CRM AND SALES PIPELINE MANAGEMENT: EMPIRICAL RESULTS FOR MANAGING OPPORTUNITIES
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Numerous Customer Relationship Management (CRM) studies have focused on utilization and acceptance (or failure). Few studies have looked at one of the original purposes of CRM, contact management, i.e., how leads become prospects and then valued clients. In this large sample study, the results indicate that when CRM systems are believed to be credible and useful, firms tend to have comprehensive prospecting plans, follow a standardized process for qualifying opportunities, and work across departments to close deals. The findings also suggest valid CRM systems (technology and culture) will improve the ability to manage opportunities in the pipeline.

INTRODUCTION

To maintain competitiveness in a challenging business environment, sales-intensive organizations are investing in state-of-the-art technologies, to help manage prospect information, improve customer relationships (Jelinek, Ahearne, Mathieu and Schillewart 2006), and increase client communication (Tanner et al. 2005), in order to increase sales force productivity (Hunter and Perreault 2006). In a survey of 1300 companies, executives ranked sales force effectiveness second only to revenue generation as their top priority (Dickie 2004). However, Customer Relationship Management (CRM) revenue ranking, continues to drop. In the most recent survey on the benefits of CRM systems, “increased revenues” was considered ninth, behind several others including improved forecast accuracy, best practices sharing, improved order process accuracy, etc., (Dickie 2010).

Sales managers need to consider the myriad benefits CRM provides. Advances in CRM technology offer opportunities for sales professionals to access detailed client information, communicate productively with management, and organize sales-related activities (Rodriguez 2009). “A common (and tactical) misconception equates CRM with technology. In other words, this notion boils down CRM to a hardware/software tool that can be purchased and implemented without much effort” (Thakur, Summey and Balasubramanian 2006, p. 148). As the sales environment continues to evolve (Jones et al. 2005; Tanner et al. 2005) and becomes more complex and competitive, CRM technology will continue to grow in importance.

Management needs a better understanding of how sales technology, such as CRM, can assist salespeople perform tasks and build improved relationships with their customers (Hunter and Perreault 2006). The positive impact that information sharing has on client satisfaction because salespeople have data at their fingertips is considerable (Steward 2008). The main driver of these CRM initiatives has been the increased strategic emphasis on building partnership relationships with buyers (Cannon and Perreault 1999). In a recent study (Reimann, Schilke and Thomas 2010), it was found that CRM has a mediated effect on performance. The authors called for a wider look at what impacts the effectiveness of CRM solutions.

While there has been much attention and research on CRM utilization and acceptance, often with conflicting results, there has been
little theory testing on the impact of CRM technology on sales opportunity management: can a CRM help the process of a lead becoming a client? In order to meet the various objectives set by sales and marketing mandates, organizations first need to effectively create and manage sales opportunities. In essence, what is being done at the infancy of building client relationships and what role does CRM play before a lead is a prospect, then eventually a loyal client? The purpose of this paper is to offer an initial exploration of the relationship of CRM and opportunity management by looking at the sales pipeline process prior to someone becoming a client.

THEORETICAL BACKGROUND

CRM and Its Benefits
Significant influences on sales professionals include the growth of information technology (IT), electronic commerce (Moore and Breazeale 2010), and the integration of relationships between different business areas. The presence of computer technologies has increased dramatically (Venkatesh et al. 2003) and many organizational technology initiatives are driven by increased pressure from competition and the demand to meet client requests. The most dramatic investment in technology has been in CRM solutions. In one study, CRM implementation strategy ranked among the top five initiatives for 60 percent of companies (Nelson 2004).

CRM is a technology blending sales, marketing, and service information systems to build partnerships with customers (Shoemaker 2001). CRM technology supports relationships at touch points where the customer and firms interact. More than technology, CRM is both a strategy and philosophy that companies should adopt and implement. “CRM can be thought of as a set of business practices designed to put an enterprise into closer touch with its customers, in order to learn more about each one and to deliver greater and greater value to each one with the overall goal of making each one more valuable to the firm” (Peppers and Rogers 2004, p. 6). The goal of CRM is to align business processes to the strategy of the customer in order to build client loyalty and long-term profitability (Rigby et al. 2002). For the sales organization, benefits of CRM include:

- Improved efficiency and increased productivity in sales, marketing, and customer support (Li 2001)
- An improved and smoother sales process
- Better sales forecasting and performance
- The ability to provide ideal solutions for clients
- Documenting customer needs quickly and efficiently (Baran, Galka and Strunk 2007).

Sales-based CRM technology tools are designed to assist a firm and its salespersons meet objectives in managing customer relationships (Hunter and Perreault 2006) by collecting, analyzing, and distributing information that enhances prospecting, improves communication and sales, and delivers tailored product configurations.

Another important component of CRM is its ability to share critical client information with other departments and colleagues within the firm. CRM enables sale professionals to collaborate with their peers and direct other departments in assisting those clients (Baran, Galka and Strunk 2007). Thus, benefits of CRM are not found in a vacuum; they require interaction from others. Through internal collaboration, CRM solutions enable sales professionals to better serve their clients and provide information to management in “real time.”

Collaboration - Key Component for the Sales Professional

Collaboration is the process by which people accomplish work (Weitz, Castelberry and Tanner 2004). It enables individuals to conform to a standardized way of working and to develop and improve their own work routine given their abilities and the unique customer needs. Collaboration, both internal and external, is increasingly important for customer-focused
firms. From a sales perspective, collaboration entails a value chain model where supply chain stakeholders (e.g., clients, support personnel, shipping, marketing) offer data input into the selling process (Tanner et al. 2005).

How do sales professionals collaborate with managers and colleagues when they are away from the office visiting clients, prospecting, or networking with partners? CRM technology enables sales professionals to coordinate the sales effort with other individuals within their company, i.e., inside sales, customer service, engineering, and marketing (Tanner et al. 2005). “CRM in these environments provides the foundation for true collaboration, co-knowledge creation, and opportunity exploitation” (Plouffe, Williams and Leigh 2004, p. 334).

Successful CRM collaboration is the ability to gather customer information through interactions across all functions and areas of the firm (Yim, Anderson and Swaminathan 2004) and disseminate this customer knowledge throughout the organization. Therefore, CRM technology enables effective collaboration between customers, salespeople, and a firm’s internal functional areas.

Opportunity Management

Sales professionals are boundary spanners and, therefore, are responsible for sales-related tasks both inside and outside the organization (Hunter 1999). One task sales professionals spend a lot of time on is opportunity management, i.e., the process of taking prospects and making them clients if there is a value match. Research on sales process effectiveness incorporates opportunity management. Sales process effectiveness is defined as the ability to complete short term outcomes in the sales exchange by being able to analyze opportunities and improve closing rates (Stoddard, Clopton, and Avila 2006). Sales force automation tools, such as CRM, have proven to help sales professionals improve closing rates and generate revenue faster (Erffmeyer and Johnson 2001). By taking advantage of the many CRM capabilities, salespeople can expand their knowledge, improve their targeting skills, and enhance their presentation skills (Ahearne, Hughes and Schillewaert 2007), culminating in a more effective sales process.

This study measures CRMs impact on how sales organizations manage prospects. Therefore, the measures of sales performance are based on four different areas, as they relate to the sales professional's job functions, including use of a standardized comprehensive process, lead conversion, internal organizational collaboration, and average sales cycle time.

HYPOTHESIS DEVELOPMENT

Early CRM research sought to show the effectiveness of the systems by comparing business results between firms that do not have a CRM tool with other firms that have a CRM implementation (e.g., Mithas, Krishnan and Fornell 2005). A more nuanced approach would be to compare CRM firms differing on implementation effectiveness of CRM systems because not all CRM firms succeed equally. In this study we looked at CRM implementation from a functional perspective. For example, is the user confident that the CRM system provides information to perform his/her function adequately? Does the user perceive that the CRM system helps improve the productivity of sales people? If so, the system is high on effective implementation. We hypothesize and find evidence for such nuanced influences on several intermediate firm outcomes.

Prospecting Plans and Qualified Leads

Prospecting is the first of the seven-step classical approach to sales (Moncrief and Marshall 2005). It is the most important first-step because most firms lose customers every year and there is a constant business need to expand the customer base (Jolson and Wotruba 1992). A well-implemented CRM system can deliver effective prospecting and provide for
directed search on where to look for potential customers. Prospecting can be a highly complex process that pools information on geographical information systems, customer segmentation, and census data (Levy and Weitz 2008). For example, one proprietary business analysis module for customer segmentation provides information on 65 customer segments based and in-depth statistical analysis (ESRI 2009). Detailed information on spending habits, income, tastes, and preferences are available for each segment. This information is integrated to information at a census block level greatly increasing the likelihood that the prospecting locations will yield qualified leads. Effectively implemented CRM should facilitate such comprehensive prospecting. Prospects may be qualified in three different ways--company initiated, salesperson generated or prospect initiated (Jolson and Wotruba 1992) and a good CRM implementation should provide consistency on qualifying leads.

H1: The higher the CRM effectiveness, the higher the use of prospecting plans.

H2: The higher the CRM effectiveness, the higher the use of a standardized process to qualify leads.

CRM Implementation and Collaboration

A strong market or customer-oriented behavior (Jaworski and Kohli 1993) is a theme that runs throughout strategic approaches to value creation. Information collection and firm-wide dissemination (Jaworski and Kohli 1993) is at the heart of market orientation. It leads to superior value and owes its success to collaboration among different departments and functions. A market/customer-oriented focus starts with a detailed analysis of customer benefits within end-use segments and then works backward to identify the action(s) needed to improve performance. Market research, defined by Moller and Anttila (1987) as the set of processes needed to discover information about customer needs, is found to be a key capability for a market-driven firm to develop (Vorhies, Harker and Rao 1999). While information collection and dissemination is broadly construed to be a marketing function, in practice, such information is largely performed by the sales team (Guenzi and Troilo 2007). A well-implemented CRM system should facilitate timely, accurate, and seamless intra-organizational collaboration across different departments.

H3: The higher the CRM effectiveness, the higher collaboration across departments to pursue deals.

Closure Accountability and Sales Cycle Time

A well-implemented CRM enables salespersons to work on prospecting and qualifying, and not investing in information searches if the data/knowledge has already been established. Salespersons can spend time building relationships with the right customers and refining the proper solutions based on CRM expertise. When the salespersons believe and adopt the CRM system with confidence, they collaborate with relevant departments from the field to provide compelling recommendations from similar customers, identify any appropriate discounts to apply, provide information on anticipated delivery times, and payment plans. When there is organizational buy-in for the CRM system, accountability for all parties, especially for the closure of leads by the sales force, may be more prevalent. Robust CRM implementations that include an advanced planning system have shown to reduce order cycle time by 50 percent (Chen 2001). Thus, a well-implemented CRM system should enable salespersons to quickly address customer concerns and move toward resolution.

H4: The higher the CRM effectiveness, the higher the accountability for lead closure.

H5: The higher the CRM effectiveness, the lower the sales cycle time.

METHODOLOGY

Sample Selection

The focus of the current study is to investigate whether organizations with effective CRM systems achieve better prospecting results as measured by criteria relevant to the beginning
stages of the sales pipeline management. Data was gathered for a global research study conducted by Miller Heiman, a leader in sales performance consulting and training. Respondents were offered an executive summary of the results, as well as a copy of the results from the previous year’s study in return for their involvement.

Surveys were sent via email to business people in a variety of revenue-oriented positions. The email contained a link to the survey and all data was collected online. A total of 14,080 individuals opened the link and 1,502 respondents completed the survey for a 14.1 percent response rate. Only surveys that noted their sales process was “complex” (involving at least three buying influences) were used for data analysis. Early and late respondent means were compared (Armstrong and Overton 1977) which revealed no statistically significant differences between the respondents.

Sample Demographics

Respondents identified themselves from various industries (see Table 1). The preponderance of replies came from consulting and professional services, technology software, and manufacturing. Business services, technology hardware, finance and investment, and telecommunications industries were also evenly

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<tr>
<th>Industry</th>
<th>Frequency</th>
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<tr>
<td>Consulting and Professional Services</td>
<td>183</td>
<td>12.2</td>
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<tr>
<td>Technology – Software</td>
<td>166</td>
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<tr>
<td>Manufacturing</td>
<td>156</td>
<td>10.4</td>
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<tr>
<td>Business Services</td>
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<td>9.4</td>
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<tr>
<td>Technology – Hardware</td>
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<tr>
<td>Finance and Insurance</td>
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<td>6.7</td>
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<tr>
<td>Telecommunications</td>
<td>99</td>
<td>6.6</td>
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<tr>
<td>Healthcare – Capital</td>
<td>61</td>
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<tr>
<td>Healthcare – Consumables</td>
<td>61</td>
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<td>Energy (Oil/Gas)</td>
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<td>Industrial and Chemical</td>
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<tr>
<td>Consumer Products</td>
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<td>Education</td>
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<td>Pharmaceuticals</td>
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<td>2.3</td>
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<tr>
<td>Energy (Other)</td>
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<td>2.1</td>
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<tr>
<td>Construction</td>
<td>27</td>
<td>1.8</td>
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<tr>
<td>Government</td>
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<td>1.6</td>
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<tr>
<td>Hospitality and Food Service</td>
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<td>1.5</td>
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<tr>
<td>Wholesale</td>
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<tr>
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<tr>
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<tr>
<td>Others/Missing</td>
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<td>1.2</td>
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<td>Total</td>
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<td>100</td>
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The size of the firms ranged from employing fewer than 24 salespeople to many employing 500 or more salespeople. Females totaled 17.3 percent of the respondents. Table 2 contains job title information for the respondents with the largest percentage (26.4 percent) being sales vice-presidents/sales directors, with sales managers constituting 19.4 percent of the sample.

### Measures

A series of measures was developed and used to understand CRM conventions and the subsequent performance outcomes. Each of the measures was an individual, single-item, question posed to understand the interaction of the two functions or outcome results. While multi-item measures increase measure reliability (Churchill 1979), Bergkvist and Rossiter (2007) showed that single-item measures are equally predictive where the construct is concrete and singular (Rossiter 2002). Each of the questions was measured via a seven point scale (1 “strongly disagree” and 7 “strongly agree”). Below is a description of the items used for the study:

**CRM effectiveness** was measured on two items, “Our sales management team is highly confident in the data available from our CRM system,” and “Our CRM system significantly improves the productivity of our salespeople,” on a seven-point scale (Cronbach’s alpha .83).

**Use of comprehensive prospecting plans** via a seven-point scale with the item “We consistently utilize comprehensive prospecting plans.”

**Standardized process** to qualify opportunities was measured with the item, “We consistently follow a standardized process to qualify opportunities.”

**Lead conversion** accountability was measured with the item, “Our salespeople are always held accountable for converting leads to closed business.”
Internal organizational collaboration was measured with the item, “Our organization regularly collaborates across departments to manage strategic accounts.”

Average sales cycle time was measured by asking the respondent to assess during the previous year if sales cycle time has decreased significantly, decreased slightly, remained unchanged, increased slightly, or increased significantly.

DATA ANALYSIS AND DISCUSSION OF RESULTS

Of the 1502 responses received, 222 indicated that they did not have a CRM system within their firm. These firms were set aside from further analysis as the focus in this paper was to study the user-based implementation effectiveness of the CRM system. The remaining responses were divided into two groups using a median split with 51.5 percent of the responses categorized as low on user-based CRM effectiveness. Group differences were analyzed on opportunity management parameters identified in this paper. As shown in Table 1, a significant difference ($t_{1255} = 9.54$, $p<.0001$) exists between the mean value of the prospecting process between the low and high CRM effectiveness groups. As a result, Hypothesis 1 is supported. Hypothesis 2, which examined differences in the standardization of lead qualification, resulting in a significant difference ($t_{1252} = 9.19$, $p<.0001$) between the low and high CRM effectiveness groups. Hypothesis 3, which examined differences in the level of inter-departmental collaboration, was also found to differ ($t_{1263} = 9.53$, $p<.0001$) between the low and high CRM effectiveness groups. Hypothesis 4 examined the potential differences in the degree of accountability for closure of qualified leads. This relationship was also supported ($t_{1260} = 8.24$, $p<.0001$), meaning the low and high CRM effectiveness groups were not similar. Finally, Hypothesis 5 examined the sales cycle time and, surprisingly, was not supported ($t_{1261} = 1.80$, $p>.05$). Thus, using an effective CRM system did not reduce the time it took to close the typical sale.

DISCUSSION AND MANAGERIAL IMPLICATIONS

This study offers several important implications for managers who are currently utilizing CRM, are evaluating their current return on investment, or are contemplating a CRM initiative.

First, sales organizations need to look differently at how CRM can benefit their firm. CRM should not be seen as a magic wand that will automatically increase revenues, but rather as a tool that improves sales process effectiveness. Our findings show that there is a positive relationship between CRM and opportunity management. Therefore, sales managers who are challenged with qualifying leads and managing prospects can garner higher outcomes by using CRM technology. As previously discussed, prospecting is the most important first step in making the sale. If the sales organization is to follow a standardized sales process, managers need to utilize CRM to capture the wants of the prospective client and create an accurate profile. Sales professionals are then able to focus on the right type of customer and use their time more efficiently.

Second, the findings confirmed that a positive relationship exists between CRM and collaboration across departments. When CRM is supported by a culture that embraces a customer-focused structure (Thakur and Summey 2005), the technology is a resource for all areas of the organization. Managers who rely on, or should rely on, other departments (i.e., support, marketing, and engineering) need technology to disseminate information efficiently to others who are involved in the sales process. As the sales process has evolved into more complexity, it is essential for sales professionals to communicate with their managers and colleagues to gain an in-depth understanding of their prospects’ needs. Through the effective use of CRM, sales professionals can work closely with co-workers.
and managers to offer a customized solution for their prospective clients.

Third, this study found that CRM effectiveness leads to higher accountability for lead closure. Converting a lead to an actual customer is the most important and challenging aspect of the sales process. CRM enables sales professionals to capture touch points from all areas of the organization, thus creating a 360 degree view of the client. Having a detailed understanding of the prospect and the buying process should enable firms to close more leads into actual sales. Therefore, there is more accountability for each lead while using an effective CRM system. If the accuracy of the system is credible, the “chain of evidence” will show who (salesperson) is doing what, when, based on what information, and in this environment of full disclosure, accountability will be rather transparent.

The one area of the research that was not supported was sales cycle time. Contrary to Chen’s findings (2001), CRM effectiveness did not decrease the sales cycle time. Though CRM may make sellers more efficient and productive, it may not change the way buyers make decisions. As discussed earlier, the sales environment has become more challenging due to more decision makers and educated buyers accessing product information. These buyers may be provided with an ideal product or solution but still need to follow their buying process. Thus, even if they have the information they need to make a decision, a seller cannot move faster than a buyer wishes.

Overall, our study supports CRM’s impact on sales opportunity management. Sales organizations who are faced with the challenges of qualifying leads, lead conversion, or sharing information with other departments may consider investing in CRM technology. Firms who already utilize CRM should also consider investing in cross-functional training on how CRM increases collaboration in order to improve CRM adoption and utilization (Rodriguez 2009).

**LIMITATIONS AND FUTURE RESEARCH**

There are certainly some limitations associated with the study. First, there was a reliance on several single item measures, which, while robust, can be improved by triangulation with additional data collection methods. Second, the CRM construct tends to touch many relationships across the firm and into the marketplace which makes it difficult to simultaneously measure and explore in isolation. Third, the only outcomes examined were pipeline-related, but a more robust approach with additional variables might lead to important interaction effects, or perhaps mediators that were not ascertained in this study.

Future research may wish to continue as it relates to CRM and its effectiveness further down the sales pipeline. How specifically are sales professionals supported by CRM? Are certain management practices better suited for highly effective versus less effective CRM systems? What moderating or mediating effects do CRM systems have on various parts of the sales process? Moreover, samples that look across national boundaries or industries would be beneficial to theory and practice. Given the importance and the amount of money spent on CRM solutions, longitudinal studies should be a main concern for future research. CRM's effect on sales cycle time is truly in need of further exploration. While potentially intuitive that the time required to close a piece of business may be shortened if you are using an effective CRM system, this was not found to be significant (p=.07). A finer microscope should be used to discern if certain correlations exist, especially those that might be influenced by industry type, the relationship with the buyer (transactional or relational), or possibly the complexity of the sale itself. Perhaps CRM does affect sales cycle times in some industries involving complex multi-step sales processes, such as in technology solution sales, and perhaps less in B2B sales in the manufacturing sector. The moderating role of the industry sector on the influence of CRM effectiveness on sales cycle
times is a possible and interesting future extension.

REFERENCES


