

TRENDS, TOPICS AND UNDER-RESEARCHED AREAS IN CRM RESEARCH

- A LITERATURE REVIEW

OLOF WAHLBERG
Dept. of Social Science
Mid Sweden University
Sweden
olof.wahlberg@miun.se

CHRISTER STRANDBERG
Dept. of Social Science,
Mid Sweden University
Sweden
christer.strandberg@miun.se

HÅKAN SUNDBERG
Dept. of Information Technology and Media
Mid Sweden University
Sweden
hakan.sundberg@miun.se

KARL W. SANDBERG
Dept. of Information Technology and Media
Mid Sweden University
Sweden
karl.w.sandberg@miun.se

Abstract

Purpose – The main purpose of this paper is to add to the image of CRM research by identifying trends and topics, using the perspective of CRM when it is divided into the four separate branches, namely those of Strategic CRM, Analytical CRM, Operational CRM and Collaborative CRM. In addition to this, the purpose is to identify under-researched areas in the body of CRM research in which there are research questions requiring to be addressed by means of further research.

Design/methodology/approach – A review is made of articles in three major journals.

Findings – The development of the number of CRM articles published in the journals signals a maturity within the CRM research field. Articles on Strategic and Analytical CRM dominate the research in this field. The focus has changed from Analytical to Strategic CRM, which is the most popular branch by the end of the period reviewed. There is a paucity of research with a resource based view in Strategic CRM. There is a large scale bias in CRM research.

Research implications - Three implications for future research on CRM are noted: 1. There is need for more research within the area of Operational CRM and Collaborative CRM. 2. There is a need for research with a resource based view on CRM. 3. There is a

need for more research on CRM in SMEs, using a frame of reference that accounts for SME features.

Originality/value – The paper presents an image of the development of the CRM research field using an image of CRM that is well established, yet which has not been used in earlier literature reviews. It also points to the development of the CRM research field during the past two decades, including an increased focus on Strategic CRM. Furthermore, it points to voids in CRM research that call for further studies.

Paper type – Literature review.

Keywords: Customer Relationship Management, CRM, Small and Medium Sized Enterprises, Resource Based View, Literature review.

1 Background

The CRM approach has received increased attention as a marketing concept during the last decades, both amongst practitioners and in academia (c.f., for instance, [Sin et al. 2005; Osarenkhoe and Bennani 2007; Wilson et al. 2002]). The number of articles and books on CRM appears to be increasing incrementally, and the implication from this is that a new sub-discipline of marketing research is emerging. As with most emerging research fields, there appears to be a certain amount of confusion associated with CRM research, not least since there is a great variety of topics that have been addressed in CRM research. There is a need for reflection on this emerging research field, and consideration must be given to identifying trends and relevant topics for further research.

Attempts have been made to map and categorise publications representing CRM research. Romano and Fjermestad [2002a,b] analysed 369 journal articles and conference papers on electronic customer relationship management (e-CRM). The articles were coded as belonging to four research areas: e-CRM markets; e-CRM business models, e-CRM knowledge management, e-CRM technology, and e-CRM human factors. The most popular research area was e-CRM technology, followed by e-CRM human factors and e-CRM markets. The least popular research area was e-CRM knowledge management. It should be noted that e-CRM is perceived as being a subdivision of MIS research, and that marketing and management publications were excluded. Ngai [2005] widened the focus and analysed 205 marketing as well as information technology (IT)/information systems (IS) articles. The articles were coded using functional categories: CRM, marketing, sales, service and support, and information technology & information systems. Articles falling outside these functional categories were categorised as general. It was found that the most common category of CRM articles belonged to the IT & IS category, followed by the general category, the marketing, the sales, and the service & support categories. Paulissen et al. [2007] analysed 510 journal articles and conference papers belonging to both the IT/IS and the marketing disciplines. A classification scheme based on the different phases of a CRM lifecycle model was used: adoption, acquisition, implementation, usage & maintenance, evolution, and retirement. Publications that did not belong to any of these phases were coded as general. It was found that the majority of publications belonged to the first phases of the lifecycle and that the latter phases appeared less frequently. There were, in relative terms, a substantial number of articles belonging to the general category. All three reviews also found that the number of publications concerning CRM has increased substantially from the period after the end of the 1990s.

A fundamental problem in CRM research is that, at present, no common image regarding what CRM is actually exists. Rather, it appears to mean different things to

different people [Paulissen et al. 2007]. This has occurred mainly because different perspectives on the phenomenon are applied. It is seen by some as being a matter of integrating business processes in an organisation (c.f., [Jain 2005; Payne and Frow 2005; Plakoyiannaki and Saren 2006; Reinartz et al. 2004; Srivastava et al. 1999; Swift 2001; Winer 2001]). Another perspective sees it as a matter of a customer focused business strategy [Chen and Popovich 2003; Osarenkhoe 2006; Sin et al. 2005; Teo et al. 2006]. A third major perspective sees it as a matter of customer knowledge management [Lin et al. 2006; Zablah et al. 2004]. Closely related to this last perspective is to see CRM as a matter of technology enabled customer information management activities, including Strategic CRM, Analytical CRM, Operational CRM and Collaborative CRM [Buttle 2004; Chalmers 2006; Karimi 2001; Tanner et al. 2005]. It is noteworthy that this last image has received a great deal of attention outside academic research. It is, for instance, a classification of CRM presented in Wikipedia¹, and also a classification advocated by the Meta Group [Business Wire 1999]. It is, however, not an image that is reflected in the attempts to describe the CRM research field mentioned above.

The main purpose of this paper is to add to the image of CRM research by focussing on identifying trends and topics focused, using the perspective of CRM when it is divided into four separate branches, namely, Strategic CRM, Analytical CRM, Operational CRM, and Collaborative CRM. In addition to this, the purpose is to identify under-researched areas within the body of CRM research that suggest that there are research questions to be addressed by means of further research.

2. Concepts

- Strategic CRM: One branch of CRM is to regard it as an enterprise wide strategy in which the main focus is on the customer. It is also assumed that, within an enterprise, it is a core managerial task to champion and implement this focus as a CRM strategy, including placing an emphasis on the systematic analysis and use of customer information as a platform for marketing and management.
- Analytical CRM: The customer knowledge data base formed from the systematic collecting and storing of customer data is perceived as an asset to the enterprise. Through an analysis of the data in this data base it is possible to improve marketing efficiency in different ways. It is important that the ICT development has made it possible to both gather and analyse customer data in a much more systematic and efficient way than was previously the case before the computer revolution.
- Operational CRM: Operational CRM means that an ICT based support is provided for front office activities, including sales, service and support. Such support is intended to be used both in call/contact centres and by the sales staff in their customer contacts.
- Collaborative CRM: The development of ICT has opened up new possibilities for communicating with the customers. In addition to personal contacts, telephone contacts and mails, it is now also possible to communicate through web sites, e-mail, self-service telephone contacts, and SMS. Through this development, the use of different communication channels in a channel

¹ http://en.wikipedia.org/wiki/Customer_relationship_management

management strategy has become a branch of CRM. The Collaborative CRM concept covers this branch of CRM.

3. Method

A literature review was conducted to describe the CRM research field using the above mentioned CRM branches as a basis for classification. Three major academic data bases with a full text option were chosen for the review: Emerald, Science Direct and IEEE. The selection of articles for the review was based on their mentioning “Customer Relationship Management” either in the title or as a key word or in the abstract. The search for articles was conducted in March 2007. The result of this was 468 research articles that dealt with CRM in one way or another.

As a point of departure for the review the following questions were used:

- How has CRM research developed over the years?
- What topics are focused on in CRM research?

To answer the first question, the articles in the databases were coded according to the CRM branches identified above, and the year that the articles were published. It should be noted that some articles were categorised into more than one branch, making the final number to be 487. To answer the second question, different key concepts attached to the different branches were noted in the coding procedure.

During the coding procedure it was realised that there were articles that were unable to be categorised within the four branches. This caused the addition of a further three categories: articles which had purely technical content with little connection to CRM were coded as “technical”, articles which listed CRM as keyword, but were in fact discussing a topic only remotely related to CRM, were coded as “other”. Finally, some articles were not “proper” CRM articles at all: mere introductions to conference proceedings or mini tracks, for instance. These articles were coded as “not applicable”.

Another somewhat serendipitous finding was that the empirical basis for the bulk of CRM research was predominantly large enterprises, and that there were only a few articles focusing on CRM from the small and medium sized (SME) context – in spite of the importance of SMEs in the economy of advanced countries (cf. [Storey 1994]). The articles were therefore also coded according to their focus on SMEs.

Three well known data bases were selected to strengthen the validity of the findings: two with a social science orientation (Emerald and Science Direct) and one with an information system orientation (IEEE). This mix of databases was made since CRM is a research field in Marketing, Business and Management as well as in IT and IS (cf. [Ngai 2005]). A focus on published research articles may result in a bias in the findings, since research is also reported in conference papers, masters and doctoral dissertations, textbooks and unpublished working papers. Paulissen et al. [2007] and Romano and Fjermstad [2002a,b] made a point of noting the differences in research from the different outlets. It may also be argued that much CRM research is published in journals not represented in the selected databases, and that this is another reason for biased findings. However, it is held here that a review of published articles presented in the three well known data bases provides a fair image of CRM research as a whole as such data bases are crucial when researchers search for information within a research field (cf. [Ngai 2005]). To strengthen the reliability, or

“trustworthiness”, of the coding, it was carried out pairwise, i.e., by two researchers analysing the articles together.

4. Results

4.1. The development of the research field over time

The distribution of CRM articles over time is shown in figure 1. The number of articles which focussed on CRM as a specific topic were rather few in number until the end of the ‘90s, which falls in line with the findings of Ngai [2005], Paulissen et al. [2007] and Romano and Fjermstad [2002a,b]. It also corroborates the assumption that the CRM concept is relatively new in the marketing discussion. The number of articles on CRM then increased steadily until 2004. However, over the last few years, the number of articles appears to have decreased.

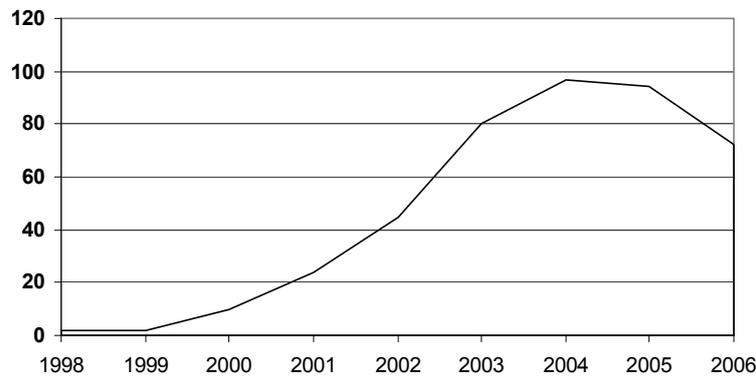


Figure 1: The distribution of CRM articles 1998-2006

The decrease in CRM articles is a finding that runs counter to Ngai’s [2005] conclusion that research on CRM will increase significantly in the future. However, when the distribution of articles is split up into the different branches of CRM (Figure 2), it is evident that the decrease in numbers is very much due to a decrease in articles relating to Analytical CRM. It is also part of the picture that the distribution curve of articles on Analytical CRM shows a “saw tooth pattern”. This makes it rather difficult to interpret the recent decrease in the total number of articles on CRM. The decrease may be temporal.

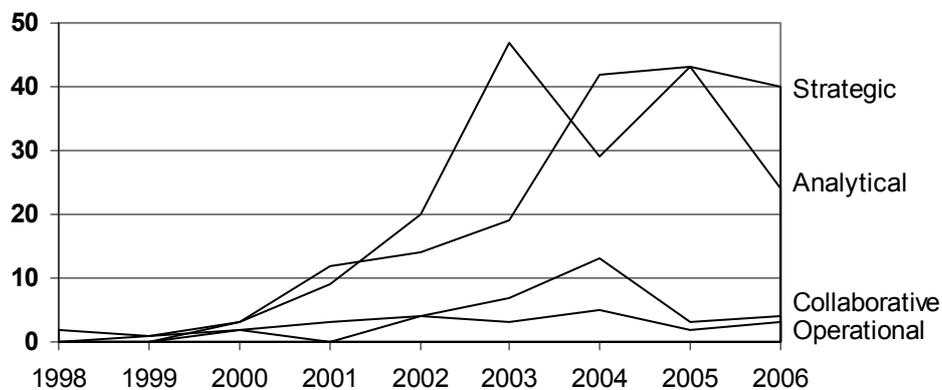


Figure 2: The distribution of CRM articles 1998-2006 in different branches

It must also be recognised that the decrease in articles during the last year in figure 1 could partly be a matter of “editorial momentum”: the articles in this study were searched for and retrieved during March 2007. At that time all articles from 2006 might not have reached the databases and thus the number of articles from 2006 remains somewhat uncertain.

4.2. On topics discussed in CRM research

Branch of CRM	No. of occurrences	Salient topics
Strategic	185	Integration, implementation, change management, organisational coordination, measurement and profitability, IT and architecture, CRM paradigm, new business practices, multichannel management, supply chain management
Analytical	180	Knowledge management, data mining, predictive modelling, customer retention, customer segmentation, customer behaviour and profile, analysis methods
Collaborative	35	Internet and web channels, mobile channels, e-learning
Operational	19	Customer service, contact centres, sales force support, CRM software
Technical	20	Software, databases and protocols, hardware, security
Other	32	CRM occurs as a keyword when discussing a completely different topic, e.g. quality or project management
Not applicable	16	Articles that were not "proper" articles, e.g. introductions to mini tracks etc.
TOTAL	487	

Table 1: Relative size of CRM branches and salient topics

4.2.1. Topics discussed in Strategic CRM

Strategic CRM is, in a close call with Analytic CRM, the largest research field according to the literature review (see Table 1). Since strategy is by definition a complex phenomenon, articles about Strategic CRM also discuss many topics.

- Among the major issues are the *CRM paradigm*; the customer-centric view and customer focus. Long-term customer relations and value creation, together with a focus on the relationship with the individual customer, also constitute major parts of the CRM paradigm [Sin et al. 2005].
- CRM requires the *integration* of activities and an integrated view across the whole organisation. This is a second major topic in the articles. Processes across the enterprise require to be integrated, and information must be shared, in order to better align managerial processes and align business with IT. In the Strategic CRM approach, this also includes the fact that it is not merely a strategy confined to marketing but it is based upon the integration of all resources and capabilities of an enterprise. This integration should also be

carried out with the overarching goal being that of generating customer value. [Chen and Popovich 2003; Ryals and Knox 2001; Payne and Frow 2005].

- Processes in general cut across organisational functions, and *organisational coordination* and a collaborative strategy is therefore necessary. This coordination is required cross-functionally inside organisations, but also between organisations in multi-enterprise collaboration, resolving possible conflicts. The traditional "silo" organisation in which different functions focus on their specific goals must give way to a more integrated process organisation in which all functions collaborate to generate customer value [Boulding et al. 2005; Ryals and Knox 2001]. Several authors have emphasized the importance of using customer needs and preferences as the starting point of such process integration and coordination [Chen and Popovich 2003; Teo 2006; Zablah et al. 2004].
- The CRM approach was greeted with great optimism when it was first launched in the 1990s. The approach was assumed to be able to generate substantial competitiveness for an organisation (cf. [Sin et al. 2005]). The implementation of a CRM strategy was also considered relatively unproblematic – if it was considered at all. However, bit by bit, the image of implementation has changed. Empirical observations point to a large percentage of *implementation failures* when attempts have been made to implement CRM strategies [Berg 2001; Bull 2003; Cleary 2003; Osarenkhoe and Bennani 2007; Thompson and Eisenfeld 2000].
- The implementation failures mentioned form the backdrop to research articles dealing with the introduction of CRM systems and strategies. The *implementation* of a CRM approach is recognised as being a complex process, full of problems and barriers that must be managed in a proper manner in order to promote the success of an implementation. Altogether, it is a question of *change management* in order to impact processes, people, supplier/outsourced relationships and technology. Organisational cultures may have to be changed, and a readiness for change has to be achieved. [Chen and Popovich 2003; Peppard 2000; Ryals and Knox 2001].
- One key factor in an implementation context is the commitment from managers [Bull 2003; Osarenkhoe and Bennani 2007], a factor which is often discussed when dealing with other *success factors*. Without managerial commitment, any implementation of CRM strategies is thought to be deemed as a failure [Chen and Popovich 2003]. Top *management commitment* and the need for a *human resource management* (HRM) in line with a customer focus is basic to the CRM approach. Closely related to this is the management of an *organisation culture* that embraces the saliency of a customer focus in operations [Boulding et al. 2005; Teo et al. 2006; Wilson 2005].
- Furthermore, CRM cannot be implemented without proper support from *information systems and architecture*. The requirement for integration increases for different IT based processes within the enterprise. Initiatives such as e-business, and electronic services in general, open up and make many of the organisation's previously internal information systems transparent to the customer. CRM cannot be treated as merely an add-on module to existing systems. Different kinds of enterprise-wide systems and concepts relate to CRM [Du 2004; Shafiei and Sundaram 2004]. The Enterprise Resource Planning (ERP) system provides the heart of information for business processes, Supply Chain Management (SCM) integrates suppliers with

customers and Decision Support Systems (DSS) provide a foundation for decisions. Altogether there is a need for the integration of all applications across the enterprise, in addition to a requirement for a common architecture supporting the business. A current trend is Enterprise Application Integration (EAI) whose ultimate goal is to integrate all applications within the enterprise into a coherent whole [Themistocleus et al. 2005; Puschmann and Alt 2001]. Such integration offers the possibility to support an enterprise wide strategy based upon integration and customer focus.

- Slightly less frequently discussed topics are *measurement and profitability*, i.e. monitoring performance, assessing profitability, and in general developing scales for CRM development. [Javalgi 2005; Lenskold 2004]. It is particularly worth mentioning the *CRM maturity scale* developed by Sin et al. [2005]. Such a scale is of importance for measuring results regarding any attempts to promote the adoption of CRM practices, including such attempts based on benchmarking.
- Other topics discussed at a strategic level are *new business practices*, such as *e-commerce*, *m-commerce* (mobile), and *multichannel management* in general, i.e. strategies for deploying CRM in new or all channels, and the management of the channels. (Payne and Frow 2004).

4.2.2. Topics discussed in Analytical CRM

Analytical CRM is, according to the literature review (see Table 1), almost as popular as Strategic CRM.

- The field is dominated by the concept of *data mining*. The essence of data mining is to analyse large quantities of data in order to discover meaningful patterns and relationships; e.g. examining customer grocery shopping behaviour and developing the profiles of loyal patrons [Min 2006] or segmentation in general [Cheng et al. 2005; Tian et al. 2006]. Data are often collected from “islands of customer data” throughout the organisation, with the help of data warehousing techniques
- It is part of Analytical CRM to disseminate the (customer) knowledge across the organisation, which means that (customer) *knowledge management* is a major topic within the field of Analytical CRM [Xu and Walton 2005; Zablah et al. 2004]. Sin et al. [2005] also argue that a detailed knowledge about key customers in particular is the very basis of a *learning oriented relationship* – that in the extension is a method for improving the enterprise’s competitiveness in an increasingly tough economy.
- Another major topic within Analytic CRM is *predictive modelling*. The purpose is to build models for the prediction of purchase behaviour and for purchase forecasting [Xu and Walton 2005]. Attempts are also made to predict customer value. A particular focus is on predictions concerning responses relating to actions leading to customer loyalty.
- An important source for predictive modelling information is the *customer behaviour and profile* where business events are detected and analysed. Data mining is often used for this purpose [Ha et al. 2002].
- The goal of prediction is twofold: The first goal is to maintain customer loyalty in order to maximise *customer retention* (anti-churn) (c.f. [Van den Poel and Lariviere 2004; Verhoef et al. 2001]). Another goal is *customer segmentation*, through which customers are selected and differentiated in order

to personalise and add value to offerings. Such adding of value is premised to be important to the loyalty of the customers. Value is also added for a company that is able to improve cross-selling [Verhoef 2001]. Cross-selling is conducted when a company presents offers to customers when they have been communicated with for other reasons. The customer profile provides clues to successful cross-selling. Segmentation can also be used for decisions about targeted market activities and for the design of products and services to make them fit different customers with different profiles (cf. [Bull 2003]). This purpose is emphasised in particular for enterprises working on mass markets. Long term profitability of business relations is discussed in terms of customer lifetime value in CRM literature. Life time value of a customer is defined as the present value of all future net revenues received from that customer [Jain and Singh 2002].

- The development and testing of methods for customer data analysis appear to be attractive topics suitable for statistical and mathematical approaches. Common statistical methods are used for this purpose, including regression analysis, but also more advanced methods, e.g. neural networks, signalling game, Bayesian equilibrium, Walraisan general equilibrium approach, Markov chain transition matrix, text analysis, fuzzy clustering, and novelty detection. [Burez and Van den Poel 2007; Lee and Cho 2006; Prinzie and Van del Poel 2006]

4.2.3. *Topics discussed in Collaborative CRM*

- The relatively few articles (see Table 1) on Collaborative CRM are dominated by the *Internet and web channels*. Internet marketing and online shopping call for shopping agents, product configurations, collaborative recommender systems, web complaint management, and general customisable services [Fan et al. 2004; Kruse and Bramham 2003; O'Leary et al. 2004]. On the other hand, all other kinds of non-commercial web services and information portals require web-based tools, web accessibility and web-enabled servicing in general [Yang et al. 2003].
- New additions to self-service channels are the *mobile channels*. Mobile computing and mobile equipment in general require development of mobile CRM, i.e. management of customer relations using mobile equipment [Camponovo et al. 2005; Shen and Lee 2000]
- Lastly, Collaborative CRM also relates to the field of *e-learning*. Web-based learning platforms and mobile student information tracking systems are examples of article topics [Neville et al. 2005]

4.2.4. *Topics discussed in Operational CRM*

- One aspect of the relatively few articles on Operational CRM (see Table 1) concerns personalised *customer service*, mainly managed in *contact centres*.² [Kooze 2004]. Personalised service also comprises real-time web interaction with sales representatives and support staff [Ohaegbu and Devgan 2000].

² There are a wide range of contact centres studies in general, and specific about the employee's well-being in contact/call centres (e.g. Strandberg and Wahlberg 2007). Often such centres are viewed as a separate department, and not so clear connected with other departments, for instance the marketing department. This can have a negative impact on the cross functional issues, which is an important CRM issue.

- An important goal for Operational CRM is to measure, improve and optimise the performance of customer services and the sales force. *Sales force support* and information is therefore necessary in order to develop sales and sales force management functions. Sales people are regarded as important information gatherers [Liu and Comer 2006] and an issue addressed is what happens once sales force automation (SFA) technology is adopted (Buehrer et al. 2005).
- Surprisingly few articles cover IT or *CRM software*, even though there are a few articles covering CRM packages in general [Light 2003] and internet based phone communication (VoIP) [Moon et al. 2000].

4.3. On the paucity of research on CRM in SMEs

As previously mentioned, when the articles were read and coded it was noted that CRM in a SME context was under-researched: only about ten of the articles reviewed actually addressed CRM in an SME context. When an attempt was made to code these articles according to what branch of CRM they were discussing, it was also found that this coding was irrelevant for the way in which CRM in SMEs was discussed. Only one article was, in fact, directly related to the issues of CRM in SMEs [Özgener and Iraz 2006]. Other articles dealt with CRM in a more indirect manner: as a subject related to e-commerce [Alonso-Mendo and Fitzgerald 2005; Manuel et al. 2003; Subba and Metts 2003], as a matter of relationship management [O'Toole 2003; Sand 2003], or as an aspect of ICT adoption in SMEs [Fink and Disterer 2006]. Finally, there were a few articles that were found to be irrelevant for the purpose of this review; since they did not address the issue of CRM in SMEs, although these concepts were mentioned in the key words.

The very small number of articles dealing with CRM in SMEs implies that CRM research is heavily biased by experiences from large scale enterprises and thus with their particular features. In the articles dealing with SMEs, it is argued that there are certain SME features that are of relevance for ICT adoption – including CRM adoption. These features include (i) an owner-management dominance [Chen and Popovich 2003; Manuel et al. 2003; O'Toole 2003; Özgener and Iraz 2006], (ii) an owner-manager commitment to independence. [Fink and Disterer 2006; Manuel et al. 2003; Sand 2003] (iii) strategic myopia, ad hoc decisions and policy inertia. [Manuel et al. 2003; O'Toole 2003], (iv) commitment to face-to-face and personalised customer relations [Fink and Disterer 2006] (v) regarding selling as equal to marketing and sales people as the central market communication medium [O'Toole 2003] and (vi) a focus on few and long term business relations and local market orientation [Manuel et al. 2003; O'Toole 2003]. The focus on a few customers is particularly relevant for enterprises in the B2B sector – which is a very large sector of the economy in general, (vii) lack of marketing capabilities [O'Toole 2003; Sand 2003], (viii) relatively low ICT maturity and a lack of ICT capabilities [O'Toole 2003; Subba Rao et al. 2003], and finally (ix) a general lack of resources to finance ICT investments [Manuel et al. 2003; Özgener and Iraz 2006].

5. Conclusions and implications

5.1. Conclusions

5.1.1. *CRM research is established as a research field*

It is argued that the CRM approach is receiving increased attention in academia. A conclusion that can be drawn from this study is that this assumption appears to be valid until 2004. After that point, the number of articles published has decreased somewhat, indicating a relative reduction in the attention paid to the subject. The number of articles published is, however, on a level that indicates that CRM research has been established as a separate research field.

5.1.2. *Focus has changed to Strategic CRM*

The two most prominent CRM branches represented in the articles are Analytical CRM and Strategic CRM. There are relatively few articles dealing with Operational CRM and Collaborate CRM. There appears to have been a shift in focus in CRM research during the last few years. The Analytical CRM branch was the most popular for a couple of years, but it now seems to have lost its popularity and, at the moment, the Strategic CRM branch is the most popular. One possible explanation for this shift in focus might be because of the high rate of implementation failures reported: most CRM projects have, in fact, proved to be failures (cf. [Giga 2001]), no matter how sophisticated the Analytical CRM solutions are, that form part of the projects. It is concluded in the literature that the adoption of a CRM approach is a leadership issue on a strategic level in the organisation (cf. [Bull, 2003]).

5.1.3. *There is a paucity of research with a resource based view in Strategic CRM*

When the topics discussed in the Strategic CRM branch are considered, two major sub-branches can be identified: one focusing on implementation issues, including organisational and leadership issues, and one on the possibility of gaining competitive advantages with a CRM approach. The importance of the first of these sub-branches is based on the above mentioned high failure rate of CRM projects. There is a need for an awareness of the social and other barriers to the adoption of the CRM approach in an organisational context if this approach is to be accepted and endorsed by the organisation members, and also for the managerial implications of this awareness. The latter sub-branch of Strategic CRM provides the motivation for the adoption of the CRM approach in the first place. When this sub-branch of Strategic CRM is considered, it is notable that the resource based view (RBV) regarding strategy, including its emphasis on organisational capabilities, is not reflected in the topics discussed. This is also something that is commented upon by Zablah et al. [2004]. This stands in contrast to the widespread attention to the RBV approach in the strategic discourse, but is in line with Srivastava's et al. [2001] observation of the relative paucity of the RBV approach in marketing research.

5.1.4. *There is a large scale enterprise bias in CRM research*

The CRM research field is heavily dominated by the experiences from large organisations and this is a crucial bias in CRM research. Small enterprises are very important in most advanced economies since they constitute the lions share of the business population as a whole, their importance as employers, and because they have

a key role in economic development [Birch 1979; Bolton 1971; Gudmunson et al. 2003; McLarty 1998; Storey 1994]. It is therefore crucial for both the enterprises themselves and for the economy as a whole that they are able to gain and develop their competitive advantages. In a situation when the competitive landscape is changing, due to globalisation, the development of the ICT, and a change in consumer behaviour, that those marketing practices, which worked in the past, may turn out to be less successful in the future. The adoption of a CRM approach, including its emphasis on ICT enabled marketing practices, is a means of remaining competitive – and also in developing new competitive advantages in this new competitive landscape.

5.2. Implications

5.2.1. *The need for more research on Operational CRM and Collaborative CRM*

The research field is dominated by Strategic CRM and Analytical CRM. At the same time, articles covering Collaborative and Operational CRM are sparsely represented. This appears to be almost opposite to the picture obtained from a simple Google search: searching for “Customer Relationship Management” or “CRM” results in numerous links to software vendors offering CRM solutions. These solutions are in many cases packages aimed at sales force automation, which implies Operational CRM. It is also part of the picture that an increasing number of e-commerce solutions are offered by software vendors on the market. This could be regarded as a special case of Collaborative CRM.

It can be argued that Operational CRM and Collaborative CRM represent a crucial first step in a general development of CRM maturity for many enterprises. This makes it salient to address questions of barriers and drivers when it comes to the deployment of Operational CRM and Collaborative CRM tools in research – including the question of acceptance. Unless the acceptance of the tools can be promoted, they will not be tested in the first place.

It is worth noting that CRM can also be purchased as a module in almost any Enterprise Resource Planning (ERP) system today. A crucial problem that must be addressed is how to make these applications work together as a coherent whole. There is a need for more research on barriers – technological and others – that restrict the integration of CRM systems with other administrative systems, including ERP systems and also other information and document management systems.

5.2.2. *The need for research with a Resource Based View on CRM*

When consideration is given to Strategic CRM, it appears that research with a RBV approach is required. This approach is at the core of the present strategy discourse and it is an approach that corresponds well with the CRM approach together with its emphasis on ICT enabled marketing. The capabilities of deploying ICT based marketing tools are central to such an approach. In a slightly different vein, it can also be stated that customer knowledge management related capabilities are crucial to the success of the CRM approach in an organisation (cf. [Dous et al. 2005]).

5.2.3. *The need for more research on CRM in SMEs*

There is an evident need for research on CRM practices – including the implementation of the CRM approach – in a SME context and in small organisations

in general. The view is held that in the articles reviewed that SMEs have certain features that are of relevance for the adoption of CRM practices. This corresponds to research on SME marketing in general (cf. [Carson 1990; Coviello et al. 2000; Simpson et al. 2006; Siu and Kirby 1998; Storey 1994; Zontanous and Andersson 2004]). SMEs are found to have particular features of importance for their marketing, and these features must be addressed in research. In other words; it points out the necessity for developing a frame of reference that builds on empirical research with regards to how SMEs manage their customer relations as a basis for research on ICT enabled marketing in a SME context (cf. [Wahlberg and Strandberg 2008]).

References

- Alonso-Mendo F. and Fitzgerald, G. 2005. A multidimensional framework for SME e-business progression. *Journal of Enterprise Information Management*, 18(6), pp.678-696.
- Berg H. 2001. The Stresses of CRM Installations. *ComputerWorld*, 15 January 2001.
- Birch D. L. 1979. *The Job Generation Process*. MIT Program on Neighborhood and Regional Change. Cambridge MA.
- Bolton J.E. 1971. *Report of the Committee of Inquiry on Small Firms*, Cmnd 4811, London HMSO
- Boulding W., Staelin R., Ehret M. and Johnston J.W. 2005. A Customer Relationship Management Roadmap: What is known, Potential Pitfalls, and Where to Go. *Journal of Marketing* (69), pp.155-166.
- Buehrer R.E., Senecal S. and Pullins B.E. 2005. Sales force technology usage - reasons, barriers, and support: An exploratory investigation. *Industrial Marketing Management*, 34(4), pp. 389-398.
- Bull C. 2003. Strategic issues in customer relationship management (CRM) implementation. *Business Process Management Journal* 9(5), pp. 592-602.
- Burez J. and Van den Poel D. 2007. CRM at a pay-TV company: Using analytical models to reduce customer attrition by targeted marketing for subscription services. *Expert Systems with Applications*, 32(2), pp. 277-288.
- Business Wire. 1999. META Group Urges Ecosystem Approach to Customer Relationship Management. June 28, 1999.
- Buttle F. 2004. *Customer Relationship Management. Concepts and Tools*. Butterworth Heineman, Oxford.
- Camponovo G., Pigneur Y., Rangone A. and Renga F. 2005. Mobile customer relationship management: an explorative investigation of the Italian consumer market. In *International Conference on Mobile business*, 2005, pp. 42-48.
- Carson D. 1990. Some exploratory models for assessing small firms' marketing performance. *European Journal of Marketing* 24(11), pp. 8-51.
- Chalmers R. 2006. Methodology for customer relationship management. *The Journal of Systems and Software* 79, pp. 1015-1024.
- Chen I.J. and Popovich K. 2003. Understanding customer relationship management (CRM): People, process and technology. *Business Process Management Journal* 9(5), pp. 672-688.
- Cheng B.W., Chang C.L. and Liu S. 2005. Enhancing care services quality of nursing homes using data mining. *Total Quality Management & Business Excellence* 16(5), pp.575-596.
- Cleary C. 2003. Strategic issues in customer relationship management (CRM) implementation. *Business Process Management Journal* 9(5), pp. 592 - 602.
- Coviello N.E., Brodie R.J and Munro H.J. 2000. An investigation of marketing practice by firm size. *Journal of Business Venturing* 15, pp. 523-545.
- Dous M., Salomann H., Kolbe L. and Brenner W. 2005. Knowledge Management Capabilities in CRM: Making Knowledge For, From and About Customers Work. *Proceedings of the Eleventh*

- Americas Conference on Information Systems, Omaha, NE, USA August 11th-14th 2005, pp. 167-178.
- Du W. 2004. The QoS of Web service for different service based on customer segments in CRM. *Proceedings. The 8th International Conference on Computer Supported Cooperative Work in Design*. 26-28 May 2004, pp. 401 – 405.
- Fan W., Luck R., Manier K., Pierce J., Pool L. and Patek S.D. 2004. Customer relationship management for a small professional technical services corporation. *Proceeding Systems and Information Engineering Design Symposium*, pp. 243-248.
- Fink D. and Disterer G. 2006. International case studies – To what extent is ICT infused into the operations of SMEs? *Journal of Enterprise Information Management* 19(6), pp. 608-624.
- Giga 2001. Seven out of Ten CRM Projects Fail, *Computing*, 16 August 2001, pp. 27.
- Gudmundson D., Tower C.B., and Hartman E.A. 2003. Innovation in small businesses: culture and ownership structure do matter. *Journal of Developmental Entrepreneurship*, 8(1): 1-17.
- Ha S.H., Bae S.M. and Park S.C. 2002. Customer's time-variant purchase behavior and corresponding marketing strategies: an online retailer's case. *Computers & Industrial Engineering*, 43(4), pp.801-820.
- Jain D. and Singh S.S. 2002. Customer lifetime value research in marketing: a review and future directions. *Journal of Interactive Marketing* 16(2), pp. 34-46.
- Jain S.C. 2005. CRM shifts the paradigm. *Journal of Strategic Marketing* 13(December), pp. 275–291.
- Javalgi R G., Whipple T.W., Ghosh A.K. and Young R.B. 2005. Market orientation, strategic flexibility, and performance: implications for service providers. *Journal of Services Marketing*, 19(4), pp. 212-221.
- Karimi J., Somers T.M. and Gupta Y.P. 2001. Impact of Information Technology Management Practices on Customer Service. *Journal of Management Information systems* 17(4), pp. 125-158.
- Koole G. 2004. Performance analysis and optimization in customer contact centres. *Proceedings of QEST 2004 Quantitative Evaluation of Systems*, pp. 2-5.
- Kruse G. and Bramham J. 2003. You choose [product configuration]. *Manufacturing Engineer* 82(August), pp. 34-37.
- Lee H. and Cho S. 2006. Focusing on non-respondents: Response modelling with novelty detectors. *Expert Systems with Applications* 33(2), pp. 522-530.
- Lenskold J. D. 2004. Customer-Centric Marketing ROI. *Marketing Management* 13(1), pp. 26-31.
- Light B. 2003. CRM packaged software: a study of organisational experiences. *Business Process Management Journal* 9(5), pp. 603-616.
- Lin Y., Su H-Y, Chien S. 2006. A knowledge-enabled procedure for customer relationship management. *Industrial Marketing Management*, 35, pp.446– 456
- Liu S.S. and Comer L.B. 2006. Salespeople as information gatherers: Associated success factors. *Industrial Marketing Management* 36(5), pp. 565-574.
- Manuel P., Demirel O. and Gorener R. 2003. Application of eCommerce for SMEs by using NLP principles. *Engineering Management Conference. IEMC '03. Managing Technologically Driven Organizations: The Human Side of Innovation and Change*, pp. 470-473.
- McLarty R. 1998. Case study: evidence of a strategic marketing paradigm in a growing SME. *Journal of Marketing Practice: Applied Marketing Science* 4(4): 105-17.
- Min H. 2006. Developing the profiles of supermarket customers through data mining. *Service Industries Journal* 26(7), pp. 747-763.
- Moon Y.S., Leung C.C., Yuen K.N., Ho H.C. and Yu X. 2000. *A CRM model based on voice over IP*. In Canadian Conference on Electrical and Computer Engineering, pp. 464-468.
- Neville K., Heavin C. and Walsh E. 2005. A case in customizing e-learning. *Journal of Information Technology* 20(2), pp. 117-129.

- Ngai E.W.T. 2005. Customer relationship management research (1992-2002). An academic literature review and classification. *Marketing Intelligence & Planning*, 23(6) pp. 582-605.
- O'Leary C., Rao S. and Perry C. 2004. Improving customer relationship management through database/Internet marketing: A theory-building action research project. *European journal of Marketing* 38(3/4), pp. 338-354.
- O'Toole T. E. 2003. Relationships – emergence and the small firm. *Marketing Intelligence & Planning* 21(2), pp.115-122.
- Ohaegbu K. and Devgan S.S. 2000.. Customer relationship management in e-commerce: the call center solution. *Proceedings of the IEEE, Souteastcon 2000*.
- Osarenkhoe A. 2006. Customer-Centric Strategy: A longitudinal study of implementation of a customer relationship management solution. *International Journal of Technology Marketing*, 1(2), pp. 115-143.
- Osarenkhoe A. and Bennani A. 2007. An exploratory study of implementation of customer relationship management strategy. *Business Process Management Journal*, 13(1), pp. 139-164.
- Özgener S. and Iraz R. 2006. Customer relationship management in small-medium enterprises: The case of Turkish tourism industry. *Tourism Management* 27, pp. 1356-1363.
- Paulissen K., Mills K., Brengman M., Fjermestad J. and Romano N. C. Jr., 2007. Voids in the Current CRM Literature: Academic Literature Review and Classification (2000-2005). *Proceedings of the 40th Annual Hawaii International Convergence on System Sciences*
- Payne A. and Frow P. 2004. The role of multichannel integration in customer relationship management. *Industrial Marketing Management* 33, pp. 527– 538.
- Payne A. and Frow P. 2005. A Strategic Framework for Customer Relationship Management. *Journal of Marketing* 69(October), pp. 167–176.
- Peppard J. 2000. Customer Relationship Management CRM in Financial Services. *European Management Journal* 18(3), pp. 312–327.
- Plakoyiannaki E. and Saren M. 2006. Time and the customer relationship management process: conceptual and methodological insights. *Journal of Business and Industrial Marketing* 21(4), pp. 218-230.
- Prinzie A. and Van den Poel D. 2006. Investigating purchasing-sequence patterns for financial services using Markov, MTD and MTDg models. *European Journal of Operational Research* 170(3), pp. 710-734.
- Puschmann T. and Alt R. 2001. Enterprise application integration-the case of the Robert Bosch Group, *Proceedings of the 34th Annual Hawaii International Conference on System Sciences*.
- Reinartz W., Krafft M. and Hoyer W.D. 2004. The Customer Relationship Management Process: Its Measurement and Impact on Performance. *Journal of Marketing Research* 41(August), pp. 293-305.
- Romano N.C. and Fjermestad J. 2002a. Electronic Commerce Customer Relationship Management: An Assessment of Reserach. *International Journal of Electronic Commerce*, 2, pp. 61-113.
- Romano N.C. and Fjermestad J. 2002b. Electronic Commerce Customer Relationship Management: A Research Agenda. *Information Technology and Management*, 4, pp. 233-258.
- Ryals L. and Knox S. 2001. Cross-Functional Issues in the Implementation of Relationship Marketing Through Customer Relationship Management. *European Management Journal* 19(5), pp. 534-542.
- Sand M. 2003. Integrating the web an e-mail into a push-pull strategy. *Qualitative Market Research: An International Journal* 6(1), pp. 27-37.
- Shafiei F. and Sundaram D. 2004. Multi-enterprise collaborative enterprise resource planning and decision support systems. *Proceedings of the 37th Annual Hawaii International Conference on System Sciences*, 5-8 January 2004, 10 pp.

- Shen K.H.W. and Lee D.C.H. 2000. WAP mail service and short message service for mobile CRM. *Proceedings from International Symposium on Multimedia Software Engineering 2000*, pp. 201-207.
- Simpson M., Padmore J., Taylor N. and Frecknall-Hughes J. 2006. Marketing in small and medium sized enterprises. *International Journal of Entrepreneurial Behaviour and Research* 12(6), pp. 361-387.
- Sin L.Y.M., Tse A.C.B. and Yim F.H.K. 2005. CRM: conceptualization and scale development. *European Journal of Marketing* 39(11/12), pp. 1264-1290.
- Siu W. and Kirby D.A. 1998. Approaches to small firm marketing. *European Journal of Marketing* 32(1/2), pp. 40-60.
- Srivastava R.K., Shervani T.A. and Fahey L. 1999. Marketing, business processes, and shareholder value: an organizationally embedded view of marketing activities and the discipline of marketing. *Journal of Marketing* 63 (Special Issue), pp. 168-179.
- Storey D.J. 1994. *Understanding the small business sector*, London: International
- Strandberg C. and Wahlberg O. 2007. All call centres are not “electronic sweatshops! On leadership and psychosocial work conditions in Swedish in-house call centres. *The Journal of E-working* 1(December), pp. 116-136.
- Subba Rao, S. and Metts. G. 2003. Electronic commerce development in small and medium sized enterprises. *Business Process Management Journal* 9(1), pp.11-32.
- Swift R.S. 2001. *Accelerating Customer Relationships using CRM and Relationship Technologies*, Prentice Hall, Englewood Cliffs, N.J.
- Tanner J.F. 2005. CRM in sales-intensive organizations; a review and future directions. *Journal of Personal Selling and Sales Management* 25(2), pp. 169-180.
- Teo T.S.H., Devadoss P. and Pan S.L. 2006. Towards a holistic perspective of customer relationship management (CRM) implementation: A case study of the Housing and Development Board, Singapore. *Decision Support System* 42, pp. 1613-1627.
- Themistocleous M., Irani Z. and Love P.E.D. 2005. Developing E-Government Integrated Infrastructures: A Case Study, *Proceedings of the 38th Annual Hawaii International Conference on System Sciences*, pp. 228-228.
- Thompson E. and Eisenfeld B. 2000. Top 10 Management Failings in Sales Technology Rollouts Gartner Group. *Strategic Planning Research Note* SPA-12-1380. Thomson Business Press.
- Tian C.H. 2006. Customer future profitability assessment: A data-driven segmentation function approach. *Data Engineering Issues in E-commerce and Services, Proceedings Lecture Notes in Computer Science*, 4055: 28-39.
- Van den Poel D. and Larviere B. 2004. Customer attrition analysis for financial services using proportional hazard models. *European Journal of Operational Research* 157(1), pp. 196-217.
- Verhoef P.C., Franses P.H. and Hoekstra J.C. 2001. The impact of satisfaction and payment equity on cross-buying. A dynamic model for a multi-service provider. *Journal of Retailing* 77(3), pp. 359-378.
- Wahlberg O. and Strandberg C. 2008. SME marketing and the adoption of the CRM approach. - On the relevance of the CRM approach for SME marketing and propositions about barriers to adoption of the approach. *Proceedings of the 5th International conference on small and medium sized enterprises*, 11-14 August 2008. Athens.
- Wilson H., Daniel E. and McDonald M. 2002. Factors for Success in Customer Relationship Management (CRM) Systems. *Journal of Marketing Management* 18(1-2), pp. 193-219.
- Winer R.S. 2001. A framework for customer relationship management. *California Management Review* 43(4), pp. 89-105.
- Xu M and Walton J. 2005. Gaining customer knowledge through analytical CRM. *Industrial Management & Data Systems* 105(7), pp. 955-971.

- Yang X., Ahmed Z.U., Ghingold M., Boon G.S., Mei T.S. and Hwa L.L. 2003. Consumer preferences for commercial Website design: an Asia-Pacific perspective. *Journal of Consumer Marketing* 20(1), pp. 10-27.
- Zablah A.R., Bellenger D.N. and Johnston W. J. 2004. An evaluation of divergent perspectives on customer relationship management: Towards a common understanding of an emerging phenomenon. *Industrial Marketing Management*, 33, pp. 475-489.
- Zontanous G. and Anderson A.R. 2004. Relationships, marketing and small business: an exploration of links in theory and practice. *Qualitative Market Research: An International Journal* 7(3). pp. 228-236.