An-Najah National University
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Evaluating the Benefits of Using Sales Force Automation Technology in the Palestinian Commercial Firms

By
Mohammad Hassan

Supervisor
Dr. Yahya Saleh

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This thesis was defended successfully in 06/12/2012 and approved by:

Defense Committee Members	Signature
Dr. Yahya Saleh (Supervisor).	.....
Dr. Rasem Kayed (External Examiner).	.....
Dr. Ramiz Assaf (Internal Examiner)	.....

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الإقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

Evaluating the Benefits of Using Sales Force Automation Technology in the Palestinian Commercial Firms

تقييم الفوائد من إستخدام تكنولوجيا أتمتة قوى المبيعات في الشركات التجارية الفلسطينية

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The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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ABBREVIATIONS

Abbreviation	Full Term
SFA	Sales Force Automation
MSFA	Mobile Sales Force Automation
PDA	Personal Digital Assistant
IT	Information Technology
CRM	Customer Relationship Management
POS	Point-of-Sales
LAN	Local Area Network
GSM	Global System for Mobile

DEFINITION OF TERMS

SFA — The deployment of technology in form of computer hardware, software, and telecommunication to the sales personnel to automate selling and administrative activities.

MSFA — A software industry term that describes the notion of having a frontend sales force automation application installed on a portable device such as personal digital assistants or mobile phone.

Evaluating the Benefits of Using Sales Force Automation Technology in the Palestinian Commercial Firms

By
Mohammad Omer Yousef Hassan
Supervisor
Dr. Yahya Saleh

Abstract

In the light of 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, in spite of the fact that the adoption and use of sales technologies have been attractive topics for IT literature over the last two decades, the Palestinian empirical studies remain silent in this regard; leaving the outcomes after implementing and using the SFA technology in the Palestinian market unveiled yet. Consequently, this study tries to unfold the outcomes of SFA usage and uncover whether this technology tells success or failure stories among the Palestinian firms applying it. Based on literature review and a case study of SFA implementation by one of the leading Palestinian firms, a group of outcomes were modeled to measure the realization of 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 totally appreciate this technology and its key benefits.

Chapter One

Introduction

Chapter One

Introduction

1.1 Overview

In today's so intense market competition, originating from globalization, sales managers are confronting unparalleled pressure to maintain effective selling strategies (Wright, Fletcher, Donaldson, and Lee, (2007); Serdaroglu, 2009) and adding additional burden on sales forces to create a competitive advantage (Boujena, Johnston, and Merunka, 2009). 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 (Cascio, Mariadoss, and Mouri, 2010; Rangarajan, Jones, and Chin, 2005). In spite of the lack of a conclusive definition for SFA technology, it can be regarded as the deployment of technology in the form of computer hardware, software, and telecommunication to sales personnel to automate selling and administrative activities (Lingaiah, Pires and Stanton, 2003).

By definition, SFA technology seems that it has come up with momentous potentials (Guan, Barker, Faulds, and Gohmann, 2004). Order processing, order tracking, inventory control, customer management, sales performance evaluation (Koivula, 2006), and most importantly, speed of information flow and sharing (Buttle, Ang, and Iriana, 2006) are but few examples of the business areas an SFA system aims to improve by means of automation.

On the supply side, vendors attempt to anchor the belief that SFA systems are business value drivers. They often highlight values such as accelerated cash-flow, shorter sales cycles resulting in higher inventory turnovers, higher salesperson performance, accurate on-time reporting, reduction of errors and shortening delays in sales processes, instant order tracking, better customer management, and minimal manual intervention, among others (SFA/CRM Vendors). Nonetheless, more than 50% of SFA adoption projects are judged as unsuccessful by leaving no positive impact on a firm's sales in the international market (Michael and Yang, 2008; Buehrer, Senecal, and Pullins, 2005). Besides, empirical research has provided no substantial scholarly evidence on the benefits gained from using SFA technology (Senecal, Pullins, and Buehrer, 2007).

On the negative side, which is unfortunately the dominant one, successful utilization of SFA technology is viewed rather than sophisticated and unguaranteed task as well as entails additional in-depth examination of the conditions and circumstances in which the use of this technology produces, in terms of enhancing sales performance and customer service, satisfying results (Serdaroglu, 2009; Barker, Gohmann, Guan, and Faulds, 2009; Buehrer et al., 2005; Honeycutt, 2005; Schillewaert, Ahearne, Frambach, and Moenaert, 2005; Koivula, 2006). On the positive side, some research empirically documents favorable links between SFA systems and sales staff productivity [for example, see Kanwal and Ahmed (2009); Haroon and Ahmed, (2009); Stoddard Clopton, and Avila, (2007)], others discussed the SFA benefits (Lee, Mohamad, Ramayah, and Ching, 2011; Milroy, 2008; Keltner and Jensen, 1999), and anecdotally, some believe that SFA is a must tool in today's competitive markets (BenMoussa, 2006).

Despite this contradiction in literature findings and regardless of being successful or unsuccessful, SFA products and projects have become a large segment in the software industry luring sales departments into dedicating large portion of their budgets to the SFA technologies and implementation projects (Cascio et al., 2010); reflecting the paramount effect of this technology on firms' common perception. In the presence of this paradox, it is not surprising that extensive research closely investigating SFA adoption and usage with the academic community is calling for more investigations in to this area. Overall, even though the literature has developed a rich understanding of SFA technology's usage and potentials in the workplace; it is still ambiguous on how and when this technology delivers its claimed benefits.

1.2 Problem Statement

In line with global markets' current trend, the Palestinian market has recently witnessed consecutive implementations of different sales technologies by leading firms in different industries; for example, JAWWAL and PALTEL have implemented Customer Relationship Management (CRM) and Point-of-Sales (POS) technologies while Unipal Trading Company (Unipal), Medical Supplies & Services (MSS), and Jerusalem Cigarettes Company (JCC) have adopted the SFA technology. The Palestinian market also shows a great ability to absorb more of these technologies as indicated by the growing number of vendors who offer specialized implementation and support services on SFA and CRM technologies. Interestingly, mobile solutions, Global System for Mobile (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 the latest technologies.

To emphasize a point made earlier, the adoption and use of sales technologies have been an attractive topic for IT literature over the last two decades. Yet, the Palestinian empirical research remains silent in this regard; leaving the outcomes unveiled. Since the main premise of this research, however, resides in the notion of using SFA technology, the current attempt is to play a catalyst role in this field by unfolding if this technology is a success or failure story among the Palestinian firms that have embraced it.

1.3 Research Objectives

Employing technology in sales has considerable impact on the relationship building processes among the manager, salesperson, and ultimately, the customer (Bush, Bush, Orr, and Rocco, 2007). Based on this premise, the primary effort is to form a three-dimensional conceptual framework of SFA technology in which its potential benefits are addressed from the perspective of sales manager, salesperson, and ultimately the customer.

To simplify, assuming that conceptual framework has been established, it will be applied empirically in the field to evaluate whether sales managers and salespersons of the Palestinian firms employing SFA technology as well as the customers of these firms have actually realized the conceptualized promises of this technology. Accordingly, the objectives of this research can be stated in the following order:

1. Forming a comprehensive conceptual framework by identifying the most common benefits of using SFA technology. This objective is a literature-based objective since it will be achieved through reviewing relevant literature that addresses common SFA capabilities.

2. Conducting an empirical investigation to uncover whether these predefined benefits have been realized based on the viewpoints of sales managers and salespersons in some of the Palestinian commercial firms on the one hand and their customers on the other hand.

It is noteworthy to mention that some previous field research (Erffmeyer and Johnson, 2001; Jones et al., 2002; Henson, 2008) uses survey techniques to summarize and rank the motivations, or equivalently, the prospective benefits leading to adoption and use of the SFA technology. Although the choice of literature review instead of survey for this objective is not in dispute in this research, it would be prudent to justify why the literature, as opposed to survey, has been used to develop the research's conceptual framework.

First, SFA technology has been investigated worldwide since the mid of 1980s (Wang et al., 2008). Being as such, generally accepted SFA benefits can be readily determined. Second, surveys' subjects often are distributed over a large geographical area which allows collecting data from a large pool of samples. Given the limited number of firms adopting SFA in the Palestinian market, using survey methods to conclude SFA prospective benefits might increase the likelihood of having insufficient or

biased results accordingly. By summing the previous two justifications, one could conclude that drawing on the literature to summarize what and how SFA systems should derive values, means adhering to a set of universal measurements rather than minority opinions which would result from sampling the small Palestinian market; which is a true advantage.

Using literature also has its disadvantages in the context of this research. One disadvantage is the probability of underestimating SFA benefits due to the high standards of used benchmarks. That is, most of the benefits circulated in the related literature are stemmed from the functions and capabilities of SFA international packages which are usually implemented in well developed markets. Therefore, applying such standard to the local SFA packages in an emerging market would, most likely, create a biased conceptual framework, and hence cause the benefits hypotheses to be exaggerated thus leading to the high probability of having negative judgment about using this technology in the Palestinian market. Therefore, a thorough review of a local SFA system in chapter two, embarking on creating the conceptual framework, doing so should keep the hypotheses of this research within reasonable boundaries of the maturity of the Palestinian market.

1.4 Research Questions

In order to empirically approach the final objective of this research, the following questions are posed:

1. Does SFA technology use impact sales managers' performance positively?

2. Does SFA technology use impact salespersons' performance positively?

3. Does SFA technology use lead to maintain better customer service?

1.5 Research Importance

While SFA technology becomes noticeably more and more appealing to the leading Palestinian firms and software vendors equally, the Palestinian research so far overlooks this field, and consequently, the outcomes have not been analyzed and compared with the results published to date. Therefore, the significance of this research can be summarized as follows:

- First, the lack of universal and concrete evidence on SFA technology's benefits and the absence of local SFA empirical research underscore the importance of analyzing and publishing the outcomes of using this technology in the Palestinian firms.

- Second, as with all markets, it is normal to have sales technologies at the top of list for many profitable Palestinian firms that are driven by the need to stay ahead in today's competitive markets.

  Offering insights about the currently employed SFA systems may benefit sales managers who are looking to automate their sales forces by providing them with reasonable estimation about the qualitative returns of using this technology.

- Third, since the ultimate objective of this research is to provide empirical evidence on whether SFA technology's has reached its

predetermined goals, its findings have to encourage forthcoming research to continue examining the factors that account for the success or failure of achieving these goals.

Finally, of particular criticisms regarding SFA prevailing empirical research is the excessive focus on managers and salespersons while overlooking the perspective of the customer who is the cornerstone of the market (Honeycutt, 2005; Boujena et al., 2009). For this research, however, the customer perspective is of great importance and shapes the objective side of SFA evaluation.

1.6 Limitations

As the case for any research effort, this research has its own limitations. One limitation is the population size; three Palestinian commercial firms will be considered; this is because of the limited number of commercial firms that adopted SFA technology in the Palestinian market. Thus, if more firms were available, the results of this research could be more generalizable. Another limitation is the dependence on secondary data; 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 underpin research findings;

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

1.7 Research Structure

The organization of this thesis proceeds as follows:

Chapter Two introduces the literature review including a brief background about SFA technology and it also includes a summary of previous studies and literature pertaining to the SFA. Inspired from a Palestinian firm's experience with the SFA technology, this chapter also provides a comprehensive explanation on how the processes workflow, and data are synchronized, in the presence of an SFA system, within the daily operations of order-to-cash cycle of this business.

Chapter Three elaborates more on specific previous studies in the domain of sales technologies to highlight the prospective benefits that SFA systems should render with the aim of developing research hypotheses. This chapter shapes the backbone of this research since it prepares for empirical testing phase which will be elaborated in subsequent chapters.

Chapter Four provides a brief review for the major research methodologies as introduction to justifying the philosophy adopted in this thesis methodology. Consequently, it presents the approaches adhered to during data collection including all the details regarding questionnaires' design, content, test, validity, and data processing.

Chapter Five analyzes the data obtained from the questionnaires; it starts by demonstrating the profiles of sales managers, salespersons, and customers who participated in this research followed by hypotheses testing. Also this chapter tests for statistical differences amongst participants' responses according to their profiles.

Chapter Six discusses the results of the data analysis and provides answers to research questions that were stated in Chapter One. It also emphasizes on the research's contribution to current literature and provides suggestions for conducting future research within SFA domain.

Chapter Two

Literature Review

Chapter Two

Literature Review

2.1 Background

According to the recent findings of Price water house Coopers (2010) survey on global sales which targets input from more than 200 international firms across a wide range of industries for the period of 2009-2010, selling excellence is the dominant attribute when differentiating between leading and developing firms in terms of revenue growth performance. Particularly, leading firms have more sophisticated selling mechanisms, more sales management tools, and more technological processes automation that are all managed consistently on a methodical basis. Although these findings are not surprising in substance they merit to be mentioned, and yet analyzed, to confirm the necessity of technology intervention in sales functions and to excuse firms inflating demand on sales technologies over the last two decades.

More specifically, globalization has eliminated borders and made market penetration easier for competitors leading to place intensive competition pressure on sales managers and salespersons. In pursuance of overcoming these increasing challenges and to improve sales productivity, managers are keen to invest in latest technologies and interested in embracing new selling models (Serdaroglu, 2009). In fact, managers are, to some extent, encouraged to employ new sales technologies because if they remain silent, other firms may make a competitive advantage (Honeycutt, 2005).

Unquestionably, sales technologies have created a dramatic innovation – at least in the perception of firms – in improving productivity by allowing salespersons to go electronic and to transfer information online; a leading technology in this regard is the SFA which has witnessed a rapid development and shows continuous growing market (Lee et al., 2011).

Automating many of routine information flows involved in sales processes is the hallmark of employing SFA technology (BenMoussa, 2006). Generally, in terms of time and quality, SFA is assumed to have positive inputs regarding communication, presentation, customer information management, price quotes and order processing and tracking, analysis and reporting, promoting products according to customers' specifications, and online access to inventories (Boujena et al., 2009; Wang et al., 2008).

Henson (2008) points out that non-selling activities, such as processing paperwork and attending meetings, account for 60% of a salesperson time; thus, the demand for automating sales functions and tasks has introduced SFA technology not only as a necessary tool for salespersons but also as a required scene of contemporary sales cycles.

SFA encompasses wide range of tools and applications; such as mobile solutions, spreadsheets, database programs, sales forecasting tools, sales management systems, and, among others, the presentation graphics software (Michael and Yang, 2008). Mobile solutions have not only come to be an integral element of today's SFA, but also is one of the novel success stories that have been emanated by the technological innovations in

cellular communications, wireless Local Area Network (LAN) and satellite services (Heijden and Valiente, 2002).

As a matter of fact, portable computing platforms such as, laptops and Personal Digital Assistants (PDAs) eliminate the geographical restrictions by allowing mobile users to be not confined to a particular location, rather, their point of connection to the network changes as their location changes too; making it possible for users to work from anywhere at any time (Madria, Mohania, Bhowmick, and Bhargava, 2002). In essence, this is the core foundation of Mobile Sales Force Automation (MSFA). MSFA is nothing more than a commercial term that describes the notion of having a frontend SFA application installed on a portable device such as PDA or mobile phone. Thus, it is not surprising that the MSFA term is rare in the vocabulary of IT research.

Even though topics on SFA adoption and usage increasingly overwhelm today's sales IT literature and surveys, this technology is not considered something new for sales management. By contrast, SFA has supplemented sales managers and salespersons with technological support since the 1980s until it became widely accepted in business-to- business environments (Buttle et al., 2006; Rogers, Stone, and Foss, 2008).

Indeed, it is the continuous utilization of latest technologies and the interaction with new innovations is what makes SFA an interesting and a -renewed resource over time. For example, mobile phones and faxes were of high interest for earlier SFA professionals, however, nowadays the spotlight turns to the exploitation of sophisticated digital applications, wireless internet tools, and on how to constantly update centralized

databases with instant remote access by field salespersons (Boujena, et al., 2009). Also, by looking ahead, the more advance mobile information and communication technologies, the more intelligent SFA systems will be (BenMoussa, 2006).

SFA technology is currently a big industry encompassing more than 600 vendors (Honeycutt, 2005). In 2000, SFA systems accounted for $2 billion of global spending on sales technologies (Barker et al., 2009). In 2007, global spending on SFA has reached $3.2 billion and approached an annual growth rate of 27% while it is strongly expected to reach $9 billion on the short run (Cascio et al., 2010). Nonetheless, there is a well-documented evidence suggesting that 55–75% of all SFA projects are unsuccessful (Buehrer, et al., 2005; Rangarajan et al., 2005; Honeycutt, 2005; Schillewaert, et al., 2005; Serdaroglu, 2009; Barker et al., 2009).

Regardless of the failure rates, SFA technology advertises itself for most firms as a valuable tool to improve sales performance and perhaps this is the main justification of why the sales literature finds SFA more interesting area than other sales technologies and synthesizes a considerable stream of research devoted to the exploration and investigation of the different aspects of integrating this technology with sales functions.

2.2 SFA Definitions and Components

Based on the context of this thesis, SFA term may refers to the concept, tools, system, or the technology; however it often describes the same meaning as the process of automating sales activities within a firm (Lingaiah et al, 2003). Literature offers an extended definitional scope on

what an SFA system means. SFA definitions are generally clustered into three groups based on:

- Content emphasis
- Components emphasis and benefits emphasis and
- A combination of these two extremes.

This section briefly elaborates on these three clusters of definitions, the focus on SFA components yields definitions such as a centralized database system that can be accessed remotely by laptop computers via modems and special software (Wright et al., 2008), "The deployment of technology in form of portable computers, databases, internet, electronic data interchange to convert manual sales activities to electronic processes" (Erffmeyer and Johnson, 2001); and "The use of computer hardware, software, and telecommunication by salespersons in their selling and administrative activities" (Lingaiah et al., 2003).

Emphasizing SFA benefits produces definition such as the use of information technology to enhance and improve collections, analysis and distribution of information, productivity of the sales force, and customer relationships (BenMoussa, 2006).

Finally, combining the previous two phases in defining SFA would result in another definition which is the process of utilizing communications, software and hardware to enhance sales tasks, sales activities, order processing, customer management, and sales reporting and analysis (Lee et al., 2011); or shortly computerizing routine tasks or

employing technologies to improve sales effectiveness and efficiency (Boujena et al., 2009).

2.3 SFA Functions and Processes: the JCC Case

As a prelude for hypotheses development (Chapter Three), this section attempts, based on the researcher's experience in the field, to review the functions and capabilities offered by local SFA systems using the Jerusalem Cigarettes Company (JCC) as a reference case. Understanding SFA capabilities in the Palestinian field is an advantage for this research since it ensures the hypotheses fitness with informants' practices. For instance, time management, sales forecasting, and graphical presentation of sales data are among the commonly circulated SFA functions in literature; hence, drawing hypotheses around such functions would jeopardize the objectivity of judging the realization of SFA values in the Palestinian market.

JCC is a publicly traded company located in Jerusalem. Although the company is officially classified as a manufacturing firm, it has been widely involved in public trading as a wholesaler for the past five years. JCC has adopted SFA technology in 2009 to automate the processes of its large volumes of daily sales transactions. The employed SFA system was developed, deployed and integrated with JCC's financial and logistics systems by Hulul Business Solutions, (Hulul) one of PalTel Group's companies at the time.

To ensure a reasonable and logical presentation of SFA role, this exposition presents the SFA functions by discussing the workflow adhered to while in handling JCC daily sales operations. Also to keep this

demonstration as concise as possible, Table (2.1) shows the terminologies and abbreviations that has been utilized:

Table (2.1): Abbreviations and Terminologies: JCC Case

Abbreviation/Terminology	Meaning
***h*SFA**	Refers to Hulul SFA system implemented in JCC site
Backend System	Financial and Logistics Legacy System employed in JCC and integrated with *h*SFA; for the case at hand, it mainly refers to the one or more of the following modules: sales, inventory, and receivables.
Van	It is a vehicle used by one or more salespersons. From a technical point of view; it is a movable (on-road) warehouse.
Device	Portable computer used solely to access SFA frontend application. In JCC case, it is assumed that a device is connected all the day with JCC network using GSM wireless technology.
Downloading Data	Loading data from the backend system into the SFA. This includes, customer invoices (balances and remaining amounts), price lists, items codes, items descriptions, items available quantities, and among others, promotional packages.
Uploading Data	Populating backend system with the sales orders, invoices, receipts, and/or shipments.

*h*SFA is designed to carry out five major sales tasks: (a) Van-Sales, (b) Pre-Sales, (c) Deliveries, (d) Promotions, and (e) Reporting; yet, within these majors activities, minor sales sub-activities can be accomplished such

as the process of return orders, the on-road stock replenishment, and the non-schedule customer visits.

a) Van-Sales

Van Sales represent direct on-the-road sales covering all phases of the typical sales cycle. Assuming that all data has been successfully downloaded into a connected device, Van Sale Cycle can be initiated by a salesperson creating a sales order on that device. Once the order is electronically signed and approved by the salesperson, *h*SFA automatically creates a shipment (delivery) and prints out related tax invoice. If the customer partially or fully pays the amount due, receipt voucher can be created, signed, and printed also on the spot.

Following that, and based on the current *h*SFA configurations, data is automatically uploaded online (during the day) about every hour to transfer completed sales orders, invoices, shipments, and if any, receipts to the backend system; all of these document are automatically populated in relevant backend modules with status being approved and no manual interference by back-office personnel is required. In summary, creating a Van Sale Order on *h*SFA means the creation of Sales Order (backend sales module), Shipment (backend inventory module), and a Tax Invoice (backend receivables module) in a single transaction. Collections, however, requires separate transactions.

Other activities involved in Van sales cycle are the unscheduled visits and the fast deliveries. The following paragraphs describe these activities.

Unscheduled visits activities: Each device is allowed for a predefined list of customers (called customer route). These Customers' lists are prepared in the backend system and transferred to the devices on a daily basis through data downloading process. For a particular device, salespersons have access to only those customers assigned to their device. However, in practices, new customers other than those listed may need a visit during the day. This is called unscheduled visit as it involves transacting with customers who are out of a particular device privileges. In such case, a salesperson calls the backend system's authorized user asking to add the required customer(s) to his device. The backend system's authorized user updates customer list and re-downloads data into that device.

Fast Deliveries: Among the data downloaded into devices is the list of available items in each van. While salespersons are on-road, however, either customer(s) order unlisted items or certain listed items become out of stock. Instead of delaying the customers' orders shipments, a van might be supplied by another on-the-road van with a surplus of the needed item(s). Such a process called "replenishment". As each van is equivalent to a warehouse, replenishment process is handled in the *h*SFA and uploaded to the backend system (inventory module) in form of inter-warehouse transfer transaction between a warehouse with a surplus and a warehouse with a shortage.

Pre Sales Cycle

Pre Sales represent creating sales orders for later fulfillment. Assuming that all data has been successfully downloaded into a device, Pre Sale Cycle can be initiated by a salesperson creating a sales order on that

device. Pre Sales orders then are uploaded to the backend system with status of unapproved. Backend authorized personnel are in charge to approve/disapprove pre sales orders. If approved, ordered items are reserved in appropriate warehouses and transferred to the vans and related devices for shipment purposes. In summary, Pre Sales Cycle differs from Van Sale Cycle by the following:

- Pre Sales Team create sales orders only, they do not issue tax invoices and do not make shipments.
- Upon uploading Pre Sales Orders to the backend system, orders are not approved automatically; thus, these orders have to be approved, reserved and transferred to delivery vans.
- Pre Sales do not include receiving payments from customers.

b) Deliveries

Delivery sales team continues the cycle that the Pre Sales team began and therefore delivery is not considered a separate cycle. Generally, shipping pre sales orders or receiving returns of previously shipped orders is what the delivery function is all about. So far Van Sale Cycle can be considered as the summation of the Pre Sales and Delivery Functions. The following steps summarize the processes involved in Delivery Cycle:

1. **Transfer orders:** this is the first step that delivery sales team should do before being able to ship Pre Sales Orders. Transfer orders mean downloading approved and reserved sales orders from the backend system to *h*SFA. As explained earlier, Pre Sale Orders need to be approved and transferred – in the backend system – to

the delivery vans (and devices thereby). Accordingly, transfer orders functionality works to get these approved-transferred orders to the delivery application in *h*SFA.

2. **Ship Orders:** after downloading approved Pre Sales Orders successfully to *h*SFA, a salesperson would be able to create shipment transactions for customers. Data uploading results in populating backend system's inventory module with stock-out transactions and receivable module with tax invoices.

3. **Collections:** including creating and printing receipt vouchers are within the responsibilities of delivery team. Upon uploading data, receivable module will be populated with receipt vouchers.

4. **Return Orders:** are customer orders to return stocks back to the supplier. Return orders are reentered in the original warehouses and credit memos are issued to decrease the amount of previously issued tax invoices. The complete cycle of return orders are carried in the backend system, delivery team just prints credit memos to customers who have approved and completed return orders and receive returned items. Credit memos are transferred to *h*SFA through data downloading process.

c) Promotional Packages

Three types of promotional packages are prepared in the backend system and downloaded to *h*SFA. These packages are:

1. **Restricted Sales Quantities:** this type of promotions allows defining categories of items (a category includes at least two items)

and determines the minimum – maximum sales quantity for each category while specifying the action that hSFA will take if the minimum was not filled or the maximum was exceeded. Two actions available: Warning (display warning message), and No Sale (disallow proceeding in order creation). Restricted Quantities are applicable for Van Sales and Pre Sales.

2. **Fixed Promotions:** this promotion type can be summarized by the statement "If you buy X Item, You must buy Y Item". So, this type of promotion used to enforce customers to order particular quantity of one item if a particular quantity of another item was ordered.

3. **Daily Promotions:** this type is the most complicated one as it encompasses multiple scenarios and validations. Daily promotions are defined in the backend system and transmitted to *h*SFA through the process of data downloading. Example of this type of promotions is:

   If the customer buys 4 units of item "X" and 2 units of item "Y" or 4 items of Item "Z" s/he will get 10% discount or get 4 items as bonus of item "A" or get 5 units of item "B" at 5% discount.

   Such logical formulas appear on *h*SFA system in a simple and narrative text so that a salesperson can easily inform customers with the available promotions. Once promotional condition(s) are met, the system automatically handles the processing of discounts and bounce quantities.

d) Inquiry and Reporting

Inquiry and reporting tools are available for salespersons using *h*SFA and sales managers on the backend system. Sales managers can query sales by items, by geographic areas, and by customers from each device for every sales team. Reports are available in two forms. Namely online operational reporting which grants sales manager the privilege to track sales transactions through the day related to a particular device and van as well as enables them to identify gross sale value, quantity sold by item, sales amount, tax amount, and collections per customer; all represented in amounts and percentages. Online analysis reporting provides detailed statistics in amounts and percentages regarding number of customers visited and not visited by sales team and by device.

*h*SFA provides salespersons with ability to inquire the daily and cumulative sales and collections amounts; all these reports are shared by all *h*SFA applications. Among these inquiries are item balances, sales amounts, end-of-the-day report, customer history transactions, and the sales by item/customer statistics.

2.4 Summary

In this chapter SFA literature reviewed to understand why and how this technology becomes increasingly attractive for firms and sales managers in today's markets. We demonstrated what functions that the SFA provides using a real case of a Palestinian commercial firm. Accordingly, this chapter conveys a high level of understanding of SFA. In the next chapter the discussion will be in depth by reviewing previous studies to conclude the major benefits that sales managers, salespersons,

and customers should obtain from utilizing this technology given our understanding of the major functionalities that local SFA applications have in them. These benefits help us in shaping the research hypotheses.

Chapter Three

Hypotheses Development

Chapter Three

Hypotheses Development

3.1 Introduction

SFA technology adoption and usage have been much investigated in recent years (Chou, Pullins, and Senecal, 2009). Yet, understanding how SFA investments create business value is still a research priority in today's technology-intensive world (Serdaroglu, 2009). In fact, even though sales IT literature is doing a great effort in understanding how SFA technology relates to sales performance, there are loud calls for more effort in this regard. As an example and not by way of enumeration, Honeycutt (2005) believes that all what we do know is that large sums of money are being invested in SFA technology while firms conduct little actual evaluation of the outcomes associated with their investments. Similarly, Schillewaert and Ahearne (2001) criticize the ongoing firms' spending on SFA while no serious justifications are present except blind faith. On the other hand Buttle et al. (2006) and Jones et al. (2002), believe that judgment on SFA benefits has not been completed thus far and consider current empirical research is still lacking.

Clearly this was a particular direction of research community with clear tendency toward one of the biggest promises of SFA technology which is leveraging sales managers' and salespersons' performance. Opposite directions, however, underline that SFA research in the context of sales managers and salespersons is plentiful while it ignores customers. After a long review of SFA literature, Buttle et al. (2006) find that customer's inputs are not given an equal attention to salespeople's thus,

which hindering the improvement in gaining knowledge about SFA. Likewise, Honeycutt (2005) and Boujena et al. (2009) advocate the need for more research on how SFA impacts customers and how customers perceive this technology. Larpsiri and Speece (2004) even go so far as warn that the lack of detailed knowledge about how customers evaluate technology services might bring firms up to failure.

To overpass this dispute, this research attempts to develop a conceptual framework in which sales manager, salesperson, and customer are all given the same opportunity to evaluate the outcomes of using SFA technology in the Palestinian firms.

3.2 SFA Benefits: Research Hypotheses Formulation

This section draws on sales IT previous studies to identify the key cited benefits of SFA and, then, derives the hypotheses of this research. To be alongside with the goals of this research, SFA assumed benefits will be broken down under three categories; salesperson perspective, sales manager perspective, and customer perspective. Based on the earlier demonstration on JCC usage of *h*SFA, the hypotheses development will be bounded by the current capabilities of this system so that preserving the practicability of research hypotheses as well as the objectivity of the evaluation results.

3.2.1 Sales Manager Perspective

Planning, management, controlling, and evaluating daily sales force activities are fundamental roles in each sale manager job. In accordance to Stoddard et al. (2007), however, managers spend only 37 percent of their

time doing these roles while the other 63 percent is used in administrative work and preparing reports; one way to avoid this ineffectiveness in sales manager's job is through adopting SFA. On the other side, Boujena et al. (2009) indicate that 90% of managers decided to automate their sales force because they believe it made salesperson appear more competent and professional. As it will be explained later, the sales manager is assumed to be better off when using SFA results in:

(a) Less administrative work

(b) Greater accessibility to more accurate and relevant information

(c) Better customer management, and

(d) Additional monitoring and controlling.

a) Less Administrative Work

Automating and standardizing selling and administrative activities are one of the major outcomes sales managers pursued through using SFA (Faulds, Guan, Barker, and Gohmann, 2007). SFA reduces time spent on paperwork by standardizing sales reporting forms and, therefore, improves managers' efficiency when having more time for reading and analyzing sales data (Henson, 2008; Koivula, 2006). Moreover, the ease and speed of information sharing and communication between sales managers and their salespersons allow these two parties to work together more efficiently and reduce rework and unproductive effort (Serdaroglu, 2009).

According to the forgoing discussion, SFA technology is assumed to minimize the unproductive administrative work and thus enables sales managers to focus on managing sales; leading to the following hypothesis:

H1-a: *Using SFA technology allows sales managers to have more time for sales management.*

b) Accessibility to More Accurate and Relevant Information

It is well-known that faster and accurate information flows are essential for all business processes, but when it comes to the sales function they become essential as they lubricate the whole sales cycle. Being managers updated on-time with accurate information about sales activities would enhance sales decisions making, such as better resources allocation and ranking of customer orders priorities; which in turn should be converted 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, Serdaroglu (2009), Barker et al., (2009), Wang et al. (2008), Buttle et al. (2006), and Erffmeyer & Johnson (2001)].

In other words, the accurate sales information is a result of having all sales activities created, reported, and transferred to sales manager automatically (i.e. less human errors). Sales information is relevant because it becomes available for sales managers as on-read sales transactions occurred (i.e. timely information). This leads to formulate the following hypothesis:

H1-b: *Using SFA technology provides sales managers with more accurate and timely information.*

c) 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 (Keltner and Jensen, 1999). With such information, customer needs also would 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 (Boujena et al., 2009). Adequate coverage of customers is another benefit of using SFA in this regard (Serdaroglu, 2009).

To conclude, SFA technology provides a wide database from which sales managers can retrieve meaningful information to study customers' purchases history, customers' credit history, and among other things, customers' geographical allocation; hence, enabling sales managers to serve more of best customers within shorter time and less cost. Such reasoning makes the following hypothesis:

H1-c: *Using SFA technology allows sales managers to efficiently manage customer relationships.*

d) 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 (Wright et al., 2008). 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 (Barker et al., 2009; Keltner and Jensen, 1999).

Therefore, instead of relying on salesperson daily reports about their sales activities now, via SFA, sales managers are assumed to have timely information about what their salespersons are doing on-road; thus, maintain on-time continuous control over salespersons work. This leads to hypothesize the following:

H1-d: *Using SFA technology allows sales managers to exert additional control over sales activities.*

3.2.2 Salesperson Perspective

Because the profitability of sales firms is highly dependent on the effectiveness of their salespersons, when studying factors affecting firm's sales performance, the job of salesperson entails pausing and much contemplation (Longino, 2007). One of the biggest promises of SFA technology is to enhance salesperson performance. As a result, considerable field of research [see for example, Serdaroglu (2006), Kanwal and Ahmed (2009), and among others, Schillewaert and Ahearne (2001)] concentrates on how SFA technology helps sales forces to improve their performance. In this research, performance is assumed to be improved when using SFA results in:

(a) More competent salespersons and

(b) More selling time for salesperson.

Below we discuss and formulate the hypotheses around these two assumptions:

a) More Competent Salesperson

Unquestionably, a more competent salesperson is a more knowledgeable and informed one which is a must condition for better performance. According to Boujena et al. (2009), adding to salespersons' competence entails optimizing SFA to increase salespersons knowledge about the products they sell, the customers they serve, the volume and the quality of the market information they need, and the speed of access to this information. From Stoddard et al., (2007) standpoint, one approach to having informed salespersons is to grant them the privilege to access up-to-the-minute information regardless of location and time. Similarly, Koivula, (2006) notices that one of the primary factors to a successful SFA is faster access to timely information. Also, Barker et al., (2009) count the ability to access online current inventory details and pricing information as a major benefit of SFA.

The flow and accessibility of information, so far, is the main keystone in competency building. However, the accuracy of information is what makes difference. Buttle et al., (2009) suggest that accurate reporting is one of the factors lead to lure investments in SFA technology. Likewise, Erffmeyer and Johnson (2001) and Wang et al. (2008) identify improving information accuracy among the top five motivations for adopting SFA. Boujena et al. (2009) aggregate things better when defining information processing as one primordial contribution of SFA in salespersons capacity

to process large amounts of information, access accurate product information instantly, and to fulfill orders more accurately.

To summarize, when salespersons have the information needed to effectively communicate with customers they are assumed more presentable and competent; meaning that:

H2-a: *Using SFA technology leads to more competent salesperson*

b) More Time for Selling

Stoddard et al. (2007) indicate that using SFA technology increases salespersons' productivity by ten percent and, on average, provides them with two working days of selling time per month. Time savings therefore is one of the anticipated outcomes of using SFA system. Based on previous studies, time saving means reducing downtime in 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 (Serdaroglu, 2009), decreasing the time consumed in supporting activities (Boujena et al., 2009), and yet, eliminating the errors encountered with manual sales processing (Keltner and Jensen, 1999).

Providing salesperson with extra time, if utilized efficiently, should be translated into higher sales rates and revenue growth. Serdaroglu (2006), Kanwal and Ahmed (2009) and Schillewaert and Ahearne (2001) suggest that increasing technology usage, accompanied with other supportive inputs, is the way to improve sales rates nowadays. Further, based on their interview with informants of 40 manufacturers and service firms,

Erffmeyer and Johnson (2001) find that higher sales efficiency and better revenue flows were among the primary motives beyond adopting SFA technology by 56 firms. Ironically, some reports show that particular SFA systems yielded 10% to 30% increase of sales (Boujena et al., 2009). Some explain this increase in sales by the additional time given for salespersons to make new sales (Olofsson and Emborg, 2004). Other sales-based research, however, uses different indirect explanations for why using SFA technology tools might lead to more sales. For example, facilitating coordination and improving communication flow among sales teams is one explanation (Lingaiah et al., 2003). Another argument is that using SFA shortens the average length of sales cycle, creates faster inventory turnover reduces stock returns, mistakes, and incorrect information (Stoddard et al., 2007; Buttle et al., 2006).

In total, the purpose of an SFA system is not to affect product recognition, but rather, to automate sales processes, and hence, increasing salespersons' time for selling. Thus, the following hypothesis is formulated:

H2-b: *Using SFA technology allows more selling time for salesperson*

3.2.3 Customer Perspective

On the assumption that a 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 and without adding value for the customer those values would evaporate (Rogers et al., 2008). In this context, Serdaroglu (2009) considers the successful sales technology the one which enhances customer services rather the one which increases firm

profits. While customer is addressed in fewer SFA research – since it has strong connections to Customer Relationship Management (CRM) studies (Richards and Jones, 2008) – enhancing customer support is still viewed as a strategic goal of SFA implementations (Buttle et al., 2006; Olofsson et al., 2004). In this research, customer services are assumed to be improved when a customer perceives the use of SFA by a salesperson results in:

(a) Better communication and

(b) Higher quality service.

a) Better Communications

Helping salespersons to know more information about their customers, is what firms look for when using SFA (Agnihotri and Rapp, 2010). With internet, firms usually perceive SFA as a powerful and low-cost tool to communicate with customers (Reday and Marshall, (2007). The question remains is that how customers perceive communications with salespersons who use SFA.

In their special effort to conceptualize SFA benefits from the customer perspective, Boujena et al. (2009) answers this question by assuming a salesperson with a SFA system is more informed and able to show customers his/her knowledge in selling contexts; thus, has greater ability to acquire customer trust and confidence. Also, they assume that SFA maintains and provides salesperson with more information necessary for personal business relationships so that s/he can smoothly identify what products to prioritize and how to adapt sales presentation during communications with customers; therefore presenting salesperson's interest

about customer needs. Schillewaert and Ahearne (2001) support this theory empirically by documenting a positive effect of SFA on sales presentation and adaptive selling techniques.

As we hypothesized early under salesperson perspective, being a salesperson able to answer customer's questions immediately should facilitate the communication with customer from the perspective of customer. This leads to the following hypothesis:

H3-a: *Using SFA technology enhances communications between customer and salesperson.*

b) Higher Service Quality

The increasing knowledge of today's customers results in making customer service the backbone of selling function. Many firms are keen to improve service quality (Upadhyaya and Badlani, 2011) and 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. (2007) discuss some of these reasons:

- First, the faster scanning of product problems
- Second, the more accurate pricing, and
- Third, the availability of online customer profile information.

Serdaroglu (2009) also views SFA as a valuable tool that provides salespersons with faster access to timely information to retrieve information about inventory levels and shipping dates, inquire on available promotions, and review customer credit history. Similarly, and according to

Schillewaert and Ahearne (2001), SFA enables salesperson to review customer orders and payments history, understand customer current and future requirements. Finally, Barker et al. (2009) indicate that one primary goal of this technology is to provide salesperson with all information needed to close orders more efficiently.

In essence, since SFA provides salespersons with online information about the customers they serve and the products they sell, the customer service quality should be scaled up:

H3-b: *Using SFA technology leads to higher quality of customer's services*

3.3 Summary

Based on the related previous studies, in this chapter; the research hypotheses formulated by using three perspectives: the sales managers, the salespersons, and the customers. In the next chapter, the research methodology explained by which the data needed to test these hypotheses will be gathered.

Chapter Four

Methodology

Chapter Four

Methodology

4.1 Introduction

Research methodology is the design of logical sequence that links empirical data to research questions and ultimately, to its conclusion. Thus, when choosing a methodology, great consideration should be dedicated to how the phenomena under investigation will be evaluated by picking the right instruments for data collection. Since having a methodology is critical factor in having a valid study, this chapter is dedicated to elaborate on the methods and techniques used to collect all data needed for answering the research's questions. This chapter draws on the theoretical and empirical research techniques from research methodologies literature, sales technology empirical research, and social science research to assemble a set of research tools appropriate to investigate and evaluate the results of using SFA technology in the Palestinian market.

As established before, because the relevant population for this research is limited, this research methodology applied on all population firms that use SFA technology. Namely the Jerusalem Cigarettes Company (JCC), Unipal Trading Company (Unipal) and the Medical Supplies & Services (MSS) – meaning that there are no sampling techniques to be used. Therefore, this chapter does not discuss issues on data sources and sampling techniques.

4.2 Research Types

Based on research objectives there are two fundamental types of researches: descriptive and explanatory researches. In simple terms, descriptive research attempts to answer "What is" questions while explanatory research seeks answering "Why" questions. More broadly, descriptive research attempts to describe systematically a situation, problem, phenomenon, or provides information about or describes attitudes towards an issue (Grimes and Schulz, 2002) but explanatory research attempts to clarify why and how there is a relationship between two or more aspects of a situation or phenomenon (Kim, 2006).

This research aims at evaluating whether commercial firms in Palestine have realized the assumed benefits of using SFA technology while it leaves investigating the success or failure factors (i.e. the why question) of realizing the benefits of this technology to the forthcoming researches, it is going to be descriptive research accordingly.

4.3 Research Methodology

In terms of data collection, research methodologies can be classified under two broad categories: qualitative and quantitative. Although there are other methods that emerged from mixing these two methods, such methods are out of scope of this research due to inapplicability factor.

Qualitative methods are utilized when the objective is to understand a particular research problem and to describe certain aspects of a phenomenon (Charoenruk, 2007). Since observation, interviews, and focus groups are the common instruments for collecting data under qualitative

approaches, the “researcher” is intimately involved. Given that these instruments are personal in nature and involve much face-to-face interaction, maintaining a close relationship between researcher and respondent is required; hence, there is a greater likelihood of having subjective judgments and higher tendency to biasing the results (Andrew, 2009).

On the other side, qualitative methods allow greater adaptation of the interaction between the researcher and participants. A case in point, qualitative methods usually ask “open-ended” questions that might be worded differently with each participant. With open-ended questions, participants have the liberty to respond in their own words, and these responses tend to be more descriptive than simply “yes” or “no”. Due to this flexibility, qualitative methods are effective when studying human behavior and a social world inhabited by human beings and this includes understanding intangible factors, such as social status, socioeconomic status, gender roles, ethnicity, religion, behaviors, beliefs, opinions, and, among others factors, emotions (FHI Publications, 2006).

Using quantitative methods however, the researcher, through hypothesizing relationships and proposing outcomes, follows a deductive approach to test theory – as opposite to qualitative research in which the theory is developed inductively. Equivalently, the researcher seeks to confirm hypotheses about, rather than exploring a phenomenon. Likewise, researchers who use quantitative methods maintain an objective view for understanding the facts as they often use data collection instruments that require no direct contact with participants; questionnaire surveys is a common one. With the researcher being uninvolved observer quantitative

research results are to certain extent insured against biasing and are usually characterized as having higher objectivity (Charoenruk, 2007, Andrew, 2009).

Bearing in mind the forgoing discussion and inspired by the work of Cascio et al., (2010), Schillewaert et al., (2005), Buehrer et al., (2005), and Senecal et al., (2007). A qualitative approach was undertaken to interview the three sales managers, one manager in each firm. In essence, 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) Assess the validity of our conceptual model; including the research hypotheses.

After conducting the interviews, a quantitative approach was followed to solicit quantitative data via close-ended questionnaires. Generally, questionnaires were decided upon since they are a better fit with the research purposes in comparison to other instruments. This is to ensure a high rate of response specially when they are distributed and collected by the researcher in person as well as they are less expensive and easier to manage, compared with other methods, they allow confidentiality to be assured.

4.4 Questionnaires Design

Three questionnaires (see Appendix A) were designed for the purpose of evaluating whether commercial firms gained the benefits expected from using the SFA technology at three levels: sales managers, salespersons, and customers. Sales managers in each firm were contacted by telephone and informed of the purpose of the research and were asked to participate in the research and to coordinate with their subordinate salespersons for completing the questionnaires assigned to them. All customers referenced by sales managers and salespersons were used to fill this questionnaire. All participants were informed that their responses would be confidential and solely will be used for academic research.

Each questionnaire includes two sections of questions; participant information section and questionnaire categories and questions section. Section one aims to gather information about the participant's profile; it has two questions that were developed by the researcher in order to group the participants of sales managers and salespersons by age and experience while the participants of customers to be grouped by gender and education. Section two encompasses multiple categories of questions where each category aims at measuring a single SFA benefit or value in a similar manner and in sequence as established by the hypotheses.

Since the categorization of questions is required only for statistical analysis, the questions in customers' and salespersons' questionnaires were not categorized to keep them as short and simple as possible after considering their limited time and busy nature of work of such participants. Sales managers, however it was assumed that they control their time with

more liberty and they are also more knowledgeable and are experts in their fields, therefore their questionnaire was broken into categories to provide a clearer picture about what each question attempts to measure. Since the questionnaires are straightforward and simple they are considered self-administered without the need for instructions on how to fill them.

The questionnaires comprised of close-ended questions using the Likert scale. This mode of preference indication was deemed most preferable and common in comparison 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 of 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).

Finally, each of the questionnaires was accompanied by a cover letter (see Appendix A-1), to introduce the objectives of the study. The complete package comprising the cover letter and questionnaire was submitted in person to the sales managers in the three firms and then to the selected customers.

4.4.1 Sales Managers Questionnaire

Section one of sales managers' questionnaire asks participants about their experience and age while section two consists of four categories with a total of 24 questions. The first category relates to managing of administrative work function. The second category concentrates on

reporting function in terms of obtained quality and quantity of information. The third category is about customer services function. The fourth category targets monitoring and control functions.

At the end of the questionnaire, an additional section was designed with the intention of obtaining the names and addresses of the key customers who are involved in the selling-buying process using SFA technology as well as any free comments on SFA usage and benefits. The purpose of obtaining such comments is to document any benefits that sales managers receive form SFA technology other than those mentioned through the questionnaire paragraphs.

4.4.2 Salespersons Questionnaire

Similarly, the salespersons questionnaire gathers information about participant experience and age in section one while section two was divided into two categories of questions; totaled 20 questions. The competency of salesperson through using the SFA technology is the subject of the first category while the salespersons' productivity is the core of the second category. As mentioned earlier, salespersons questionnaire were sent in form of row questions but for analysis purposes the questions where categorized after they filled and returned back.

At the end of this questionnaire, additional section was designed with the intention of obtaining the names and addresses of the key customers who are involved in the selling-buying process using SFA technology. Furthermore, those salespersons were allowed to write free comments in the section about SFA benefits out of those mentioned through questionnaire items.

4.4.3 Customers Questionnaire

Section one of customers' questionnaire asks for the gender and education level while section two combines two categories with a total of 19 questions. The communication and service quality are the subjects of the first and second categories, respectively. Similar to the salespersons questionnaire, customers' questionnaire were sent in form of row questions but for analysis purposes the questions were categorized after they were filled and returned back.

At the end of this questionnaire few, open-ended questions were added to allow some comparable data to be collected and to add some freedom to expand on points with specialist interest. The data obtained from answering these questions was mainly qualitative and, although subjective, gives some triangulation to other data from this and the other two questionnaires.

4.5 Validity and Reliability

4.5.1 Validity

Validity is the degree to which an instrument measures what is intended to measure or how truthful the research results are (Golafshani, 2003; Lewis, 1999). Within this general definition of validity, there are several types of validity. For relevancy purposes, the researcher was interested in two of these types; content validity and external validity.

Content validity relates to the extent to which the design of a research instrument covers the extent and depth of the topics it is intended to cover and it is good enough to test of the hypothesis or is appropriate for

the research questions (Lewis, 1999; Twycross, 2004). To maintain the content validity of research's questionnaires, the following procedures were adopted by the researcher:

a) Questionnaires' questions were formulated based on information gathered during the literature review. In turn, the hypotheses posed during literature review have been validated through interviewing one sales manager in each firm.

b) Among questionnaires categories, some questions have been deliberately designed to refer to each other. Accordingly, responders should answer these questions in a specific (i.e. reasonable) way; when having conflicting answers on these questions, the questionnaire was considered invalid and discarded.

c) To determine the clarity of questions, ease of responding, and the optimum length of the questionnaires, they were reviewed by two industry experts, both with over fifteen years of experience and who are general managers of their own business solutions firms,

d) Two professors from the American Arab University checked the three questionnaires for their general content, content validity and thoroughness. Their noteworthy advice and comments were incorporated in the final survey instrument. This thesis supervisor further checked the instrument before it was finally approved.

External validity relates to the extent to which study findings can be generalized (Twycross, 2004). To maintain the external validity all the questionnaires were distributed to the responders by the researcher

personally. All sales managers' and sales persons' questionnaires were completed in the presence of the researcher to prevent the chance of giving questionnaires to other people to complete them on their behalf.

4.5.2 Reliability

Reliability refers to the degree of consistency with which an instrument measures the attribute it is designed to measure; thus, repeated measurements, or measurements taken under identical circumstances, have to yield the same results; internal consistency is one of the common approaches to test the reliability of Likert scale questionnaires; statistically speaking, questionnaire items should correlate significantly with related dependent variables (i.e. questionnaire average paragraphs) to indicate the internal consistency. Moreover, Cronbach's alpha coefficient is an appropriate method to analyze the reliability of questionnaires that use Likert scales (Lewis, 1999).

As a result, correlation tests and Cronbach's alpha coefficient was calculated using the Statistical Package for Social Sciences (SPSS) software for each element in the three questionnaires. From a statistical point of view, in order to get an accepted level of internal consistency, correlation coefficient should be significant at 95% confidence level and Cronbach's alpha coefficient should not fall below 0.7. Appendix B has the tables that show that some questionnaire items have significant correlation coefficients as well as a Cronbach's alpha coefficient greater is than 0.7 for each paragraph in the three questionnaires.

4.6 Questionnaires Distribution and Data processing

After filling the questionnaires by the respondents they were returned to the researcher and the responses were edited to ensure completeness, consistency and readability. All incomplete questionnaires were discarded. Table (4.1) summarizes the number of questionnaires distributed, returned, excluded, and valid questionnaires per respondent class in all of the three firms:

Table (4.1): Questionnaires Distribution

Respondent	# of Questionnaires	# of Returned Questionnaires	Response %	# of Excluded Questionnaires	# of Valid Questionnaires
Sales Managers	26	26	100	0	26
Salespersons	120	114	95	3	111
Customers	150	147	98	4	143

4.7 Summary

The purpose of this chapter was to describe the research methodology of this study, the procedure followed in designing the questionnaires, and to demonstrate how the validity and reliability of these questionnaires had been ensured. In the next chapter, researcher will analyze the gathered data, scan participants distributions based on their profiles, and test research hypotheses.

Chapter Five

Data Analysis

Chapter Five

Data Analysis

5.1 Introduction

As stated in Chapter Four, the data for this research has been collected using questionnaires that were distributed to sales managers, salespersons in each of the three firms that adopt and use the SFA technology in Palestine – Jerusalem Cigarettes Company (JCC), Unipal Trading Company (Unipal) and Medical Supplies & Services (MSS). While the research targets the entire population of sales managers and sales persons in these firms, customers were sampled randomly from customer lists referred by the sales managers and salespersons. The responses of all valid questionnaires were coded and keyed into the SPSS software for analysis. SPSS was selected because it was considered to be user-friendly, commonly used, and fit with quantitative approach and questionnaire surveys. Statistical techniques were then employed to analyze the data collected.

This chapter provides a comprehensive analysis of the results obtained from each questionnaire. In particular, it starts by discussing the profiles of sales managers, salespersons, and customers who participated in this research followed by comments and explanations on the descriptive statistics and the results of the hypotheses testing. Examining whether participants' responses show statistical differences as their profiles change is considered as well in this chapter.

5.2 Respondents' Characteristics Distribution

Respondents on each questionnaire have different demographic data - experience, age, gender, and education – that may introduce different responses toward SFA technology usage. These different personal characteristics are the first part of each questionnaire. The following sections show and discuss the distribution of respondents based on their profiles.

5.2.1 Sales Managers and Salespersons

Twenty six (26) participants of sales managers and 111 participants of salespersons answered the questionnaires. Those respondents were asked to provide their experience and age. The experience variable was divided into two intervals while age variable was divided into three intervals. Table (5.1) below shows the sales managers respondents who have experience of more than 10 years are the majority of the respondents as they form 65% of the total sales managers. Such percentage is logical and justifiable since the position of sales manager is usually filled by more senior and experienced personnel.

Given the relatively small population of sales managers, due to the number of firms implementing the SFA technology, 16 sales managers between the ages of 30-40 years form the majority of total sales managers, while 5 sales managers are between the ages of 20-30 and 5 are above the age of 40. On the salespersons side, the experience years falling in the interval of 1-10 years represents 60% of the total salespersons while those falling in the age interval of 30-40 years encompass 51% of the total salespersons respondents followed by 33% and 15% for 20-30 years and

more than 40 years intervals respectively. Figures (1) to (4) in Appendix B depicts sales managers' and salespersons' experience and age distributions graphically through the use of bar charts.

Table (5.1): Distribution of Sales Managers and Salespersons by Experience and Age

Respondent	Variable		Frequency	Percentage
Sales Managers	**Experience**	1-10 Years	9	35%
		More than 10 Years	17	65%
	Age	20-30 Years	5	19%
		30-40 Years	16	62%
		More Than 40 Years	5	19%
Salespersons	**Experience**	1-10 Years	67	60%
		More than 10 Years	44	40%
	Age	20-30 Years	37	33%
		30-40 Years	57	51%
		More Than 40 Years	17	15%

5.2.2 Customers

In reference to customers' respondents, 143 participants provided their input on the customer questionnaire. Gender and education are the variables used to differentiate these respondents. The education level was divided into 4 categories. Table (5.2) summarizes the frequencies and

percentages corresponding to each category of the customers' gender and education. The tabulated results reveal that male customers who earned high school or less account for more than the half of respondents whereas male customers account for 59% of the total customers while with an educational level of a high school diploma or less account for 51%. Such tendency toward less educated male customers in the distribution can be explained by the nature and compensation of salesperson job where this job requires the capability to travel among cities frequently without time restriction but usually the salary is comparatively low. The histograms in Figures (5) and (6) in Appendix B represent the distribution of customers sample by gender and education.

Table (5.2): Distribution of Customers by Gender and Education

Respondent	Variable		Frequency	Percentage
Customers	Gender	Female	59	41%
		Male	84	59%
	Education	High School or Less	73	51%
		Diploma	32	22%
		Bachelor	25	17%
		Master or Higher	13	9%

5.3 Hypotheses Testing

Recalling that in Chapter Three eight hypotheses were formulated about the expected benefits of SFA technology based on the perspectives of sales managers, salespersons, and customers and each hypothesis has a corresponding independent paragraph in one of the questionnaires. This section presents the statistical procedures followed to test the research

hypotheses and then to analyze the statistics related to these hypotheses in an ordered manner as adapted in Chapter Three.

5.3.1 Statistical Procedures

A five-item Likert scale was used in each questionnaire and all responses were obtained on a five-point range from “strongly agree” to “strongly disagree” with a total score of 15 and an average of 3. Accordingly, being an item mean above 3 would be considered a positive opinion and vise versa. However, to accept or reject a particular hypothesis, the researcher uses the descriptive statistics of a related questionnaire paragraph and stipulates 95% confident that the paragraph’s true mean not less than *3.5*. Therefore a one-tail test will be used to get the lower boundary of mean. 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 means of qualitative independent variable which has two levels (in our case are experience and gender variables), whereas one-way ANOVA compares means of qualitative independent variable which has more than two levels (in our case these are age and education variables).

5.3.2 Sales Managers Perspective

The first set of hypotheses is concerned with the main effects of SFA technology on sales managers’ work. Table (5.3) below displays descriptive statistics and confidence intervals for sales managers’

paragraphs by which related hypotheses (H1-a, H1-b, H1-c, and H1-d below) will be tested; table (9) in appendix C presents descriptive statistics for each item in questionnaire. Next, hypotheses will be tested for any statistical differences among respondents according to their profiles.

Table (5.3): Sales Manager Questionnaires Paragraphs Statistics

Questionnaire Paragraph *SFA leads to:*	Mean	Std. Deviation	Std. Error	95% Confidence That Lower Limit for Mean is:
Less administrative work	3.9835	.64565	.12662	3.7672
More accurate and timely information	3.9038	.84218	.16517	3.6217
Efficient mgmt. of customer relationships	3.8654	.71960	.14112	3.6243
additional monitoring and control	3.9308	1.02128	.20029	3.5886
All paragraphs	**3.9234**	**.66837**	**.13108**	**3.6995**

The first (H1-a) hypothesis was: ***Using SFA technology allows sales managers to have more time for sales management.***

Sales managers' responses on whether SFA technology leads to less administrative work were positive as indicated by a mean of 3.98 and a 95% confidence that the true mean is not less than 3.77 (which is greater than 3.5). This result corroborates the stated hypothesis.

The second (H1-b) hypothesis was: using SFA technology provides sales managers with more accurate and timely information.

Sales managers' responses on whether SFA technology leads to more accurate and timely sales information were positive as indicated by a mean of 3.90 and a 95% confidence that the true mean is not less than 3.62

(which is greater than 3.5). This result corroborates the second stated hypothesis.

The third (H1-c) hypothesis was: using SFA technology allows sales managers to efficiently manage customers' relationships.

Sales managers' responses on whether SFA technology leads to greater efficiency in managing customer relationships were positive as indicated by a mean of 3.87 and a 95% confidence that the true mean is not less than 3.62 (which is greater than 3.5). This result corroborates the stated hypothesis.

The last (H1-d) hypothesis was: using SFA technology allows sales managers to exert additional control over sales activities.

Sales managers' responses on whether SFA technology enables exerting additional control over sales activities were positive as indicated by a mean of 3.93 and a 95% confidence that the true mean is not less than 3.59. This result indicates accepting the stated hypothesis. Notice that the lower boundary of confidence interval is very close to 3.5 even though paragraph mean is 3.93; this is because responses on this paragraph items were highly deviated from mean (i.e. a relatively high standard deviation and thus high standard error). Nonetheless, the statistics still show a mean greater than our "3.5" conservative threshold.

Overall, sales managers convey a positive perception on the SFA technology benefits as indicated by total questionnaire paragraphs; a mean of 3.92 and 95% confidence that the true mean is not less than 3.69.

- **Statistical differences among sales managers**

  - **Experience**

To test for the statistical differences among questionnaire respondents' experience T-test is used. Table (12) Appendix C shows the T-test results and the following discussion briefly explains them:

Less administrative work: there are no statistical differences between sales managers with 1-10 years of experience and sales managers with more than 10 years of experience in recognizing the benefit of SFA technology on administrative work ($P > 0.05$). That is, sales managers regardless of their experiences recognize the benefit of SFA technology in minimizing unproductive administrative work (the mean for sales managers with 1-10 years of experience is 4.07 and for sales managers with more than 10 years of experience is 3.93).

More accurate and timely information: there are no statistical differences between sales managers with 1-10 years of experience and sales managers with more than 10 years of experience in recognizing the benefit of SFA technology on the quality and quantity of sales information ($P > 0.05$). That is, sales managers regardless of their experiences recognize the benefits of SFA technology in providing more accurate and relevant information (the mean for sales managers with 1-10 years of experience is 3.87 and for sales managers with more than 10 years of experience is 3.92).

Efficient management of customer relationships: there are no statistical differences between sales managers with 1-10 years of experience and sales managers with more than 10 years of experience in

recognizing the benefit of SFA technology on customer relationship management (P > 0.05). That is, sales managers regardless of their experiences are agreed upon the benefits of SFA technology within the context of enhancing customer services and relationship (the mean for sales managers with 1-10 years of experience is 3.72 and for sales managers with more than 10 years of experience is 3.94).

Additional monitoring and control: there are no statistical differences between sales managers with 1-10 years of experience and sales managers with more than 10 years of experience in recognizing the benefit of SFA technology on monitoring and control function (P > 0.05). That is, sales managers regardless their experiences do not recognize that SFA technology leads to additional monitoring and control.

- **Age**

To test for the statistical differences among questionnaire respondents' age, ANOVA test is used to check the correlation between age intervals and other dependent variables (age has more than two alternatives). Table (13) in Appendix C shows ANOVA tests results. For all paragraphs (i.e. dependent variables) the tests show no statistical differences among ages (P > 0.05); whatever sales mangers become older, they remain positive with respect to SFA technology impact on the administrative work, sales information timeliness and accuracy, customer relationships management, and the monitoring and control functions.

5.3.3 Salespersons Perspective

With respect to how salespersons perceive the benefits of SFA technology, two hypotheses were developed; corresponding to these two hypotheses (H2-a and H2-b below), two constructs (paragraphs) were built in salespersons questionnaire. Table (5.4) below displays the descriptive statistics and confidence intervals for salespersons average responses on these paragraphs, table (10) in appendix C presents descriptive statistics for each item in questionnaire. Next test is to find whether there are statistical differences among respondents according to their profiles.

Table (5.4): Salespersons Questionnaires Paragraphs Statistics

Questionnaire Paragraph *SFA leads to:*	Mean	Std. Deviation	Std. Error	95% Confidence That Lower Limit for Mean is:
More Competent Salesperson	3.7215	.93035	.08831	3.5751
More Time for Selling	3.7888	1.05568	.10020	3.6226
All paragraphs	**3.7518**	**.94947**	**.09012**	**3.6023**

In regard to (H2-a) hypothesis *"Using SFA technology leads to more competent salesperson"*, salespersons responses has a mean of 3.72 with a 95% confidence that true mean is not less than 3.5751; which implies accepting salespersons to this assumed benefit; which also leads to accepting the stated hypothesis.

The responses on the questionnaire paragraph related to second hypothesis (H2-b) *"Using SFA technology allows more selling time for salesperson"*, has a mean of 3.78 and a 95% confidence that true mean is not less than 3.6226 which implies accepting salespersons to this assumed benefit too; which also leads to accept the stated hypothesis.

- **Statistical Differences Among Salespersons**

  - **Experience**

Similar to sales managers, T-test is used to check for statistical differences among questionnaire respondents' experience. Table (14) in Appendix C shows the related T-test results and the following discussion briefly explains them:

Regarding increasing salespersons competency after using the SFA technology, there are no significant statistical differences between salespersons with 1-10 years of experience and salespersons with more than 10 years of experience in recognizing this benefits; as indicated by a $P > 0.05$. This means that salespersons, regardless of their experiences recognize the benefit of SFA technology in improving their competency and representativeness.

Also, in term of experience intervals, no statistical differences were found in recognizing salespersons the benefit of SFA technology on increasing the time of selling as indicated by a $P > 0.05$. In other words, regardless of their experiences, salespersons recognize the benefit of SFA technology in allowing for more selling time.

  - **Age**

To test for the statistical differences among questionnaire respondents' age, ANOVA test is used to check the correlation between age intervals and the other two dependent variables. Table (15) in Appendix B shows ANOVA tests results. For both related paragraphs, the tests show no statistical differences among ages ($P > 0.05$); whatever

salespersons become older, they remain positive with regard to SFA technology impact on competency and time for selling.

5.3.4 Customers Perspective

Better communications and higher service quality are the two hypotheses (H3-a and H3-b below) that were developed to evaluate SFA technology benefits from a customer perspective. Accordingly, customers' questionnaire was designed to encompass two paragraphs of questions targeting these two hypotheses. Table (5.5) below displays the descriptive statistics and confidence intervals for customers' average responses on these paragraphs, table (11) in appendix C presents descriptive statistics for each item in questionnaire. Looking for statistical differences among respondents according to their profiles is the next step.

The results indicate that the hypothesis (H3-a) *"using SFA technology enhances communications between customer and salesperson"* should be accepted as customers' responses on related questionnaire paragraph got a mean of 3.61 with 95% confidence that true mean is not less than 3.54.

Table (5.5): Customers Questionnaires Paragraphs Statistics

Questionnaire Paragraph *SFA lead to:*	Mean	Std. Deviation	Std. Error	95% Confidence That Lower Limit for Mean is:
Better Communications	3.6169	.55987	.04682	3.5394
Higher Service Quality	3.7518	.61549	.05147	3.5917
All paragraphs	**3.6485**	**.52848**	**.04419**	**3.5753**

The hypothesis (H3-b) "*using SFA technology leads to higher quality of customer's services*" also should be accepted since customers' responses on the related questionnaire paragraph got a mean of 3.75 with 95% confidence that true mean is not less 3.59.

- **Statistical Differences Among Customers**

  - **Gender**

T-test is used to check for significant statistical differences among questionnaire respondents' gender. Table (16) in Appendix B shows the related T-test results and the following discussion briefly explains them:

There are no significant statistical differences between male and female customers with respect to SFA technology on communications between customer and salespersons; indicated by a $P > 0.05$. In relation to service quality, also customer gender variable derives no statistical differences since the corresponding P-value was greater than 0.05.

  - **Education Level**

To test for the statistical differences among questionnaire respondents' education levels (high school, diploma, bachelor, and master), ANOVA test is used to check the correlation between education levels and the other two dependent variables. Table (17) in Appendix B shows ANOVA tests results. For both questionnaire paragraphs, the tests reveal no statistical differences among education levels ($P > 0.05$); meaning that whatever customers become more or less educated, they remain positive with regard to SFA technology impact on communications and service quality.

5.4 Summary

Analyzing sales managers', salespersons', and customers' responses on questionnaires in order to test the research hypotheses and to test responses for statistical differences based on their different profiles were the main objectives of this chapter. The following chapter "Discussion and Conclusion" aims at discussing and summarizing the results of hypotheses testing to provide answers on research questions that that were posed in chapter one.

Chapter Six

Discussion and Conclusion

Chapter Six

Discussion and Conclusion

6.1 Introduction

In the light of the increasing SFA technology adoption by leading Palestinian commercial firms, the main objective of this research was to understand the influences of this technology on the performance of sales function in these firms. Such an understanding is particularly important for firms planning to invest in this technology as well as SFA vendors who should pay more attention to the features and benefits that are of high importance to the SFA users. When evaluating the use of such technology in the Palestinian market a set of predefined benefits were introduced based on similar studies on other markets.

Within the context of research objectives and questions, this chapter accordingly discusses the analysis results to evaluate the current status of SFA technology in the Palestinian market. This chapter also presents suggestions for future work in this field.

6.2 Results Discussion

The ultimate purpose of this research was to empirically evaluate whether the SFA presumed benefits have been realized by the key users of this technology. Therefore, this research empirically distinguishes among the different impacts of SFA based on the users utilizing this technology; each is expected to have different points of interests. Sale managers are the users who have been given the highest attention in this research since they were assumed as key makers of the decision to invest in SFA technology;

their feedback on whether SFA returns valuable benefits is a the backbone of our evaluation. For this reason, the first question that this research seeks 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 value-adding tool when it results in less administrate work and enhances the other three areas of sales management. 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 last important benefit. What this means is that sales managers appreciate SFA technology as an internal more than an external tool. Such result was supported regardless of sales managers’ different personal profiles.

The second research question looks for same previous answers but on the salespersons side. To answer the question of “does SFA technology use impact salesperson’s performance positively?” two benefits were evaluated; the salesperson competency and salesperson time for selling. The analysis of salespersons’ questionnaire results reveal that by using SFA technology, 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 terms of importance as indicated by averages of responses, the extra time for selling benefit is superior to competency benefit.

In regards to customers, the research question was "does SFA technology use lead to maintain better customer service?" The investigation of this question covers customers who are in direct contact and communicate with salespersons using SFA technology. Two SFA benefits were targeted in customers' questionnaire survey, the better communication with and the better service quality from salespersons who use this technology, the results of questionnaire analysis show that all sampled customers are positively impacted by this technology in term 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.

6.3 Summary and Conclusion

Over the last two decades the adoption and use of SFA technology have built a considerable emphasis in the IT literature. One of the major reasons standing behind this increasing emphasis is the realization of SFA benefits in the field which is deemed a prominent problem in today sales firms that embrace this technology. Considering the magnitude of sales technology investments worldwide and their large failure rates on one hand, and the recent adoption of SFA technology in the Palestinian local market by leading sales firms – along with increasing vendors of this

technology – on the other hand, it is particularly important for the local market to better understand the outcomes of this technology adoption just as the other markets do.

To provide sufficient and comprehensive understanding when evaluating the results of SFA technology's implementations in the Palestinian commercial sector (sales distribution), three entities from these firms of perspective were considered: sales managers, salespersons, and customers. By utilizing related international literature on SFA technology, a group of key benefits were selected to be the evaluation factors in this research but in order not to overestimate the maturity of the current prevailing technology in the local market, a local case study was introduced to review the local SFA adopted technology as a step to filtering the selected benefits criteria and to keep them within realistic range. Based on these premises, sales managers, salespersons, and customers were questioned about these benefits by using targeted surveys for each of the entities impacted by the use of SFA technology.

The overall conclusion from the questionnaires analysis is that the usage of SFA technology in the Palestinian commercial firms, along with their customers, has achieved its expected outcomes as inferred by the sales managers, salespersons, and related customers who participated in this study and who overwhelmingly appreciated this technology and its key benefits.

6.4 Implications of the Study

This research has implications for academics in information systems disciplines and sales management practitioners as well for local vendors of

sales technology. From an academic perspective, the conceptual framework developed in this research 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 findings of this research to know what this technology actually renders in the field and how to start thinking about more advanced benefits in addition to the standard ones. Suppliers also may benefit from these research findings as they could use the findings for a better understanding of what sales managers, salespersons and customers would like to benefit from this technology and how to upgrade their products accordingly. However, the work accomplished in this research has its limitations as discussed in page 10. These limitations guide our suggestions for future research.

6.5 Suggestions for Future Research

This work suggests a number of important opportunities for future research effort to fully cover the topic of SFA technology in the Palestinian market. Namely;

(a) As SFA adoption expands in the market, future research has to focus on gathering data from various firms across different sectors to generate more generalizable results.

(b) Critically analyze the success factors that stand behind attaining SFA benefits and values.

(c) Identifying personal factors that could help explain sales managers' and salespersons' usage of SFA technology, and

(d) Investigating the impact of top and senior management support on SFA adoption projects.

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Appendices

Appendix A: Questionnaires

إستبانة مديري المبيعات حول

تقييم تبني تكنولوجيا أتمتة قوى المبيعات

الأخ الكريم/ الأخت الكريمة,

يسعى الباحث (طالب في جامعة النجاح الوطنية– برنامج ماجستير الإدارة الهندسية) من خلال هذه الاستبانة الى تقييم المنافع المتحصلة من استخدام تكنولوجيا أتمتة قوى المبيعات في الشركات التجارية الرائدة في السوق الفلسطيني وذلك من خلال التعرف على أثر استخدام مثل هذه التكنولوجيا على كفاءة المبيعات وعلاقات الزبائن والوصول الى حكم نهائي حول ما اذا حقق استخدامها المنافع المرجوة منها.

والمقصود بأتمتة قوى المبيعات (Sales Force Automation): ان يتم استخدام أجهزة الكمبيوتر والبرمجيات، والإنترنت، وأجهزة الاتصالات السلكية واللاسلكية في مهام المبيعات والمسؤوليات الإدارية لمندوبي المبيعات، بما في ذلك معالجة اوامر المبيعات، والمشاركة باستخدام المعلومات والتحكم ومراقبة المخزون، ومتابعة اوامر المبيعات ، وإدارة العلاقات مع الزبائن، كل ذلك من أجل الوصول الى وضع أكثر إنتاجية.

وبما أننا نؤمن بأنكم مصدرنا الوحيد والمعتمد من اجل اتمام هذا العمل, فأننا نعهد بكم الاهتمام والاستعداد لمؤازرة الابحاث العلمية, التي من شأنها خدمة مجتمعنا والعمل على تطويره, لذلك نتوجهة اليكم وكلنا أمل أن نجد التعاون من قبلكم, من خلال الإجابة على الاسئلة الموجودة في هذه الاستبانة بدقة وموضوعية, والتي نتعهد لكم بالمحافظة على عدم إظهار هوية المجيب عنها, وعدم إستخدامها في أي مجال غير مجال البحث العلمي التي تخدم دراستنا.

ولكم جزيل الشكر والاحترام,,,

الباحث,,,

الجزء الاول: المعلومات الشخصية:

الخبرة العملية: □ **من 1 – 10 سنوات** □ **من 10 – 20 سنة**

العمر: □ **20 – 30 سنة** □ **30 – 40 سنة** □ **40 سنة اكثر**

الجزء الثاني: أرجو إختيار الدرجة التي تتناسب مع تصوراتكم لإستخدام التكنولوجيا في المبيعات:

	وصف الفقرة	أوافق بشدة	أوافق	لا أعلم	أعارض	أعارض بشده
أثر أتمتة قوى المبيعات على العمل الاداري	إن إستخدامكم لتطبيقات أتمتة قوى المبيعات تقلل من الروتين والعمل الورقي في عملية ادارة المبيعات.					
	تساعدكم تكنولوجيا اتمتة المبيعات على توفير النماذج والتقارير اللازمة لإدارة ومتابعة وتحليل مبيعات الشركة بصورة سهلة وفي الوقت المناسب.					
	تسمح لكم تكنولوجيا اتمتة قوى المبيعات العمل والتواصل مع مندوبي العمل بشكل اكثر تنظيما وتعاونيا.					
	عدم حاجتكم الى تكرار العمل لانجاز المهام ذاتها وتخفيض حجم الجهد الغير منتج هي احد نتائج تبني هذه التكنولوجيا.					
	استخدامكم هذه التكنولوجيا يزيد من الانتاجية في العمل من خلال توفير المزيد من الوقت لإدارة المبيعات وتحليلها.					
	ترون أن البيع بواسطة تكنولوجيا اتمتة المبيعات يعتبر أكثر كفاءة وتمثيلا من البيع العادي.					
	تعمل آلية البيع بإستخدام التكنولوجيا على تحسين الكفاءة الادارية لمدراء المبيعات.					
أثر أتمتة قوى المبيعات على نوعية وكمية المعلومات	تعمل آلية التكنولوجيا المستخدمة في البيع إلى التحسين من قراءة ومعرفة نوعية وأداء المبيعات لديكم.					
	تعمل تكنولوجيا اتمتة المبيعات على معالجة واسترجاع البيانات المتعلقة بعمليات البيع بشكل اكثر فاعلية وكفاءة.					
	تستطيعون من خلال تطبيقات اتمتة المبيعات ان تحصلوا على التقارير والمعلومات عن عمليات البيع وقت حصولها.					
	تساعدكم المعلومات التي تحصلوا عليها من تطبيقات اتمتة دقيقة على اتخاذ القرارات اللازمة لتحسين الاداء البيعي للشركة.					

	توصون بضرورة العمل على أتمتة وتوحيد عمليات البيع والأنشطة الإدارية من خلال الآليات التكنولوجية.					
	من نتائج استخدامكم لهذه التكنولوجيا سرعة اتخاذ الاجراءات اللازمة لزيادة كفاءة مندوبي المبيعات وتقديم ما هو افضل للزبائن.					
أثر أتمتة قوى المبيعات على خدمة الزبائن	تساعدكم تكنولوجيا اتمتة المبيعات في التمييز بين الزبائن الأكثر بيعا وتبني استراتيجيات مرضية لهم.					
	تساعدكم مخرجات تكنولوجيا المبيعات على التوزيع الافضل لموارد دائرة المبيعات وبالتالي القدرة على تغطية عدد اكبر من الزبائن.					
	تساعدكم مخرجات تكنولوجيا المبيعات على فهم افضل لتوقعات الزبائن حول منتجاتكم وخدماتكم.					
	ترون بإن إستخدام آلية التكنولوجيا في البيع للسلع المختلفة يقلل من الوقت الذي يقضيه الموظف لخدمة الزبون مقارنةً بطريقة البيع اليدوية.					
	تتيح لكم هذه التكنولوجيا تقييم الأنشطة اليومية المتبعة في الشركة وتقييم حركة بيع المنتجات المختلفة للزبائن جميعاً بشكل سريع ومنظم.					
	يتم إعداد برامج وخطط بهدف السير في تكنولوجيا المبيعات في بيع المنتجات لايجاد خدمة افضل للزبائن.					
أثر أتمتة قوى المبيعات على الرقابة والمتابعة	تتيح لكم تكنولوجيا اتمتة المبيعات ادارة قوى المبيعات بشكل اكثر كفاءة وفاعلية					
	ان عملية رصد ومراقبة عمل واداء مندوبي المبيعات اثناء عملهم اصبحت تتم بسرعة اكبر مع استخدام تكنولوجيا اتمتة المبيعات.					
	ان عملية رصد ومراقبة عمل واداء مندوبي المبيعات اثناء عملهم اصبحت اكثر سهولة مع استخدام تكنولوجيا اتمتة المبيعات.					
	تساعدكم مخرجات تكنولوجيا المبيعات على التنسيق المشترك والتواصل مع الدوائر الأخرى في الشركة وخاصة التسويق والإنتاج.					
	تمكنكم مخرجات هذه التكنولوجيا من متابعة مبيعات الشركة خلال فترة معينة حسب الزبون, وحسب مندوب المبيعات، وحسب المنتج، وحسب المنطقة وغيرها.					

أسماء بعض الزبائن لديكم تتم عملية البيع من خلال استخدام هذه التكنولوجيا:

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❖ اذا كان لديكم اي ملاحظات ترغبون بإضافتها:

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ولكم جزيل الشكر,,,

إستبانة مندوبي المبيعات حول

تقييم تبني تكنولوجيا أتمتة قوى المبيعات

الأخ الكريم/ الأخت الكريمة,

يسعى الباحث (طالب في جامعة النجاح الوطنية– برنامج ماجستير الإدارة الهندسية) من خلال هذه الاستبانة الى تقييم المنافع المتحصلة من استخدام تكنولوجيا أتمتة قوى المبيعات في الشركات التجارية الرائدة في السوق الفلسطيني وذلك من خلال التعرف على أثر استخدام مثل هذه التكنولوجيا على كفاءة المبيعات وعلاقات الزبائن والوصول الى حكم نهائي حول ما اذا حقق استخدامها المنافع المرجوة منها.

والمقصود بأتمتة قوى المبيعات (Sales Force Automation): ان يتم استخدام أجهزة الكمبيوتر والبرمجيات، والإنترنت، وأجهزة الاتصالات السلكية واللاسلكية في مهام المبيعات والمسؤوليات الإدارية لمندوبي المبيعات، بما في ذلك معالجة اوامر المبيعات، والمشاركة باستخدام المعلومات والتحكم ومراقبة المخزون، ومتابعة اوامر المبيعات ، وإدارة العلاقات مع الزبائن، كل ذلك من أجل الوصول الى وضع أكثر إنتاجية.

وبما أننا نؤمن بأنكم مصدرنا الوحيد والمعتمد من اجل اتمام هذا العمل, فأننا نعهد بكم الاهتمام والاستعداد لمؤازرة الابحاث العلمية, التي من شأنها خدمة مجتمعنا والعمل على تطويره, لذلك نتوجهة اليكم وكلنا أمل أن نجد التعاون من قبلكم, من خلال الإجابة على الاسئلة الموجودة في هذه الاستبانة بدقة وموضوعية, والتي نتعهد لكم بالمحافظة على عدم إظهار هوية المجيب عنها, وعدم إستخدامها في أي مجال غير مجال البحث العلمي التي تخدم دراستنا.

ولكم جزيل الشكر والاحترام,,,

الباحث,,,

الجزء الاول: المعلومات الشخصية:

الخبرة العملية: □ **من 1 – 10 سنوات** □ **من 10 – 20 سنة**

العمر: □ **20 – 30 سنة** □ **30 – 40 سنة** □ **40 سنة اكثر**

الجزء الثاني: أرجو إختيار الدرجة التي تتناسب مع تصوراتكم لإستخدام التكنولوجيا في المبيعات:

	وصف الفقرة	أوافق بشدة	أوافق	لا أعلم	أعارض	أعارض بشده
مندوب مبيعات اكثر كفاءة	ترون أن الدراية والعلم والإستخدام لآلية التكنولوجيا في البيع هو شرط لأداء أفضل.					
	إستخدام آلية التكنولوجيا في البيع يعمل على زيادة المعرفة حول مبيعات المنتجات التي تبيعها.					
	ترون أن آلية التكنولوجيا المستخدمة في البيع تعمل على تحديد حجم ونوعية المعلومات التي يحتاج إليها الزبائن في السوق عن المنتوجات المختلفة.					
	ترون أن نهج الإستخدام التكنولوجي المستخدم عند البيع هو مناسب لجميع فئات المجتمع.					
	ترون أن وسيلة التكنولوجيا المستخدمة أثناء البيع هي وسيلة ناجحة.					
	ترون ان وسيلة التكنولوجيا المستخدمة في البيع تمكنكم من توصيل المعلومات للزبائن في الوقت المناسب عن كافة المنتجات.					
	إستخدام التكنولوجيا كوسيلة في البيع يعمل على إعطاء تفاصيل أكثر عن حجم ونوعية المنتجات.					
	يساعد إستخدام التكنولوجيا في البيع إلى إعطاء معلومات أفضل عن التسعيرات والفائدة من بيع مختلف المنتجات.					
	تتمكنون من خلال الإستخدام لآلية التكنولوجيا في البيع من تيسير التنسيق وتحسين تدفق الاتصالات بين فرق المبيعات الموجودة معكم.					
	باستخدامكم لهذه التكنولوجيا تتمكنون من تحديد الأولويات وكيفية التكيف مع المبيعات					

	خلال عرض الاتصالات المختلفة مع جميع الزبائن.					
	ترون أن إستخدام التكنولوجيا في البيع يعمل على تعزيز كفاءة مندوبي المبيعات.					
اتاحة وقت اطول للبيع	الإستخدام لآلية التكنولوجيا في البيع يعمل على زيادة السرعة في بيع المنتجات المختلفة للعملاء.					
	إستخدامكم لآلية التكنولوجيا في البيع هو أكثر نجاحاً من البيع العادي.					
	ترون أن إستخدام آلية التكنولوجيا يعمل على زيادة سرعة الوصول إلى هذه المعلومات لكم ولزبائنم.					
	ترون أن هذا النهج المستخدم للتكنولوجيا في البيع هو صالح لكل مكان.					
	ترون أن آلية التكنولوجيا المستخدمة في البيع للمنتجات المختلفة هي صالحة لجميع هذه المنتجات.					
	تعمل التكنولوجيا المستخدمة أثناء البيع إلى إعطاء المندوب المزيد من الوقت للبيع.					
	بصفتكم كمندوب مبيعات, تفضلون إستخدام التكنولوجيا كوسيلة أساسية في البيع.					
	تعانون من مشاكل أثناء الإستخدام للآلية التكنولوجية في البيع.					
	ترون بإنكم تستطيعون تخليص مستلزمات البيع خلال إستخدام آلية التكنولوجيا في البيع.					

❖ اسماء بعض الزبائن لديكم تتم عملية البيع من خلال استخدام هذه التكنولوجيا:

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❖ اذا كان لديكم اي ملاحظات ترغبون بإضافتها:

.....

.....

ولكم جزيل الشكر,,,

إستبانة الزبائن حول

تقييم تبني تكنولوجيا أتمتة قوى المبيعات

الأخ الكريم/ الأخت الكريمة,

يسعى الباحث (طالب في جامعة النجاح الوطنية– برنامج ماجستير الإدارة الهندسية) من خلال هذه الاستبانة الى تقييم المنافع المتحصلة من استخدام تكنولوجيا أتمتة قوى المبيعات في الشركات التجارية الرائدة في السوق الفلسطيني وذلك من خلال التعرف على أثر استخدام مثل هذه التكنولوجيا على كفاءة المبيعات وعلاقات الزبائن والوصول الى حكم نهائي حول ما اذا حقق استخدامها المنافع المرجوة منها.

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وبما أننا نؤمن بأنكم مصدرنا الوحيد والمعتمد من اجل اتمام هذا العمل, فأننا نعهد بكم الاهتمام والاستعداد لمؤازرة الابحاث العلمية, التي من شأنها خدمة مجتمعنا والعمل على تطويره, لذلك نتوجهة اليكم وكلنا أمل أن نجد التعاون من قبلكم, من خلال الإجابة على الاسئلة الموجودة في هذه الاستبانة بدقة وموضوعية, والتي نتعهد لكم بالمحافظة على عدم إظهار هوية المجيب عنها, وعدم إستخدامها في أي مجال غير مجال البحث العلمي التي تخدم دراستنا.

ولكم جزيل الشكر والاحترام,,,

الباحث,,,

الجزء الاول: المعلومات الشخصية:

الجنس: ذكر أنثى

المؤهل العلمي: ثانوية عامة أو أقل دبلوم

** بكلوريوس ماجستير فأعلى**

الجزء الثاني :أرجو إختيار الدرجة التي تتناسب مع تصوراتكم لإستخدام التكنولوجيا في المبيعات:

	وصف الفقرة	أوافق بشدة	أوافق	لا أعلم	أعارض	أعارض بشده
تواصل أفضل بين مندوب المبيعات والزبون	ترون بإن شرائكم من أية شركة بواسطة الآلية التكنولوجية هو مناسب لكم.					
	تواجهون صعوبة عند شرائكم لحاجياتكم من خلال آلية البيع التكنولوجية.					
	تعطيكم طريقة الشراء التكنولوجية الفرصة لتفحص ما تريدون شرائه من الشركات المختلفة.					
	ترون أن هذه الطريقة باستخدام التكنولوجيا الحديثة في شراء المنتوجات هي مناسبة لجميع الفئات من الزبائن.					
	ترون أن هذه الطريقة في الشراء مناسبة لجميع الإحتياجات.					
	ترون بأنه لا بد من تحديد بعض الإحتياجات اللازمة عن هذه الطريقة في البيع لدى الشركات المختلفة.					
	ترون بأنه ينقصكم بعض المعلومات في المعرفة عن هذه الطريقة.					
	ترون بأنه ينقصكم بعض المعلومات في المعرفة عن كيفية إستخدامها وتحديثها.					
	توصون الجميع من المندوبين والشركات والزبائن بإتباع هذه الطريقة في البيع والشراء.					
	تعاملكم في شراء إحتياجاتكم بالطريقة التكنولوجية هو أسهل عليكم من حيث الوقت.					
	تعاملكم في شراء إحتياجاتكم بالطريقة التكنولوجية هو أسهل عليكم من حيث					

اتاحة وقت خدمة أفضل	والتوصيل.					
	تعاملكم في شراء إحتياجاتكم بالطريقة التكنولوجية هو أسهل عليكم من حيث كيفية الدفع .					
	ترون بإن هذه الطريقة مناسبة لجميع الشركات في المجتمع.					
	ترون أن إستخدام هذه الطريقة هو مناسب في حالة مثل حالة المجتمع الفلسطيني.					
	تُشجعون جميع الشركات العاملة في المجتمع بإتباع الطريقة التكنولوجية في البيع لجميع المنتجات.					
	ترون بإن هذه الطريقة هي طريقة ناجحة للشركات.					
	ترون بإن هذه الطريقة ناجحة للزبائن.					
	ترون بإن آلية الشراء بواسطة إستخدام التكنولوجيا هي أفضل الوسائل لشراء كافة المنتجات اللازمة لكم.					
	ترون بإن هذه الطريقة ناجحة وستظل مستمرة.					

❖ ما هو أهم ما يرضيك من الطريقة التكنولوجية الحديثة في شراء المنتوجات ؟

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❖ ما الذي لا يرضيك في الخدمات المقدمة من هذه الطريقة في الشراء لإحتياجاتك ؟

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❖ كيف ترى أداء القائمين على هذه الخدمات الحديثة في البيع ؟

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❖ هل لك بعض النصائح على الإستخدام للطريقة التكنولوجية الحديثة في البيع لدى الشركات؟

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اذا كان لديكم اي ملاحظات ترغبون بإضافتها:

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ولكم جزيل الشكر,,,

Appendix B: Respondents Profile Figures

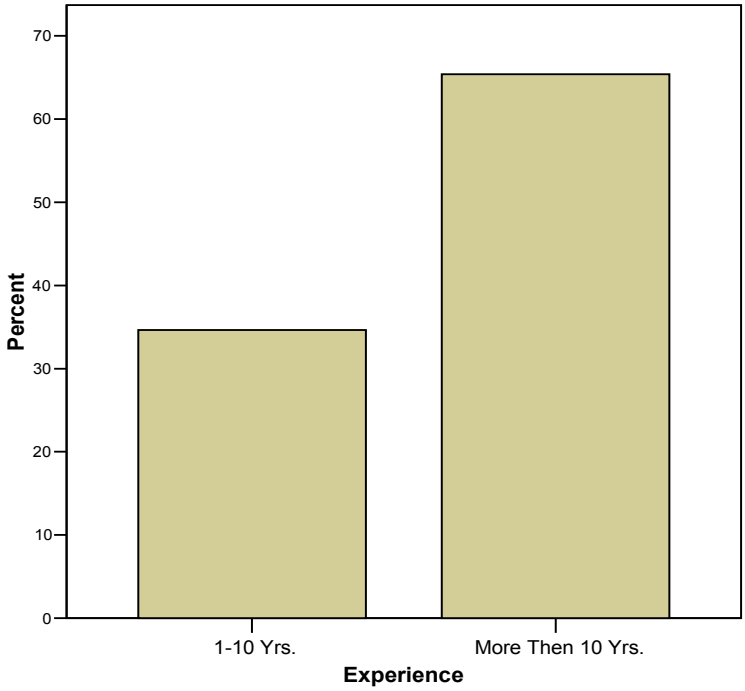

Figure (1): Sales Managers Distribution by Experience

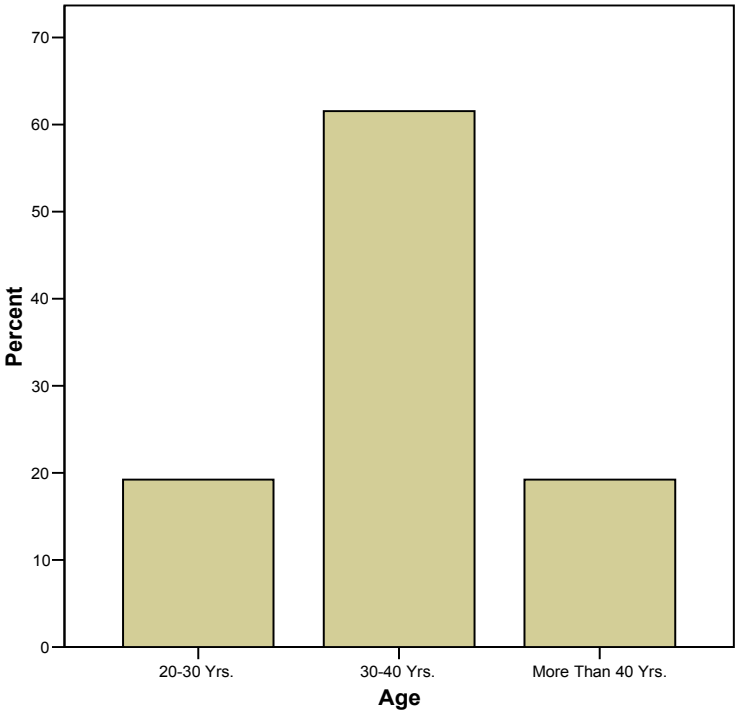

Figure (2): Sales Managers Distribution by Age

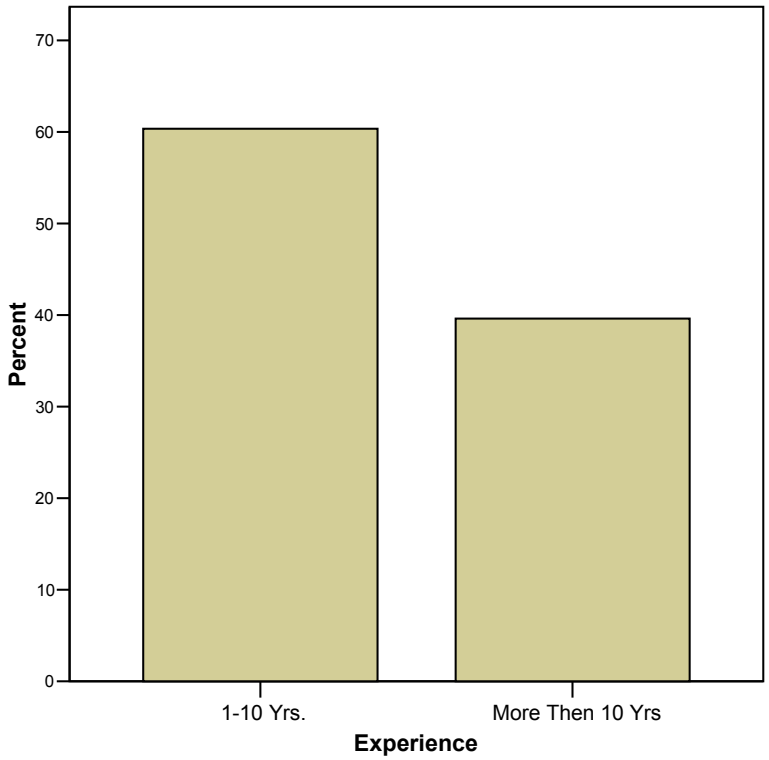

Figure (3): Salespersons Distribution by Experience

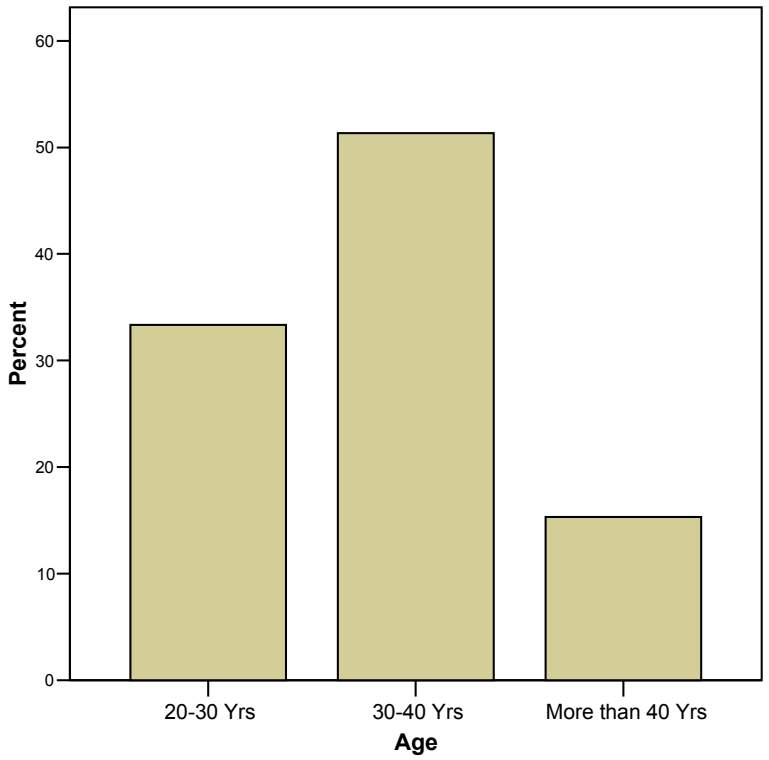

Figure (4): Salespersons Distribution by Age

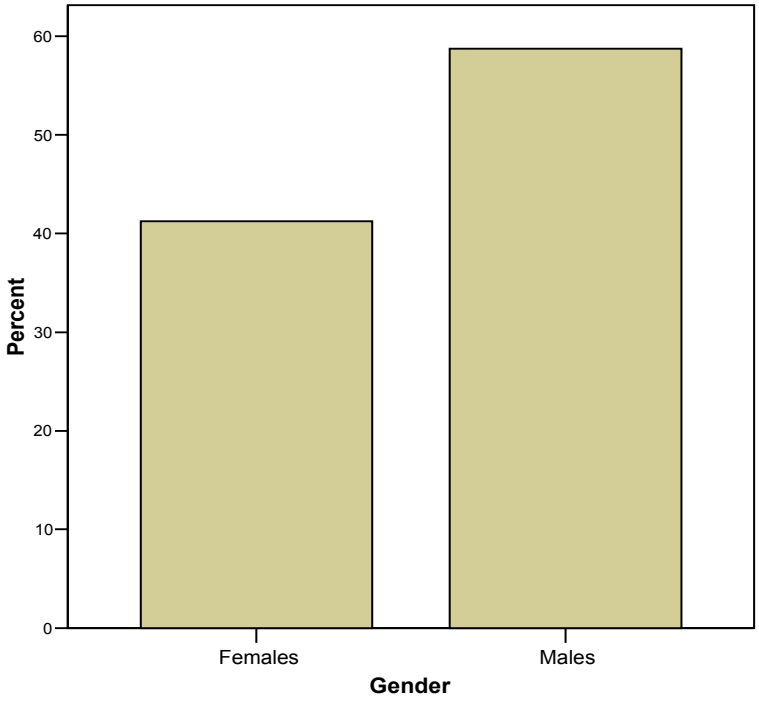

Figure (5): Customers Distribution by Gender

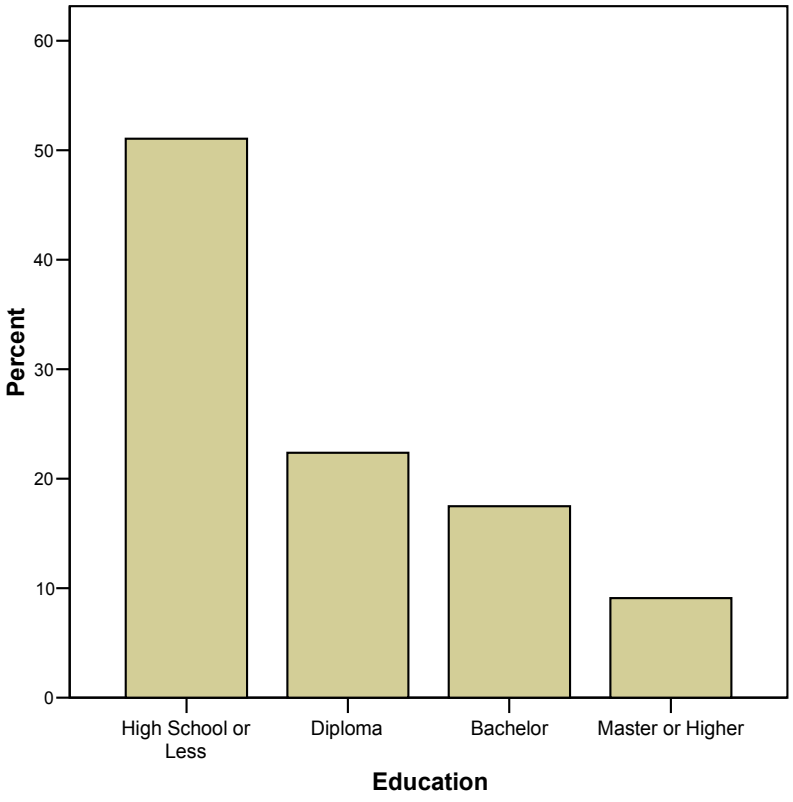

Figure (6): Customers Distribution by Education

Appendix C: Tables

Tables (1-4): Below show the correlation coefficients and Cronbach's Alpha for sales managers' questionnaire items and paragraphs

Table 1: Administrative Work Paragraph	Sig. (2-tailed)	Pearson Correlation
Using SFA minimizes work routines and limits the use of paper while managing sale processes	0.000	0.702
SFA provides the needed reports and sales templates for following up, monitoring, and analyzing sales	0.149	0.291
Through SFA technology, you are able to communicate with salespersons under your supervision more timely and systematically	0.000	0.635
Less rework and less unproductive work are outcomes of using this technology	0.000	0.761
SFA increase your productivity by allowing you more time for managing and analyzing daily sales	0.000	0.672
Selling through SFA is more efficient, effective, and representative that traditional selling	0.000	0.647
SFA increase the management efficiency for sales managers	0.001	0.613
Cronbach's Alpha	**0.731**	

Table 2: Quality and Quantity of Sales Information Paragraph	Sig. (2-tailed)	Pearson Correlation
The outputs of this technology improves your reading and understanding of the quality and performance of sales function in your company	0.000	0.868
Through the using of SFA technology, you are able to process sales data and retrieve sales information more effectively and efficiency	0.000	0.751
While you are in the back-office, you are provided with timely reports about on-road sales just as they occurred	0.000	0.734
The sales information you got by using this technology is accurate, reliable, and relevant to the extent enables you to improve the sales performance of your company	0.000	0.853
After using SFA, you recommend such automation of other administrative processes in the company	0.000	0.902
Of the outcomes of using this technology the ability to make timely decisions for improving salespersons performance and customers' service	0.000	0.751
Cronbach's Alpha	**0.887**	

Table 3: Customers' Service Paragraph	Sig. (2-tailed)	Pearson Correlation
SFA helps you to identify the profitable customers and thus adopting more satisfying sales strategies for them	0.000	0.714
The outputs of SFA technology enable better allocation of sales department resources and increase the customer service coverage	0.000	0.678
The outputs of SFA technology enable better understanding of customers' expectations about your products and services	0.000	0.879
You believe that the use of this technology decreases the time that a salesperson consumes to serve a customer in comparison with traditional sales methods	0.000	0.728
The SFA technology provides you with the ability to continuously evaluating the daily sales processes in an organized manner	0.005	0.530
Based on SFA technology outputs ,you are able to prepare plans and sales programs to create better customer service	0.004	0.546
Cronbach's Alpha	**0.770**	

Table 4: Monitoring and Controlling Paragraph	Sig. (2-tailed)	Pearson Correlation
SFA technology enables you managing sales forces more efficiently and effectively	0.000	0.915
The process of monitoring salespersons performance becomes shorter by using of SFA technology	0.000	0.971
The process of monitoring salespersons performance becomes easier by using of SFA technology	0.000	0.948
SFA technology results in better coordination and communication with the other departments in the company (e.g. the marketing and production)	0.000	0.856
SFA technology provides you with enough operational reports such as sales during particular period per customer, per salesperson, per product, per area and so forth	0.000	0.967
Cronbach's Alpha	**0.962**	

Tables (5-6): Below show the correlation coefficients and Cronbach's Alpha for salespersons' questionnaire items and paragraphs

Table 5: More Competent Salesperson Paragraph	Sig. (2-tailed)	Pearson Correlation
You think that the knowledge about and use of SFA technology is an condition for better sales performance	0.644	0.000
Using SFA increases your knowledge about the products you sell	0.782	0.000
By using the SFA technology you got obtain more information that customers need about the products you sell	0.790	0.000
SFA technology is relevant for all classes of customers	0.786	0.000
You believe that SFA technology is a successful tool in sales	0.763	0.000
Providing customers with the right and timely information about the products is one of the SFA using results	0.762	0.000
Using SFA allows you to provide more detailed information about any product you sell	0.776	0.000
SFA technology leads to more accurate pricing of products	0.723	0.000
By using SFA, you are now able to contact and communicate with other salespersons more effectively.	0.748	0.000
Managing and serving customers according to their priorities are more attainable functions when using SFA technology	0.785	0.000
Using SFA technology makes you more competent salesperson	0.820	0.000
Cronbach's Alpha	**0.928**	

Table 6: More Time for Selling Paragraph	Sig. (2-tailed)	Pearson Correlation
The automation of sales (through SFA) leads to more frequent sales of different products for different customers	0.772	0.000
Sales by using of SFA is more successful than traditional sales	0.816	0.000
For you and your customers, SFA makes the access to sales information more effective	0.821	0.000
SFA is applicable and valid for sales whenever and wherever its available	0.856	0.000
SFA is useful regardless of the types and classes of products you sell	0.829	0.000
Using of SFA technology provides you with more time for selling	0.744	0.000
As a salesperson, you prefer to use this technology as basic tool in sales	0.888	0.000
You encounter problems and obstacles while using SFA technology	0.891	0.000
You are able to accomplish all the requirements of sales process through using this technology	0.889	0.000
Using SFA technology makes you more competent salesperson	0.820	0.000
Cronbach's Alpha	**0.945**	

Tables (7-8): Below show the correlation coefficients and Cronbach's Alpha for customers' questionnaire items and paragraphs

Table 7: Better Communication Paragraph	Sig. (2-tailed)	Pearson Correlation
Buying from companies that use SFA technology is suitable for you	0.000	0.626
You encounter difficulties when buying through salespersons who use SFA technology	0.000	0.559
Through using SFA technology you have the opportunity to review the products you intend to buy	0.015	0.204
You think that this technology is applicable for all customers classes	0.000	0.522
You think that buying through this technology is appropriate for all of your needs	0.000	0.652
You believe that SFA technology stills need additional requirements to be addressed by selling companies	0.000	0.719
Some knowledge is still needed about the optimal use of SFA technology	0.000	0.430
You still lack information about how to upgrade and fully utilize this technology	0.000	0.411
You recommend all salespersons from all companies to use such technology in sales	0.000	0.533
Cronbach's Alpha	**0.710**	

Table 8: Better Services Paragraph	Sig. (2-tailed)	Pearson Correlation
In term of time, it is an advantage to buy through SFA technology	0.000	0.523
In term of delivery, it is an advantage to buy through SFA technology	0.000	0.376
In term of payment, it is an advantage to buy through SFA technology	0.000	0.410
You believe that this technology is valid and applicable for all companies	0.000	0.696
Using SFA technology is useful in the Palestinian market	0.000	0.677
You urge all wholesalers to adopt and use SFA technology	0.000	0.599
For your point of view, SFA technology tells a success story from the side of the companies using it	0.000	0.582
For your point of view, SFA technology tells a success story from the side of customers who involve with sellers using it	0.000	0.684
SFA is of the best tools to order and buy all products	0.000	0.651
SFA technology is successfully running and will remain so in future	0.000	0.701
Cronbach's Alpha	**0.825**	

Table (9): Sales mangers Questionnaire: Descriptive Statistics

Question	N	Mean	S.E	S.D
Using SFA minimizes work routines and limits the use of paper while managing sale processes	26	3.88	.224	1.143
SFA provides the needed reports and sales templates for following up, monitoring, and analyzing sales	26	4.12	.187	.952
Through SFA technology, you are able to communicate with salespersons under your supervision more timely and systematically	26	3.96	.232	1.183
Less rework and less unproductive work are outcomes of using this technology	26	3.96	.196	.999
SFA increase your productivity by allowing you more time for managing and analyzing daily sales	26	4.12	.195	.993
Selling through SFA is more efficient, effective, and representative that traditional selling	26	3.81	.176	.895
SFA increase the management efficiency for sales managers	26	4.04	.218	1.113
The outputs of this technology improves your reading and understanding of the quality and performance of sales function in your company	26	3.9835	.12662	.64565
Through the using of SFA technology, you are able to process sales data and retrieve sales information more effectively and efficiency	26	4.00	.166	.849
While you are in the back-office, you are provided with timely reports about on-road sales just as they occurred	26	3.77	.210	1.070
The sales information you got by using this technology is accurate, reliable, and relevant to the extent enables you to improve the sales performance of your company	26	3.88	.244	1.243
After using SFA, you recommend such automation of other administrative processes in the company	26	3.85	.181	.925
Of the outcomes of using this technology the ability to make timely decisions for improving salespersons performance and customers' service	26	3.88	.224	1.143
SFA helps you to identify the profitable customers and thus adopting more satisfying sales strategies for them	26	4.04	.204	1.038
The outputs of SFA technology enable better allocation of sales department resources and increase the customer service coverage	26	3.9038	.16517	.84218

Question	N	Mean	S.E	S.D
The outputs of SFA technology enable better understanding of customers' expectations about your products and services	26	3.85	.246	1.255
You believe that the use of this technology decreases the time that a salesperson consumes to serve a customer in comparison with traditional sales methods	26	3.92	.183	.935
The SFA technology provides you with the ability to continuously evaluating the daily sales processes in an organized manner	26	3.73	.212	1.079
Based on SFA technology outputs ,you are able to prepare plans and sales programs to create better customer service	26	3.81	.222	1.132
SFA technology enables you managing sales forces more efficiently and effectively	26	4.00	.192	.980
The process of monitoring salespersons performance becomes shorter by using of SFA technology	26	3.88	.178	.909
The process of monitoring salespersons performance becomes easier by using of SFA technology	26	3.8654	.14112	.71960
SFA technology results in better coordination and communication with the other departments in the company (e.g. the marketing and production)	26	3.81	.200	1.021
SFA technology provides you with enough operational reports such as sales during particular period per customer, per salesperson, per product, per area and so forth	26	3.96	.232	1.183
Using SFA minimizes work routines and limits the use of paper while managing sale processes	26	4.08	.207	1.055
SFA provides the needed reports and sales templates for following up, monitoring, and analyzing sales	26	3.77	.217	1.107
Through SFA technology, you are able to communicate with salespersons under your supervision more timely and systematically	26	4.04	.218	1.113

Table (10): Salespersons Questionnaire: Descriptive Statistics

Question	N	Mean	S.E	S.D
You think that the knowledge about and use of SFA technology is an condition for better sales performance	111	4.06	.113	1.185
Using SFA increases your knowledge about the products you sell	111	3.61	.126	1.322
By using the SFA technology you got obtain more information that customers need about the products you sell	111	3.77	.119	1.250
SFA technology is relevant for all classes of customers	111	3.68	.117	1.237
You believe that SFA technology is a successful tool in sales	111	3.67	.111	1.170
Providing customers with the right and timely information about the products is one of the SFA using results	111	3.83	.115	1.213
Using SFA allows you to provide more detailed information about any product you sell	111	3.62	.114	1.199
SFA technology leads to more accurate pricing of products	111	3.63	.112	1.183
By using SFA, you are now able to contact and communicate with other salespersons more effectively.	111	3.50	.117	1.235
Managing and serving customers according to their priorities are more attainable functions when using SFA technology	111	3.88	.116	1.227
Using SFA technology makes you more competent salesperson	111	3.69	.114	1.204
The automation of sales (through SFA) leads to more frequent sales of different products for different customers	111	3.7215	.08831	.93035
Sales by using of SFA is more successful than traditional sales	111	3.75	.117	1.232
For you and your customers, SFA makes the access to sales information more effective	111	3.89	.113	1.186
SFA is applicable and valid for sales whenever and wherever its available	111	3.82	.126	1.329
SFA is useful regardless of the types and classes of products you sell	111	3.80	.124	1.306
Using of SFA technology provides you with more time for selling	111	3.93	.114	1.196
As a salesperson, you prefer to use this technology as basic tool in sales	111	3.63	.129	1.361
You encounter problems and obstacles while using SFA technology	111	3.75	.118	1.239
You are able to accomplish all the requirements of sales process through using this technology	111	3.80	.118	1.242
You think that the knowledge about and use of SFA technology is an condition for better sales performance	111	3.73	.124	1.307

Table (11): Customers Questionnaire: Descriptive Statistics

Question	N	Mean	S.E	S.D
Buying from companies that use SFA technology is suitable for you	143	3.98	.082	.975
You encounter difficulties when buying through salespersons who use SFA technology	143	3.38	.098	1.174
Through using SFA technology you have the opportunity to review the products you intend to buy	143	3.04	.104	1.238
You think that this technology is applicable for all customers classes	143	3.79	.082	.985
You think that buying through this technology is appropriate for all of your needs	143	3.05	.107	1.274
You believe that SFA technology stills need additional requirements to be addressed by selling companies	143	3.15	.102	1.218
Some knowledge is still needed about the optimal use of SFA technology	143	3.93	.079	.947
You still lack information about how to upgrade and fully utilize this technology	143	4.22	.076	.905
You recommend all salespersons from all companies to use such technology in sales	143	4.01	.082	.979
In term of time, it is an advantage to buy through SFA technology	143	3.6169	.04682	.55987
In term of delivery, it is an advantage to buy through SFA technology	143	3.83	.084	1.000
In term of payment, it is an advantage to buy through SFA technology	143	3.66	.090	1.082
You believe that this technology is valid and applicable for all companies	143	3.69	.091	1.083
Using SFA technology is useful in the Palestinian market	143	3.03	.102	1.222
You urge all wholesalers to adopt and use SFA technology	143	3.29	.098	1.174
For your point of view, SFA technology tells a success story from the side of the companies using it	143	3.79	.091	1.087
For your point of view, SFA technology tells a success story from the side of customers who involve with sellers using it	143	4.07	.075	.893
SFA is of the best tools to order and buy all products	143	3.79	.080	.956
SFA technology is successfully running and will remain so in future	143	3.71	.077	.916
Buying from companies that use SFA technology is suitable for you	143	3.90	.084	1.009

Table (12): Statistical differences among sales managers according to their experience

Experience		N	Mean	Std. Deviation	Std. Error Mean
Administrative Work	1-10 Years	9	4.0794	.42923	.14308
	More than 10 years	17	3.9328	.74251	.18009
Quality and Quantity of Sales Information	1-10 Years	9	3.8704	.86111	.28704
	More than 10 years	17	3.9216	.85821	.20815
Customers' Service	1-10 Years	9	3.7222	.80364	.26788
	More than 10 years	17	3.9412	.68450	.16602
Monitoring and controlling	1-10 Years	9	4.0667	.90554	.30185
	More than 10 years	17	3.8588	1.09719	.26611

Independent Samples Test		Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Administrative Work	Equal variances assumed	1.440	.242	.543	24	.592	.14659	.26999	-.41064	.70383
	Equal variances not assumed			.637	23.693	.530	.14659	.23000	-.32844	.62162
Quality and Quantity of Sales Information	Equal variances assumed	.013	.910	-.145	24	.886	-.05120	.35418	-.78219	.67979
	Equal variances not assumed			-.144	16.363	.887	-.05120	.35456	-.80148	.69909
Customers' Service	Equal variances assumed	.053	.820	-.731	24	.472	-.21895	.29944	-.83697	.39906
	Equal variances not assumed			-.695	14.273	.498	-.21895	.31515	-.89368	.45577
Monitoring and controlling	Equal variances assumed	.150	.702	.486	24	.631	.20784	.42759	-.67465	1.09034
	Equal variances not assumed			.517	19.407	.611	.20784	.40240	-.63319	1.04888

Table (13): Statistical differences among sales managers according to their age

Age		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Administrative Work	20 – 30 years	5	4.0571	.51110	.22857	3.4225	4.6918	3.43	4.57
	30 – 40	16	4.0089	.60038	.15010	3.6890	4.3288	2.57	4.71
	More than 40 years	5	3.8286	.97625	.43659	2.6164	5.0407	2.14	4.57
	Total	26	3.9835	.64565	.12662	3.7227	4.2443	2.14	4.71
Quality and Quantity of Sales Information	20 – 30 years	5	3.6667	1.03414	.46248	2.3826	4.9507	1.83	4.33
	30 – 40	16	4.0833	.65828	.16457	3.7326	4.4341	2.17	4.83
	More than 40 years	5	3.5667	1.18204	.52863	2.0990	5.0344	1.50	4.50
	Total	26	3.9038	.84218	.16517	3.5637	4.2440	1.50	4.83
Customers' Service	20 – 30 years	5	3.5667	1.07108	.47900	2.2367	4.8966	1.67	4.17
	30 – 40	16	4.0313	.45223	.11306	3.7903	4.2722	3.00	4.67
	More than 40 years	5	3.6333	1.01653	.45461	2.3711	4.8955	1.83	4.33
	Total	26	3.8654	.71960	.14112	3.5747	4.1560	1.67	4.67
Monitoring and controlling	20 – 30 years	5	3.6800	1.06395	.47582	2.3589	5.0011	1.80	4.40
	30 – 40	16	4.1750	.92340	.23085	3.6830	4.6670	1.00	5.00
	More than 40 years	5	3.4000	1.23288	.55136	1.8692	4.9308	1.20	4.00
	Total	26	3.9308	1.02128	.20029	3.5183	4.3433	1.00	5.00

ANOVA Test		Sum of Squares	df	Mean Square	F	Sig.
Administrative Work	Between Groups	.157	2	.079	.176	.839
	Within Groups	10.264	23	.446		
	Total	10.422	25			
Quality and Quantity of Sales Information	Between Groups	1.365	2	.683	.959	.398
	Within Groups	16.367	23	.712		
	Total	17.732	25			
Customers' Service	Between Groups	1.156	2	.578	1.127	.341
	Within Groups	11.790	23	.513		
	Total	12.946	25			
Monitoring and controlling	Between Groups	2.677	2	1.339	1.316	.288
	Within Groups	23.398	23	1.017		
	Total	26.075	25			

Table (14): Statistical differences among salespersons according to their experience

Experience		N	Mean	Std. Deviation	Std. Error Mean
More Competent Salesperson	1-10 Years	67	3.7205	.89442	.10927
	More than 10 years	44	3.7231	.99314	.14972
More Time for Selling	1-10 Years	67	3.8441	1.01228	.12367
	More than 10 years	44	3.7045	1.12522	.16963

Independent Samples Test		Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
More Competent Salesperson	Equal variances assumed	.623	.432	-.015	109	.988	-.00265	.18135	-.36209	.35679
	Equal variances not assumed			-.014	85.249	.989	-.00265	.18536	-.37117	.36587
More Time for Selling	Equal variances assumed	1.502	.223	.680	109	.498	.13957	.20535	-.26743	.54657
	Equal variances not assumed			.665	85.179	.508	.13957	.20993	-.27781	.55695

Table (15): Statistical differences among salespersons according to their age

Age		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
More Competent Salesperson	20 – 30 years	37	3.7690	.80875	.13296	3.4994	4.0387	1.36	4.91
	30 – 40	57	3.5582	1.04283	.13813	3.2815	3.8349	1.00	4.82
	More than 40 years	17	4.1658	.60237	.14610	3.8561	4.4755	2.91	5.00
	Total	111	3.7215	.93035	.08831	3.5465	3.8965	1.00	5.00
More Time for Selling	20 – 30 years	37	3.9309	.99047	.16283	3.6007	4.2612	1.22	5.00
	30 – 40	57	3.5945	1.14444	.15158	3.2909	3.8982	1.00	5.00
	More than 40 years	17	4.1307	.75178	.18233	3.7442	4.5173	1.89	5.00
	Total	111	3.7888	1.05568	.10020	3.5902	3.9874	1.00	5.00

ANOVA Test		Sum of Squares	df	Mean Square	F	Sig.
More Competent Salesperson	Between Groups	4.959	2	2.479	2.967	.056
	Within Groups	90.252	108	.836		
	Total	95.211	110			
More Time for Selling	Between Groups	4.886	2	2.443	2.241	.111
	Within Groups	117.706	108	1.090		
	Total	122.591	110			

Table (16): Statistical differences among customers according to their gender

Gender		N	Mean	Std. Deviation	Std. Error Mean
Better Communications	Male	84	3.6257	.60164	.06564
	Female	59	3.6045	.49916	.06498
Better Services	Male	84	3.7310	.63549	.06934
	Female	59	3.5966	.57654	.07506

Independent Samples Test		Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Better Communications	Equal variances assumed	1.591	.209	.222	141	.825	.02114	.09542	-.16750	.20978
	Equal variances not assumed			.229	137.044	.819	.02114	.09237	-.16151	.20380
Better Services	Equal variances assumed	1.469	.227	1.292	141	.198	.13434	.10395	-.07115	.33984
	Equal variances not assumed			1.315	132.036	.191	.13434	.10218	-.06779	.33647

Table (17): Statistical differences among customers according to their education

	Education Level	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Better Communications	High School or Less	73	3.5723	.52138	.06102	3.4507	3.6939	2.33	4.67
	Diploma	32	3.6076	.70780	.12512	3.3524	3.8628	2.22	4.67
	Bachelor	25	3.6756	.45578	.09116	3.4874	3.8637	3.00	4.56
	Master or Higher	13	3.7778	.56656	.15713	3.4354	4.1201	2.78	5.00
	Total	143	3.6169	.55987	.04682	3.5244	3.7095	2.22	5.00
Better Services	High School or Less	73	3.6795	.57517	.06732	3.5453	3.8136	2.30	4.90
	Diploma	32	3.5000	.59568	.10530	3.2852	3.7148	2.20	4.80
	Bachelor	25	3.8280	.68649	.13730	3.5446	4.1114	1.90	4.80
	Master or Higher	13	3.7923	.68003	.18861	3.3814	4.2032	2.10	4.70
	Total	143	3.6755	.61337	.05129	3.5741	3.7769	1.90	4.90

ANOVA Test		Sum of Squares	df	Mean Square	F	Sig.
Better Communications	Between Groups	.570	3	.190	.602	.615
	Within Groups	43.940	139	.316		
	Total	44.511	142			
Better Services	Between Groups	1.746	3	.582	1.565	.201
	Within Groups	51.679	139	.372		
	Total	53.424	142			

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إعداد الطالب
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اشراف
د. يحيى صالح

قدمت هذه الأطروحة استكمالاً لمتطلبات درجة الماجستير الإدارة الهندسية بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

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د. يحيى صالح

الملخص

على نهج وتوجه الأسواق العالمية في هذه الايام ،فقد شهدت السوق الفلسطينية مؤخرا تطبيقات مختلفة لتكنولوجيات المبيعات وكان ذلك من قبل الشركات الرائدة في الصناعات المختلفة، واحدة من هذه التنولوجيا هي تكنولوجيا اتمتتة قوى المبيعات, ومع ذلك، وبالرغم من ان تبني اعتماد واستخدام تكنولوجيا اتمتتة قوى المبيعات اصبحت من المواضيع الاكثر جذبا للباحثين في مجال تكنولوجيا المعلومات على مدى العقدين الماضيين، الدراسة التطبيقية الفلسطينية بقيت صامتة في هذا المجال؛ وبترك نتائج تطبيق واستخدام تكنولوجيا اتمتتة قوى المبيعات في السوق الفلسطيني والتي لم يكشف بعد .هذه الدراسة، وفقا لذلك، تكشف نتائج استخدام تكنولوجيا اتمتتة قوى وتكشف كذلك ما إذا كان سيتوج قصة نجاح أو فشل بين الشركات الفلسطينية التي تتبني مثل هذه التكنولوجيا. بالاعتماد على مراجعة الأدبيات ودراسة حالة التطبيق لتكنولوجيا أتمتتة قوى المبيعات من قبل بعض الشركات التجارية الفلسطينية الرائدة، مجموعة من الفرضيات تم تشكليها لقياس المنافع التي تم اكتسابها من استخدام تكنولوجيا اتمتتة قوى المبيعات وكان ذلك من ثلاث جوانب؛ مديري المبيعات، ومندوبي المبيعات، والزبائن .النتائج اظهرت أن استخدام تكنولوجيا اتمتتة قوى المبيعات في الشركات التجارية الفلسطينية حقق جميع النتائج المتوقعة, كان ذلك كما أشارت اليه استجابة مديري المبيعات، ومندوبي المبيعات، والزبائن الذين كانوا ذات صلة بهذه التكنولوجيا ومفتاح الاستفادة من نتائجها الرئيسية.