CRM/Social Media Technology: Impact on Customer Orientation Process and Organizational Sales Performance

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The diffusion of technology, such as customer relationship management (CRM) systems and social media, has created a need to improve the understanding of how to manage interactions with customers in today's digital era. The authors examine how customer focused technology (CRM/social media) and customer orientation process impacts sales performance. With a diverse industry sample of nearly 1700 sales professionals, partial least squares regression finds that CRM and social media positively influence customer orientation activities, which in turn positively impact sales performance. Managerial implications are provided regarding the potential power CRM and social media has on sales performance.

INTRODUCTION

The importance of technology in managing relationships with customers has grown significantly, especially with the advent of innovations such as cloud computing and web-based technology. One of the more popular topics in both academic research and business discussions has been the use of Customer Relationship Management (CRM) technology to increase business and sales productivity through the ongoing development of relationships with buyers (Hunter and Perreault, 2006; Jelinek, Ahearne, Mathieu, and Schillewaert, 2006). A new phenomenon in understanding buyers' needs and reaching new customers is social media. Organizations are capturing data from tools such as LinkedIn, Facebook and blogs, and attempting to integrate this information into their sales process.

In an article predicting 2012 CRM market trends, analysts pointed out that CRM will allow companies to become more customer-centric and that integrating social media with CRM will be essential for organizations (Schiff, 2012). Technology is useful for enhancing the customer relationship and in capturing competitive advantages (Bharadwaj, Varadarajan , and Fahy, 1993). Technology can help improve the operating process of an organization and, thus, improve its performance. In order to extract value from technology, organizations need to build a framework and processes to deliver value to the customer.

The purpose of this research study is to ascertain how customer-oriented technology, CRM and social media, might impact customer orientation which in turn impacts sales performance. In this exploratory paper, we attempt to understand the impact of technology on performance through the use of customer-oriented processes. Customer orientation refers to the extent an organization focuses its efforts in understanding and satisfying its customers' needs for quality and timeliness and building long-term relationships (Deshpande, Farley, and Webster, 1993; Strong, 2006; Luo, Hsu, and Liu, 2008; Jun and Cai, 2010; Li, Chau, and Lai, 2010). We first start the discussion by reviewing the literature on customer-oriented technology, customer orientation, and sales performance. The research model and hypotheses are presented, followed by a discussion of the research methods and data collection. The results of measurement and structural analysis using partial least squares (PLS) are then discussed. The paper concludes with a discussion of the theoretical and managerial implications of the findings.

LITERATURE REVIEW

Customer-Oriented Technology

The advancement of technology allows sales-focused organizations to manage customer information effectively in order to better understand their unique needs and provide a solution that meets those needs. Panagopoulous defines sales technology "as any information and communication technology employed by the sales organization to conduct its essential activities" (2010, p. 14). The central focus of CRM is "to leverage customer data creatively, effectively and efficiently to design and implement customer-focused strategies" (Hansotia, 2002). Initially, CRM was considered an information technology customer solution, a type of sales force automation. Now, CRM strategy is considered a "holistic approach to managing customer relationships to create shareholder value" (Payne and Frow, 2005, p. 168). Evolving into a mix of relationship marketing and relevant technology, use of platforms such as CRM can potentially generate profitable, long-term relationships with customers. The CRM aim is three fold, 1) improve data regarding the customer from a host of different inputs, not just from the sales force, 2) improve relationships, and 3) co-create value with clients.

Recent research has focused on specific sales technology, such as customer relationship management (Tanner, Ahearne, Leigh, Mason, and Moncrief, 2005; Rapp, Agnihotri and Forbes, 2008) and sales force automation tools (SFA). Ahearne, Jelinek, and Rapp (2005) reported in previous studies that CRM systems improve the sales professional's ability to collaborate internally with peers and communicate clearly with clients. Sales-based CRM technology tools are designed to help sales professionals manage customer relationships (Hunter and Perreault, 2007) by improving communication, learning more about the clients' needs, and creating customized solutions for the customer. Organizations are also integrating use of social media tools to reach new markets and gain an improved understanding of prospects and existing customers. When managing customer relationships and experiences, sales organizations are leveraging social media to perform sales-related tasks, such as prospecting and sharing of information on product and services (Panagopoulos, 2010). Today, sales-focused firms have integrated social media tools, such as Linked-In, Facebook, and Twitter, into their business process to directly communicate with prospective buyers and create deeper conversations. To stay current and competitive, organizations may find it critical to add a social media strategy to their existing CRM initiative. Social media tools, whether in the form of blogs, Facebook, or Twitter, offer interactions between buyer and seller. This new era of creating conversations may develop more meaningful relationships with customers and, potentially, result in a more profitable relationship. In order for these technologies to benefit stakeholders, sales professionals must accept and employ the technology within their job function (Venkatesh, Morris, Davis and Davis, 2003; Rodriguez and Honeycutt, 2011). In fact, the value of any technology investment to an organization is mainly determined by the way the technology is used and applied (Kohli and Grover, 2008).

Customer-oriented technologies, such as CRM and social media, are expected to positively impact performance and activities within the organization.

Customer Orientation Processes and Sales Performance

The marketing literature suggests that customer orientation is a cornerstone in the theory and practice of marketing management (Saxe and Weitz, 1982; Jaworski and Kohli, 1993). Ruekert (1992) defines this orientation as the "degree to which the organization obtains and uses information from customers, develops a strategy which will meet customer needs, and implements that strategy by being responsive to customers' needs and wants" (p. 228). Different processes relate to customer orientation: customer satisfaction, after-sales services, personalized services to key customers, and commitment to deliver high value to customers (Narver and Slater, 1990). Researchers argue that customer orientation is not only a set of processes, but a culture that stresses the customer as the center of strategic planning and execution and that is important to create superior value for an organization (Narver and Slater, 1990; Deshpande et al., 1993; Jaworski, Kohli and Sahay, 2000; Steinman, Deshpande, and Farley, 2000). Organizations with higher customer orientation are better able to respond to customers' demand with goods and services (Deshpande et al., 1993). Those companies also indicate a continuous and proactive disposition toward identifying and meeting demands (Han, Kim, and Srivastava, 1998). Researchers found that increased customer orientation within an organization results in improved business performance (Narver and Slater, 1990; Jaworski and Kohli, 1993; Van Egeren and O'Connor, 1998; Yilmaz, Alpkan, and Ergun, 2005).

Thus, customer-oriented processes involve many facets, including understanding clients' needs and sharing and aligning information to create a value proposition that satisfies customers.

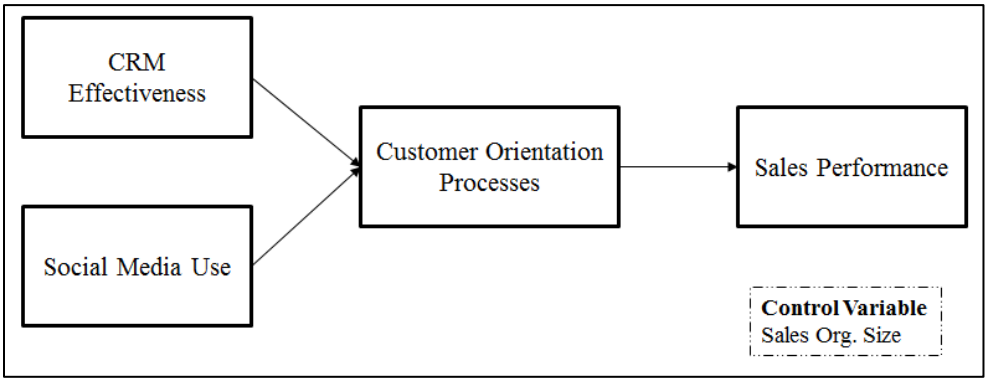
Past research on the relationship between technology and performance has been well documented and supported (Stoddard, Clopton, and Avila, 2006; Hunter and Perreault, 2007; Rodriguez and Honeycutt, 2011). Due to the increased use of technology from the sales perspective, current research has focused on the relationship between technology and sales performance. Johnston and Marshall define sales performance as "behavior evaluated in terms of its contribution to the goals of the organization" (2006, p. 412). Ahearne, Jelinek, and Rapp (2005) reported that CRM technology improves the sales professional's ability to communicate clearly with prospects and clients and establish new business.

However, other researchers found that the link to performance is not always direct, and can depend on environmental settings (Hartline and McKee, 2000). There is still a need in the literature to better understand the impact of customer orientation on firm's benefits (Brady and Cronin, 2001). In this paper, we attempt to understand the direct influence of customer-oriented processes on sales performance, while considering the impact of CRM and social media use.

RESEARCH MODEL AND HYPOTHESES

Customer-oriented technologies, such as CRM and social media, help organizations support and create strong relationships with customers and support the firm's customer orientation. The authors posit that the real value of customer-oriented technologies lies in the way customer orientation processes use the information provided by the platforms to enhance the customer's experience. Customer orientation subsequently drives improved sales performance because firms can tailor their offerings to suit customer needs. Previous research shows that customer orientation is positively associated with a firm's performance (Narver and Slater, 1990; Van Egeren and O'Connor, 1998; Jaworski et al., 2000; Yilmaz et al., 2005). As the preceding discussion suggests, better customer-oriented processes facilitated by CRM and social media should enable a firm to improve its sales performance. The research model is shown in Figure 1.

FIGURE 1
CUSTOMER ORIENTATION MEDIATION MODEL



Customer-oriented technologies, such as CRM and social media, are used to collect customer data from all customer contact points and create proper customer-oriented marketing responses (Payne and Frow, 2005). Accumulating this customer insight can be used to boost the quality of the customer experience (Plakoyiannaki and Saren, 2006). CRM and social media applications enable firms to customize their offerings for each customer. By accumulating information across customer interactions and processing this information to discover hidden patterns, CRM and social media applications help firms customize their offerings to suit the individual tastes of their customers and improve customer engagement (Woodcock, Green, and Starkey, 2011).

In order to achieve higher benefits, well designed customer-orientation processes are needed to enable sales performance level benefits. Therefore, we expect customer-oriented processes (such as measuring customer satisfaction, obtaining feedback from customers, and adapting to changes in customers' needs) to positively impact sales performance. Customer orientation implies having an understanding of the customers to be able to offer them greater added value (Narver and Slater, 1990). Organizations with higher customer orientation will be able to design business processes that are strongly oriented to improve employee understanding of the customers (Bang, 2005). This is why we expect customer orientation processes are likely to positively impact sales performance. Organizations should be equipped with strong customer-oriented technologies (CRM and social media) to effectively employ customer-oriented processes for optimal level marketing and sales activities, which eventually may result in higher performance. Hence, we hypothesize that:

H1: CRM has a positive relationship on customer-orientation.
H2: Social media has a positive relationship on customer-oriented processes orientation.
H3: Customer oriented processes has a positive relationship on sales performance/

RESEARCH METHODS

Data Collection

In order to examine the research model, data was gathered in conjunction with Miller Heiman, a global leader in sales performance consulting. Respondents were offered an executive summary of the results and a copy of the findings from the previous year's study in return for their participation in the survey. Participants included business executives in revenue-generating roles across job functions; notably, different levels in sales and executives from the C-suite. Data was collected using an emailed link to an online survey supported by two reminder emails. In all, 15,110 individuals clicked on the link; 1,699 respondents completed the 130+ item survey yielding an 11.2% response rate. Early and late response means were compared to assess non-response bias (Armstrong and Overton, 1977). No significant difference between the data was evidenced.

Sample Description

Respondents were from a range of industries (see Table 1). A portion of the sample, 7% or more in each category, worked in consulting, professional services, technology-software, business services, and manufacturing. Health care consumables, technology-hardware, industrial and chemical, and technology services were also well represented in the sample (4%-7%). The remainder of the sample came from numerous other industries. Approximately 46% of the respondents worked for organizations employing 24 or less sales people, 18% for those employing 25-99 salespeople, 18% for those employing between 100-499 salespeople, and 18% for those employing 500 or more salespeople.

TABLE 1
INDUSTRY DATA

Industry	**Percent**
Aerospace and Defense	2.2
Business Services	7.1
Construction	2.6
Consulting & Professional Services	11.3
Consumer Products	1.8
Education	1.6
Oil/Gas	2.8
Energy	1.7
Finance & Banking	3.9
Insurance	2.1
Government	1.7
Healthcare – Capital	3.8
Healthcare – Consumables	6.0
Healthcare – Services	3.2
Hospitality & Food Service	.8
Food Service	1.4
Industrial & Chemical	4.3
Manufacturing	9.0
Media	.6
Pharmaceuticals	2.4
Technology – Hardware	5.9
Technology – Software	7.3
Technology – Services	4.8
Telecommunications – Equipment	2.0
Telecommunications – Services	3.4
Transportation	2.0
Utilities	.6
Wholesale	1.5
Missing	2.1
Total	**100.0**

Measures

Customer orientation was measured on a 7-item Likert scale. We specified customer orientation as a formative first-order construct. The measurement items were selected and refined to ensure that the selected formative measures for customer orientation did not overlap and covered all characteristics of the constructs. We ensured the clarity, lack of ambiguity, and avoidance of jargon (Diamantopoulos and Winklhofer, 2001). The indicator specification process resulted in a set of subjective measures for customer orientation. Sample questions included "We know why our customers buy from us"; "We consistently use a formal process for measuring customer satisfaction"; and "Sales and marketing are aligned in what our customers want and need." CRM effectiveness and social media use was measured using a 3-item scale. All performance measures used a 7-point scale, ranging from "More than 10 percent decrease" to "More than 10 percent growth", with a midpoint anchor of "remained flat". Appendix A presents the constructs studied.

The sales organization size is included as a control variable to account for any contextual differences that may influence the sales performance across the sample. Oliver and Anderson (1994) and Krafft (1999) found that the size of the sales force tends to be negatively related to the extent that behavior-based controls are employed. Piercy, Cravens, and Morgan (1997), on the other hand, found no significant differences existed between the more and less effective sales units based on sales force size.

Results

Partial Least Squares (PLS) was used to analyze the data. PLS is well suited to handle highly complex predictive models (Jöreskog and Wold, 1982) with formative constructs as is the case with this model. The results of the PLS analysis are presented in the following discussion.

Measurement Model

Appropriate validation procedures were followed to evaluate both reflective and formative measures in the model. We examined internal consistency, convergent validity, and discriminate validity to check the measurement validity of reflective constructs (Straub, 1989; Gefen and Straub, 2005). Both discriminate validity and multicollinearlity were examined for formative measures.

The internal consistencies of the reflective measures were evaluated using Cronbach's alphas. All constructs had Cronbach's alpha values greater than 0.6, the recommended threshold for exploratory research (Nunnally and Bernstein, 1994). Table 2 displays the Cronbach's alpha values for all the reflective constructs.

TABLE 2
TEST AND MEASUREMENT RELIABILITY

Construct	Cronbach's Alpha
Social Media	0.878
CRM Effectiveness	0.911
Sale Performance	0.815

Principle component factor analysis with varimax rotation was used to evaluate discriminate validity of the reflective measures. This approach examines whether the theorized items group together on appropriate constructs and discriminate across multiple constructs with minimal cross loading among factors. The criterion used in the analysis was a factor loading greater than 0.45, and eigen values greater than 1.0. The results in Table 3 show that the items for the independent variables converge on three constructs as originally designed.

TABLE 3
FACTOR ANALYSIS RESULTS

Loading	Component		
Items	**Social Media Use**	**CRM Effectiveness**	**Sales Performance**
SM1_dm	0.901		
SM2_bp	0.889		
SM3_bo	0.827		
CRM1_p		0.908	
CRM2_qi		0.906	
CRM3_da		0.821	
OP1_cp			0.777
OP2_na			0.766
OP3_nq			0.759
OP4_cr			0.600
OP5-qa			0.774

Notes: Principal components method was used for extracting the components and Varimax was the rotation method. All factor loadings below 0.45 were suppressed.

Confirmatory factor analysis in SmartPLS (Ringle, Wende and Will, 2005) was used to validate the measurement model. One control variable, sales organization size, was included in the model for the confirmatory factor analysis test. We also examined the convergent and discriminant validity of the reflective constructs. Convergent validity is supported as indicated by Average Variance Extracted (AVE) for each construct being greater than the recommended 0.5 in all cases (Gefen and Straub, 2005). In addition, strong convergent validity is evident as the items load highly on their own constructs (Table 4). Discriminant validity was evaluated by assessing the square root of the AVEs to ensure that it is greater than the correlation among the constructs. The higher AVE for a construct indicated that more variance is shared between the construct and its items than with other constructs (Fornell and Larcker, 1981; Chin, 1998). The inter-construct correlation matrix in Table 5, with square root of AVE on the diagonal, indicated satisfactory discriminate validity of all the constructs. Furthermore, Cronbach's alpha for all reflective constructs exceeded 0.6, and the composite reliability of all reflective constructs exceeded 0.7, indicating adequate internal consistencies of the constructs.

For the formative construct, the outer model weights were examined. The results shown in Table 6 indicate acceptable outer model weights. Multicollinearity among indicators was also checked since it can cause an insignificant model. The variance inflation factor (VIF) was used to assess any multicollinearity problems. VIF values below 3.3 are indicative of an absence of multicollinearity (Diamantopoulos and Siguaw, 2006). The VIF value for the customer orientation processes was below the threshold value of 3.3. Therefore, multicollinearity is not a problem in the formative construct.

TABLE 4
REFLECTIVE CONSTRUCTS RELIABILITY AND LOADINGS

Social Media	Composite Reliability =0.925 Cronbach's Alpha =0.879	AVE=0.805
	Loadings	T- Value
SM1_dm	0.99	35.328***
SM2_bp	0.903	31.483***
SM3_bo	0.881	25.283***
CRM Effectiveness	Composite Reliability =0.944 Cronbach's Alpha= 0.911	AVE=0.850
	Loadings	T- Value
CRM1_p	0.891	28.079***
CRM2_qi	0.946	52.664***
CRM3_da	0.929	45.818***
Sales Performance	Composite Reliability =0.870 Cronbach's Alpha= 0.815	AVE=0.574
	Loadings	T- Value
OP1_cp	0.732	8.519***
OP2_na	0.784	9.581***
OP3_nq	0.701	13.683***
OP4_cr	0.763	7.569***
OP5_qa	0.689	9.380***

*p<0.1, **p<0.05, ***p<0.01

TABLE 5
INTER-CONSTRUCT CORRELATION MATRIX

#		1	2	3
1	Social Media	0.80		
2	CRM Effectiveness	0.32	0.92	
3	Sales Performance	0.20	0.22	0.75

TABLE 6
FORMATIVE MEASURES WEIGHTS ASSESSMENT

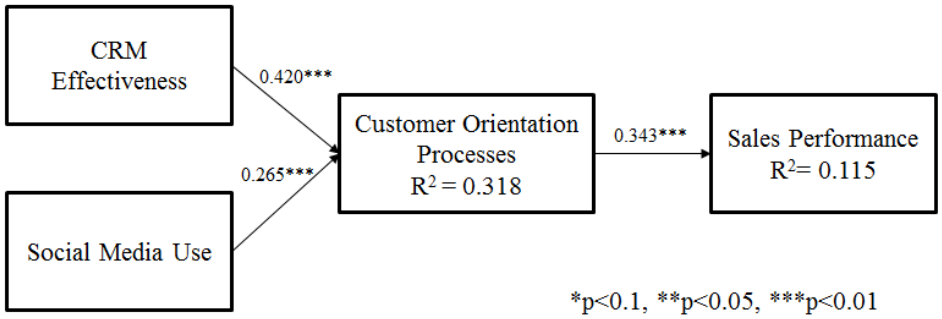
Customer Orientation	Weights	T-Value
CO1_wb	0.174	2.697***
CO2_fp	0.126	2.277**
CO3_a	0.118	1.651*
CO4_fv	0.190	1.970**
CO5_ci	0.230	2.183**
CO6_af	0.345	2.389***
CO7_ac	0.514	3.572***

*p<0.1, **p<0.05, ***p<0.01

Structural Model

A bootstrapping resampling method was used to assess the structural model. The R^2 values in the model range from 0.115 to 0.318. Additionally, all paths are statistically significant at the 0.05 level and are in the expected direction. Therefore, the proposed model is considered to have good predictive power. The path coefficient of each hypothesized relationship and its statistical significance was examined to determine the support for the hypothesis. The path coefficient between CRM technology and customer orientation was 0.421 (t= 5.01, pb.001), while that between social media and customer orientation was 0.265 (t=3.83, pb.001). We also found customer orientation to be positively associated with sales performance 0.343 (t=4.24, pb.001). The PLS structural model results are shown in Figure 2.

FIGURE 2
CUSTOMER ORIENTATION MEDIATION MODEL RESULTS



DISCUSSION AND MANAGERIAL IMPLICATIONS

This study delivers several contributions. First, it provides evidence that customer technology, such as CRM and social media, positively impacts customer-orientated processes. These processes include understanding customers, adapting to customers changing needs, measuring customer satisfaction, and aligning customer needs with sales and marketing activities. Organizations adopting CRM strategies, both traditional and social, need to practice customer-oriented behaviors in order to have these technologies platforms affect bottom-line sales performance. Before implementing customer-oriented technologies, sales-focused firms need to create business practices that build and maintain profitable relationships. It is

too easy for organizations to get caught up in technology investment without first defining and practicing customer orientation and establishing proper customer-oriented business processes.

Second, the findings provide justification for investing in both CRM and social media technology as it leads to improved customer orientation processes in the firm. Business-to-business organizations need to implement both CRM technology and social media and ensure the technologies integrate well with one another. Integration of both CRM and social media leads to improved customer oriented processes, which in turn may lead to a number of benefits: improved sales and marketing alignment, access to decision makers, shorter sales cycles, and better collaboration with customers. This type of integration will more effectively capture conversations and truly provide a 360-degree view of the client. "Social media adds a new dimension by recording the interaction and conversation with the client. Organizations should capture the most relevant and valuable information from social media and integrate this communication with the firm's current CRM workflow" (Rodriguez, Peterson, and Krishnan, 2012, pg. 378).

Third, effective utilization of sales-focused technology, in the form of CRM and social media, starts with understanding customer processes. Firms with higher customer orientation are more competitive due to the level of understanding of their clients' needs and buying habits. This understanding combined with integration of CRM and social media results in more successful firm performance. The study also makes a pioneering contribution to the existing research that has mostly been focused on sales force automation technology. To date, it appears no other studies have empirically examined both CRM and social media practices and tied them to performance with such a large cross-sectional sample.

In today's competitive environment, organizations need to focus on delivering high value to their customers through focused, customer-oriented business processes. New CRM and social media technologies have changed the way organizations interact with customers and have allowed enhanced understanding of customers' needs and concerns (Marshall, Moncrief, Rudd, and Lee 2012; Rodriguez, Peterson, and Krishnan, 2012). These new technologies have enabled customers to communicate effectively with organizations and to improve the relationships between the buyer and seller. In this research, we assessed the positive impact of CRM and social media on customer orientation processes (i.e., processes focused on customer satisfaction and commitment) which, in turn, positively impacts sales performance. Traditional and Social CRM should be tightly integrated into both marketing and sales strategy, in order gain a deeper understanding of customers, develop further commitment and loyalty, which in time will increase overall sales performance.

LIMITATIONS AND FUTURE RESEARCH

There are several limitations associated with this current study. First, the measure used for social media usage is new. Additional scrutiny for this new measure is warranted to increase robustness. Second, future studies could include buyers and marketing professionals to provide additional validity, as the present study focused only on the perspectives of people connected to revenue generation. Third, since this study is a brief cross-sectional snapshot in a very fluid and emerging phenomena, this is merely one data point in understanding the social media evolution.

The findings also suggest various avenues for future research. Scholars may wish to take a deeper look into potential moderating effects, such as the technical competency of the firm, sales personnel capability, size of the firm, level of the respondent within the company, or other context variables. Another area of future research would be to examine the rate of adoption and proficiency in various industries. Certainly, given the importance of revenue generation, longitudinal studies should be a priority for future researchers.

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