Jyväskylän yliopiston julkaisuarkisto
Jyväskylä University Digital Archive

UNIVERSITY OF JYVÄSKYLÄ

This is an electronic reprint of the original article.
This reprint *may differ* from the original in pagination and typographic detail.

Author(s): Sinisalo, Jaakko; Karjaluoto, Heikki; Saraniemi, Saila

Title: Barriers to the use of mobile sales force automation systems: a salesperson's perspective

Year: 2015

Version:

Please cite the original version:

Sinisalo, J., Karjaluoto, H., & Saraniemi, S. (2015). Barriers to the use of mobile sales force automation systems: a salesperson's perspective. Journal of Systems and Information Technology, 17(2), 121-140. https://doi.org/10.1108/JSIT-09-2014-0068

All material supplied via JYX is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the repository collections is not permitted, except that material may be duplicated by you for your research use or educational purposes in electronic or print form. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone who is not an authorised user.

BARRIERS TO THE USE OF MOBILE SALES FORCE AUTOMATION SYSTEMS. A SALESPERSON'S PERSPECTIVE

Abstract

Purpose – The objective is to examine the barriers associated with the adoption and use of mobile sales force automation (SFA) systems from a salesperson's perspective.

Design/methodology/approach – A qualitative investigation of two business-to-business companies was conducted. Data collected from ten semi-structured interviews with directors or sales managers were analyzed to understand the main barriers to SFA system adoption.

Findings (mandatory) – The study confirms the existence of three barriers (customer knowledge, quality of information, and the characteristics of mobile devices) to mobile SFA system use and identifies two additional barriers: lack of time and optimization issues.

Research limitations/implications – The explorative nature of the study and the qualitative method employed limits the generalizability of the results. The propositions could be further validated and tested with a wider population.

Practical implications – Organizations wishing to speed the adoption of a mobile SFA system should evaluate the importance and significance of the five identified barriers to adoption, and plan how to overcome them. It is important for providers of mobile SFA systems to focus on developing systems that can exploit the different characteristics of each channel and, in parallel, overcome the inherent limitations of any single channel. The content of an SFA system should be customizable for each type of mobile device.

Originality/value – Ever increasing mobility has led to a rise in the use of smartphones and tablet PCs (tablets) in business and the consequent growth in the use of sales force automation (SFA) systems. Although sales force automation systems have been studied for roughly thirty years, little is known of the impact of newly developed mobile devices on sales management and sales personnel.

Keywords Technology adoption, customer relationship management, IT services, mobile systems, wireless technology

Article Classification Research paper

Barriers to the Use of Mobile Sales Force Automation Systems. A Salesperson's Perspective

1. Introduction

The sales function is viewed as being a part of conceiving, producing, and delivering customer value by understanding and meeting customer needs by supplying goods and services appropriate to those needs (e.g., Jones et al., 2005; Weitz and Bradford, 1999). Accordingly, sales is a boundary-spanning function with a more or less explicit role to produce value in business relationships with customers (Haas et al., 2012). The emerging use of technology by salespeople is evident through the growing use of sales force automation (SFA) products and cutting-edge communication technology deployed in the field (Clark et al., 2007).

The main changes affecting the sales function are globalization, increased customer focus, and an increasing use of SFA systems (Sheth and Sharma, 2008). Although SFA has been defined in various ways, all the scholarly definitions relate to the application of information technology to support the sales function in an organization (Buttle et al., 2006). SFA helps organizations manage their sales pipelines by collecting and storing customer data such as their demographics, purchasing history, preferences, and situation in the sales pipeline in the system. SFA is thus part of a company's customer relationship management (CRM) system and typically the first function, (others being marketing and customer service) that is automated with the help of CRM technology. Academic research on SFA started in the early 1980s; it is categorized under four themes: *adoption of SFA by organizations, the impact of SFA on an organization, success or failure of SFA projects,* and *sales force adoption of SFA* (Buttle et al., 2006), of which also this study is an example.

From a managerial viewpoint, implementation of mobile SFA is found to improve sales force productivity by up to 150% (Aberdeen Group, 2007). Sales force productivity is

increased by allowing sales representatives real-time access to enterprise data such as customer contact information, sales history, pricing, and products on mobile devices. The increasing spread of new mobile devices, specifically smart phones and tablets, is generating growing interest in SFA systems, allowing sales teams to sell more efficiently by replacing heavier, larger, and lower mobility devices such as laptops, and reducing the need to print and carry sales support materials. According to Gartner (2011), sales force automation, sales presentations, and sales ordering systems are the top commercial business applications for tablets. As the sales of tablets and smartphones is growing year by year and has surpassed the sales of desktop PCs and laptops (Gartner, 2013), more and more industries are investing in these new technologies. In addition, the consumerization trend related to mobile devices, meaning people bring their own devices to work, has resulted in companies rethinking their mobile SFA strategy (Harris, Ives, and Junglas, 2012).

Organizations are increasingly taking advantage of mobile technologies focusing on the performance of work instead of the location. Depending on the industry, mobilizing the workforce could prove to be key enablers and differentiators of service. It seems that to become mainstream activity, the benefits of a mobile workforce should be demonstrated to and accepted by the management (McIntosh and Baron, 2005). Indeed, according to DelVecchio and Seeman (2007), the strategic orientation of the firm (i.e. level of customer focus) also predicts the adoption of wireless technology by the field sales force. They suggest that taking mobile capabilities as part of a sales strategy supporting the field sales function, the company is likely to be more customer-oriented. McIntosh and Baron (2005) found that cost-efficiency and better disaster recovery fostered creativity, increased efficiency, enhanced corporate image, and improved employee morale as positive implications of the mobile workforce. On the other hand, security threats, technological interference, and inability to

separate oneself from the office were mentioned as negative implications for the employer and employee.

This study contributes to the SFA literature by examining the barriers to mobile SFA found among sales managers in B2B firms. Specifically, the study introduces the concept of mobile SFA relating to the use of mobile devices, namely smart phones and tablets, in accessing an SFA system, and presents a conceptualization of the key elements of mobile SFA from a salesperson's perspective via a multiple case study approach. We extend the work of Karjaluoto et al. (2015) and focus on sales staff perceptions of using smartphones and/or tablets to access an SFA system. In addition, we endeavor to increase the understanding of the barriers perceived by the sales force when using a mobile SFA system. To be more specific, we aim to answer the question of why salespeople might be reluctant to use sales force automation systems on a mobile device.

Prior research argues that SFA technology adoption is a two-stage process starting from an organization's decision to adopt an SFA system, and ending up with the choice of the individual salesperson to adopt the technology or not (Buehrer et al., 2005; Parthasarathy and Sohi, 1997). Although many benefits of using SFA systems among sales people have been identified (e.g., Boujena et al., 2009; Ingram et al., 2002; Rogers et al., 2008), this study sheds more light on the potential barriers to using a mobile SFA system from a salesperson's perspective.

The next section provides a conceptualization of mobile SFA, and the study then moves on to present the facilitators of and barriers to mobile SFA system use, as informed by the relevant literature. This is followed by a description of the case study methodology and the results. The article ends by discussing the theoretical and managerial implications and outlining the limitations of the study and future research directions.

2.1. Conceptualization of mobile SFA

Mobile SFA is a system that enables company staff to retrieve data while on the road through the use of mobile devices (i.e., smart phones and tablets) to support the sales function (e.g., Buttle et al., 2006; Nguyen et al., 2007; Ranjan and Bhatnagar, 2009). Accordingly, mobile SFA refers to providing the sales force with access to enterprise data such as customer and product information, orders and sales pipeline information, and updating it frequently via a mobile device, regardless of the location of the sales person. As an example, Salesforce.com's mobile app starts with a customized landing page showing for example the Chatter feed, task list and the navigation menu with access to a search box, links to people and groups, a 'recently used' section, the organization's own custom pages, or information about that day's meetings, events and records (Salesforce, 2014).

As various established definitions have been provided for SFA, all sharing the view that SFA relates to using technology and a specific software to manage the sales pipeline and related activities, the conceptualization of mobile SFA should focus on the term *mobile* and what new aspects arise from its inclusion. However, academic literature has not provided a universally accepted definition for mobile or mobile devices. Thus, there is a need for a discussion regarding what devices can appropriately be categorized as *mobile*.

Mobile devices can be classified in four categories; mobile phones, smart phones, tablets, and laptops (see Table 1). However, the level of mobility of these devices varies due to the size of each device. Additionally, with respect to the conceptualization of mobile SFA, it is important to distinguish 1) forms of mobile access to an SFA system and 2) forms of keyboards on the mobile devices. First, if a salesperson uses a laptop to access SFA, the process is similar to that of using a desktop PC, whereas when a salesperson accesses an SFA system through either a mobile device or tablet, the SFA system needs to support mobile use and its information needs to be optimized for mobile devices. Secondly, the (near) full sized QWERTY keyboard of a laptop makes for better and faster information processing. The

virtual keyboards of mobile devices and tablets limit the remote use of an SFA system (although external keyboards can be added). There is evidently a considerable difference in accessing an SFA system through a laptop and doing so via a smart phone or tablet. Therefore, the mobile SFA conceptualization in its ultimate sense should focus on using the system with smart phones and tablets.

There is a consensus among SFA literature that one of the key strengths of using SFA systems is access to a massive amount of information (e.g. Jayachandran et al., 2005; Boujena et al., 2009). Prior research has remained silent about "the access" itself or the devices through which the access is completed. In theory, sales force can perform essentially the same functions through the mobile devices as through any other channel providing access to an SFA system. However, mobile devices have certain distinguishing characteristics that present unique opportunities and challenges to the use of the system. The most important characteristic for mobile access is the flexibility of communication provided by mobile technology (e.g. Walker and Barnes, 2005, Shankar and Balasubramanian, 2009). Since mobile users always carry their highly portable devices such as smart phones with them, they can always access an SFA system (either by using 2G/3G/4G telecommunications network or wireless local area network) and provide accurate information for the customers instantly. On the other hand, the sales force is always reachable, which means that you can reach the individual with a mobile medium virtually anytime and anywhere, whereas all other channels, even laptops, used within SFA are to some degree restrictive in this respect. The next section describes the changes in sales function and the role of mobile devices within these changes.

2.2. Changes in SFA

Major changes are taking the place in sales automation (Sheth and Sharma, 2008). Currently, there are multiple benefits of using SFA systems among sales people (e.g. Boujena et al., 2009; Ingram et al., 2002; Rogers et al., 2008). While the level of automation has increased,

this change has evidently influenced sales activities as well. For instance, SFA systems improve the effectiveness and efficiency of sales forces' daily activities (Ingram, 2002; Boujena, 2009). Marshall et al. (1999) suggested that all sales activities can fall into five major categories: 1) *communication*, 2) *sales*, 3) *relationship*, 4) *team*, and 5) *database*. Next, we will take a closer look at these categories and evaluate how the advances of technology have influenced these activities.

Communication

Technology has had an increasing role in communication with customers, as it becomes part of the process of the ongoing relationship (Marshall et al., 1999). An SFA system provides access to a massive amount of information and improves the ability of the sales force to gather, analyze, and disseminate vital information at the point of need (Jayachandran et al., 2005). Based on this access, the sales force can communicate quickly with any individual using e-mail, the Internet, or a mobile phone despite their location. Furthermore, an SFA system improves access to information for both the sales force and their customers (Erffmeyer and Johnson, 2001). In turn, the sales force and customers can more easily access detailed information based on specific needs (Sheth and Sharma, 2008). For instance, customers can search a large amount of information provided on the Internet (either extranet or intranet) without any effort on the part of the sales person. This means that customers may have much more knowledge about the products/services in question. In turn, the sales person is able to focus more on problem solving, for instance, industry or company specific challenges during the sales process instead of presenting product/service specifications.

Relationship

In many industries, the advances of technology in parallel with the constant effort to be more cost-efficient have influenced sales processes and, thus, salespersons' responsibilities. For instance, some of the sales activities, such as the ordering process, are already automated; thus shifting the salesperson's responsibilities from order taking to relationship building and maintenance (Landry et al., 2008). By using an SFA system, the company can collect and disseminate a large amount of market information, which they can use to develop value-added customer relationships (Ahearne et al., 2008). An SFA system supports the sales force to create a holistic view about individual customers. Additionally, it facilitates the sales force to understand customers and their businesses more profoundly and, accordingly, helps them to communicate in a more customer-oriented way. Despite these major changes within the sales function, it is evident that not all sales activities can be replaced by technology (Sheth and Sharma, 2008).

Sales, database, and team

In sales situations, the sales force constantly use laptops and databases to support their sales presentations and to deliver information to customers (Marshall et al., 1999). Additionally, the sales force use mobile devices to provide more accurate information (e.g. product specifications, inventory, support material) to customers more quickly despite the location and distance between the sales force and the customers (Walker and Barnes, 2005). Furthermore, mobile devices – as a part of the SFA system - enhance the ability of the sales force to react and respond faster to customer needs even while on the move.

A sales force utilizes information from the database and continuously updates the databases with customer details for reports, analyses, and observations to be used by the management (Marshall et al., 1999). Because of their very important boundary-spanning role, the sales force is a valuable source of relevant and important information regarding the

customers to the company (Leigh and Marshall, 2001). Because of their experience, they are also capable of validating the customer data and turning this data into useful customer information for use by the company. Accordingly, the sales force can update this customer information in the SFA system on a real-time basis using their mobile devices.

The sales force can participate in virtual meetings with other sales personnel or people from multiple locations using the voice, video, text, and share documents using communication technology. With the current mobile devices, smart phones and tablets, the sales force can participate in these meetings despite their location.

Overall, the most important characteristic of mobile devices in an SFA context is the flexibility of communication. Accordingly, this means that the mobile devices allow access to the SFA system virtually anytime and anywhere, whereas all other channels, even laptops, used within SFA are to some degree restrictive in this respect. As an illustrative example (Figure 1), customers may have some challenges or problems creating the need for information. In this case, customers can access a massive – albeit limited – amount of information offered by the company's systems. Therefore, they may search for the solution by themselves. However, in many cases the customers need the support of qualified and experienced sales persons to specify the problem and find the appropriate solution. By having a supportive mobile SFA, the sales force can instantly respond to – even very complex – information needs and, thus, give accurate information to customers. Axiomatically, the information retrieved from SFA systems needs to be updated and relevant for both the sales force and the customers.

"Take in Figure 1 about here"

On these bases, the utilization of a mobile medium increases the convenience of sales functions by saving time and increasing value both for the sales force and the customers.

However, the use of mobile SFA is not without barriers that may hinder the sales function. These barriers are elaborated in the next section.

2.3. Barriers to mobile SFA use

The two most used theories predicting user acceptance of mobile technology are the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology, and their extensions (Sanakulov and Karjaluoto, 2015). The most commonly used predictors of mobile technology adoption, commonly measured as behavioral intention, have been perceived usefulness and perceived ease of use in the TAM model, and their counterparts performance expectancy and effort expectancy in the UTAUT framework. Although research on the adoption of SFA has followed the same stream (Buttle et al., 2006), almost all studies have examined SFA in some context other than the mobile one (Karjaluoto et al., 2014). In understanding the benefits such as perceived usefulness of mobile SFA, its real value cannot be realized if barriers to use are too high. On a general level, many barriers restrict the use of SFA systems. The literature (Table 2) suggests three different levels at which SFA may hinder the sales function: *customer knowledge, characteristics of mobile devices* and *quality of information*.

Many studies acknowledge that an SFA system facilitates the sales force understanding customers and their businesses more profoundly (Srivastava et al., 1999; Speier and Venkatesh, 2002; Boujena et al., 2009), especially in this big data era in which companies have access to massive volumes of customer data (see for example George et al. (2014) for a definition of big data). Furthermore, an SFA system improves the sales force's responsiveness and the capacity to fit customer needs (Ahearne et al., 2008). However, SFA only facilitates the management of customer relationships: neither automating sales processes nor customer information will help if the sales force is not performing well. The expertise and personality

of the sales personnel are far more important to the customer experience and relationships than any system. This is largely because a salesperson is knowledgeable in areas related to the products, customer needs, and market intelligence (Keillor et al., 1997). Additionally, Scornavacca and Sutherland (2008) identified mobile SFA as not influencing sales performance from the sales force's perspective. Instead, the sales force considered that the qualities of a salesperson could not be changed or assisted by the application of mobile technologies. Thus, we propose that:

Proposition 1: Information provided by an SFA system as such does not enhance or could even weaken the salesperson's understanding of a customer.

As previously noted, the different channels, such as mobile and Internet, have certain distinguishing characteristics, which largely determine which activities can be serviced by a specific channel (Sinisalo, 2011). Accordingly, mobile SFA has its own associated barriers, mostly stemming from the characteristics of the mobile devices themselves (e.g., smart phones and tablets). Although mobile devices are constantly evolving, they are still adversely affected by a limited set of visual and functional capabilities connected to issues like small screen size and the lack of a physical keyboard (Jelassi and Enders, 2006; Shankar and Balasubramanian, 2009). Therefore, the mobile medium lacks the ability to carry out a complete range of activities for firms (Nysveen et al., 2005). As such, we propose that:

Proposition 2: The characteristics of the mobile device determine and limit activities in the mobile SFA context.

Generally speaking, better management of knowledge in an organization supports several organizational objectives such as increased sales, enhanced decision making, and improved customer service (Dotsika and Patrick, 2013). The quality of information in an organization is closely linked to information usefulness (Watts and Wyner, 2011), and that is one of the most frequently examined attributes in research on sales force adoption of information technology (Karjaluoto et al., 2014). An SFA system improves the speed and quality of information flow between the sales force, customers, and the organization (Bush et al., 2005, Speier and Venkatesh, 2002) because the SFA system provides access to a large amount of information and improves the ability of the sales force to gather, analyze, and disseminate vital information at the point of need (Boujena et al., 2009; Jayachandran et al., 2005). By using mobile SFA systems, the sales force can initiate contact in real-time with the system wherever they are (Nguyen et al., 2007), which means that the sales force can answer most of their customers' questions immediately in the field. On the other hand, the customers expect salespeople to provide timely and accurate information, prompt answers to requests, personalized offers, and market expertise (Atkinson and Koprowski, 2006). The information needs of individual sales people differ, however, they all have to be satisfied with the information provided by the SFA system. If the information is inaccurate or outdated to any significant degree, the whole basis for using an SFA system will be undermined. One serious problem of CRM technologies is that the customer database often does not contain the right types of information, and evidence suggests that engaging employees in information creation and maintenance often requires significant changes in culture (Landry et al., 2008). Against this backdrop, we propose that:

Proposition 3: Poor quality information is a barrier to using mobile SFA.

3. Methodology

The empirical part of this study relies on a qualitative inquiry to deepen the theoretical framework of mobile CRM, as approached from the perspective of a sales person. In the research setting where the studied organizations operate in a business-to-business environment, the survey research and statistical techniques often used in IT adoption studies (e.g. Silva 2007) might suffer from the large number of contextual variables influencing organizational behavior (Johnston et al., 1999) suggesting that explanatory qualitative approach with interviews suits well for this study in hand.

In this study, the primary data were collected mainly through semi-structured interviews (Arksey and Knight, 1999) with intentionally selected interviewees. The choice of informants was based on purposeful sampling technique so that selection was made to meet the needs of the study . Kumar et al. (1993) argue that information is best gained through the people involved with the phenomenon under investigation. Thus, the participants needed to have experience of sales work and CRM system use. The sample is appropriate to contribute to the theoretical understanding of the subject of the study (Bryman and Bell, 2011, p. 500).

Two-round data collection process were conducted: first a few unstructured interviews and notes were conducted to produce semi-structured interview guide for the second data collection round. All together 10 sales force representatives from two different industries and several countries were interviewed (see Table 3) to provide rich and vivid data for the analysis.

In this study, the focus is on the perspective of sales personnel and thus, all of the interviewees have many years of sales experience in different roles within the same or other companies. The interviewees had sales experience of 6 months to 22 years.

Therefore, the interviewees have a unique understanding of and expertise in the subjects under investigation. Despite their long experience of sales work, the interviewees had not used an SFA system through a smart phone or tablet – instead they had experience of

using it with a laptop and desktop PC. Accordingly, these interviews provided researchers with valuable insights into the barriers to mobile SFA use from the sales person's perspective.

The interviewees were encouraged to discuss changes occurring within the sales field and the related technology. In addition, the interviewees pinpointed advantages and disadvantages of using mobile SFA. The main themes discussed during the interviewees were: *General changes in sales occurring over the last decade, role of technology and systems in those changes, and role of mobile CRM could perform in the sales function.*

While the researchers took notes, all the interviews were recorded to ensure the responses were captured accurately. The recordings were subsequently transcribed for analysis. The analysis phase followed Miles and Huberman's (1994) framework, in which the author notes patterns and themes from the data, makes links with previous literature, and identifies areas of contribution to the existing knowledge. In the analysis phase, the researcher analyzed the data afresh as the focus of the study was sharpened. Furthermore, several additional questions emerged following the transcription process, leading the author to contact selected informants by e-mail and telephone to clarify and confirm those issues afterwards.

4. Results

4.1. The current nature of selling

Before detailing the barriers to using mobile SFA, it is important to describe how sales work has changed over the last decade. The number of technologies (i.e., systems, solutions, devices) available to support sales staff in their work has increased rapidly. Although there are currently a plethora of different technological solutions supporting the function, sales

work itself has remained largely unchanged in the field. Some interviewees even reported that the technology does not really facilitate sales work:

> *"Hmmm, well… Facilitate may not be the right word. The sales job is easy without any applications when the sales skills are your backbone….From the sales personnel's perspective, these are mainly reporting systems, so they don't really facilitate the sales work."* (Kendall, Paper Industry)

Thus, sales technology itself does not help achieve sales objectives if the salesperson underperforms. However, the number of tools designed specifically to support the sales task has increased enormously:

> *"The process is still there but there is more that backs up that process like presentations etc. and technical information."* (John, Paper Industry)

This view is in line with that of Scornavacca and Sutherland (2008) who argued that technology can support the sales force's tasks, such as the sales pitch. With regard to mobile devices, the majority of interviewees agreed that both smart phones and laptops currently play a very important role in their work, as the following quotes indicate:

> *"Hmm, well actually I guess it's the mobile phone that is becoming the most important device. Although I personally like to use the computer a lot because you can see things better from the computer screen than from the mobile phone screen… But I would say that the mobile phone is more important."* (Katie, Paper Industry)

Although the motivation to use mobile devices in a sales environment undoubtedly differs among different persons, mobile phones have become a constant companion of the people. In parallel, this advancement has led to a situation in which sales forces are increasingly utilizing mobile devices to support different sales activities (Sheth and Sharma, 2008). However, the proliferation of technology has not had much influence on the selling process itself. The sales

force still relies on personal characteristics and interactive communication to conclude deals. In this sense, nothing has changed, since interactive communication has always been at the core of selling. Instead, the role of mobile devices and applications is to support the selling process, for instance, by making additional information instantly available to both parties.

4.2. Barriers to using mobile devices in sales

The use of mobile SFA is not without its drawbacks from the sales force perspective. It is worth noting that the drawbacks are not things that will prevent the use of mobile SFA, but are considered obstacles that can be overcome, some easily and some less easily. The data analysis isolated five barriers (Table 4): *customer knowledge*, *poor information quality*, *lack of time*, *functionality of mobile devices*, and *SFA backup systems*.

Customer knowledge/understanding

Technological development has led to a situation where the sales force can have access to an enormous amount of customer related information at great speed. In ideal circumstances, this means that the sales people acquire better customer knowledge and, accordingly, offer customers a more personal service. In promoting personal service, the available information should generate enhanced customer satisfaction and closer customer relationships. Interestingly, in this study some interviewees suggested that, contrary to the suggestions of current literature, the increased use of technology has reduced the levels of customer knowledge among the sales force. The next excerpt illustrates the situation:

> *"What I have noticed, and I have worked for many years in sales now, is that in the past you could know all your customers by heart but this is impossible these days, everything is changing so fast."* (Wesley, Paper Industry)

The quotation indicates that the increasing use of technology may have negative consequences. This is somewhat contrary to previous literature that paints mobile SFA as improving customer - sales force relationships. The technology has enabled more efficient time management meaning the sales force can manage more customer relationships simultaneously, but at the same time, a salesperson may have less time for personal contact with each customer. That reduction in personal contact may result in diminished personal ties and the emotional side of relationships and, consequently, lead to customers being known only as digits (i.e., numbers and in terms of figures). Therefore, the growth of the customer base is not necessarily a wholly positive development either for the individual salesperson or for their customer. As was highlighted in the theoretical framework, customer relations are established and maintained through personal interactions rather than the use of technology, such as mobile SFA (Scornavacca and Sutherland, 2008).

Poor quality of information

Sophisticated mobile technologies enable the sales force to retrieve information at the point of need. The interviewees saw the quality of that information to be a very important element of mobile SFA. To be more specific, good quality information was seen as a foundation for activities related to managing customer relationships, making it critically important that the information within the systems is relevant and current:

> *"We can't do anything with the terminal or mobile device if the backup systems are not functioning and updated."* (Justin, Software Industry)

The starting point for using any SFA system should be that the information within it is always available to use and of use to all the parties involved. In many cases, the information retrieved is not current enough. There is no use for any technology, application, or system, if all relevant personnel do not update it constantly. In the best case, an SFA system fosters

transparency of all past sales force activity and of scheduled activity. Responsibility for updating information into the system rests not only with sophisticated information gathering tools, but also with all parties involved.

Lack of time

From the sales force perspective, one major barrier to doing sales work currently is the lack of time. Although mobile SFA provides remote access to a large amount of information and enables sales staff to take care of more customers over a shorter period, mobility itself has also increased the level of activity expected. The sales force is always reachable and both customers and other stakeholders expect to be able to reach a salesperson whenever they have a need to. In many cases, customers also expect a quick response whatever the time of day, and some interviewees reported this development to be a problem:

> *"When you're on the road the telephone is disturbing when you're driving you have to concentrate on the road and the traffic and think about the customer that you're driving to, and then suddenly you get a phone call from another customer and that already disturbs you and during this time you don't have time to respond any e-mails either. This is also a problem."* (Wesley, Paper Industry)

Although their conferring of reachability is one of the key characteristics making mobile devices unique, this characteristic also has a dark side in terms of sales work; that constant reachability of the sales force can make sales work more onerous, because it can affect their concentration on their scheduled workload. If a sales person cannot direct their limited resources efficiently enough to achieve tasks or satisfy the needs of all customers, it can affect the efficiency of the sales force as a whole. Time is limited for everyone and sales people would rather not be permanently reachable if that were possible. It was an aspect of their jobs they found very disturbing.

Finally, for an SFA system to function efficiently, constant reporting by the sales force is required. Formalized and frequent reporting brings explicit advantages for the organization as individual sales performance becomes more transparent and fully documented. However, the downside of constant reporting can be seen in the following excerpt:

> *"To my mind, sales managers have more and more workload; that includes writing and reporting of numbers and turnovers, etc. So you must imagine, the sales manager has to set aside one day to make telephone calls for new appointments to plan the week. You need one day, after a week of travelling, to write reports to organize everything what you have promised for the customers during the week."* (Wesley, Paper Industry)

Accordingly, the interviewees perceive reporting, while being understandable, as very time consuming. This insight confirms that the current proliferation of technology has decreased the time the sales force can use to interact personally with its customers. There is already evidence in the field that instead of responding to e-mail throughout the day, staff might increase productivity by setting specific times (perhaps twice a day) to deal with e-mail (Wilson, 2012).

Characteristics of mobile devices

As noted previously, mobile devices, especially mobile phones, have certain distinguishing characteristics, which largely determine which activities they best serve. Mobile phones may not have the capacity to deal remotely with SFA systems, especially if those systems are not optimized for mobile devices:

> *"But, for instance, our sales management system includes so much information on one screen. So I have not really felt that comfortable with it that I would*

> *operate through the mobile phone to find information quickly if I had to."* (Katie, Paper Industry)

In practice, this means that the activities made possible by the SFA system are not fully available to the sales person connecting via mobile phone. Furthermore, some interviewees thought utilizing some of the information delivered via a mobile phone was very inconvenient. Although the sales force has access to information during the customer visit, they cannot utilize the information to support the sales:

> *"Usually forming or revising of anything through mobile devices is very difficult. Basically, they [mobile devices] are meant for very simple things and you cannot show anything from the mobile devices."* (Murray, Software Industry)

As noted, the characteristics of the mobile device limit the activities for which an SFA system can be used by the sales force. On some occasions, the use of a tablet or laptop is preferable for both the customers and sales force when accessing an SFA system.

SFA system

In mobile SFA, it is vital that the backup system functions and supports the use of mobile devices. However, the interviews revealed that, contrary to theory, mobile devices are not always synchronized and integrated into SFA systems. This seemed to be a challenge in one organization as the following excerpt indicates:

> *"At the moment our SFA data application cannot be accessed through mobile devices. So, we are thinking about how to change the situation because it would simplify the sales personnel's job and information retrieval."* (Robert, Software Industry)

In a nutshell, the sales force has not only to be able to access the information via a mobile device, but the SFA system also needs to have customized solutions for those devices. It would particularly benefit the sales force if they could determine the kind of information they access. In some cases, retrieving a simple piece of information, such as the contact details of a customer, may be very complex. In that case, the sales force would benefit from the mobile solution having a simple site for each customer presenting the key customer data the sales person requires. Naturally, the SFA system also has to support the reporting and updating of information through the mobile devices. This would be a very practical quality from the sales force perspective, and would accelerate and enhance the dissemination of information within the organization.

5. Discussion and conclusion

The objective of this study was twofold: first, to offer a conceptualization of mobile SFA and second, to examine the barriers to mobile SFA system use from a sales person's perspective. Mobile SFA was defined as a system that enables company personnel to retrieve data to support the sales function while on the road by use of mobile devices, namely smart phones and tablets (e.g., Buttle et al., 2006; Nguyen et al., 2007; Ranjan and Bhatnagar, 2009). Thus, mobile SFA refers to giving the sales force access to enterprise data regardless of the sales person's location by using a smart phone, tablet or a sort of combination of them, phablet.

In light of the literature on SFA (Boujena et al., 2009; Jayachandran et al., 2005; Nguyen et al., 2007), this study identified three barriers to mobile SFA system use; *increasing technology may have negative consequences for customer knowledge* while sales persons have less time for personal contacts with customers, yet having technically possibilities to manage more customer relationships. Furthermore, *quality of information in SFA systems may be poor*, as it is not always updated and current. Third barrier consists of *the characteristics of*

mobile devices such as mobile phones having not enough capacity to deal remotely with SFA systems. The literature suggests that the inability to use mobile applications stems from either the lack of commitment of the sales force to using them or a lack of training in doing so (Kumar and Reinartz, 2012; Schillewaert et al., 2005). The empirical findings support these identified barriers and in addition, identified two new, namely *lack of time* and *an SFA system is not optimized for mobile use*. The first, lack of time, refers to the increased utilization of new technology in sales, which means more reporting and monitoring activities for the sales person. This can lead to sales staff allocating most of their time to back up tasks such as reporting and monitoring to the detriment of their core tasks that are organizing visits and visiting customers. Tanner and Shipp (2005) pointed out that as customers become more technologically aware and adept, their expectation of service levels and speed of information delivery times are increasing and may even outpace the salesperson's ability to provide such services, thus leading to tension in the relationship. Related to time management, this study also supports the earlier findings (e.g. McIntosh and Baron, 2005) in that being constantly reachable could be disturbing and inconvenient for sales personnel. The second new barrier, some SFA systems not fully supporting the use of mobile devices, is largely due to the lack of capacity of mobile devices and the complexity of information retrieval.

From the perspective of the mobile technology adoption literature, the findings her contribute to the theory in that they identify five barriers that might hinder the positive aspects of adoption of mobile technology in general and mobile SFA in particular. Thus, taking into account these negative aspects of adoption, researchers can better understand how the typical drivers of adoption such as perceived usefulness and ease of use might be affected by various barriers.

From a managerial perspective, the use of mobile devices within SFA has undoubtedly made an important contribution to the work of sales personnel. For sales managers, a mobile

SFA system utilized appropriately by their sales people can prove an efficient tool for monitoring sales people's performance. If the sales people use mobile devices, not just for information retrieval but also for sharing up-to-date information, their performance will be more transparent and the devices can enable faster responses by a sales manager to possible deficiencies. Undoubtedly, it could be challenging to encourage sales people who consider themselves independent, entrepreneurial professionals to open up their day-to-day interaction with customers and share up-to-date information about their work by using mobile devices. However, the frequent use of mobile SFA is also beneficial for the sales people since they can retrieve, for instance, their own notes and information about the last meeting held with the customer they are going to meet again. Yet, while the development of SFA systems can be seen to have affected sales practice, the results of this study suggest there is still some room for further development.

The previous SFA literature has indicated that use of SFA system may increase the workload of the sales personnel and lead to the lack of time to manage more important tasks. According to this study, the use SFA system through the mobile device can either enhance or diminish the lack of time. This is because mobile devices enable the flexible information retrieval for the sales personnel regardless of the time and place. Ideally, sales personnel can direct their limited resources better and schedule the workload better by using SFA system through mobile device. Therefore, time management has become a vital skill in efficient working, and to work efficiently the sales people need not be reachable all the time. Instead they should allocate time for different mobile SFA tasks such as reporting, perhaps twice a day, for example. It should also be remembered that customer relationships are always developed and maintained by people, not systems or solutions.

Additionally, it is of critical importance to acknowledge that mobile devices, such as tablets and smart phones, have unique characteristics. Therefore, SFA system manufacturers should focus on developing systems that can take advantage of the different characteristics of each channel and, in parallel, overcome the inherent limitations of any single channel. Furthermore, the content of the SFA systems should be customizable for each mobile device.

With respect to the study limitations, our results are explorative in nature as this is among the first examinations on the barriers to mobile SFA system use. Thus, theoretically the paper attempted to combine literatures on SFA adoption and mobile adoption to develop and test the propositions. Second, the main empirical data for the paper consisted of ten interviews from just two companies representing two different industries. Thus, future studies should collect wider empirical data to test the propositions offered in the study. Additionally, we call for further research from perspectives other than the sales person's on the adoption and utilization of mobile SFA systems in organizations. Finally, in general the volume of mobile and remote working is constantly increasing. In addition to highlighting the issues relating to the organization, the SFA system, or the device that can inhibit the use of mobile SFAs, this study acts as a reminder that not all employees know exactly how their smart devices can support their working efficiency. If they did, they could make their work more convenient and work more flexibly. In future studies, these features of mobile working, and their specific applications, should be examined in greater detail, which would offer an interesting line of research.

References

Aberdeen Group (2007), "Mobile sales force effectiveness. Strategies beyond mobility utilization", *Mobile SFA Benchmark Report,* available at: http://www.salesforce.com/assets/pdf/datasheets/MobileSalesForce_effectiveness.pdf

Ahearne, M., Jones, E., Rapp, A. and Mathieu, J. (2008), "High touch through high tech: the impact of salesperson technology usage on sales performance via mediating mechanisms", *Management Science*, Vol. 54 (April), pp. 671-685.

Arksey, H. and Knight, P. (1999), *Interviewing for Social Scientists*, Sage, London, UK.

Atkinson, T. and Koprowski, R. (2006), "Sales reps' biggest mistakes", *Harvard Business Review*, Vol. 84, pp. 18-22.

Boujena, O., Johnston, W.J. and Merunka, D.R. (2009), "The benefits of sales force automation: a customer's perspective", *Journal of Personal Selling & Sales Management*, Vol. 29 No. 2, pp. 137-150.

Bryman, A. and Bell, E. (2011), *Business Research Methods* (3rd ed.), Oxford University Press, Oxford, UK.

Buehrer, R.E., Senecal, S. and Pullins, E.B. (2005), "Sales force technology usage –reasons, barriers, and support: An exploratory investigation", *Industrial Marketing Management*, Vol. 34 No. 4, pp. 389-398.

Bush, A.J., Moore, J.B. and Rocco, R. (2005), "Understanding sales force automation outcomes: a managerial perspective", *Industrial Marketing Management*, Vol. 34 No. 4, pp. 369-377.

Buttle, F., Ang, L. and Iriana, R. (2006), "Sales force automation: review, critique, research agenda", *International Journal of Management Reviews*, Vol. 8 No. 4, pp. 213-231.

Clark, P., Rocco, R.A. and Bush, A.J. (2007), “Sales force automation systems and sales force productivity: critical issues and research agenda”, *Journal of Relationship Marketing*, Vol. 6 No. 2, pp. 67-87.

DelVecchio, S. and Seeman, E. (2007), “Discriminant analysis of field sales force adoption of wireless technologies”, *International Journal of Mobile Communications*, Vol. 5 No. 1, pp. 32-47.

Dotsika, F. and Patrick, K. (2013), “Collaborative KM for SMEs: a framework evaluation study”, *Information Technology & People*, Vol. 26 No. 4, pp. 368-382.

Eisenhardt, K.M. (1989), “Building theories from case study research”, *Academy of Management Review*, Vol. 14 No. 4, pp. 532-550.

Erffmeyer, R.C. and Johnson, D.A. (2001), “An exploratory study of sales force automation practices: Expectations and realities”, *Journal of Personal Selling & Sales Management*, Vol. 21, pp. 167-175.

Eze, S. C., Duan, Y. and Chen, H. (2014), “Examining emerging ICT's adoption in SMEs from a dynamic process approach”, *Information Technology & People*, Vol. 27 No. 1, pp. 63-82.

Gartner (2011), “Gartner identifies top 10 commercial business applications for tablet devices”, Nov 15, 2011, available at: http://www.gartner.com/it/page.jsp?id=1849621

Gartner (2013), “Forecast: Devices by operating system and user type, worldwide, 2010-2017, 3Q13 update”, October 21, 2013, available at: http://www.gartner.com/newsroom/id/2610015

George, G., Haas, M.R. and Pentland, A. (2014), “From the editors: big data and management”, *Academy of Management Journal*, Vol. 57 No. 2, pp. 321-326.

Haas, A., Snehota, I. and Corsaro, D. (2012), “Creating value in business relationships: the role of sales”, *Industrial Marketing Management*, Vol. 41 No. 1, pp. 94-105.

Harris, J., Ives, B. and Junglas, I. (2012), “IT Consumerization: When gadgets turn into enterprise IT tools”, *MIS Quarterly Executive*, Vol. 11 No. 3, pp. 99-112.

Ingram, T., LaForge, R. and Leigh, T. (2002), “Selling in the new millennium: A joint agenda”, *Industrial Marketing Management*, Vol. 31 No. 7, pp. 559-567.

Jayachandran, S., Sharma, S., Kaufman, P. and Raman, P. (2005), “The role of relational information processes and technology use in customer relationship management”, *Journal of Marketing*, Vol. 69 No. 4, pp. 177-192.

Jelassi, T. and Enders, A. (2006), “Mobile advertising: a European perspective”, in Barnes, S. and Scornavacca, E. (Eds.), *Unwired Business: Cases in Mobile Business*, Idea Group Inc., Hershey, PA, pp. 82-95.

Johnston, W.J., Leach, M.P. and Liu, A.H. (1999), “Theory testing using case studies in business-to-business research”, *Industrial Marketing Management*, Vol. 28, pp. 210-213.

Jones, E., Brown, S. P., Zoltners, A. A. and Weitz, B. A. (2005), “The changing environment of selling and sales management”, *Journal of Personal Selling and Sales Management*, Vol. 2, pp. 105-111.

Karjaluoto, H., Sinisalo, J., Saraniemi, S. and Töllinen, A. (2015), “Barriers to the use of mobile sales force automation systems. A salesperson’s perspective”, in Krzysztof, K. (Ed.), *Ideas in Marketing: Finding the New and Polishing the Old. Proceedings of the 2013 Academy of Marketing Science (AMS) Annual Conference*, Springer, Cham, pp. 625-634.

Karjaluoto, H., Töllinen, A., Pirttiniemi, J. and Jayawardhena, C. (2014), ”Intention to use mobile customer relationship management systems”, *Industrial Management & Data Systems*, Vol. 114 No. 6, pp. 966-978.

Keillor, B.D., Bashaw, R.E. and Pettijohn, C.E. (1997), “Sales force automation issues prior to implementation: the relationship between attitudes toward technology, experience and productivity”, *Journal of Business & Industrial Marketing*, Vol. 12 No. 3/4, pp. 209-219.

Kumar, N., Stern, L.W. and Anderson, J.C. (1993), “Conducting interorganizational research using key informants”, *Academy of Management Journal*, Vol. 36 No. 6, pp. 1633-1651.

Kumar, V. and Reinartz, W. (2012), “Customer relationship management issues in the business-to-business context”, in Kumar, V. and Reinartz, W. (Eds.), *Customer Relationship Management: Concept, Strategy and Tools*, Springer Berlin Heidelberg, pp. 261-277.

Landry, T., Arnold, T. and Arndt, A. (2005), “A compendium of sales-related literature in customer relationship management: Processes and technologies with managerial implications”, *Journal of Personal Selling & Sales Management*, Vol. 25 No. 3, pp. 231-251.

Leigh, T.W. and Marshall, G.W. (2001), “Research priorities in sales strategy and performance”, *Journal of Personal Selling & Sales Management*, Vol. 21 No. 2, pp. 83-93.

Marshall, G.W., Moncrief, W.C. and Lassk, F.G. (1999), “The current state of sales force activities”, *Industrial Marketing Management*, Vol. 28, pp. 87-98.

McIntosh, J.C. and Baron, J.B (2005), “Mobile commerce’s impact on today’s workforce: issues, impacts and implications”, *International Journal of Mobile Communications*, Vol. 3 No. 2, pp. 99-113.

Miles, M.B. and Huberman, A.M. (1994), *An Expanded Sourcebook Qualitative Data Analysis* (2nd ed.), Sage Publications, CA, USA.

Nguyen, T., Sherif, J. and Newby, M. (2007), "Strategies for successful CRM implementation", *Information Management & Computer Security*, Vol. 15 No. 2, pp. 102-115.

Nysveen, H., Pedersen, P.E. and Thorbjørnsen, H. (2005), "Intentions to use mobile services: Antecedents and cross-service comparisons", *Journal of the Academy of Marketing Science*, Vol. 33 No. 3, pp. 330-346.

Parthasarathy, M. and Sohi, R. (1997), "Salesforce automation and the adoption of technology innovations by salespeople: Theory and implications", *Journal of Business & Industrial Marketing*, Vol. 12 No. 3/4, pp. 196-208.

Perry, C. (1998), "Processes of a case study methodology for postgraduate research in marketing", *European Journal of Marketing*, Vol. 32 No. 9, pp. 785-802.

Ranjan, J. and Bhatnagar, V. (2009), "A holistic framework for mCRM - data mining perspective", *Information Management & Computer Security*, Vol. 17 No. 2, pp.151-165.

Rogers, B., Stone, M. and Foss, B. (2008), "Integrating the value of sales people and systems: Adapting the benefits dependency network", *Database Marketing & Customer Strategy Management*, Vol. 15 No. 4, pp. 221-232.

Salesforce (2014), Anatomy of the Salesforce 1 Mobile App, Available at [Accessed December 16, 2014],

http://www.salesforce.com/salesforce1/rolloutguide/usingtheapp.jsp#tour-1b

Sanakulov, N. and Karjaluoto, H. (2015), "Consumer adoption of mobile technologies- A literature review", *International Journal of Mobile Communications*, Vol. 13 No. 3, pp. 244-275.

Schillewaert, N., Ahearne, M.J., Frambach, R.T. and Moenaert, R.K. (2005), "The adoption of information technology in the sales force", *Industrial Marketing Management*, Vol. 34 No. 4, pp. 323-336.

Scornavacca, E. and Sutherland, A. (2008), "The perceived impact of mobile sales force automation systems on salespeople's performance", *Proceedings of 7th International Conference on Mobile Business*, pp. 270-279.

Shankar, V. and Balasubramanian, S. (2009), "Mobile marketing: Synthesis and prognosis", *Journal of Interactive Marketing*, Vol. 23 No. 2, pp. 118-129.

Sheth, J.N. and Sharma, A. (2008), "The impact of the product to service shift in industrial markets and the evolution of the sales organization", *Industrial Marketing Management*, Vol. 37 No. 3, pp. 260-269.

Silva, (2007), "Post-positivist review of technology acceptance model", *Journal of the Association for Information Systems*, Vol. 8 No.4, pp.255-266.

Sinisalo, J. (2011), "The role of the mobile medium in multichannel CRM communication", *International Journal of Electronic Customer Relationship Management*, Vol. 5 No. 1, pp. 23-45.

Speier, C. and Venkatesh, V. (2002), "The hidden minefields in the adoption of sales force automation technologies", *Journal of Marketing*, Vol. 66 No. 3, pp. 98-111.

Srivastava, R.K., Shervani, T.A. and Fahey, L. (1999), "Marketing, business processes, and shareholder value: An organizationally embedded view of marketing activities and the discipline of marketing", *Journal of Marketing*, Vol. 68, pp.168-179.

Stake, R.E. (2000), "Case studies", in Denzin, N.K. and Lincoln, Y.S. (Eds.), *Handbook of Qualitative Research*, Sage, Thousand Oaks, CA, pp. 435-454.

Tanner, J.F. Jr. and Shipp, S. (2005), "Sales technology within the salesperson's relationship: a research agenda", *Industrial Marketing Management*, Vol. 34 No.4, pp. 305-312.

Walker, B. and Barnes, S.J. (2005), “Wireless sales force automation: concept and cases”, *International Journal of Mobile Communications*, Vol. 3 No. 4, pp. 411-427.

Watts, S. and Wyner, G. (2011), “Designing and theorizing the adoption of mobile technology-mediated ethical consumption tools”, *Information Technology & People*, Vol. 24 No. 3, pp.257-280.

Weitz, B.A. and Bradford, K. (1999), “Personal selling and sales management: A relationship perspective”, *Journal of the Academy of Marketing Science*, Vol. 27 No. 2, pp. 241-254.

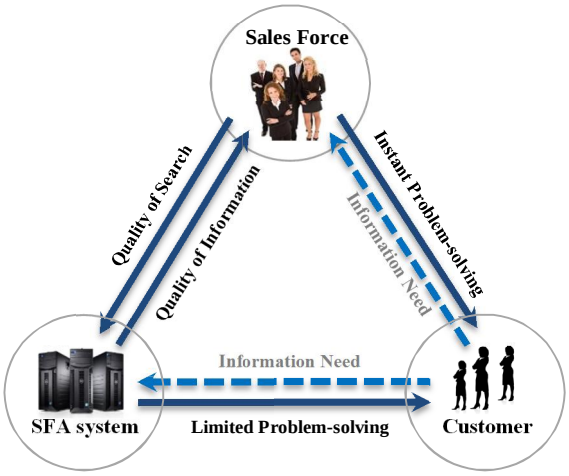
Williams, M., Dwivedi, Y.K., Lal, B. and Schwarz, A. (2009), “Contemporary trends and issues in IT adoption and diffusion research”, *Journal of Information Technology*, Vol. 24 No.1, pp. 1-10.

Wilson, J. (2012), “You, by the numbers. Better performance through self-quantification”, *Harvard Business Review*, Vol. 90 No. 4, pp. 119-123.

Xu, Y., Yen, D.C., Lin, B. and Chau, D.C. (2002), “Adopting customer relationship management technology”, *Industrial Management and Data Systems*, Vol. 102 No. 8, pp. 442-452.

List of Figures

Figure 1 The Supportive Role of Mobile SFA



List of Tables

Table 1 Definition of mobile devices (focus of the study highlighted)

Device	*Definition*	*Features*	*Level of mobility*	*Information processing capability*
Mobile phone	(i.e. cellular phone) is a device that can make and receive calls over a radio link while moving around a wide geographic area	Basic features are SMS, MMS, e-mail, Internet access, short-range wireless communications (infrared, Bluetooth), business applications, gaming and photography.	**High** · weight typically less than 150 gr	**Low** · typically standard telephone keypads · small size screens
Smart phone	is a mobile phone with more advanced computing capability and connectivity (WiFi and 4G)	In addition to mobile phones offers enhanced computing capabilities and wider range of applications such as GPS navigation, touchscreens, larger screen size, better cameras etc.	**High** · weight typically 100-200 grams	**Medium** · virtual keyboards · from small to medium size screens
Tablet*	is a one-piece, mobile version of a personal computer, primarily operated by touchscreen	Mostly the same as smart phones: Wireless connectivity (2G, 3G, 4G, WiFi), mobile browser, E-mail and social media services, messaging, video calling and – conferencing, e-book reading, apps	**Medium** · weight about 0,5-1 kg	**From medium to high** · virtual keyboards (and external physical keyboard) · medium size screens
Laptop	also known as notebook computer, is a small, portable computer, small enough that it can sit on your lap.	Basically the same as with desktop PCs, but laptops offer better connectivity	**From low to medium** · weight more than 1 kg	**High** · physical QWERTY keyboards · from medium to large size screens

* the newest mobile device class in the marketplace is a 'phablet', a combined smart phone and tablet.

Table 2 Barriers to using mobile SFA

Function	Description
Customer knowledge	SFA systems improve effectiveness and efficiency of sales forces in their daily activities. In parallel, the level of individual customer knowledge among sales persons can decrease since they have less time for personal contact with each customer.
Quality of information	An SFA system provides access to a massive amount of information and improves the ability of a sales force to gather, analyze, and disseminate vital information at the point of need. Additionally, it enhances the ability of a sales force to react and respond faster to customer needs. Therefore, it is of critical importance, especially, for the use of mobile SFA that the information in an SFA system is updated and relevant.
Characteristics of mobile devices	The mobile devices have inherent characteristics, such as reachability and interactivity, making it unique for mediated-communication purposes. However, there are also characteristics that limit the use of mobile devices for the whole range of activities provided by SFA systems.

Table 3 Interview data (original names altered)

Industry	**Name**	**Sales Experience**	**Region**	**Position**	**Date**	**Duration of interview**
Paper	Jack	8 years	North America	Vice President	20 April 2012	18 min
Paper	Raymond	10 years	Global	Senior Vice President	25 April, 2012	15 min
Software	Justin	22 years	Finland	Director	27 March 2012	16 min
Software	Murray	13 years	Finland	N/A	2 May 2012	14 min
Paper	Kendall	6 months	Scandinavia	Director	20 April 2012	21 min
Software	Robert	10 and a half years	Global	N/A	27 May 2012	20 min
Paper	Katie	12 years	Benelux	Sales Director	20 April 2012	26 min
Paper	Wesley	4 years	Germany	Sales Manager	16 April 2012	29 min
Paper	Lewis	14 years	Germany	Sales Manager	16 April 2012	28 min
Paper	Emily	8 months	Finland	Sales Director	17 April 2012	13 min

Table 4 Barriers of mobile SFA

Factor	Description	Possible Barrier	Sales Force Perspective
Customer knowledge / understanding	An SFA system supports the sales force by creating a holistic view of individual customers. Additionally, SFA allows more efficient use of information and handling of more customers at the same time	Excessive use of an SFA system can lead to a sales force relying merely on information provided by the system and knowing their customers only as figures and numbers	Relationships are built and managed during inter-personal contacts between sales persons and customers. Therefore, the sales force is responsible for building personal relationships with customers as the SFA system has just a facilitating role to make customer information available
Poor Information Quality	The quality of information is a prerequisite of using mobile SFA. An SFA system provides access to a massive amount of information and improves the ability of the sales force to gather, analyze, and disseminate vital information	The information in the SFA system can be dated or inaccurate. In this case, the sales force cannot retrieve the required information at the point of need and is not able to guarantee the customer experience and satisfaction	Relevant and updated information is fed into the SFA system by sophisticated data gathering tools and the sales force who are responsible for the quality of the information
Lack of Time	Increased utilization of the technology has also increased the activities of the sales force on, for instance, reporting and monitoring. Mobility also makes the sales force always reachable	The lack of time can lead to the sales force having to focus on irrelevant activities instead of their core tasks	Activities demanded of the sales force have increased due to the advances in technology. The sales force now need time management and prioritizing skills to mitigate the effect on time
Functionality of Mobile Devices	Mobile devices, especially mobile phones, have certain distinguishing characteristics which limit the remote use of an SFA system on occasion	Mobile devices cannot be used for all the activities inherent in the SFA systems	Mobile devices can be used for certain activities in the SFA context. The sales force is responsible for delivering information required by the customers using all means necessary
SFA Systems	Some SFA systems do not support remote use of mobile devices or the information within the SFA is not optimized for mobile devices	Mobile devices cannot be utilized for sales force support if the SFA does not support mobile devices	The sales force is responsible for ensuring they have access to the SFA system by using other devices at the point of need