

EFFECTS OF SALES FORCE AUTOMATION USE ON SALES FORCE ACTIVITIES AND CUSTOMER RELATIONSHIP MANAGEMENT PROCESSES

Jean-Michel Moutot and Ganaël Bascoul

This study defines a framework for understanding the impact of sales force automation (SFA) on customer relationship management (CRM) processes from the perspective of information systems and motivation theories. Investigating the relationship between these processes, with sales activities as the common link, sheds new light on several crucial issues. To enrich this study, two alternative models that distinguish the efficiency and effectiveness of salespersons' activities also are formulated. Data from a longitudinal field study demonstrate that different SFA functionalities generate counterintuitive effects on sales activities. The main outcomes of SFA implementation in CRM processes include a mostly negative effect of SFA reporting and conflicting but complementary and globally positive effects of SFA call planning and product configuration.

In the past decade, technology has been the subject of considerable interest among marketing theorists and practitioners, as evidenced by the overwhelming proliferation of sales force automation (SFA) and customer relationship management (CRM) concepts. Initially, research focused mainly on understanding why SFA and CRM information system (IS) projects generally led to high failure rates (Block et al. 1996; Petersen 1997; Speier and Venkatesh 2002). Because of the high investment levels required for SFA tools (Siebel and Malone 1996), practitioners needed to prove the returns on such investments (Bush, Moore, and Rocco 2005).

In this paper, we study the link between SFA use and CRM. Therefore, in this context, SFA use refers to the use of SFA IS tools, and CRM consists of two main dimensions. First, CRM reflects an IS tool that makes up the SFA tool (Jayachandran et al. 2005) or a series of processes. Reinartz, Krafft, and Hoyer (2004) decompose CRM processes into several steps, ranging from relationship initiation through relationship maintenance to relationship termination. Second, three different levels of CRM exist—functional, customer-facing, or companywide. Most existing research considers the relationship between sales performance and either SFA use (Robinson, Marshall, and Stamps 2005) or CRM IS tool use at a customer-facing level (Mithas, Krishnan, and Fornell 2005). However, the relationship between SFA use and CRM processes remains

unexplored, despite its criticality. These two managerial concepts actually are interdependent and therefore should be considered according to an integrative view. Evaluating each tool separately could lead managers to employ biased judgment by focusing on only one step (usually CRM) instead of evaluating the full process chain. Thus, our investigation of the entire value chain, from SFA tools to CRM processes through sales force processes, aims to improve theoretical understanding of the organizational antecedents to CRM quality. It also provides managers with insight into the types of levers they should attend to when they attempt to improve customer relationships.

The lack of convergent results regarding the link between SFA use and CRM performance (Robinson, Marshall, and Stamps 2005) seems to indicate that direct study of this link does not clarify the full process chain. Therefore, to develop an appropriate IS success model that includes the chain, we start with SFA use and analyze its effect at the individual level (consistent with recommendations by DeLone and McLean 1982) on sales activity, which is directly influenced by SFA use (Ahearne, Jelinek, and Rapp 2005). Next, we address its indirect effect on CRM in terms of CRM processes instead of focusing directly on outcomes, or CRM performance. Furthermore, we present this two-step model as two complementary versions, in which we successively consider sales activity in terms of efficiency and effectiveness, and compare it with a model that directly links SFA use to CRM processes. Together, this set of models provides a rich overview of the issue.

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The authors thank Dominique Rouziès for her continuous and helpful support to this research. They are also grateful to the reviewers whose careful evaluations helped improve the presentation of this study.

LITERATURE REVIEW

Reflecting growing interest in the interaction between technology and sales force performance, several studies of SFA, both theoretical and empirical, recently have emerged (Table 1). Whereas some attempts to explain SFA adoption generate complex theoretical models, most studies concentrate on the consequences of SFA use on sales force performance. Furthermore, the results of these different studies encompass varied and controversial conclusions.

SFA Use and Performance

The question of how a given technology might influence organizational performance appears often in IS literature. However, compared with other firm departments, marketing and sales departments generally have resisted IS technologies. Only in the late 1990s did organizations begin investing significantly in automation of sales and marketing functions (Rivers and Dart 1999). Therefore, few research studies compare SFA with other IS applications, in contrast with the nearly 30-year history of research into outcomes in other departments (DeLone and McLean 2003). Prior research on the effects of SFA systems tends to involve two types of outcomes—customer oriented and firm oriented (Table 1). Customer-oriented research typically focuses on end results, such as sales levels (Avlonitis and Panagopoulos 2005) or customer satisfaction (Jayachandran et al. 2005; Mithas, Krishnan, and Fornell 2005), whereas firm-oriented research revolves around the effects of sales efficiency (Ahearne, Jelinek, and Rapp 2005; Erffmeyer and Johnson 2001). Furthermore, most of the results from the customer-oriented approach reveal few significant effects, and the results generated by the firm-oriented approach, though they suggest clearer results, are still fragmented because such studies analyze processes within the firm to understand what causes end results.

SFA and Customer-Oriented Performance

In most cases, researchers analyze the causal relationship between SFA use and sales force performance and thus have emerged with results consistent with the information technology (IT) productivity paradox (Brynjolfsson 1993), which states that investments in IT might not improve firms' productivity. Avlonitis and Panagopoulos (2005) find no significant effect of SFA use acceptance, whether in terms of usage or integration into sales activities, on sales performance. Speier and Venkatesh (2002) similarly find no significant changes in sales volume from the time just before the SFA implementation until six months later. In broadening the study of this direct interaction by investigating the moderating effects of

salesperson expertise and experience, Ko and Dennis (2004) still arrive at significant results only for expertise.

However, SFA use can modify customer satisfaction through its moderating effect on the relationship between relational information processes and customer relationship performance (Jayachandran et al. 2005). Specifically, SFA use tends to increase (decrease) customer relationship performance in developed (scarce) relational information processes environments. In this sense, Keillor, Bashaw, and Pettijohn (1997) report that 64 percent of firms declare that SFA use increased their sales levels, and Mithas, Krishnan, and Fornell (2005) suggest a positive relationship between SFA use and customer satisfaction through enhanced perceived quality. Mainly because of its provision of more accurate customer information, SFA use provides salespeople with the ability to customize proposals and thus cater to customers' needs better.

SFA and Firm-Oriented Performance

Prior research also recognizes a second category of outcomes resulting from SFA use that relate to transformations in internal firm processes and activities. Erffmeyer and Johnson (2001), studying the operational effects of SFA tools, indicate that many organizations achieve both improved access to information from their sales force and their customers and improved communication with customers. In contrast, Speier and Venkatesh (2002) assert relationships between SFA implementation and several negative outcomes, such as increased sales force turnover and absenteeism. Gohmann et al. (2005) study the effect of perceptions of SFA tools on sales forces and sales managers and find significant differences, such that managers perceive the benefits of SFA tools more favorably than do salespeople. In an operational field, 79.8 percent of firms interviewed by Keillor, Bashaw, and Pettijohn (1997) report that SFA increases salesperson productivity.

By analyzing outcomes related to salespeople's workload, Brown and Jones (2005) posit that SFA use may both increase role overload in the short term and decrease it in the long term. Consistent with that view, Rouziès et al. (2005) suggest that IS may help salespeople save time by automatically generating reports, and Robinson, Marshall, and Stamps (2005) establish a relationship between intention to use SFA and adaptive selling. In addition, when they analyze the nature of changes in sales activities in detail, Ahearne, Jelinek, and Rapp (2005) argue that by saving time and optimizing call schedules, greater use of technology enables salespeople to increase their number of sales calls; their cross-sectional research also provides evidence of the moderating effect of user support in the relationships between SFA use and both sales effectiveness and efficiency, as well as a similar effect of user training on sales effectiveness. Finally, from a qualitative point

Table I
Summary of Key Literature on Outcomes of SFA Use

Authors	Orientation	Outcomes	Key Findings
Ahearne, Jelinek, and Rapp (2005)	Customer/firm	Sales effectiveness (percent of quota) Sales efficiency (number of calls per day)	User support moderates the relationship between SFA use and both sales effectiveness and efficiency. User training moderates the relationship between SFA use and effectiveness.
Ahearne, Srinivasan, and Weinstein (2004)	Customer	Sales performance (percent of quota)	Results show a curvilinear relationship between sales performance and CRM/SFA use with an optimum.
Avlonitis and Panagopoulos (2005)	Customer	Sales performance (sales volume, market share, new account development, servicing existing customers)	No relationship between CRM acceptance and sales performance.
Ko and Dennis (2004)	Customer	Sales performance	Expertise moderates the relationship between SFA use and sales performance. Experience does not moderate the relationship.
Erfmeyer and Johnson (2001)	Customer/firm	Sales force efficiency, access to information, time with clients, client access to information, faster turnaround, improved service or quality, communication with customers, revenue generation speed, monitoring/forecasting of sales, changes in the firm sales, changes in the firm.	Most significant results suggest three positive outcomes—sales force access to information, client access to information, and communication with customers.
Gohmann et al. (2005)	Firm	Perceptions of SFA outcomes	Managers perceive SFA benefits more favorably than salespeople (greater gain in productivity). The control function of SFA is perceived stronger by salespeople than managers.
Jayachandran et al. (2005)	Customer	Customer satisfaction, current customer retention	CRM tools (including sales force, marketing, and service automation) use moderates the relationship between relational information processes and CRM performance.
Keillor, Bashaw, and Pettijohn (1997)	Customer/firm	Sales volume, salespeople productivity	64 percent (13.2) of firms report that SFA has increased (unchanged) sales. 79.8 percent (7.9) of firms report that SFA has increased (unchanged) salespeople productivity.
Mithas, Krishnan, and Fornell (2005)	Customer	Customer satisfaction	The use of CRM applications (including SFA) is associated with greater customer satisfaction.
Robinson, Marshall, and Stamps (2005)	Firm	Adaptive selling, job performance	Intention to use SFA tool is positively related to adaptive selling. No link between intention to use SFA and job performance.
Speier and Venkatesh (2002)	Customer/firm	Sales performance, absenteeism, voluntary turnover	SFA implementation increases absenteeism and voluntary turnover.
Rivers and Dart (1999)	Customer/firm	Sales force efficiency/payback	Breadth of analysis prior to SFA investment is positively correlated with sales force effectiveness. No correlation between the extent of SFA acquisition and the benefits generated.
Hunter and Perreault (2007)	Customer	Sales performance (sales value, sales margin, percent quotas)	SFA adoption and sales performance are correlated.

of view, SFA tools appear to facilitate information flow and improve communication within sales teams (Brown and Jones 2005), which, through better information sharing, should help salespeople become more efficient in setting appointments or customizing proposals.

CONCEPTUAL FRAMEWORK

Models

To study the link between SFA use and CRM processes, we intuitively first might build a model composed of a unique direct link from SFA use to CRM process evaluations (Model 0). However, our study aims to understand the transformation that occurs as a result of sales processes automation, and such a basic model cannot provide sufficient insight into what happens at the operational level. As Rivers and Dart (1999) state, SFA is about transforming sales activities into electronic processes, and we place sales activities at the heart of this transformation. Our main models (Models 1a and 1b) therefore test the potential mediating role of sales force activities on the relationship between SFA use and CRM processes; the direct model serves instead as a benchmark.

Hypothesis 0: Sales force activities mediate the relationship between SFA use and CRM processes.

Building on previous IS, sales force, and psychology literature, we provide a conceptual framework that relates SFA use to the performance of CRM processes while also encompassing the mediating role of sales force activities. To proceed, we next must distinguish between two different measures of sales force activities—effectiveness and efficiency. We depict the two alternative models that correspond to these two measures in Figure 1. Model 1a focuses on the effectiveness of sales force activities and analyzes the mediating role of sales force activities in terms of the number of sales calls, proposals generated, and reports. Model 1b integrates the mediating effect of efficiency, including the ratios of the number of sales closed to the total number of sales calls, number of sales closed to the number of proposals generated, and number of proposals generated to the number of sales calls. This distinction enables a deeper understanding of the individual mechanisms that influence the link between SFA use and CRM processes.

Variables

We derive the variables used to formalize SFA use, sales force activities, and CRM processes in our models from IS and sales force literature. We discuss their implementation further in the methodological section.

SFA converts sales activities into electronic processes through various combinations of hardware and software (Riv-

ers and Dart 1999); therefore, a wide range of functionality is associated with SFA tools. In this context, Raman, Wittmann, and Rauseo (2006) distinguish two types of functions that integrate SFA tools—operational and analytical. The SFA use we study herein corresponds to the set of operational functions of SFA; as applied in our research, operational SFA tools encompass activities such as call planning, sales proposal editing, and sales activity reporting. We present the definitions of our SFA use variables in Table 2.

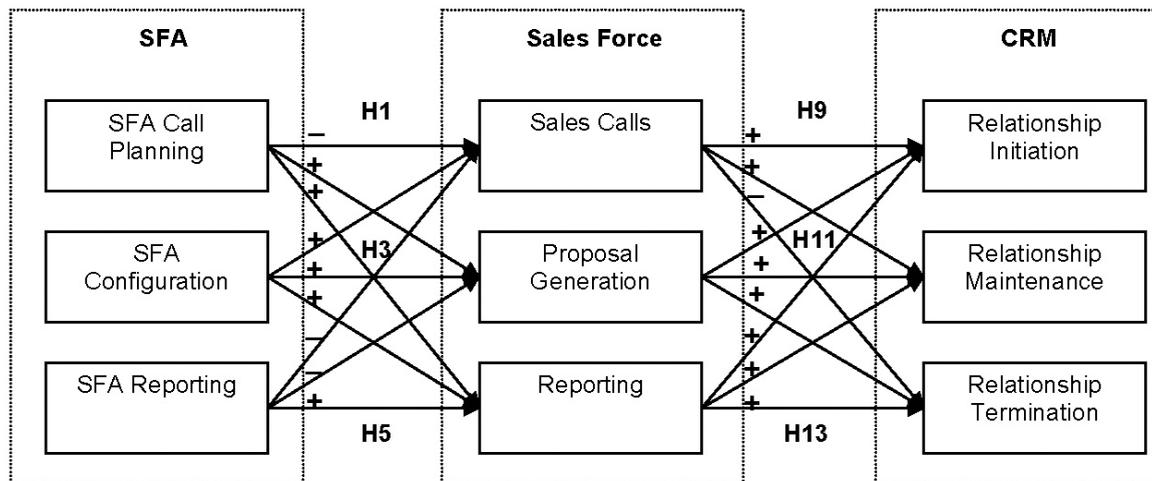
For each of these SFA functionalities, we explore the direct effect on sales force operational activities. Widmier, Jackson, and Brown McCabe (2002) define a taxonomy of sales force operational tasks that includes six sales function categories—organizing, presenting, reporting, informing, supporting and processing transactions, and communicating. For practical data collection purposes, we gather these activities into three main activities—sales calls, proposal generation, and reporting. Regarding the effect of SFA on salespersons' efficiency and effectiveness, we note that effectiveness corresponds to a quantitative measure of activities (e.g., number of calls), whereas efficiency corresponds to a qualitative measure based on productivity ratios (e.g., number of calls leading to sales as a proportion of total calls).

Recent research attempts to formulate a clear definition of CRM. For example, Srivastava, Shervani, and Fahey (1999) consider CRM a core organizational process that focuses on establishing, maintaining, and enhancing long-term associations with customers, whereas Plouffe, Williams, and Leigh (2004) and Payne and Frow (2005) both list diverse operational and theoretical CRM perspectives related to different stakeholders. Because current CRM definitions provided by software vendors and consultants range from purely IS definitions to strategic concepts, most theorists consider CRM a cross-functional process (Reinartz, Krafft, and Hoyer 2004). Similarly, Boulding et al. (2005) perceive CRM as the result of an integration of marketing ideas, data, technologies, and organizational forms. Moreover, in analyzing organizations whose market approach relies heavily on salespeople, Tanner and Shipp (2005) propose a global CRM framework that includes analytical and operational processes and defines three primary objectives: customer acquisition, customer loyalty, and learning. In line with previous theorists, Zeithaml, Rust, and Lemon (2001) assert that CRM tries to allocate resources effectively to ensure customers receive the appropriate attention at the right cost.

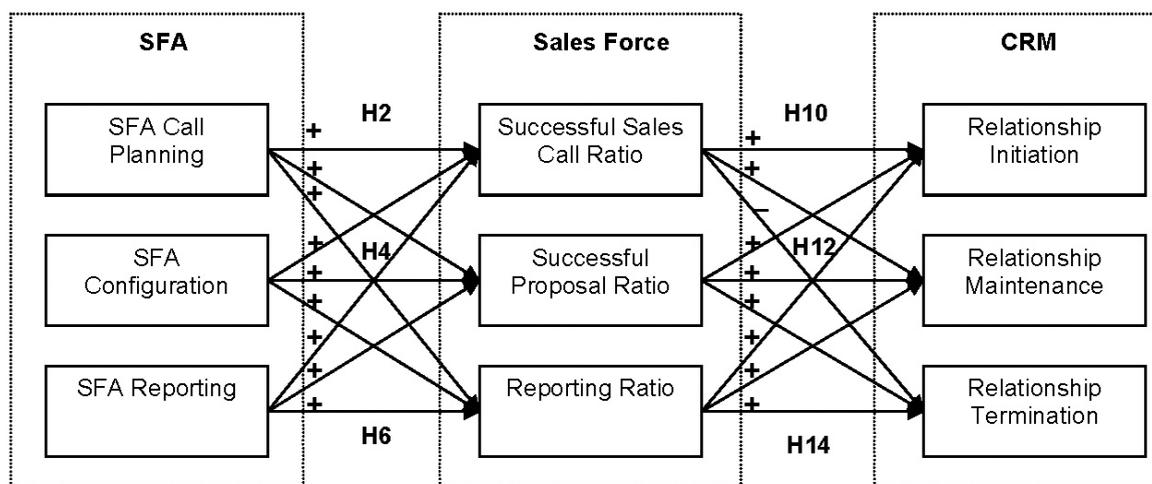
In line with this conceptualization, we base our study on Reinartz, Krafft, and Hoyer's (2004) definition of three types of CRM processes—relationship initiation, maintenance, and termination. (We provide detailed scales in the Appendix.) Furthermore, they view CRM processes as longitudinal phenomena that must be analyzed according to three successive processes. Initiation corresponds to the set of activities that

Figure 1
Research Models

(a) Model 1a: Activity Effectiveness



(b) Model 1b: Activity Efficiency



occur before or in the early stages of a relationship, such as identifying potential customers. The maintenance process encompasses activities that characterize normal customer relationships, such as cross-selling, upselling, or retention programs. Finally, the termination process can occur at any point in the relationship and includes both termination management activities and the activities used to detect and decide to end a bad relationship (e.g., unprofitable, low-value customers). Thus, we study the effect of SFA use on these three CRM processes, as mediated by sales force activities.

Relating Sales Force Automation Use and Sales Force Activities

To determine the direct effect of SFA use on sales force activities, we use IS and motivation theories as lenses that focus

our understanding of salespeople's behavioral reactions to SFA use.

Call Planning

Sales organizational activities range from scheduling sales calls to managing sales contacts (Widmier, Jackson, and Brown McCabe 2002), and technology can help with such tasks (Marshall, Moncrief, and Lask 1999), because SFA embodies the information salespeople need for their contact and account management, such as call and order histories (Morgan and Inks 2001; Schillewaert et al. 2005). Using SFA tools, sales managers also can provide salespeople with assigned leads and prospects (Jayachandran et al. 2005), which help salespeople fill their agenda. The use of SFA further should reduce the length of each sales call, enabling salespeople to make more

Table 2
Description of Factors and Related Variables

Factor	Definition	Variable
SFA Use	Use of the SFA information system tool.	SFA call planning SFA configuration SFA reporting
Sales Force Activities Effectiveness	Effectiveness of the sales force activities: number of sales activities per sales representative for a given period of time.	Number of sales calls Number of proposals generated Number of reports
Sales Force Activities Efficiency	Efficiency of the sales force activities: quality of sales activities realized in terms of capacity to transform a given activity into sales (sales calls and proposals) and exhaustiveness (reporting).	Successful sales call ratio Successful proposal ratio Reporting ratio
CRM Processes	Activities performed by the organization concerning the management of the customer relationship. These activities are grouped according to a longitudinal view of the relationship.	Relationship initiation Relationship maintenance Relationship termination

calls during a given period (Ahearne, Jelinek, and Rapp 2005). Furthermore, we posit that the associated visibility of their agenda should motivate salespeople to select their sales calls more carefully and only conduct those that they can justify, which, in turn, should improve sales ratios.

In its analytical function, SFA may facilitate selling situation analysis and data interpretation (Ahearne, Jelinek, and Rapp 2005). Thus, we predict that sales calls planned using SFA generate more proposals, as well as decreased sales calls volume. For the same reasons, we posit that the sales proposals will reflect better quality and thus increase the proposal ratio. If salespeople use SFA tools to plan their sales calls, the automated reporting offers a potential time-saving opportunity because it reduces paperwork (Rouziès et al. 2005). Therefore, the use of SFA call planning should increase reporting activity and the reporting ratio, or the ratio of reported sales calls to total sales calls.

Hypothesis 1: SFA call planning use relates (a) negatively to the number of sales calls and positively to the (b) number of proposals and (c) number of reports.

Hypothesis 2: SFA call planning use relates positively to (a) successful sales call ratios, (b) successful proposal ratios, and (c) reporting ratios.

Sales Proposal Generation

Product configuration, one of the earliest SFA functionalities to be studied (Markus and Keil 1994), may relate to sales performance because SFA should produce more customer-oriented proposals that result in increased customer satisfaction (Ahearne, Jelinek, and Rapp 2005). Automatic proposal

generation helps salespeople create and configure proposals that they would not have been able to produce without SFA. Therefore, we predict an increase in the proposals generated when salespeople use SFA for product configuration. In turn, salespeople should be able to visit new customers, for which the SFA function configures proposals, which increases sales calls. Finally, the increase of sales calls associated with the use of the configuration function should result in proportionately increased reporting. Therefore, in terms of the sales call and proposal ratios, the assistance provided by the SFA's configuring capability should increase performance. The reporting ratio also should increase, because salespeople have no reason not to report sales calls produced by the IS-configured proposals that are visible to their managers.

Hypothesis 3: SFA configuration use relates positively to the (a) number of sales calls, (b) number of proposals, and (c) number of reports.

Hypothesis 4: SFA configuration use relates positively to (a) successful sales call ratios, (b) successful proposal ratios, and (c) reporting ratios.

Reporting

With IS implementation, the analytical capabilities of salespeople and sales managers improve through faster access to information (Taylor 1993) contained in salespeople's reports. Jayachandran et al. (2005) define two types of information available through SFA tools, customer and competitor, though Ko and Dennis (2004) also include knowledge management capabilities. This basic set of functions supports salespeople by providing well-organized, carefully stored information. To

keep their information up to date, salespeople probably want to report their own sales calls for later use, so reporting through SFA should correlate positively with the level of information reported. On the flip side, salespeople may consider the SFA reporting function as a waste of time that lacks concrete returns or even as a “big brother”—type intrusion (Widmier, Jackson, and Brown McCabe 2002).

When they use SFA, salespeople likely spend more time providing information they think managers expect or demand more time to justify the reported elements. Brehm (1966) predicts this type of reaction with reactance theory, which states that people resist attempts to constrain their thoughts or behaviors. Applied to our SFA reporting context, salespeople may assume that reporting all their activity entails the risk of behavioral control by managers, which prompts them to limit their voluntary reporting to only low-involvement items. Such a reaction also causes salespeople to reduce the number of ineffective sales calls and thus the risk of managerial control. However, by decreasing convenience sales calls and proposals associated with low success rates, salespeople using the SFA reporting function should improve their successful sales call, successful proposal, and reporting ratios.

Hypothesis 5: SFA reporting use relates negatively to the (a) number of sales calls and (b) number of proposals but (c) positively to the number of reports.

Hypothesis 6: SFA reporting use relates positively to (a) successful sales call ratios, (b) successful proposal ratios, and (c) reporting ratios.

Relating Sales Force Activities and CRM Processes

Sales force literature provides significant evidence that salespeople affect the quality of customer relationships. For example, Weitz and Bradford (1999) note they can form long-term relationships through their influence on customer perceptions, and Cannon and Perreault (1999) suggest that salespeople critically affect the formation and sustainability of customer relationships. In studying just the initiation and maintenance stages of relationships, Langerak (2001) finds a positive correlation between salespersons' behaviors and customers' trust, satisfaction, and cooperation. Consistent with these results, Humphreys and Williams (1996) show that interpersonal processes between salespersons and customers determine customer satisfaction, regardless of other criteria such as product quality. That is, the more salespersons make sales calls and the longer they spend with customers, the greater their opportunities to interact and enrich the CRM processes. Nevertheless, we argue salespeople may not use this opportunity in the termination process, because they have little desire to watch one of their affective relationships

disappear. On the basis of Vroom's (1964) expectancy theory of motivation, we predict that during the impression formation stage, salespeople who invest more in the relationship through successful sales call ratios have higher expectations that the relationship will produce positive outcomes and therefore do not want the relationship to end. Following this reasoning, we posit a negative relationship between successful sales call ratios and the CRM termination process.

Hypothesis 7: The number of sales calls has a positive effect on the (a) CRM initiation process and (b) CRM maintenance process but (c) a negative effect on the CRM termination process.

Hypothesis 8: Sales call ratios have a positive effect on the (a) CRM initiation process and (b) CRM maintenance process but (c) a negative effect on the CRM termination process.

In a study that relates closely to the concept of CRM, Jap (2001) measures the effect of salespeople on customer satisfaction and reveals a significant relationship with both product and overall satisfaction. Early research by Weitz (1978) also defines a sales process to include a salesperson's attempts to influence customers and thus modify relationships through an iterative five-stage process—impression formation, strategy formulation, transmission, evaluation, and adjustment. During the impression formation stage, which typically corresponds to early sales calls, salespeople learn about the customer's decision process and formulate an appropriate selling strategy that leads to a proposal. They then deliver this message through additional sales calls and proposal transmission. During delivery, salespeople evaluate customers' reactions and accordingly adjust one or several of the previous stages.

After salespeople transmit proposals to customers and receive feedback, they can adjust their early impression formation (Weitz 1978) by removing uninterested customers from their prospect list—that is, terminating the relationship. In the case of more successful proposals, salespeople implicitly confirm the needs and behaviors of customers to enrich their knowledge and improve the CRM initiation and maintenance processes. Increasing the successful proposal ratio enables them to refine the list of criteria they use to qualify prospects and determine whether they should initiate a relationship; it also provides them with a key understanding of the elements on which they should focus to maintain high-quality customer relationships. Therefore, we predict a positive relationship between proposal generation activity, in terms of both effectiveness and efficiency, and the three CRM processes.

Hypothesis 9: The number of proposals has a positive effect on the (a) CRM initiation process, (b) CRM maintenance process, and (c) CRM termination process.

Table 3
Description of SFA Use Measures

	Mean*	Standard Deviation
SFA Call Planning	3,907	1,865
SFA Configuration	3,442	1,721
SFA Reporting	3,971	1,905

* Average number of times (over two weeks) that salespeople log on each SFA function each day. Only measured at T2.

Hypothesis 10: A successful proposal ratio has a positive effect on the (a) CRM initiation process, (b) CRM maintenance process, and (c) CRM termination process.

Finally, sales call reporting represents an interesting illustration of the boundary-spanning role of salespeople that may explain their behavior (Behrman, Bigoness, and Perreault 1981). By reporting information they have collected from customers, salespeople provide colleagues and managers with a better understanding of their own activity and thus extend the number of persons able to analyze the CRM processes. We therefore predict that the transparency associated with reporting improves the CRM processes. Furthermore, if salespeople use reporting to justify failures as resulting from external forces, it strengthens the relationship termination process.

Hypothesis 11: The number of reports positively influences the (a) CRM initiation process, (b) CRM maintenance process, and (c) CRM termination process.

Hypothesis 12: The reporting ratio positively affects the (a) CRM initiation process, (b) CRM maintenance process, and (c) CRM termination process.

METHOD

To examine the hypothesized relationships, we follow DeSanctis and Poole's (1994) suggestion that IS users have difficulty assessing the full range of effects that a specific technology may have on their job until after they have engaged in ongoing use of that technology. We therefore employ a longitudinal field study over a nine-month period, consistent with (though longer than) Speier and Venkatesh's (2002) six-month study, and thus measure all variables well before and after the SFA implementation. We first collect sales force activities and CRM processes data a month before the announcement of the project inside the company. The IS implementation began three months later. This longitudinal characteristic of our data set enables us to measure variations in behavior and performance rather than their values at any given time, which provides a more relevant assessment of the effect of SFA.

Sample

We conducted our research with a leading waste management company that mainly provides waste collecting and treatment services. During the year of the study, the company operated 45 separate branch offices and employed nearly 5,000 people, of whom 350 were salespeople; all salespeople participated in this study, and 172 provided data pertaining to all points of measurement. The median age of our respondents is 34 (standard deviation [sd] = 7.6), and their average tenure with the company is 5.3 years (sd = 3.8). We control for age, tenure, and sales team size by collecting data from human resources department files. In terms of the SFA used, the company implemented a Siebel CRM/SFA IS.

Measures

Our measures can be categorized into three sets of variables—SFA function use, sales activities, and CRM processes. Each has a different source, which enables us to cross-validate the collected information. Most of our data pertain to two different periods—before SFA implementation (T1) and after SFA implementation (T2). We depict the average levels of the SFA use variables in Table 3.

For the SFA use data, we employ SFA records provided by Siebel regarding the number of sales calls planned, number of proposals edited, and number of sales call reports edited. These three elements correspond to the three main functions of SFA use; we refer to them as SFA call planning, SFA configuration, and SFA reporting. Unlike most of our other variables, we measure these items only once, after the SFA implementation (T2). Specifically, we record the number of times the salespeople log on to each type of function within the SFA system and derive an average number per day over two weeks. For example, the SFA call planning variable represents the average number of times each day salespeople log on to the call planning function to work on their planning. This approach provides us with a valuable and quantitative measure of SFA use.

Sales activities pertain to the actual commercial activity of the participants, measured at two points (T1 and T2), and consist of three main activities—sales calls, proposal generation, and reporting. We measure the total number of sales calls with a survey on which respondents indicated their number of visits per day over a period of two weeks. To confirm the completeness of this list, we performed a validity check with 45 sales managers. Recorded data provide the measure of proposal generation; the company's technical division is required to validate every edited proposal to ensure material availability.

Finally, we measure reporting differently at T1 and T2. Before the implementation, salespeople used a single sheet of paper to document each sales call, which is standard and

Table 4
Description of Sales Activity Measures and Indices

	Mean (for a period of four weeks per salesperson)	Standard Deviation
Number of Sales Calls at T1*	29,302	9,744
Number of Sales Calls at T2*	29,819	10,233
Number of Sales Calls Percent Increases*	0.025	0.162
Number of Proposals at T1	40,866	11,469
Number of Proposals at T2	41,483	11,360
Number of Proposals Percent Increases	0.026	0.109
Number of Reports at T1	9,831	4,108
Number of Reports at T2	11,378	4,458
Reporting Percent Increases	0.192	0.456
Number of Sales at T1	22,988	7,234
Number of Sales at T2	24,773	7,451
Successful Sales Call Ratio	0.080	0.137
Successful Proposal Ratio	0.069	0.104
Reporting Ratio	0.202	0.397

* Sales call figures relate to a two-week period, all other figures correspond to a four-week period.

unrelated to our study. Therefore, at this stage, we only collect existing data. After the SFA implementation, salespeople were to use the Siebel system to report their activities in the same fields as those that appeared on the paper-based form. We thus use the data provided by Siebel, after verifying that no paper-based reporting form still existed. To complement our estimation of the sales force effectiveness ratios, we measure sales volume (number of sales closed) on the basis of the monitoring company's enterprise resource planning IS, through which all sales must be transmitted to start serving customers.

We use Reinartz, Krafft, and Hoyer's (2004) scale to measure CRM process performance, because it covers a broad spectrum of CRM activities. However, some initial items had no relevance for our study because they refer to tasks that the studied company does not practice. Therefore, we delete those items to obtain more adequate scales for our case. Our revised scales thus include 9, 13, and 3 items. This practical modification further illustrates the flexibility of our chosen CRM scale. For further details about the scales and items used within each scale, see the Appendix.

Measure Validation

We collect sales activity measures at a nine-month interval (between T1 and T2). Using data available from the preceding two years, we check for any seasonality during the two months when we collected our data; our analyses of sales and activity levels show no significant differences. For both proposals and sales, we check the average values per proposal and sale to verify stability during the study period. Finally, we verify

the reliability of the CRM scale before conducting any further computations and find that each of the six scales (three scales in two periods) has an alpha greater than 0.9.

Analysis

To measure the two different types of sales activity change (effectiveness and efficiency), we compute two different indices from the sales activity measures. Specifically, we measure effectiveness as the percentage of variation: activity at T2 minus activity at T1 divided by activity at T1. Furthermore, we create ratios that correspond to each step of the sales process, so the successful sales call ratio consists of the ratio of sales to sales calls and the successful proposal ratio is the ratio of sales to proposals, which is mechanically smaller than the sales call ratio because only some sales calls lead to proposals. The reporting ratio in turn consists of the ratio of reporting to total sales calls. For the efficiency indexes, we use the percentage of variation in the ratios: T2 minus T1 divided by T1. In Table 4, we provide the average values of each index, as well as their corresponding measures of sales activity.

For CRM, after we compute and test each scale at T1 and T2 separately, we measure the difference between the values to indicate the change in the CRM process evaluation. This measure relies on Likert-type scales, and the percentage of variation is less relevant than the absolute variation. We thus avoid bias, because participants have different intrinsic valuations. We depict these changes in Table 5.

After confirming the appropriateness of our measurement model, we use PLS-Graph version 3.0 to test the research model. Specifically, we measure the effect of SFA use at T2 on

Table 5
Description of CRM Process Performance Changes
(Performance at T2 – Performance at T1)

	Mean	Standard Deviation
CRM Initiation Process		
Performance Change	0.0415	0.641
CRM Maintenance Process		
Performance Change	0.0064	0.681
CRM Termination Process		
Performance Change	0.0024	0.843

the changes of CRM processes between T1 and T2, according to the changes in sales forces activities between T1 and T2.

Moreover, we estimate two models: Model 1a uses the effectiveness indices to depict the path between SFA use and CRM processes, whereas Model 1b applies the efficiency indices. In Table 6, we provide the correlation matrix between the different measures and indices, and Tables 7 and 8 indicate the results derived from Models 1a and 1b, respectively.

RESULTS

Model Estimation

Model 0 results in an average R^2 of 12.98. In both Models 1a and 1b, the average R^2 is satisfactory (35.52 percent and 27 percent of explained variance, respectively). The first part of the path is equally well explained in both models, with an average R^2 of 44 percent. However, the effectiveness indices predict CRM processes better than the efficiency indexes (average $R^2 = 26.78$ and 9.65 , respectively). Because many path coefficients are significantly nonnull, our overall model provides a precise picture of the phenomenon under consideration and therefore enables us to test most of our hypotheses.

Hypotheses

Overall, the results validate our hypotheses. Because we can discard the direct link model, as a result of the superiority of Models 1a and 1b in terms of R^2 , we focus on these latter models and examine each specific hypothesis according to the links within them.

We confirm H0 by comparing the average R^2 of Models 1a and 1b on one side and Model 0 on the other. This alternative model, with six variables (three SFA use, three CRM processes), reveals an average multiple R^2 of 12.98, and five of the nine testable links are not significant. Moreover, this R^2 value is significantly smaller than that of Models 1a and 1b ($p > 0.01$), at 35.52 and 27.00, respectively. This test thus validates H0 and incites us to analyze the links within the models.

In Models 1a and 1b (described in Figure 2), we observe more significant effects in the first part of the path (i.e., from SFA use to sales activity) than in the second part (i.e., from sales activity to CRM processes). The first part of the path confirms most of our hypotheses pertaining to the effectiveness model (H1a, H1b, H1c, H3a, H3c, H5a, and H5b), with the exception of H3b and H5c, whose effects are not significant. These results support the theoretical background we propose to infer the impact of SFA use on sales activity changes in terms of effectiveness.

In the efficiency model, as we predicted, the effect of SFA call planning on the successful sales call ratio is significantly positive (H2a), as is the effect of the other two SFA uses, in contrast with H4a and H6a. The negative effect of SFA call planning on the successful proposal ratio is significant but not in the hypothesized direction (H2a), whereas the effect of the other two SFA uses matches our predictions in H4b and H6b. Finally, our findings support all hypothesized directions of the SFA effects on the reporting ratio, though the effect associated with H6c is not significant.

In the second part of the path, most of our results pertaining to the effect of sales activity in terms of effectiveness agree with the formulated hypotheses (H7a, H7b, H9a, H9b, H9c, and H11b), but three are not significant (H11a, H11c, and H7c). The results are less satisfying with regard to effectiveness. As the low average R^2 in this section of Model 1b indicates, most path coefficients are insignificant (H8a, H8b, H10a, H10b, H12a, and H12b), and two hypotheses are contradicted by the results (H10c and H12c). In the efficiency framework, we correctly predict only the impact of the successful sales call ratio on CRM termination (H8c).

DISCUSSION

In recent years, researchers and practitioners have emphasized the importance of CRM; in response, we address an important gap in the SFA and CRM literature by theoretically and empirically examining the relationship between these two major concepts. According to Speier and Venkatesh (2002), SFA technologies increasingly support CRM strategies, and yet little is known about their effect on CRM processes. By investigating the effect of SFA on performance in terms of CRM processes, we analyze different outcomes specifically related to different SFA functions. That is, our main purpose is to understand these complex interactions better.

Intermediary Mechanisms: SFA Use to Sales Activity

Our study indicates some counterintuitive results regarding the relationship between SFA use and sales force activities. Consistent with our hypotheses, neither the SFA configuration nor the SFA reporting function increases the numbers of

Table 6
Intercorrelations Among Measures and Indices

	1	2	3	4	5	6	7	8	9	10	11	12
1. SFA Call Planning	1.00	0.19	-0.03	-0.31	0.58	0.25	0.52	-0.51	0.52	0.12	0.03	-0.37
	—	0.01	0.72	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.13	0.70	< 0.01
2. SFA Configuration	0.19	1.00	0.07	-0.18	-0.49	0.06	-0.08	0.18	0.16	-0.48	-0.43	-0.16
	0.01	—	0.34	0.02	< 0.01	0.40	0.29	0.02	0.04	< 0.01	< 0.01	0.04
3. SFA Reporting	-0.03	0.07	1.00	0.56	-0.02	0.32	-0.30	0.59	0.17	0.10	0.34	0.04
	0.72	0.34	—	< 0.01	0.80	< 0.01	< 0.01	< 0.01	0.03	0.20	< 0.01	0.63
4. Sales Call (percent)	-0.31	-0.18	0.56	1.00	0.09	-0.09	-0.71	0.68	-0.14	0.27	0.41	0.44
	< 0.01	0.02	< 0.01	—	0.24	0.24	< 0.01	< 0.01	0.07	< 0.01	< 0.01	< 0.01
5. Proposal Generation (percent)	0.58	-0.49	-0.02	0.09	1.00	0.02	0.42	-0.51	0.39	0.48	0.34	-0.11
	< 0.01	< 0.01	0.80	0.24	—	0.76	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.17
6. Reporting (percent)	0.25	0.06	0.32	-0.09	0.02	1.00	0.32	0.26	0.64	0.02	0.13	-0.16
	< 0.01	0.40	< 0.01	0.24	0.76	—	< 0.01	< 0.01	< 0.01	0.81	0.09	0.03
7. Successful Sales Call Ratio	0.52	-0.08	-0.30	-0.71	0.42	0.32	1.00	-0.58	0.51	0.07	-0.12	-0.44
	< 0.01	0.29	< 0.01	< 0.01	< 0.01	< 0.01	—	< 0.01	< 0.01	0.33	0.12	< 0.01
8. Successful Proposal Ratio	-0.51	0.18	0.59	0.68	-0.51	0.26	-0.58	1.00	-0.08	-0.06	0.17	0.32
	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	—	0.30	0.41	0.02	< 0.01
9. Reporting Ratio	0.52	0.16	0.17	-0.14	0.39	0.64	0.51	-0.08	1.00	0.06	-0.02	-0.39
	< 0.01	0.04	0.03	0.07	< 0.01	< 0.01	< 0.01	0.30	—	0.41	0.78	< 0.01
10. CRM Initiation	0.12	-0.48	0.10	0.27	0.48	0.02	0.07	-0.06	0.06	1.00	0.38	0.20
	0.13	< 0.01	0.20	< 0.01	< 0.01	0.81	0.33	0.41	0.41	—	< 0.01	0.01
11. CRM Maintenance	0.03	-0.43	0.34	0.41	0.34	0.13	-0.12	0.17	-0.02	0.38	1.00	0.13
	0.70	< 0.01	< 0.01	< 0.01	< 0.01	0.09	0.12	0.02	0.78	< 0.01	—	0.10
12. CRM Termination	-0.37	-0.16	0.04	0.44	-0.11	-0.16	-0.44	0.32	-0.39	0.20	0.13	1.00
	< 0.01	0.04	0.63	< 0.01	0.17	0.03	< 0.01	< 0.01	< 0.01	0.01	0.10	—

Table 7
Standardized Path Coefficients and Overall Fit for Effectiveness Model

Path from	Path to	Standardized Path Parameter	Coefficients	Results
SFA Use	Sales Activities			
SFA call planning	Sales call	$\beta_{1,1}$	-0.263	-
	Proposal generation	$\beta_{1,2}$	0.706	+
	Reporting	$\beta_{1,3}$	0.264	+
SFA configuration	Sales call	$\beta_{2,1}$	0.563	+
	Proposal generation	$\beta_{2,2}$	0.049	NS
	Reporting	$\beta_{2,3}$	0.338	+
SFA reporting	Sales call	$\beta_{3,1}$	-0.171	-
	Proposal generation	$\beta_{3,2}$	-0.631	-
	Reporting	$\beta_{3,3}$	-0.004	NS
Sales Activities	CRM Processes			
Sales call	CRM initiation	$\gamma_{1,1}$	0.231	+
	CRM maintenance	$\gamma_{1,2}$	0.393	+
	CRM termination	$\gamma_{1,3}$	0.445	+
Proposal generation	CRM initiation	$\gamma_{2,1}$	0.465	+
	CRM maintenance	$\gamma_{2,2}$	0.306	+
	CRM termination	$\gamma_{2,3}$	-0.142	-
Reporting	CRM initiation	$\gamma_{3,1}$	0.020	NS
	CRM maintenance	$\gamma_{3,2}$	0.148	+
	CRM termination	$\gamma_{3,3}$	-0.121	NS
Average R^2 Part 1			44,26	
Average R^2 Part 2			26,78	
Average R^2			35,52	

Note: All results not noted as NS (not significant) are significant at $p < 0.05$.

Table 8
Standardized Path Coefficients and Overall Fit for Efficiency Model

Path from	Path to	Standardized Path Parameter	Coefficients	Results
SFA Use	Sales Activities			
SFA call planning	Sales call ratio	$\beta'_{1,1}$	0.541	+
	Proposal ratio	$\beta'_{1,2}$	-0.542	-
	Reporting ratio	$\beta'_{1,3}$	0.515	+
SFA configuration	Sales call ratio	$\beta'_{2,1}$	-0.277	-
	Proposal ratio	$\beta'_{2,2}$	0.555	+
	Reporting ratio	$\beta'_{2,3}$	0.179	+
SFA reporting	Sales call ratio	$\beta'_{3,1}$	-0.163	-
	Proposal ratio	$\beta'_{3,2}$	0.248	+
	Reporting ratio	$\beta'_{3,3}$	0.047	NS
Sales Activities	CRM Processes			
Successful sales call ratio	CRM initiation	$\gamma'_{1,1}$	0.016	NS
	CRM maintenance	$\gamma'_{1,2}$	-0.034	NS
	CRM termination	$\gamma'_{1,3}$	-0.178	-
Successful proposal ratio	CRM initiation	$\gamma'_{2,1}$	-0.051	NS
	CRM maintenance	$\gamma'_{2,2}$	0.153	+
	CRM termination	$\gamma'_{2,3}$	0.192	+
Reporting ratio	CRM initiation	$\gamma'_{3,1}$	0.051	NS
	CRM maintenance	$\gamma'_{3,2}$	0.009	NS
	CRM termination	$\gamma'_{3,3}$	-0.286	-
Average R ² Part 1			44,35	
Average R ² Part 2			9,65	
Average R ²			27,00	

Note: All results not noted as NS (not significant) are significant at $p < 0.05$.

proposals or reports. Furthermore, SFA call planning decreases sales calls. However, moving beyond these apparently unproductive effects, both call planning and configuration use have several positive consequences for activities and sales that may balance out these negative effects. First, the proportion of successful sales calls significantly increases because of the use of call planning functions, which represents a significantly positive effect on sales force productivity. Second, the use of SFA configuration relates positively to the number of sales calls and reports, whereas the use of the SFA reporting functionality has mainly negative effects: it decreases the number of sales calls, the ratio of successful calls, and the number of proposals. These results are consistent with previous research that indicates control relates negatively to IS adoption (Speier and Venkatesh 2002; Widmier, Jackson, and Brown McCabe 2002). The only significant and potentially positive effect on sales force activity thus stems from the improved quality of proposals.

Our longitudinal testing largely confirms our theoretical model. To explain the three unexpected correlations we discovered, we conducted post hoc interviews with seven salespersons and two sales managers, who provided some satisfying answers. First, the unexpected negative relationship between SFA call planning and the number of proposals may reflect the greater number of proposals per sales lead. The total number of

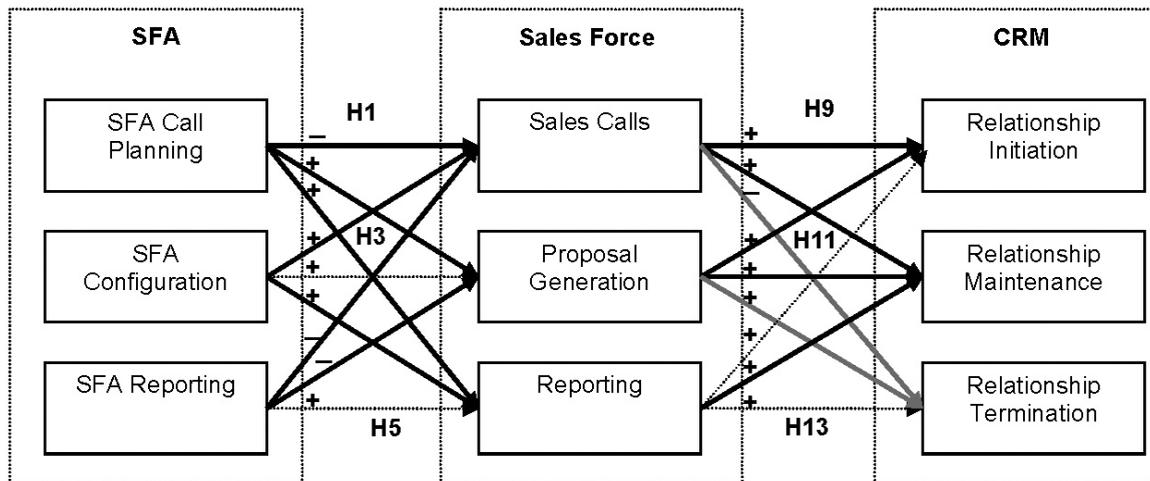
proposals increases as a result of iterative proposal generation for the same lead, which naturally decreases the number of sales closed per proposal. Second, our interviewees suggested that the negative relationship between SFA configuration use and successful sales call ratios may result from the following process: by increasing the number of sales calls, salespeople confront a wider scope of potential technical problems, which challenges them to find appropriate answers and thus lowers their ratio of successful sales calls. Third, the most difficult result to interpret, the negative relationship between SFA reporting use and the reporting ratio, prompts two possible explanations. Salespeople using the SFA reporting tool realize their reports take more time than they did previously and therefore report less frequently. Alternatively, salespersons might not want to report low-value calls that seem to highlight their ineffective behaviors.

Intermediary Mechanisms: Sales Activity to CRM Processes

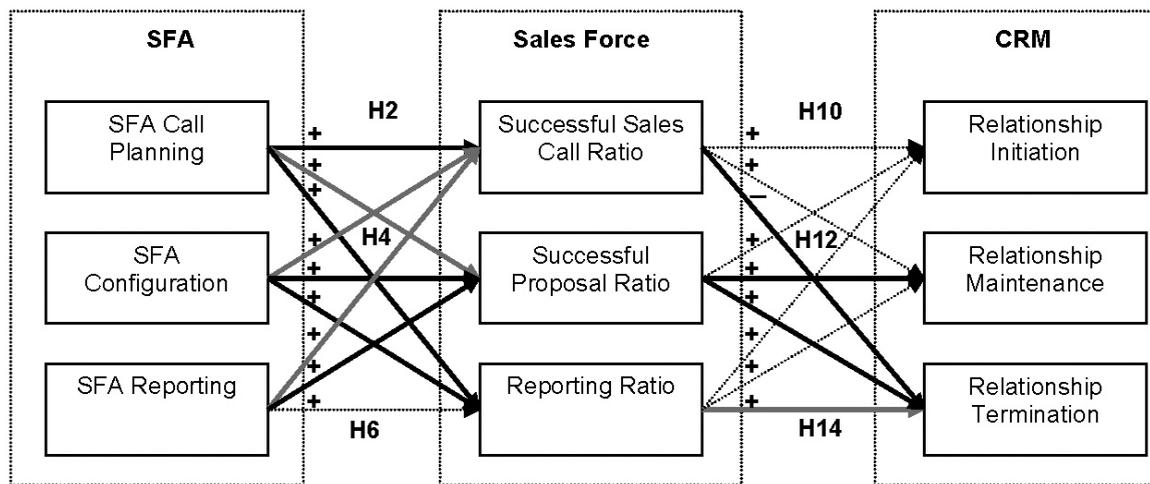
In line with previous theorists (Humphreys and Williams 1996; Langerak 2001), we find that salespeople have a major role to play in influencing the quality of customer relationships. This interaction is significant in terms of both sales

Figure 2
Results

(a) Results on Model 1a: Activity Effectiveness



(b) Results on Model 1b: Activity Efficiency



Legend: Validated hypotheses: Significant link Invalidated hypotheses: Significant link with opposite sign Invalidated hypotheses: No significant link

calls and proposal generation activities on all three CRM subprocesses, though it is significant for reporting activity only with CRM maintenance. Considering the differential effects of sales force activities on CRM processes, we note that reporting produces a much smaller effect than sales calls, consistent with the importance of interpersonal relationships posited by Humphreys and Williams (1996). In addition, CRM initiation and maintenance processes are not likely to be influenced by the ratios of successful sales calls or proposals. This interesting but surprising outcome indicates that the quantity of interaction matters more than its quality in improving the performance of CRM processes. Moreover,

our analysis of the impact of sales force activity on different CRM subprocesses leads to results that are mainly consistent with previous research conducted by Jap (2001), who indicates the weak influence of the sales force in the early stages of a relationship and its stronger effects during mature and decline phases. By highlighting this conflicting role of sales forces, we offer further insight into the decline phase. That is, the amount of sales calls and proposals improves performance related to CRM termination, but successful sales call, proposal, and reporting ratios hinder that performance. In other words, the more efficient salespeople are, the less they contribute to improving CRM termination processes.

The indirect relationship between SFA use and CRM processes performance also implies conflicting results. For example, SFA sales call planning and proposal generation appear to complement each other in improving CRM processes through mediating improvements in the quantity and quality of sales calls and proposals. In addition, the indirect influence of the SFA reporting function on CRM processes is mostly negative, except when it has a mediating effect on the successful proposal ratio.

THEORETICAL CONTRIBUTIONS

Several theoretical contributions emerge from our research. First, we address an important gap in the literature by developing a theoretical model in which sales force activity mediates the relationship between SFA use and CRM performance. The appeal of this approach stems from the controversial effects of SFA on customer relationships. Because we can deduce no clear effect from the literature, it seems useful to move a step back and study the effect of SFA on CRM processes before studying the effect on CRM performance. We also concentrate on individual sales behaviors to understand the concrete mechanisms behind this relationship. Second, to our knowledge, this study is the first attempt to analyze the causal influence of SFA use on salespeople's behaviors and activities in depth. Specifically, we differentiate efficiency and effectiveness in sales force activities and thus obtain a more complete view of these mechanisms and their effects on quantity and quality, as well as stronger recommendations based on these estimated models. Third, we show that various SFA functionalities do not lead to enhanced CRM performance. Fourth, we extend Mithas, Krishnan, and Fornell's (2005) work by providing evidence of the global positive impact of SFA on customer relationships.

MANAGERIAL IMPLICATIONS

This study also provides several useful insights into the effects of SFA implementations on salespeople's behaviors. In particular, SFA improves the quality of sales calls through more efficient filtering of ineffective visits. This continual drive to increase sales force productivity seems to find a key lever in SFA. Nevertheless, managers should control the volume of sales calls carefully, because our study shows a decrease with greater SFA use.

Previous observations warn firms about salespeople's negative perceptions of the SFA reporting function; we confirm its negative outcomes for salesperson behavior. Firms therefore should try to avoid using this function or make it completely voluntary. This proposal is consistent with our results, because the use of SFA sales call planning and configuration increases the quantity of reports. Managers also should ensure that all

sales calls scheduled through the SFA are real, particularly those posted by salespeople who use the SFA reporting function extensively.

Finally, our study provides managers with interesting knowledge about salespeople's behavioral profiles. If they want to improve CRM termination processes, managers should follow the lead of their most efficient salespeople and avoid poor reporting contributions.

LIMITATIONS AND FURTHER RESEARCH

This study uses self-reported data and therefore could be constrained by common method bias, though these data pertain only to CRM processes and sales calls schedule reports. Our other measures (SFA use, sales, reports, proposals, and control variables) come directly from the IS or the company. However, to limit the potential for this bias, a further investigation of our research model should use customer data to measure CRM performance. In addition, our results may not be generalizable to other sales organizations, because we rely on salespeople from a single firm and industry to serve as our respondents.

From an internal validity perspective, we acknowledge that we may have not taken into account some factors that could contribute to CRM performance evaluations. However, we find no changes in sales force compensation, structure, or quotas during our longitudinal study. Finally, our framework is based on the attitude assumptions of several salespersons, which we do not measure during this study. An extension of this work therefore should integrate such factors into the proposed model.

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APPENDIX

CRM Processes Scales

We extract these scales from Reinartz, Krafft, and Hoyer (2004) and deleted items related to activities with no concrete equivalent in our study company. The deleted items are marked with an asterisk (*). All items use seven-point Likert scales anchored by 1 = "strongly disagree" and 7 = "strongly agree."

CRM Initiation (INITIATE): 9 items out of 15

Measurement at Initiating Stage (IMEASURE)

With regard to your SBU [strategic business unit], to what extent do you agree with the following statements:

- We have a formal system for identifying potential customers.
- We have a formal system for identifying which of the potential customers are more valuable.
- We use data from external sources for identifying potential high-value customers.
- We have a formal system in place that facilitates the continuous evaluation of prospects.
- We have a system in place to determine the cost of reestablishing a relationship with a lost customer.*
- We have a systematic process for assessing the value of past customers with whom we no longer have a relationship.*
- We have a system for determining the costs of reestablishing a relationship with inactive customers.*

Activities to Acquire Customers (ACQUISIT)

With regard to your SBU, to what extent do you agree with the following statements:

- We made attempts to attract prospects in order to coordinate messages across media channels.
- We have a formal system in place that differentiates targeting of our communications based on the prospect's value.
- We systematically present different offers to prospects based on the prospects' economic value.
- We differentiate our acquisition investments based on customer value.*

Activities to Regain Customers (REGAIN)

With regard to your SBU, to what extent do you agree with the following statements:

- We have a systematic process/approach to reestablish relationships with valuable customers who have been lost to competitors.
- We have a system in place to be able to interact with lost customers.*
- We have a systematic process for reestablishing a relationship with valued inactive customers.
- We develop a system for interacting with inactive customers.*

CRM Maintenance (MAINTAIN): 13 items out of 20*Measurement at Maintaining Stage (MMEASURE)*

With regard to your SBU, to what extent do you agree with the following statements:

- We have a formal system for determining which of our current customers are of the highest value.
- We continuously track customer information in order to assess customer value.
- We actively attempt to determine the costs of retaining customers.*
- We track the status of the relationship during the entire customer life cycle (relationship maturity).

Activities to Retain Customers (RETAIN)

With regard to your SBU, to what extent do you agree with the following statements:

- We maintain an interactive two-way communication with our customers.
- We actively stress customer loyalty or retention programs.
- We integrate customer information across customer contact points (e.g., mail, telephone, Web, fax, face-to-face).
- We are structured to optimally respond to groups of customers with different values.
- We systematically attempt to customize products/services based on the value of the customer.*
- We systematically attempt to manage the expectations of high-value customers.
- We attempt to build long-term relationships with our high-value customers.

Activities to Manage Up-Selling and Cross-Selling (CROSS_UP)

With regard to your SBU, to what extent do you agree with the following statements:

- We have formalized procedures for cross-selling to valuable customers.
- We have formalized procedures for up-selling to valuable customers.
- We try to systematically extend our “share of customer” with high-value customers.
- We have systematic approaches to mature relationships with high-value customers in order to be able to cross-sell or up-sell earlier.*
- We provide individualized incentives for valuable customers if they intensify their business with us.*

Activities to Manage Customer Referrals (REFERRAL)

With regard to your SBU, to what extent do you agree with the following statements:

- We systematically track referrals.
- We try to actively manage the customer referral process.*
- We provide current customers with incentives for acquiring new potential customers.*
- We offer different incentives for referral generation based on the value of acquired customers.*

CRM Termination (TERMINATE): 3 items out of 4

Measurement at Termination Stage (TMEASURE)

With regard to your SBU, to what extent do you agree with the following statement:

We have a formal system for identifying nonprofitable or lower-value customers.

Activities to Demarket Customers Actively (EXIT)

With regard to your SBU, to what extent do you agree with the following statements:

We have a formal policy or procedure for actively discontinuing relationships with low-value or problem customers (e.g., canceling customer accounts).

We try to passively discontinue relationships with low-value or problem customers (e.g., raising basic service fees).

We offer disincentives to low-value customers for terminating their relationships (e.g., offering poorer service).*

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