Perception of Sales Managers, Sales Persons and Customers towards Sales Force Automation Technology in Palestine

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Abstract

In line with the global markets' current trend, the Palestinian market has recently witnessed consecutive implementations of different sales technologies by leading firms in different industries; one of these technologies is the Sales Force Automation (SFA) technology. However, although the adoption and use of sales technologies have been attractive topics for IT literature over the last two decades, the Palestinian empirical research remains silent in this regard, leaving the outcomes of implementing and using the SFA technology in the Palestinian market unveiled yet. Accordingly, this study unfolds the outcomes of SFA usage and uncovers whether this technology tells a success- or a failure-story among the Palestinian firms employing it. Based on literature review and a case study of SFA implementation by one of the leading Palestinian firms, a group of expected outcomes was hypothesized to measure the realization of the SFA technology benefits from three perspectives: sales managers, salespersons, and customers. The results show that using SFA technology in the Palestinian commercial firms has achieved all of its expected outcomes as indicated by responses of sales managers, salespersons, and related customers who were totally appreciating this technology and its key benefits.

1. Introduction

In today's world, so intense markets' competition sales managers are confronting unsurpassed pressures to maintain effective selling strategies [1; 2], enforcing an additional burden on sales forces to create a competitive advantage [3]. Consequently, most firms, in every industry, are closely observing the area of Information Technology (IT) and rushing to invest significant resources in Sales Force Automation (SFA) technology with the goal of improving sales performance and enhancing customer services [4; 5]. In spite of the fact that there is no conclusive definition for SFA technology, it can be regarded as the deployment of technology in the form of computer hardware, software, and telecommunication by sales personnel to automate selling and administration [6]. By definition, SFA technology seems to come up with momentous potentials [7]. Order processing, order tracking, inventory control, customer management, sales performance evaluation [8], and most importantly, speed of information flow and sharing [9] are just a few examples of the business areas an SFA system aims to improve by means of automation.

In accordance with the current global market trend, the Palestinian market has recently witnessed consecutive implementations of different sales technologies by leading firms in different industries along with the growing number of vendors who offer specialized implementation and support services on SFA and Customer Relationship Management (CRM) technologies. Interestingly, mobile solutions, GSM wireless technology, and centralized databases have been employed with SFA systems to support the business nature of hosting firms, which clearly indicates that SFA local projects are not basic or simple, but rather, they embody an advanced model of latest technologies.

The empirical study, however, has provided no ample scholarly evidence on the benefits gained from using SFA technology [10]; one of the noticeable findings is that a successful utilization of SFA technology is viewed as rather a sophisticated and unguaranteed task; it entails an additional in-depth examination of the conditions and circumstances in which the use of this technology produces satisfying results [2; 8; 11-14]. Some recent evidence went beyond this notion, Buehrer *et al.* [12] report that more than 50% of SFA adoption projects turned to be unsuccessful by leaving no positive impact on the firm's sales. On the other hand, some studies empirically document favorable links between SFA systems and sales staff productivity (for example, see [15-17]; others testify on the SFA benefits [18; 19], and anecdotally, some believe that SFA is a nowadays-survival tool [9; 20-24]). However, other studies [25-30] believe that judgment on SFA benefits has not been completed yet, and the current empirical research is still lacking ample evidence.

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In the presence of this paradox, it is not surprising to find a long line of study intensively investigating SFA adoption and usage, while the academic community calls for more investigations in this area. Yet, the Palestinian empirical study remains silent in this regard, leaving the outcomes unveiled. In summary, the main premise of this study, however, resides in the notion of using SFA technology; the current attempt is to play a catalyst role in this field through unfolding whether this technology tells a success- or a failure-story among the Palestinian firms embracing it.

2. Conceptual Background

Employing technology in sales has a considerable impact on relationship-building processes among the manager, the salesperson, and ultimately, the customer [31]. On the grounds of this notion, the primary effort is to form a three-dimensional conceptual framework of SFA technology in which the potential benefits are addressed from the perspective of the customer in addition to sales-manager and the salesperson. In this study, related literature has been used to develop a conceptual framework. Since the SFA benefits, circulated in related literature, stem from the functions and capabilities of SFA international packages that are usually implemented in well developed markets, using literature to develop the study's conceptual framework may increase the probability of underestimating SFA benefits due to the high standards of used benchmark. To overcome this issue, a thorough review of a local SFA system has been introduced before embarking on the conceptual framework. Doing so should keep the hypotheses of this study within reasonable boundaries.

2.1. Hypotheses Development

2.1.1. Sales Managers' Perspective
According to Stoddard et al. [17], managers spend only 37% of their time doing these roles while the other 63% is used in administrative work and preparing reports; one way to avoid this ineffectiveness in a sales manager job is through adopting SFA. In Boujena et al. [3], it is indicated that 90% of managers decided to automate their sales force because they believed it made a salesperson appear more competent and representative.

Less Administrative Work

Automating and standardizing selling and administrative activities are one of the major outcomes sales managers pursued through using SFA [32]. SFA reduces the time spent on paperwork by standardizing sales reporting forms and, therefore, improves managers' efficiency when having more time for reading and analyzing sales data [8; 33]. Therefore, the first hypothesis is stated as follows:
1. **H1a**: Using SFA technology allows sales managers to have more time for sales management.

Accessibility to more Accurate and Relevant Information

To be managers updated on-time with accurate information about sales activities would enhance sales decision-making, such as better resources allocation and ranking of customer orders priorities, which should in turn be transmitted into higher sales rates. The role of SFA in increasing the access to timely accurate information has been much emphasized in sales IT literature (see, for example, [2; 9; 11; 34; 35]). Thus, we formulate the second hypothesis as follows:
2. **H1b:** Using SFA technology provides sales managers with more accurate and timely information.

Better Customer Management

By capturing more information about customers' purchases and payments history, and this is what an SFA system is supposed to provide, sales managers can manage customers according to their profitability [19]. With such information, customer needs would also be addressed more appropriately across sales functions since sales managers are assumed to be in a better position to inform and guide internal processes responsible for meeting customer expectations [3]. Adequate coverage of customers is another benefit of using SFA in this regard [2]. Accordingly, the third hypothesis is formulated as follows:
3. **H1c:** Using SFA technology allows sales managers to efficiently manage customer relationships.

Additional Monitoring and Control

With an SFA system, managers are able to scan and analyze the frequency of and time allocated for sales by their salespersons, leading to more monitoring [1]. More specifically, SFA enables sales managers to monitor their salespersons' field activities as they occur, which allows manager to call reports on sales activities for territories, groups, or customers aggregated over time; leading to more effective and efficient management of the sales force [11; 19]. Therefore, the forth hypothesis is stated below:
4. **H1d:** Using SFA technology allows sales managers to exert additional control over sales activities.

2.1.2. Salespersons' Perspective
Because the profitability of sales firms is highly dependent on the effectiveness of their salespersons, when studying factors affecting the firm's sales performance, the job of the salesperson entails pausing and much contemplation [36]. One of the biggest promises of SFA technology is to enhance a salesperson's performance. As a result, a considerable field study (see, for example, [15; 37], among others) is surely needed. Schillewaert and Ahearne [38] concentrate on how SFA technology helps sales forces to improve their performance.

More Competent Salesperson

Adding to salespersons' competence entails optimizing SFA to increase the salespersons' knowledge about the products they sell, the customers they serve, the volume and the quality of market information they need [3]. One approach to have informed salespersons is to grant them

the privilege to access up-to-the-minute information regardless of location and time [8; 11; 17]. The accuracy of information and reporting is also a necessary input in a salesperson's competency and is considered one of the key factors to encourage investments in SFA technology [9; 34; 35]. Therefore, the fifth hypothesis is stated as follows:

5. **H2a**: Using SFA technology leads to more competent salesperson.

More Time for Selling

Stoddard *et al.* [17] indicate that using SFA technology increases salespersons' productivity by 10% and, on average, provides them with two working days of selling time per month. Time saving, therefore, is one of the anticipated outcomes of using SFA system. Based on previous studies, time saving means reducing the downtime in the salespersons' workday, minimizing repetitive manual back-office activities that are handled manually by salespersons for control and monitoring purposes, faster sales orders entry and fulfillment [2], decreasing the time consumed in supporting [3], and, yet, eliminating the errors encountered with manual sales processing [19]. Providing a salesperson with extra time, if utilized efficiently, should be translated into higher sales rates and revenue growth [6; 15; 37-39], suggesting that increasing technology usage, accompanied with other supportive inputs, is the way to improve sales rates nowadays. To summarize, the sixth hypothesis is stated below:

6. **H2b:** Using SFA technology allows more selling time for salesperson.

2.1.3. Customers' Perspective

While the customer is addressed in fewer SFA research studies – since it has strong connections with studies on Customer Relationship Management (CRM) [40] – enhancing customer support is still viewed as a strategic goal of SFA implementations [9; 39]. In the present study, customer services are supposed to improve when a customer is served by a salesperson with SFA.

On the assumption that the firm's effort to accrue a good return on SFA investment has been attained by improving sales efficiency, such return produces no more than internal values; without adding value for the customer, those values would be evaporated [41]. In this context, Serdaroglu [2] considers the successful sales technology as the one that enhances customer services rather the one which increases the firm's profits.

Better Communications

Helping salespersons to gain more information about their customers is what firms look for when using SFA [42]. With internet, firms usually perceive SFA as a powerful and low-cost way to communicate with customers [43; 44]. The pending question is that how customers perceive communications with salespersons who use SFA. Boujena *et al.* [3] answers this question by assuming that a salesperson with a SFA system is more informed and able to show the customers his/her knowledge in selling contexts, presenting a salesperson's interest about customer needs. Schillewaert and Ahearne

[38] support this theory empirically by documenting a positive effect of SFA on sales presentation and adaptive selling techniques. Therefore, hypothesis number seven is stated as follows:

7. **H3a:** Using SFA technology enhances communications between customer and salesperson

Higher Service Quality

The increasing knowledge of today's customers results in making customer service the backbone of the selling function. Many firms are keen to improve service quality [45; 46]; SFA is an option to do so. Proposing that SFA is an investment in service quality might be justified by many reasons. Stoddard *et al.* [17] discuss some of these reasons including fast scanning of product problems, the more accurate pricing, and the availability of online customer profile information. Similarly, according to Schillewaert and Ahearne [38], SFA enables a salesperson to review customer orders and payments history, understand customer current and future requirements. Finally, Barker *et al.* [11] indicate that one primary goal of this technology is to provide a salesperson with all the information needed to close orders more efficiently. Thus, the eighth hypothesis is formulated as follows:

8. **H3b:** Using SFA technology leads to higher quality of customer's services.

3. Methodology

3.1. Setting and Participants

Three leading Palestinian distribution firms that use SFA technology were selected to achieve the purpose of the present study. The three firms have a total of 26 sales managers, 120 salespersons, and 150 customers who were referred by participating sales managers and salespersons. Inspired by the work of [4; 10; 12; 14], we, first, adopted a qualitative approach to interview three sales managers; one manager in each firm. The aim of these interviews was to (1) supplement the current developed theory, (2) check the face validity of adapted SFA benefits realization measures, and (3) to assess the validity of our conceptual model, including the study hypotheses. After conducting these interviews, a quantitative approach was followed to solicit quantitative data via close-ended questionnaires. Questionnaires were decided upon since they fit better with the study purposes in comparison to other instruments. Specifically, they ensure a high rate of response specially when they are distributed and collected in person, they are less expensive and easier to administer, and, among others, they assure confidentiality.

Three questionnaires were designed for each of the sales managers, salespersons, and customers. Sales managers in each firm were contacted by telephone and informed of the purpose of the study and asked to participate in the study to coordinate with their subordinate of salespersons for completing the questionnaires assigned to them. All customers, referenced by sales managers and salespersons, were used to fill customers questionnaires. All participants were informed that their responses would be confidential and solely used for academic purposes. In total, response rates of 100%, 95%, and 98% have been

obtained for sales managers, salespersons, and customers, respectively. After filled questionnaires were returned, the responses were edited to ensure completeness, consistency and readability. All incomplete questionnaires were discarded and the final usable rates were 100%, 92%, and 95% for sales managers, salesperson, and customers, respectively.

3.2. Measurement

Each questionnaire included two sections of questions: (1) a participant information section and (2) questionnaire categories and questions section. Section one aims to gather information about the participant profile; it has two questions that were developed in order to group the participants of sales managers and salespersons by age and experience while the participants of customers are to be grouped by gender and education. The questionnaires comprised close-ended questions using the Likert scale. This mode of preference indication was deemed the most preferable and the most common as compared to other modes of scales. The Likert scale was easy to construct and could be easily understood by the respondents. It allowed the respondents a sufficient range of choices when answering the questions, thus enabling the collection more accurate information particularly from the non-experts such as customers and salespersons. For the purpose of statistical analysis, numbers were assigned to each anchor. The anchors used are: Strongly Disagree (=1); Disagree (=2); I Don't Know (=3); Agree (=4); Strongly Agree (=5). To ensure the reliability of data collection instrument, Cronbach's alpha coefficient [47] was calculated using equation (1), for each element in the three questionnaires. Table 1 shows Cronbach's Alpha for each questionnaire' paragraphs; all coefficients were above 0.7 which insure the internal consistency among questionnaires constructs.

$$\alpha = \left[\frac{K}{K-1} \right] \left[1 - \frac{\sum_{i=1}^{K} \sigma_{Y_i}^2}{\sigma_X^2} \right] \qquad (1)$$

Where α is the Cronbach's alpha, K is the number of statements in the questionnaire, σ_X^2 is the variance of the observed total questionnaire scores, $\sigma_{Y_i}^2$ is the variance of statement (question) i in the questionnaire and

$$X = \sum_{i=1}^{K} Y_i \; .$$

3.3. Approach

A five-item Likert scale was used in each questionnaire; all responses were obtained on a five-point range "strongly agree" to "strongly disagree" with a total score of 15 and average 3. Accordingly, being an item mean above 3 would be considered a positive opinion and vice versa. However, to accept a particular hypothesis, the descriptive statistics of a related questionnaire paragraph should yield a 95% confident that the paragraph's true mean with a lower interval limit of more than 3.5. Such conservatism should add more reliability and confidentiality on the analysis results. To outline the statistical difference among respondents, independent

samples test (t-test for Equality of Means) and one-way ANOVA Test are used. T-test method compares the means of a qualitative independent variable which has two levels (in our case, experience and gender variables), whereas one-way ANOVA compares means of a qualitative independent variable which has more than two levels (in our case, age and education variables).

4. Results

Table 2 shows the descriptive statistics for the hypotheses developed in the present study. The first set of hypotheses was concerned with the main effects of SFA technology on sales managers' work. The results indicate that sales managers convey a positive perception on the SFA technology benefits as indicated by questionnaire paragraphs related to each hypothesis; confidence intervals with lower limits above 3.5 mean. The confidence intervals [48] are calculated using equation (2):

$$95\% CI \ for \ mean = \overline{X} \pm t_{n-1,0.025} \frac{s}{\sqrt{n}} \qquad (2)$$

Where $\overline{X}$ is the sample mean, $t_{n-1,0.025}$ is the t-value at $\frac{\alpha}{2} = 0.025$ confidence and $n-1$ degrees of freedom, s is the sample standard deviation and n is the sample size. For example, the number of sales managers surveyed is 26, hence $n = 26$ and the degrees of freedom ($n-1$) becomes 25. For paragraphs one (Less administrative work) in Table (2), the mean ($\overline{X} = 3.9835$) and the sample standard deviation ($s = 0.64565$). From the t-table, we found that $t_{25,0.025} = 2.06$. Substituting in equation (2), one can easily find that the 95% CI for the mean of the first paragraph is [3.7227, 4.2443]. Other tabulated values for confidence intervals for means of other paragraphs could be computed similarly using equation (2).

Table 1. Cronbach's alpha for questionnaires' paragraphs

	Paragraph	Number of Items	Cronbach's Alpha (α)
Sales Managers	Less administrative work	7	0.731
	Accessibility to more accurate and relevant information	8	0.887
	Better customer management	6	0.770
	Additional monitoring and control	5	0.962
Salespersons	More competent salesperson	11	0.928
	More time for selling	9	0.945
Customers	Better communications	9	0.710
	Higher service quality	10	0.825

The results in Table 2 reveal that sales managers, sales persons as well as customers are in favor of using SFA in sales management. More specifically, utilizing SFA technology substantially improves the performance of all stakeholders involved in the sales management process in Palestine.

Table 2. Descriptive statistics and confidence intervals

Questionnaire Paragraph	Mean ($\overline{X}$)	Std. Dev. ($\int$)	95% Confidence Interval for Mean ($\overline{X}$)		Conclusion
Less administrative work	3.9835	.64565	3.7227	4.2443	Accept H1a
Accessibility to more accurate and relevant information	3.9038	.84218	3.5637	4.2440	Accept H1b
Better customer management	3.8654	.71960	3.5747	4.1560	Accept H1c
Additional monitoring and control	3.9308	1.02128	3.5183	4.3433	Accept H1d
Sales Managers Questionnaire's Paragraphs Average	3.9234	.66837	3.6534	4.1933	Positive attitude towards SFA use
More competent salesperson	3.7215	.93035	3.5465	3.8965	Accept H2b
More time for selling	3.7888	1.05568	3.5902	3.9874	Accept H2c
Salespersons Questionnaire's Paragraphs Average	3.7518	.94947	3.7518	3.9304	Positive attitude towards SFA use
Better communications	3.6169	.55987	3.5244	3.7095	Accept H3a
Higher service quality	3.6769	1.05568	3.5902	3.9874	Accept H3b
Customers Questionnaire's Paragraphs Average	3.7518	.61549	3.5752	3.7787	Positive attitude towards SFA use

4.1. Hypotheses 1

Table 3 (the four hypotheses (H1a, H1b, H1c, and H1d) on the SFA benefits for sales managers' field work) shows the t-values for the statistical differences among responding sales managers according to their profiles. All coefficients were not significant at the significance level of $\alpha = 0.05$. This indicates that all sales managers have the same positive perception towards SFA technology benefits regardless of their age as all t-vales in Table 3 belong to the interval $-2.06 \le t \le 2.06$. Likewise, all sales managers have the same positive perception towards SFA technology benefits regardless of their experiences as all p-values in Table 3 are greater than the significance level $\alpha = 0.05$. Herein, we assume the general case of unequal variances of normally-distributed categories of the independent variables.

Table 3. t-Test and ANOVA results summary for hypotheses 1 (sales managers)

Dependent Variable	Independent Variables/Test	
	Age/ANOVA	Experience/t-Test
H1a: Less administrative work	.839[a]	.543[b]
H1b: Accessibility to more accurate and relevant information	.398	-.145
H1c: Better customer management	.341	-.145
H1d: Additional monitoring and control	.288	.486

[a] The hypothesis is true (accepted) if the tabulated p-values are greater than $\alpha = 0.05$.
[b] The hypothesis is true (accepted) if the tabulated t-vales lie in the interval $-2.06 \le t \le 2.06$.

4.2. Hypotheses 2

With respect to how salespersons perceive the benefits of SFA technology, two hypotheses were developed. The descriptive statistics and confidence intervals for salespersons average responses were also above the mean threshold of 3.5, which implies the acceptance of the assumed SFA benefits by salespersons. Thus, both hypotheses (H2a and H2b) are accepted (true). Testing for statistical differences among salespersons responses, according to their personal profiles, reveals that all salespersons, regardless of experience and age, accept that the assumed SFA benefits; t-values as well as the p-values were not significant at the significance level $\alpha = 0.05$, as shown in Table 4.

Table 4. t-Test and ANOVA results summary for hypotheses 2 (salespersons)

Dependent Variable	Independent Variables/Test	
	Age/ANOVA	Experience/t-Test
H2a: More competent salesperson	.056[a]	-.015[b]
H2b: More time for selling	.111	.680

[a] The hypothesis is true (accepted) if the tabulated p-values are greater than $\alpha = 0.05$.
[b] The hypothesis is true (accepted) if the tabulated t-vales lie in the interval $-2.06 \le t \le 2.06$.

4.3. Hypothesis 3

Better communications and higher service quality are the two hypotheses that were developed to evaluate SFA technology benefits from a customer perspective. The descriptive statistics and confidence intervals for customers' average responses on these two benefits also have a value greater than 3.5, which means customers'

acceptance to the assumed SFA benefits. This supports the hypothesized SFA benefits (H3a and H3b) under a customer perspective. With regards to statistical differences among customers' perspectives according to their personal profiles, regardless of gender and education level, customers are in favor of SFA technology at the significance level of 5%, as shown in Table 5. This leads to concluding that customers convey a positive perspective towards the assumed SFA benefits regardless of their gender and education.

Table 5. t-Test and ANOVA results summary for hypotheses 3 (customers)

Dependent Variable	Independent Variables/Test	
	Education/ANOA	Gender/t-Test
H3a: Better communications	.615[a]	.222[b]
H3b: Higher service quality	.201	1.292

[a] The hypothesis is true (accepted) if the tabulated p-values are greater than $\alpha = 0.05$.
[b] The hypothesis is true (accepted) if the tabulated t-vales lie in the interval $-2.06 \le t \le 2.06$.

5. Discussion

The ultimate purpose of this study was to empirically evaluate whether the SFA presumed benefits have been realized by the key users of this technology. Therefore, the study empirically distinguishes among the different impacts of SFA based on the users who utilize this technology; each is expected to have different points of interest accordingly. Sale managers are of the users who have been given the highest attention since they were assumed as key makers of the decision to invest in SFA technology; their feedback on whether SFA returns valuable benefits is the backbone of our evaluation. For this reason, the first question that this study sought to answer was "does SFA technology use impact sales managers' performance positively?"

To answer this question, four aspects within a sales manager work's domain were investigated: the excess-unproductive administrative work, accessibility for accurate-relevant sales information, customer management, and the mentoring and control function. The SFA technology was considered an added value tool when it results in a less administrative work and enhances the other three areas of sales managements. With respect to these areas of investigation, the analysis of sales managers' questionnaire survey clearly indicates that sales managers are better off with SFA technology and statistically support the hypotheses drawn about them. More specifically, by taking the responses averages on each benefit as a scaling tool to rank in descending order how sales managers perceive these benefits of SFA technology, the less administrative work will be at the top while the efficiency in customer relationship management will be the least important benefit. This means that sales managers appreciate SFA technology as an internal more than as an external tool. Such a result was supported regardless of the sales managers' different personal profiles.

The second question sought the same previous answers but on the salespersons side; "does SFA technology use impact salesperson's performance positively?" To answer this question, two benefits were evaluated; the salesperson's competency and the salesperson's time for selling. The analysis of salespersons' questionnaire results reveals that, by using SFA technology, the salespersons, regardless of their personal profiles, felt more competent and representative in their work and found extra time for selling; the two related hypotheses were supported accordingly.

In reference to customers, the study question was "does SFA technology use lead to maintain better customer service?" The investigation around this question covers customers who are in direct contact and communicate with salespersons using SFA technology. Two SFA benefits were targeted in the customers' questionnaire survey: the better communication with and the better service quality from salespersons who use this technology. The results of the questionnaire analysis show that all the sampled customers were positively impacted by this technology in terms of quality of service first and communications with salespersons second as ordered based on average responses. The results also support the hypotheses formulated on these two benefits without statistical differences among customers' various personal characteristics.

6. Implications

This study has implications for academics in information systems disciplines and for the sales management practitioners too. It also has implications for sales technology local vendors. From an academic perspective, the conceptual framework developed in this study provides a reasonable understanding of how sales function could be impacted by technology applications. From a practical perspective, however, sales management practitioners who plan to introduce SFA technology in their firms could utilize the finding of this study to know what this technology actually renders in the field and how to start thinking about more advanced benefits than the standard achieved ones. Suppliers may also benefit from these study findings as they are assumedly looking for a better understanding of what sales managers, salespersons and customers should realize from this technology and how to upgrade their products. However, the work accomplished in this study has its limitations. These limitations steer our suggestions for future studies.

7. Limitations

As the case of any research study, the present study has its own limitations. One limitation is the population size. Three Palestinian commercial firms were considered; this is due to the limited commercial firms that adopt SFA technology in Palestine. Thus, if more firms were available, the results of this study could be more generalized. Another limitation is the dependence on secondary data (questionnaires) for analysis; the use of primary data (such as studying the relationship between the use of SFA and sales dollar amounts, inventory turnover ratio, and other financial data) would support the

findings of this study. Moreover, investigating the realization of SFA promised benefits is not enough as long as understanding all SFA's dimensions entails investigating, among many other things, the reasons of and the barriers to making this technology business value-adding.

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