SALESFORCE AUTOMATION: AN EXPLORATORY STUDY ON SALES PROFESSIONALS' PERCEPTIONS OF PERFORMANCE BENEFITS

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Nothing developed to date has the potential to affect all areas of sales management and to facilitate the selling process as does the use of sales force automation (SFA). This study reports the results of a survey of sales professionals (sales managers and salespeople) that assessed their perceptions of the use of sales automation software and hardware. The results of this study suggest that sales managers and salespeople have not moved much past traditional contact management tools when it has been predicted that such tools would be heavily used by salespeople today. The real gains in SFA appear to be in the areas of hardware and communication tools (i.e., laptops, e-mail, fax, and Web) and not software. The respondents in this study did not support the notion that SFA would lower the cost of leads and sales.

INTRODUCTION

The cost of retaining existing customers has been estimated to be about one-fifth the cost of acquiring new customers. Customer loss is very expensive, yet sales forces in the U.S. lose, at a minimum, about 20 percent of their customers every year (Griffin and Lowenstein 2001). Customer loss is often attributed to salesperson turnover and the resulting dissatisfaction among some customers who claim that every time they meet with a new salesperson they have to repeat information about their product requirements, budget, and buying schedule (Lorge 1999). Customer loss is exacerbated as salespeople leave the organization when they become frustrated because they are making too many cold calls and are unable to close orders, when they have few qualified leads to pursue, and when taking over for a previous rep, they have little or no contact information about existing accounts (Lorge 1999). Sales force automation (SFA) has been designed to solve many of these problems.

The purpose of this paper is to (1) define and describe sales force automation, (2) identify the costs and benefits of sales force automation, and (3) explore the perceptions of sales professionals regarding the adoption, implementation, and performance results of sales force automation systems. First, sales automation is defined and described. Next, the benefits and problems associated with sales automation systems are identified. Finally, the results of a survey used to assess sales professionals' perceptions of sales force automation are presented.

WHAT IS SALES FORCE AUTOMATION?

Several conceptions of SFA have been presented in the literature. According to Rivers and Dart (1999), sales force automation involves the conversion of manual sales activities into electronic processes via the use of software and/or hardware. Erffmeyer and Johnson (2001) contend that SFA was envisioned as the use of technology to enhance the sales process.

The Marketing Management Journal
Volume 12, Issue 2, pages 1-9

Sales force automation systems can vary from the simple (e.g., electronic organizers and other personal information management systems) to the complex (e.g., computer systems and software that integrates with corporate systems). In any case, the notion behind the use of this technology is that selling tasks can be completed faster (e.g., a decreased sales cycle), cheaper (e.g., improved order accuracy) or better (e.g., ability to share information between departments within a company) and that new tasks (e.g., greater synergy between inside and outside sales through improved communication) can be accomplished that were not previously possible without the technology (Erffmeyer and Johnson 2001, Hunter 1998, Taylor 1994, Verity 1993).

For this study, sales force automation involves the conversion of manual sales activities into electronic processes via the use of software and/or hardware (Rivers and Dart 1999). This definition encompasses that provided by Erffmeyer and Johnson (2001) where sales force automation was conceived of as the use of technology such as cellular phones, faxes, portable computers, databases, the Internet, and electronic data interchange systems to enhance the sales process. The following sections provide an example of SFA and identifies the costs and benefits of such a system. Next, an empirical investigation of purported benefits is presented before concluding with a discussion of the findings.

EXAMPLE OF A SALES AUTOMATION SYSTEM

Complex sales automation systems involve the use of hardware and software to integrate inter- and intra-departmental communication with the objective of facilitating management of the sales force and the sales process. The focal point for these systems is the customer or contact person. Each time a department within the sales organization contacts a customer, a contact record is created by that department. This contact record usually includes the company name, address, phone and fax number along with other information such as product interest and, eventually, a history of the account's activity with the selling firm. The information is saved on the seller's network so that all company employees (e.g., inside sales, field sales, technical service, customer service, sales managers, etc.) can access the data.

Once the initial data has been entered into the customer management system, tasks associated with the customer account can readily be delegated to the appropriate department within the selling firm. For example, after taking a call from a prospect, an inside sales representative can immediately fax company and product literature to the prospect. Concurrently, a follow-up call can be added to the schedule of the appropriate field sales representative (reducing cold calling), and will automatically appear on the field sales representative's calendar.

Each day, employees for the sales firm check their calendars for pending work or communications. When the field sales representative sees the scheduled call-back, the salesperson can immediately access the prospect's record that was created by the inside sales representative, preventing the prospect from having to repeat information about their product requirements, and the like. As the field sales representative asks prospects questions about their budgets, buying schedule, and so forth, notes are recorded which automatically become part of each customer's contact record. Completion of the phone call creates an historical record that is attached to the customer's contact record. Any questions the prospect asks that the field sales rep cannot answer can be addressed immediately by the technical service department via e-mail. After the phone conversation, the field sales representative can schedule a forecasted sale.

In addition to facilitating the sales process, sales automation can also assist the marketing department by providing access to groups of customers for direct mail (via mail merge) or other promotional efforts. Finally, sales managers are able to monitor the performance of their salespeople at any point in time by generating reports delineating each salesperson's activities in areas such as appointments, call backs, completed sales, forecasted sales, and so on.

Indeed, sales force automation has perhaps the greatest potential to impact the performance of the sales organization of any tool yet developed. The

following section outlines some of the benefits and limitations of sales force automation for the selling firm, including its salespeople and sales managers.

BENEFITS OF SALES FORCE AUTOMATION

A large number of articles have appeared in the trade press identifying the benefits of sales force automation. For example, Lorge (1999) reported that SFA maintains histories of customers and allows sales managers to track the activities of their salespeople. It also helps sales representatives sell more consultatively by providing survey questions to assess customer needs, and helps to attract new representatives to the firm (i.e., because the firm made a large investment which differentiates it from competing firms in the labor market).

Orenstein and Leung (1997) identified the benefits of SFA as faster feedback to the marketing department of product problems encountered by customers, more accurate pricing and ordering processing, and the provision of a central database of customer profile information.

Gentilcore (1996) reported that by implementing sales automation software, everyone on the selling team -- sales, marketing, order processing, customer service, administration and management -- can access up-to-the-minute information whether they are on the road, in a regional or corporate office, or even at home. Users can also produce sales forecasts and analyze reasons for won and lost opportunities. In addition, sales automation software enables sales representatives to manage their time and activities as well as their client lists, contacts, products, price lists, orders, documents, and electronic mail from remote regions.

An article issued by Microsoft Corporation (1998) touted the following benefits of SFA: (1) lowering the cost of leads and sales, (2) enhancing teamwork and productivity, (3) improving customer satisfaction and retention, (4) facilitating communication with the office, and (5) instantaneous sales forecasts.

In the apparel industry, Schottmiller (1996) agreed that SFA can increase sales revenue through a reduction of out-of-stocks, decreased markdowns and returns, increased sales through line expansions and assortment changes, more time with the customer, fewer costly mistakes based on incorrect information, more accounts covered by the representative, and increased efficiency in upstream areas of both vertical and contract manufacturers.

Sales force automation may also facilitate a sales manager's ability to monitor the performance of a company's use of sales agents. The use of tools such as free voice mail, software management tools, e-mail newsletters, and company web sites can keep sales agents informed about company policies, procedures, products, and goals, while allowing sales managers to more closely monitor their performance (Hanover 2000).

The benefits of SFA seem to have translated into increased performance for many firms. For example, Smith (2001) reported that Eaton Corporation reduced order cycle times by 30 to 40 percent with SFA. Thetgyi (2000) reported that SFA allowed Dow Chemical to cut administration costs by 50 percent, boost sales force productivity by 32.5 percent, and reduce order cycle time. A study by Datamonitor found that SFA increased revenues or efficiencies for about 60 percent of the companies surveyed (Voelker 2000). Voelker also emphasizes that SFA can be an important component of a company's efforts to provide better customer service and to improve channel cooperation. Unfortunately, not all experiences with SFA are positive. The following section identifies some weaknesses of SFA.

LIMITATIONS OF SALES FORCE AUTOMATION

There are a range of limitations associated with the use of sales force automation. First, computer costs range from $2,000 for a desktop system to $4,000 for a laptop, software can start from $150 to $5,000 *per* salesperson. Hannaman (2000) and McCrea (1998) estimate these costs can run as high as $5,000 to $15,000 per salesperson. Training and support costs two to three times as much as the hardware and

software and, because technology rapidly becomes obsolete, resources must be allocated to continuously upgrade and maintain the technology, which is especially difficult in economic downturns (Orenstein and Leung 1997).

Furthermore, it takes slightly more than 12 months to deploy SFA, at an approximate cost of $1.5 million (but the majority of those surveyed in the study could not pin down the exact total cost of their SFA system) (Dugan 1998). Finally, sales force automation systems fail at a very high rate, estimates range from 55 percent to 80 percent of initial automation efforts fail (Lorge 1999, Blodgett 1995, Schafer 1997).

According to Holt and Radosevich (1998) there are three primary reasons for sales force automation failure. First, the systems are often not easy enough to use for salespeople with limited technical skills. Second, there may be a lack of real support from the top management. Third, there could be a lack of proper financial support from the holders of the company's purse strings.

Ironically, salespeople worry that use of sales automation is going to give them *more* administrative work, which would take time away from selling and receiving commissions (Hamblen 1999). Finally, anecdotal evidence suggests that SFA implementation failures are more acute when companies adopt technologies without properly training their sales representatives (Thetgyi 2000).

Despite these problems, the growth of SFA is strong. There are currently over 500 sales force automation software programs on the market with a continuous release of new products (Lejfer 1998). Sales of SFA are expected to reach slightly less than $6 billion in 2003 versus sales of just less than $600 million in 1993 (Pender 1998).

The following empirical study was prompted by the tremendous growth in sales of sales force automation in the past and its projected growth into the future, as well as the conflicting results of SFA performance across firms. The purpose of the study was to gain additional insight by exploring sales professionals' perceptions of SFA.

EMPIRICAL STUDY OF SALES PROFESSIONALS' PERCEPTIONS OF SFA

Method

A survey was administered to a sample of professional salespeople and sales managers. The sampling frame was the subscriber base of *Selling Power* magazine and was purchased from a business list provider. One thousand eight hundred surveys were sent. Two hundred seventy four surveys were returned with the wrong address. One hundred fifty usable responses from the first mailing were included in the analysis. The low response rate was considered adequate especially considering undeliverable rates and internal forwarding problems for mail to busy and harried practitioners (See Hunt and Vasquez-Parraga 1993).

The questionnaire asked respondents whether or not they used SFA. If not, respondents were asked to indicate their reasons for not using SFA. Users were asked to indicate how long they had used SFA, what type of hardware and software they used, the extent of training they received, and their level of satisfaction with SFA. Users were also asked to evaluate whether certain aspects of their job (e.g., hours worked, the ways they approach their customers) have improved as a result of using SFA. Additional items queried respondents as to how helpful SFA has been in performing the selling function.

Sample Characteristics

Several demographic questions were included on the survey including the size of the firm in terms of number of employees and sales revenue. Table 1 shows the sizes of the firms represented in the sample.

As Table 1 shows, the majority of firms in this sample had fewer than 500 employees and almost 25 percent of the firms had more than five thousand employees.

Table 1A
Size of Firms in the Sample by Number of Employees

Number of Employees	Frequency	Percent
0 - 500	87	58%
501 - 1,000	8	5.33%
1,001 - 5,000	18	12%
5,001 - 10,000	8	5.33%
10,000+	28	18.6

Table 1B
Size of Firms in the Sample by Sales Revenue

Sales Revenue	Frequency	Percent
< $1 million	4	2.67%
$1 million to $10 million	30	20%
$10 million to $100 million	53	35.33%
$100 million to $500 million	13	8.67%
$500 million to $1 billion	8	5.33%

Figure 1 shows the industries represented in the sample. The majority of the respondents worked for firms in manufacturing, followed by finance and insurance and professional services. Early and late responding firms were compared as a partial check for non-response bias. No significant differences were found for sales revenue and number of employees for early and late responding firms.

Of the respondents, 59 percent identified themselves as salespeople, 24 percent as sales managers, and 15 percent as other (company presidents and active in the selling function, etc.). On average, respondents had just over 16 years of sales experience and their average age was 45. Just over three percent of the respondents indicated that they had a high school education, 15 percent had some college, 48 percent had a bachelor's degree, 14 percent had some graduate training, and almost 19 percent had a graduate degree.

Results

Eighty three percent of the responding firms currently use some type of sales automation (SFA) system. Of those firms not currently using SFA, 60 percent said that the company did not know what SFA would do for the firm, 32 percent said that the company thought that it was too expensive, 24 percent said that the company would not provide the resources, 12 percent thought it would take away from people's selling time, 8 percent thought it would take too long to implement, and 4 percent thought that it would be too difficult to use.

Those using SFA had an average of five years of experience with it and were satisfied with their SFA tools (mean = 4.72 on a Likert scale anchored by "not very satisfied" (1) and "very satisfied" (7)). The SFA software and hardware tools used by the sample are shown in Figures 2a and 2b respectively.

Effectiveness of SFA

The present research sought to determine the extent to which SFA helps sales professionals in the various areas identified in prior, anecdotal reports (e.g., Microsoft 1998). Table 2 reports the two-tailed t-test results (against the scale midpoint of 4) from this sample. A Likert scale was used to measure the sales tasks anchored by (1) "Not Very Helpful" and (7) "Very Helpful."

Respondents perceived SFA to be most helpful to: maintain the history of customers (5.73), facilitate office communication (5.51), access up-to-date information (5.38) track activities (5.26) and enhance productivity (5.24). It is interesting that these are traditional contact management areas and coincide with 60 percent of the respondents using contact management software. Respondents perceived SFA to be least helpful in decreasing returns and allowances (3.03), lowering costs of goods (3.63)

Table 2
Sales Force Automation's Impact on Various Sales Tasks

Sales Task	Mean	St. Dev.	t-Statistic	p-Value
Maintaining the history of customers	5.73	1.72	11.23	.0001*
Tracking activities	5.26	1.70	8.27	.0001*
Helping to sell more consultatively	4.71	1.63	4.89	.0001*
Faster feedback of customer problems	4.42	1.79	2.60	.01*
More accurate pricing	4.38	1.95	2.20	.0295
More accurate ordering	4.22	2.11	1.189	.2365
Access up-to-date information	5.38	1.76	8.775	.0001*
Quickly generate sales forecasts	4.54	1.78	3.374	.001*
Opportunity analysis	3.81	1.70	-1.261	.2097
Time management	4.99	1.66	6.688	.0001*
Lowers cost of leads	3.63	1.88	-2.186	.0307
Lowers cost of sales	4.00	1.68	0.000	1.000
Enhances teamwork	4.56	1.68	3.733	.0003*
Enhances productivity	5.24	1.57	8.843	.0001*
Improves closing rates.	4.25	1.62	1.707	.0904
Improves customer satisfaction	4.62	1.71	4.022	.0001*
Improves customer retention	4.55	1.67	3.69	.0003*
Facilitates office communication	5.51	1.63	10.374	.0001*
Increases sales revenue	4.70	1.68	4.642	.0001*
Decreases returns and allowances	3.03	1.88	-5.759	.0001*
More time with customers	4.14	1.69	0.954	.3421
Fewer mistakes	4.73	1.67	4.881	.0001*
Handle more accounts	4.87	1.74	5.614	.0001*

Figure 1
Frequency of Firms by Industry

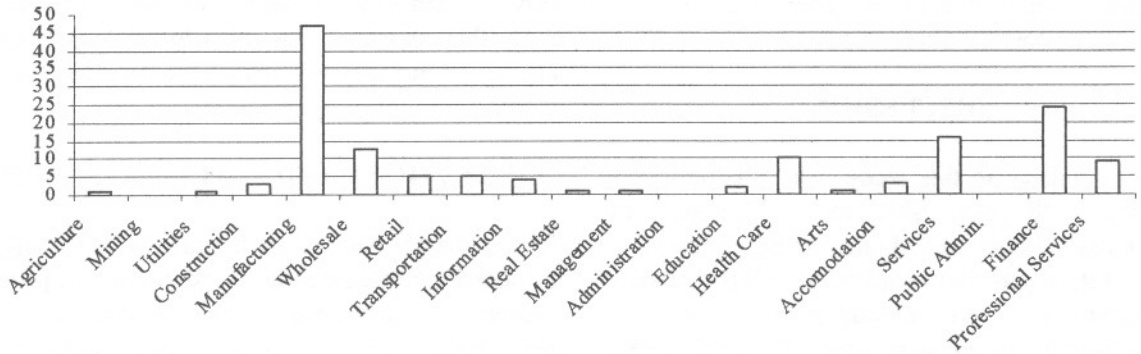


Figure 2a
SFA Software Used by the Sample

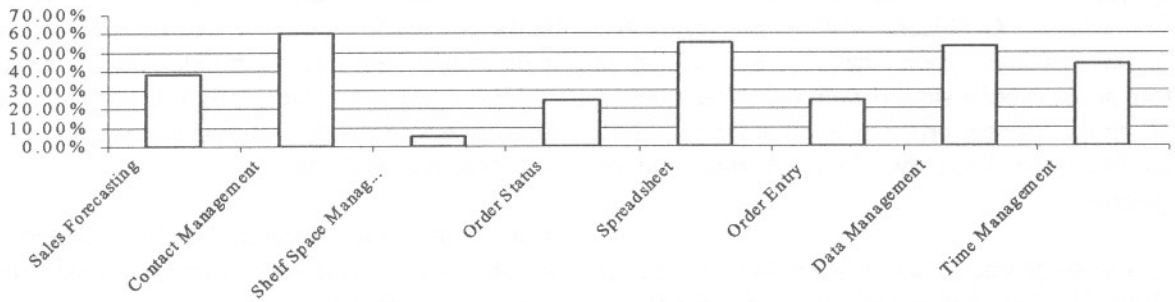
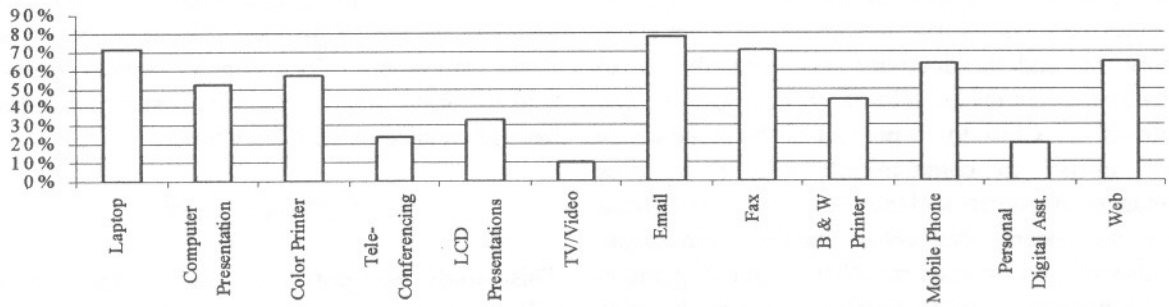


Figure 2b
SFA Hardware Used by the Sample



lowering costs of sales (4.00), allowing for more time with customers (4.14) and helping with more accurate ordering (4.22). These results indicate that SFA has not had as much impact on generating leads and lowering the costs of doing business.

DISCUSSION

The respondents in this study were predominantly satisfied with their SFA tools. However, the responding salespeople and sales managers seem to be using SFA only as traditional sales tools (i.e., contact management, data management, and time management). In previous work, Microsoft (1998) reported that instantaneous sales forecasts were one of the major benefits of SFA, but less than 40 percent of the companies in the present study use SFA for sales forecasting and less than 25 percent of the respondents use order status software or SFA for order entry. Gentilcore (1996) predicted that everyone would soon have up-to-the-minute information on order status whether they were on the road, in the regional office, or even at home. More than five years later, this does not appear to be happening.

It is also surprising to note that respondents did not feel that SFA helped them lower the cost of their leads or lower the costs of their sales. This is in contrast to what the Microsoft study reported in 1998. It does not appear the respondents in this study are using the software needed to help them in these areas.

The present study did confirm what others have found in other respects. First, it appears SFA enhanced teamwork and productivity and contributed to enhanced communication between the salesforce and their office. Close to 80 percent of the respondents used e-mail to communicate with their sales managers, customers and each other. Over 70 percent of the respondents used laptops and fax machines and another 60 percent used the Web. The real gains in SFA appear to be in the hardware used by the sales forces and not the software, so true implementation of SFA seems often to be incomplete.

A final noteworthy result has to do with SFA users and nonusers. Sixty percent of nonusers reported that their company did not know what SFA would do for their firm. On the other hand, those using SFA (who had an average of five years of experience using SFA) were satisfied with their tools. Together, these results imply that nonusers may wish to implement SFA, since over time they will realize the benefits that will accrue to the sales organization.

LIMITATIONS AND FUTURE RESEARCH

This research had some limitations that suggest avenues for future research. First, the survey process yielded a low response rate, which precludes generalization of the results beyond those in the present study. Second, company demographics show that most of the respondent firms in the sample were small (as measured by number of employees) or medium (as measured by sales revenue) suggesting a lower level of investment in sales force automation hardware and software tools. Third, most of the firms in the sample were manufacturers, also inhibiting the ability to generalize this study's results. Each of these sampling issues indicate a need for further empirical studies in the area.

In addition, future research should investigate the specific issues that are not allowing certain sales tasks to be accomplished (e.g., lowering the costs of goods). Questions such as "Is specific software not being provided that could help the sales force?", "Are the sales forces not being trained to use SFA hardware and software effectively?" and, "Which industries are embracing SFA?" need to be addressed. Finally, future research should look at specific industries to ascertain whether some industries are adopting SFA faster than others. For example, there is anecdotal evidence that salespeople in the construction industry have great success with SFA tools.

CONCLUSION

This study suggests that sales managers and salespeople have not moved much past traditional contact management tools when it has been predicted that such tools would be heavily used by salespeople today. The real gains in SFA appear to be in the areas of hardware and communication tools (i.e., laptops, e-mail, fax, and Web) and not software. The

results of this study did not support the notion that SFA would lower the cost of leads and sales. It is also interesting to note that instantaneous forecasts are not the norm as past researchers have predicted.

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