evidence that different CRM process exploitation leads to different business results and benefits. CRM alignment with organisational and customer-value processes was also found to affect the materialization of CRM benefits (e.g. Karimi et al. 2001, Corner & Hinton 2002). Thus, CRM evaluation should consider the types of CRM process exploitation and then measure their impact on different business processes. Literature within the ICT productivity paradox (Sigala 2003b, Dos Santos et al. 1993, Mooney et al. 1995, Barua et al. 1995) has also advocated that research on the ICT benefits should immigrate from firm-level to process-level studies. This is because in firm-level studies aggregate data tend to hide and balance trade offs and substitution effects amongst processes. On the contrary, process-centric approaches gather the first-order impact of ICT that occurs at the process level by improving individual business processes and /or enabling inter-processes linkages. Consequently, the greater the impact of ICT on individual processes and on inter-processes linkages, the greater the ICT business value. Moreover, as past studies on the ICT productivity paradox have ignored soft and intermediate benefits such as inventory management and enhanced customer service, current research should apply a more comprehensive and inclusive approach to the measurement of CRM applications benefits that includes broader economic and strategic impacts (Tallon et al. 2000). To that end, this study developed and applied a process-level model for evaluating CRM business value.

For developing this process-oriented CRM benefits evaluation model (Table 1), Tallon et al.'s (2000) process-oriented ICT benefits model was used but also further extended to consider CRM benefits/impacts revealed in other studies (e.g. Scullin et al. 2002, Adebajo 2003, Karimi et al. 2001, Sigala 2003a). However, in the absence and difficulty in gathering objective data on CRM benefits, executives' perceptions to assess the actual, rather than the expected, impacts of CRM on each activity

were used. Perceptual measures have been criticised in their use as proxies for objective CRM business value because executive may exaggerate their views on CRM impacts as a means of self-promotion as well as because market uncertainty and complex organisational structures complicate the task in giving an accurate assessment of true CRM payoffs. However, research has succeeded in alleviating these concerns by showing that perceptual measures of firm performance correlate strongly with more traditional objective measures (Venkatraman and Ramanujam 1987, Tallon et al. 2000). Moreover, numerous studies (DeLone & McLean 1992, Watson 1990, Jarvenpaa & Ives, 1991, Grover et al. 1998) have advocated the reliability of and used executives as key informants in assessing ICT impacts. This is because of several reasons. First, as direct consumers of ICT, executives can rely on personal experiences when forming an overall perception of ICT impacts. Second, as business executives become more involved in ICT investments and applications, they are increasingly exposed to the views of peers and subordinates regarding the performance of previous ICT investments. It has also been proved that executives' perceptions are key to understanding how ICT applications affects firm performance, because managerial knowledge of and attitudes towards ICT and ICT climate within an organisation are useful indicators of how IT is used to support the business strategy. In other words, these studies have proved a link between ICT business diffusion, process change and performance gains. However, it should be stressed that the use of perceptual measures is not meant to replace or displace traditional hard metrics. Instead, it is argued that perceptual data consist a reliable alternative approach to measuring CRM applications benefits.

3 ICT MANAGEMENT PRACTICES AND CRM BENEFITS

CRM effectiveness and benefits materialisation depend on several factors relating to ICT management practices. Indeed, the new competitive and technological challenges demand firms to adopt a more sophisticated approach to the way they manage and exploit ICT applications (Karimi et al. 2001, Corner & Hinton, 2002). In several firms, the lack of clearer organisational processes for effective ICT management prevent them from using ICT strategically and gaining maximum benefits (Sigala 2003b, Furey 1991). ICT management sophistication is found to significantly moderate the materialisation of the full ICT business value and has been traditionally used to characterise a firm's evolution in its management orientation, planning, organisation and control aspects of its ICT function (Karimi et al. 2001, Sigala 2003b, Tallon et al. 2000). Greater ICT management sophistication is characterised by (Karimi et al. 2001): the IT manager being aware of the firm's long-term strategic plans; the firm's future strategic plans being explicitly considered during ICT planning; and the ICT performance being evaluated based on contribution to the overall firm's objectives and not exclusively on cost savings. Parallel, in firms with high ICT management sophistication, top management is expected to have greater knowledge about ICT and participate more actively in ICT planning.

Moreover, studies investigating the ICT productivity paradox have also revealed that CRM benefits' materialization depends on the sophistication of ICT management as CRM success is inhibited/facilitated by the following factors: failure to develop a CRM strategy and adopt a strategic orientation (Cann 1998, Rigby et al. 2002, Sigala 2003a); lack of robust implementation approaches (Rheault & Sheridan 2002, Adebajo 2003); lack of measurement tools (Abbot 2001); selection and configuration of the CRM tools according to business processes and strategic goals (Rheault & Sheridan 2002; Adebajo 2003); ICT implementation and integration (Cavaye 1995, Adebajo 2003, Sigala 2003a); ICT management (Karimi et al. 2001); and management of organisational change, cultural management (Corner & Hinton 2002, Sigala 2003a, Fjermestad & Romano 2003).

Previous research (Karimi et al. 2001, Tallon et al. 2000) has also proved that corporate strategic ICT goals have a direct as well as an indirect (by influencing the way organisations plan, invest, use and monitor ICT projects) impact on ICT benefits. Overall, this study controlled for the effects of any ICT goals by classifying firms as: 1) market focused firms aiming to exploit ICT for creating or enhancing the value proposition to their customers; 2) operations focused firms aiming to exploit ICT for reducing operating costs and enhancing the overall effectiveness of business operations by focusing on

quality, speed, flexibility and time to market; 3) dual focused firms aiming to exploit ICT for achieving both operational efficiency and market effectiveness; and 4) unfocused firms without any clear focus on their ICT exploitation. Managers of unfocused firms are indifferent towards ICT and they are very likely to mismanage or undermanage ICT investments, leading to vicious cycle that erodes the potential for realising payoffs from both existing and future ICT investments. Based on this analysis the following hypotheses can be proposed: H1) managers in firms with more focused goals for ICT will perceive greater CRM benefits; and H2) managers claiming higher sophistication in their ICT management practices will perceive higher CRM benefits. Figure 1 illustrates the impact (direct or moderated) of these two variables on CRM process benefits.

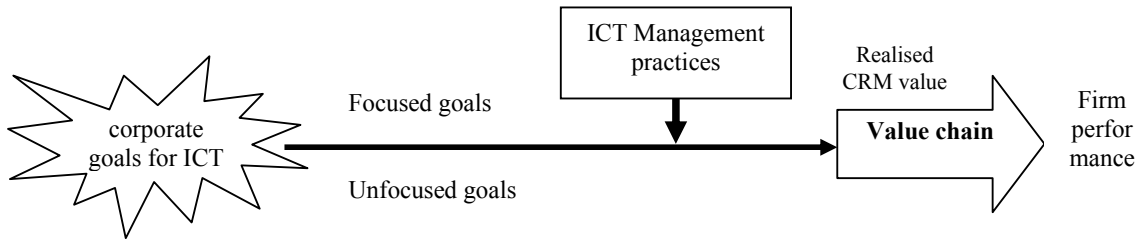


Figure 1. Process-oriented model for CRM benefits evaluation.

4 METHODOLOGY

Given the major failures of CRM projects despite the heavy business CRM investments, this study aimed to investigate the relation between firms' exploitation of CRM applications and their ICT management practices and CRM benefits. Primary data were gathered from Greek tourism and hospitality firms because of the great importance and significance of application in the sector. Moreover, by focusing on a specific sector, other contextual variables that may have moderated research relations are eliminated, while findings provide empirical evidence and implications for an under-researched but highly important ICT issue in the tourism sector. The questionnaire with a pre-paid self-addressed return envelop and a cover letter explaining the purpose and confidentiality of the research were sent to the general manager of the 800 largest firms. Appropriate firms were identified by using the ICAP (Index of Companies and Products) directory, a widely accepted database containing information about Greek companies, and by including a screening question on whether the firm is applying CRM. After a follow-up, in total, 127 usable questionnaires were returned giving a respectable response rate for the Greek and tourism industry of 15.8% (Sigala 2003a and 2003b).

The reliability and robustness of the data were ensured by an extensive review and use of the relevant literature. Specifically, CRM benefits were measured by a process-level model which was developed based on Tallon et al.'s model (2000) (Table 1). Moreover, as it was found that CRM benefits heavily depend on the sophistication of ICT management practices, Karimi et al.'s (2001) model for measuring ICT management sophistication was used. Karimi et al.'s (2001) model referred to ICT applications aiming to enhance customer service, but since CRM also aims to increase the scale and the scope of customer service, Karimi et al.'s (2001) model was considered as appropriate for this study (Table 2). Both models were tested for their content validity, reliability and construct validity. Content validity refers to the extent to which an instrument covers the range of meanings included in the concept. Content validity is not computed numerically but is subjectively judged by researchers. It represents the adequacy with which a specific domain of contents is sampled and it is determined based on two criteria (Nunnally, 1978): 1) whether an instrument contains a representative collection of items; and 2) whether a satisfactory method to test the instrument is used. To meet the first criterion, content validity was established by reviewing an extensive literature and by using previously validated constructs. To satisfy the second criterion, the questionnaire was pilot tested with 9 researchers and managers. The multi-items constructs of the models were also tested for their clarity

and appropriateness. Reliability is the degree to which measures are free from errors thus yield consistent results. The Cronbach's standardised α was estimated to assess reliability (the most commonly used reliability test in surveys). The recommended minimum acceptability value for α is 0.70, although some studies use α as low as 0.60 (Nunnally, 1978). A metrics in Tables 1 and 2 reveal that the reliability test is passed. Construct validity refers to an observed relationship between measures purported to assess different but conceptually related constructs and is indicated if items expected to load together in a factor analysis, actually do so. Confirmatory factor analysis was used for testing the unidimensionality of the items. Loadings and factors (Tables 1 and 2) confirmed unidimensionality and so, the models' format.

Perceived degree of CRM impact onLikert scale; (7) high impact-low impact (1)	M	α	Factor loading
Process Planning and Support	4.35	0.67	
Improve internal communication and coordination			0.66
Strengthen strategic planning			0.71
Enable your company to adopt new organisational structures			0.73
Improve management decision making			0.77
Streamline business processes			0.74
Supplier Relations (Supply Chain Management)	4.05	0.71	
Help reduce variance in supplier lead times			0.73
Help develop close relations with suppliers			0.64
Improve monitoring of the quality of suppliers' products / services			0.69
More efficient inventory management			0.74
Faster response to customer demand			0.76
Enable collaborative product development with suppliers			0.83
Help your company gain leverage over its suppliers			0.78
Production and Operations	4.36	0.74	
Enable and support customer collaborative product development			0.75
Enable efficient production of customized tailored made products			0.74
Improve production throughput or service volumes			0.78
Enhance operating flexibility			0.83
Improve labour productivity			0.72
Product and Service Enhancement	4.57	0.76	
Decrease the cost of product/service development / design			0.83
Reduce the time to market for new products / services			0.78
Enhance product / service quality			0.76
Support product / service innovation			0.69
Support project management			0.77
Sales and Marketing Support	5.97	0.82	
Enable the identification of market trends			0.86
Increase the ability to anticipate customer needs			0.85
Enable and empower sales people to increase sales per customer			0.80
Improve the time and level of accuracy of sales forecasts			0.74
Help track market response to business strategies / practices			0.71
Enhance online sales			0.86
Enhance effectiveness of market targeting			0.88
Monitor and enhance effectiveness of campaign management			0.79
Customer Relationships	6.11	0.78	
Enhance the ability to provide after sales service and support			0.88
Enhance the flexibility and responsiveness to customer needs			0.86
Enhance order management			0.77
Enable customer tracking and delivery management			0.78
Enhance customer contact service and channel options			0.76

Table 1. Process-oriented CRM benefits evaluation model.

ICT management sophistication Likert scale; (7) totally agree-totally disagree (1)	M	α	Factor loading
ICT planning	5.03	0.76	
Our ICT projects support the business objectives and strategies of our company			0.76
We continuously examine the innovate opportunities ICT can give for competitive advantage			0.77
We are currently informed on the current use of ICT by competitive forces in our industry			0.63
We are adequately informed on the potential use of ICT by competitive forces in our industry			0.66
We have an adequately picture of the coverage and quality of our ICT systems			0.68
We are content with how our ICT project priorities are set			0.71
ICT control	4.37	0.77	
In our company, the responsibility and authority for ICT direction and development are clear			0.78
In our company, the responsibility and authority for ICT operations are clear			0.81
We are confident that ICT project proposals are properly appraised			0.79
We constantly monitor the performance of ICT functions			0.75
Our ICT function is clear about its goals and responsibilities			0.65
Our ICT function is clear about its performance criteria			0.64
ICT organisation	4.01	0.73	
In our company, user ideas are given due attention in ICT planning & implementation			0.75
Our ICT specialist understands our business goals and the firm			0.71
The structure of our ICT function fits our organization			0.68
ICT integration and infrastructure support business goals			0.75
The ICT specialist-user relations in our firm are constructive			0.64
ICT integration with business	4.26	0.78	
In my firm, management perceives that future exploitation of ICT is of strategic importance			0.69
There is a top-down planning process for linking information systems strategy to business needs			0.71
Some ICT development resource is positioned within the business unit			0.74
The introduction of, or experimentation with, new technologies takes place at the business unit level			0.78

Table 2. *ICT management practices sophistication model.*

Corporate goals for ICT were measured using a seven point Likert scale (ranging from 1, do not agree, to 7, totally agree) of four items as in Tallon et al. (2000): ICT should reduce our costs and increase quality and speed; ICT should enhance the effectiveness of our overall performance; ICT should extend our market and geographic reach; ICT should help us to change industry and market practices. Based on respondents' responses to these items, firms were assigned to one of the four categories as previous identified by Karimi et al. (2001) and Tallon et al. (2000). So, if managers rated four or less on each item, they were assigned to the "unfocused" group since their responses suggested that they had no discernible goals for ICT. If managers rated five or above on the first two items (operational effectiveness), they were assigned to the operations-focus group. Alternatively, if managers rated four or less on the first two items and five or above on the second items, they were assigned to the market-focus group, while if rated five or above on all four items, they were assigned to the dual-focus group. So, the 127 respondents were assigned as: 28 unfocused; 26 operations-focus; 54 market-focus; and 19 dual-focus. The numerous market-focus firms are not surprising given the people and information intensiveness of the industry, while the several unfocused firms confirmed previous data indicating tourism and hospitality firms' inability to exploit and manage ICT tools (Sigala 2003a and 2003b).

5 DATA ANALYSIS AND DISCUSSION

The majority of the 127 respondents (67.7%) represent hotel companies, while less respondents (20.4%) are found in the travel agency and tour operator sector and fewer in the transport sector, conference centres and tourist activities facilities (Table 3). Actually, this sample is representative of the structure of the Greek tourism industry, i.e. the great number of accommodation providers.

Business type	No	%
Hotel companies	86	67.7
Travel agencies / tour operators	26	20.4
Transport companies (airlines and shipping companies)	8	6.3
Conference centres & other tourist activities (golf and spa centres)	7	5.5
Total	127	100%

Table 3. *Business type of respondents.*

5.1 Relationship between corporate goals and perceptions of realised CRM benefits

Composite variables for each of the six critical business activities were calculated by averaging the items under each process heading while also weighting their impact based on their factor loading. Using one-way analysis of variance, differences in realised benefits were investigated and confirmed between each focus type across each of the six business activities (Table 4). Specifically, executives in dual-focus firms perceive the highest “level” of CRM business value, followed by executives in market-focus, operations-focus and finally unfocused firms. It is also clear that this hierarchy or ordering is maintained across the entire breath of the value chain. So, findings provide support for H1 confirming the fact that corporate goals for ICT are an important determinant of perceived CRM benefits. Further analysis of the peaks across each type points to a link between the main locus of perceived CRM benefit and corporate goals for ICT. For operations-focus firms, the primary locus of perceived value occurs in production and operations activities that are central to a business strategy emphasizing operational effectiveness. In market-focus firms the highest CRM payoffs are in customer relations –consistent with a strategy emphasising strategic positioning. For dual-focus firms, the locus of perceived CRM benefits occurs twice at production/operations and customer relations.

5.2 Relationship between sophistication of ICT management practices and CRM benefits

Respondents claimed different business goals for ICT. However, since corporate goals for ICT have a considerable effect on the extent to which ICT investments contribute to firm performance as they influence firms’ ICT investments, the moderated impact of the former on perceived CRM benefits needs to be controlled. Thus, partial correlations controlling for the effects of goals for ICT on CRM benefits were used for investigating the correlation between sophistication of ICT management practices and perceived CRM benefits (Table 5). Results reveal that the sophistication of all ICT management practices is strongly related with all the perceived CRM benefits across the value chain processes with the exception of ICT control. ICT control is not a significant determinant of perceived CRM benefits in process planning and support and supplier relations. Such findings (valid even after controlling for the effect of corporate goals for ICT on perceived CRM benefits) provide strong evidence of the impact of ICT planning, organisation, integration and partly for control on perceived CRM process benefits and so of H2. Thus, in order to maximize CRM benefits firms need to: 1) define specific goals and objectives for improving customer service; 2) understand what attributes customers are looking for while using customer service CRM applications; 3) design ICT-based services to provide customers with personalised experiences; 4) manage organisational change due to CRM applications and gain management and staff commitment by involving them into the changing process; and 5) define metrics to be used by project managers to measure customer perceptions of the service.

Business activity	Focus group	Mean	S.D.	F
Process planning and support	Unfocused	4.06	1.43	10.102*** significance p<0.001
	Operations	4.30	0.98	
	Market	4.78	0.99	
	Dual	5.08	1.13	
Supplier relations	Unfocused	3.28	1.45	8.681*** significance p<0.001
	Operations	3.54	1.32	
	Market	3.82	1.45	
	Dual	4.33	1.34	
Production and operations	Unfocused	3.87	1.34	10.056*** significance p<0.001
	Operations	4.39	1.41	
	Market	4.56	0.99	
	Dual	5.10	1.26	
Product and service enhancement	Unfocused	3.53	1.43	15.781*** significance p<0.001
	Operations	3.11	1.36	
	Market	4.54	0.89	
	Dual	4.83	1.21	
Sales and marketing	Unfocused	3.44	1.47	10.852*** significance p<0.001
	Operations	3.37	1.43	
	Market	4.22	1.06	
	Dual	4.68	1.43	
Customer relations	Unfocused	3.93	1.01	14.982*** significance p<0.001
	Operations	4.11	1.43	
	Market	4.93	1.32	
	Dual	5.16	1.01	

Table 4. Perceived CRM benefits per focus group (CRM benefits and corporate goals for ICT)

	Process plan/supp	Supplier Relations	Produc. & Operat.	Prod/Serv enhance.	Sales & market.	Customer relation
ICT planning	0.147***	0.114***	0.351***	0.201***	0.265***	0.104***
ICT organization	0.362***	0.211***	0.193***	0.182***	0.243***	0.0325***
ICT control	0.021	0.127	0.398***	0.203***	0.262***	0.202***
ICT integration with business	0.318***	0.142***	0.283***	0.261***	0.175***	0.231***

*** significance p<0.001

Table 5. ICT management practices sophistication and perceived CRM benefits.

5.3 Discussion of findings

Overall the study provided evidence of the following. First, managers claimed very different goals for ICT. As goals for ICT influence firms' ICT investments and their exploitations, the former can have a considerable effect on the extent to which ICT investments contribute to firm performance. This means that the context or environment in which IT and the firm operates is a key factor that should be considered by researchers studying the ICT business value. Thus, failure to control for goals for ICT assumes that all firms are homogeneous regarding their strategic intent for ICT, which however is a false assumption. Second it was found that the primary locus of CRM benefits is consistent with corporate goals for ICT. Finally, it was found that enhanced sophistication of ICT management practices relates to higher perceived CRM benefits across all processes, apart from planning and supplier relations in the case of the management practice referring to ICT control. Such findings have implications for both business and ICT managers. As managers have different goals for ICT, communication between business and ICT managers is required in order to ensure that these goals are fully understood and acted upon. This confirms studies advocating the importance of involving

business managers with ICT planning as well as creating a shared vision and mutual recognition of business and ICT goals as a way to enhance strategic alignment. On the contrary, diverging goals for ICT between business and ICT managers may significantly hamper the materializations of ICT benefits. More broadly, the study has also provided a process-model of CRM benefits which can help managers identify areas within their businesses where CRM tools and applications can add business value. Thus, rather than investing on CRM technologies as a reaction to competitors move, managers can use the framework for setting CRM goals and identifying critical areas whereby CRM investments can be directed and managed. Finally, findings stressed the importance to manage ICT just like any other resource. Clear planning, organisation, control and alignment practices and efforts should be established and co-ordinated along with other business fields/resources in order to ensure the optimum utilisation and exploitation of ICT resources.

6 CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Despite the wide adoption of CRM applications in general but also in tourism and hospitality firms in particular, several CRM projects have been reported to fail creating big confusion regarding the business benefits and the success factors of CRM implementation. This study aimed to examine the relationship between the perceived benefits of different types of CRM exploitation with the corporate goals and sophistication of ICT management practices. A process-oriented model was developed for measuring the perceived CRM benefits across the entire value chain and data were gathered from the tourism and hospitality sector in Greece. Data analysis revealed that corporate goals for ICT can significantly impact on perceived CRM benefits. Specifically, it was found that perceived CRM benefits are stronger realised when corporate goals for ICT are aligned with focused CRM applications. In other words, findings confirmed the importance of aligning ICT and business strategies for materializing CRM and ICT business value. After controlling for the impact of strategic alignment on CRM business value, results also revealed a strong impact of ICT management sophistication on perceived CRM benefits. Such findings confirm claims of previous studies regarding the effect of ICT project planning, management, control and integration with business strategies on successful CRM implementation. By highlighting the critical determinant factors of ICT management practices, findings also provide useful practical guidelines on how firms should implement successful CRM projects. Analytically, to enhance CRM benefits managers need to: 1) gain top management support by demonstrating cost reduction, revenue enhancement, or strategic impact of new CRM projects; 2) ease the implementation and use of e-CRM; 3) decide which business functions need to be automated and / or streamlined, restructured; 4) gain middle management acceptance by involving them early in the process, especially as they decide which functions to automate; 5) monitor and continually control ICT implementation.

Moreover, the study provides very critical information for conducting future research in the area. As the study suffered from the small number of respondents also representing big firms, future studies should aim to extent the research scale to gather data from a more representative sample of the Greek tourism industry. Another limitation of the study is also the threat of respondent bias, since its pool was restricted to business managers. It might be possible that the perceptions and the opinions of business managers may be different from the collective opinions of executives/managers in these firms. Since CRM applications span different functions having a value chain impact, a multiple-respondent approach (from each firm) may further increase confidence in the observed data target. Thus, triangulation of data sources as well as data types may further enhance the reliability of future research. Since CRM is a very consumer focused approach customers' perceptions may also need to be included (i.e. quality and customer service impacts). Research findings are also limited by the fact that they only reflect managers' perceptions of the CRM benefits based in one country and in one sector. Thus, research findings should be carefully interpreted and not generalised. Future research should aim to construct and validate a CRM benefits evaluation and materialisation model that is independent of the sector/country applied or it is generic and also flexible enough to be able to consider different contextual factors affecting CRM benefits in different environments. Research has

also revealed that ICT and business leadership can also crucially affect business and ICT benefits and so, further validation of the previous findings should also be subjected to testing in different business structures, management styles and environments. Thus, the replication of the study in different contextual and business environments could also further refine, develop and enhance current findings.

References

- Abbott, J. (2001). Data data everywhere - and not a byte of use. *Qualitative Market Research: An International Journal*, 4 (3), 182 – 192
- Adebanjo, D. (2003). Classifying and selecting e-CRM applications: an analysis based proposal, *Management Decision*, 41 (6), 570 – 577
- Adebanjo, D. (2003). Classifying and selecting e-CRM applications: an analysis based proposal, *Management Decision*, 41 (6), 570 – 577
- Anton, J., and Hoeck, M. (2002). *ebusiness Customer Service*, The Anton Press: Santa Monica, CA
- Applegate, L., McFarlan, F. and McKenney, J.L. (1996). *Corporate Information Systems Management: The Issues Facing Senior Executives*, Irwin: Chicago
- Barua, A., Kriebel, C. and Mukhopadhyay, T. (1995). Information technologies and business value: an analytic and empirical investigation, *Information Systems Research*, 6 (1), 3 – 23
- Boyton, A. and Zmud, R. (1987). Information technology planning in the 1990s. *MIS Quarterly*, 11 (1), 59 – 71
- Bradshaw, D, and Brash, C. (2001). Management customer relationships in the e-business world” how to personalise computer relationships for increased profitability, *International Journal of Retail & Distribution Management*, 29 (12), 520 – 530
- Buttle, F. (1996). *Relationship Marketing Theory and Practice*, Paul Chapman: London
- Cann, C. (1998). Eight steps to building a B2B relationship, *Journal of Business & Industrial Marketing*, 13 (¾), 393 – 405
- Cavaye, A. (1995). The sponsor-adopter gap: differences between promoters and potential users of IS that link organizations, *International Journal of Information Systems*, 15 (2), 85 – 96
- Corner, I., and Hinton, M. (2002). Customer relationship management systems: implementation risks and relationship dynamics, *Qualitative Market Research: An international Journal*, 5 (4), 239 – 251
- DeLone, W. and McLean, E. (1992). Information systems success: the quest for the dependent variable. *Information Systems research*, 3 (1), 60 – 95
- Dos Santos, B.L., Peffers, G.K. and Mauer. D.C. (1993). The Impact of Information Technology Investment Announcements On the Market Value of the Firm. *Information Systems Research*, 4 (1), 1-23.
- Dyche, J. (2001). *The CRM handbook: a Business Guide to CRM*, Addison Wiley: Boston, MA
- Early, R. (2002). How to avoid the CRM graveyard, *Customer Inter@ction Solutions*, 20 (12), 26 – 30
- Feinberg, R., and Kadam, R. (2002). e-CRM web service attributes as determinants of customer satisfaction with retail Web sites, *International Journal of Service Industry Management*, 13 (5), 432 – 451
- Feinberg, R., and Kadam, R. (2002). e-CRM web service attributes as determinants of customer satisfaction with retail Web sites, *International Journal of Service Industry Management*, 13 (5), 432 – 451
- Fitzsimmons, J. and Fitzsimmons, M. (1997). *Services Management: Operations, Strategy, and Information technology*. Irwin: New York.
- Fjermestad, J., and Romano, N. (2003). Electronic customer relationship management: revisiting the general principles of usability and resistance – an integrative implementation framework, *Business Process Management Journal*, 9 (5), 572 – 591
- Fjermestad, J., and Romano, N. (2003). Electronic customer relationship management: revisiting the general principles of usability and resistance – an integrative implementation framework, *Business Process Management Journal*, 9 (5), 572 – 591

- Gronroos, C. (1994). From marketing mix to relationship marketing: toward a paradigm shift in marketing, *Asia – Australian Marketing Journal*, 2 (1), 9 – 30
- Grover, V. Teng, J., Segars, A. and Fiedler, K. (1993). The influence of information technology diffusion and business process change on perceived productivity: the IS executives' perspective. *Information & Management*, 34 (3), 4 – 16
- Jarvenpaa, S. and Ives, B. (1991). Executive involvement and participation in the management of IT. *MIS Quarterly*, 15 (2), 205 – 227
- Karimi, J., Somers, T., and Gupta, Y. (2001). Impact of Information Technology Management Practices on Customer Service", *Journal of Management Information Systems*, 17 (4), 125 – 158
- Kekoe, L. (2002). Long live e-business: software is finding a new role in helping companies to share information effectively", *Financial Times*, March 16, 14
- Kotorov, R. (2002). Ubiquitous organisational design for e-CRM, *Business Process Management Journal*, 8 (3), 218 – 232
- Krishnan, M., Ramaswamy, V, Meyers, M. and Damien, P. (1999). Customer satisfaction for financial services: the role of products, services ad information technology. *Management Science*, 45(9), 1194 – 1209
- Massey, A., Montaoya-Weiss, M, and Holcom, K. (2001). Re-engineering the customer relationship: leveraging knowledge assets at IBM", *Decision Support Systems*, 32 (2), 155 – 170
- Mooney, J., Gurbaxani, V and Kraemer, K. (1995). A process-oriented framework for assessing the business value of information technology. Proceedings of the sixteenth International Conference on Information Systems, Amsterdam, 17 – 27
- Nunnally, J. (1978). *Psychometric Theory*. New York, NY: McGraw-Hill.
- Reicheld, F. (1996). *The loyalty effect*, Harvard Business School Press: Cambridge MA
- Rheault, D., and Sheridan, S. (2002). Reconstruct your business around the customer, *The Journal of Business Strategy*, 23 (2), 101 – 109
- Riel, A.C., Liljander, V., and Jurriens, P. (2001). Exploring customer evaluations of e-services: a portal site", *International Journal of Service Industry Management*, 12 (4), 359 – 377
- Rigby, D., Reichheld, E., Schefter, P. (2002). Avoiding the four perils of CRM, *Harvard Business Review*, 80 (2), 101 – 109
- Scullin, S. Allora, J., Lloyd, G. and Fjermestad, J. (2002). Electronic customer relationship management: benefits, considerations, pitfalls and trends, Proceedings of the IS One World Conference, Las Vegas, Nevada, 3 – 5 April, CD – ROM
- Sigala, M. (2003a). Implementing Customer Relationship Management in the hotel sector: Does 'IT' always matter?", 11th European Conference on Information Systems (ECIS) "New Paradigms in Organisations, Market and Society": University of Napoli Federico II, University of Cattolina del. S. Cuore, Naples, Italy 16 – 23 June, 2003.
- Sigala, M. (2003b). The Information & Communication Technologies productivity impact on the UK hotel sector. *International Journal of Operations and Production Management*, 23 (10), 1224 – 1245.
- Tallon, P., Kraemer, K. and Gurbaxani, V. (2000). Executives' perceptions of the business value of information technology: a process-oriented approach, *Journal of MIS*, 16 (4), 145 – 173
- Tu, Q., Vonderembse, M. & Ragu-Nathan, T. (2001). The impact of time-based manufacturing strategies on mass customization and value to customer. *Journal of Operations Management*, 19, 201 – 217
- Venkatraman, N. and Ramanujan, V. (1987). Measurement of business economic performance: an examination of method convergence, *Journal of Management*, 13 (1), 109 – 122
- Watson, R. (1990). Influences on the IS manager's perceptions of key issues: information scanning and the relationship with the CEO. *MIS Quarterly*, 14 (2), 217 – 231