Determinants of Sales force Technology Adoption among Insurance Sales Agents in Kenya

Langat Charles

Abstract

Salespersons are adopting and using a variety of technologies to increase their selling productivity and efficiency at different rates. Previous studies have addressed various factors affecting technology adoption. This study identifies various factors that can influence sales force automation and analyzes their effect on technology adoption. An explanatory research design was used and data collected by means of self-administered questionnaires to the target population. Reliability and correlation analysis were conducted to establish relationships between the research variables. Logit regression showed that social factors, system characteristics, organizational factors and salesperson characteristics significantly affect technology adoption. The major reason for such failure rates seems to be that the experienced salespersons frequently reject the new sales technologies. The study recommends that insurance companies should create an enabling environment for sales agents to adopt technology and improve their performance.

Introduction

In the competitive environment, success depends on effectiveness of the sales force, developing and maintaining customer relationships. Consequently, firms are attracted by the CRM-related technological capabilities including sales force automation systems (SFA). SFA refers to the concept, tools, system, or the technology; that often describes the process of automating sales activities within a firm (Lingaiah et al, 2003). Through its boundary spanning activity, sales force plays a critical role in building mutually beneficial Long-term customer relationships with clients (Weitz and Bradford 1999). SFA represents the CRM application in support of selling tasks and it is of great potential for collection and dissemination of market information and the creation of valuable customer relationships (Day, 1992). SFA encompasses a set of tools related to a variety of tasks and functions such as communication, presentation generation or customer information management.

As competition increases and technology advances, organization continues to seek ways to adjust to changing business environments. This is especially true in the personal selling context where salespeople are recognized as the boundary spanners and are expected to be relationship managers (Kotler 1994). The salesperson is constrained to do more in less time and technological advancements have become an integral part of the personal selling and sales management process. Sales technology enables sales people answering the queries of customers to effectively provide competent solutions. This can lead to strong relationship between a salesperson and customer. However, previous studies (Homburg, *et al* 2010) have shown that even superiors who have a less intense relationship with salespeople still exert a significant influence on their SFA adoption.

Kenya's insurance industry consisted of 43 insurance companies and 2 reinsurance companies licensed to operate in Kenya. In addition, there were 201 licensed brokers, 21 medical insurance providers (MIPS) and 2,665 insurance agents. Insurance policies are sold by agents who are recruited by the insurance companies and are usually not employees of these institutions. As such, agents earn on commission bases and have to work extra hard to have their commissions grow from one level to the other. The individual companies invest on SFA tools to be used by their sales team.

Taylor (1993) reports that SFA provides salespeople with faster access to information, thus reducing the time required to prepare for a client presentation and reducing the number of follow-ups when further information is requested. Verity (1993) identifies several additional benefits from SFA, including the reduction of errors common with manual sales processing, reduced support costs, improved close rates, and an increase in the average selling price through more accurate and timely pricing information. Despite the benefits, the adoption of SFA technology by the sales force continues to be sluggish.

Previous studies investigating drivers of salespeople's SFA adoption have mainly scrutinized predictors on the level of salespeople (within-level analysis). Hence, these studies have mostly neglected the social influence of coworkers' and superiors' SFA adoption on salespeople's SFA adoption (Homburg. *et al* 2010). The purpose of this study was asses the factors affecting sales force adoption of technology among insurance sales agents in Kenya. This study adopted the TAM model by (Venkatesh and Davis, 2000) which provided more detailed explanations for the reasons participants find a given system useful. This study analyzed the effect of system characteristics, ease of use, social characteristicsand organizational environment on salesperson technology adoption.

Literature Review

Theory of Reasoned Action (TRA) is a widely validated intention model that has proven successful in predicting and explaining behavior across a wide variety of domains (Fishbein and Ajzen's, 1975). Ajzen (1985) extended the theory by including another construct, perceived behavioral control, which predicts behavioral intentions and behavior. The extended model is called the Theory of Planned Behavior (TPB). Previous studies (Mathieson, 1991; Taylor and Todd, 1995; Venkatesh et al., 2000) have used the two theories for studying the determinants of Technology Adoption usage behavior.

The Technology Acceptance Model (TAM) was theoretically derived from Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), and attempts to explain the determinants of computer use across a broad range of end-user computing technologies and populations (Davis et al., 1989). TAM explains an individual's acceptance of computer technology based on two specific beliefs: perceived usefulness (i.e. the degree to which a person thinks that using a system enhances his/her performance) and perceived ease of use (i.e. the extent to which an individual believes that using the technology requires little effort). TAM theorizes that both beliefs directly determine adoption. The theory also suggests that perceived ease of use influences perceived usefulness, because, technologies that are easy to use can be more useful. In fact, the efforts saved due to easy-to-use systems may be reused to complete more work for the same overall effort (Davis et al., 1989).

SFA systems consist of centralized database systems that can be accessed through a modem by remote laptop computers using special SFA software. An SFA system also enables a salesperson to file regular reports electronically without having to travel to the central office in person. The social factors of SA-applications increase with the number of users within a focal salesperson's social environment (Markus, 1990). Secondly, social influence may be normative in nature and affects social persuasion and interpersonal communications. Demographic characteristics comprise one of the factors (other than personal and environmental) which play an important role in determining the timing of the adoption of an SFA system (Chen *et al*, 2011). This includes age, experience and education.

In sales automation user training in a system with field support have been proposed as critical success factors for intra-firm adoption. In addition,

user training is used to inculcate corporate goals and increase salespeople's motivation to adopt the technology. Personal innovativeness has a long standing tradition in the fields of marketing and innovation adoption and better realize the usefulness of these systems for their sales activities (Churchill, et.al, 1993). The concept of computer self-efficacy on how well one can execute a course of action required to deal with prospective situations is also very important in SFA (Bandura, 1986). Several studies have found empirical evidence to support the fact that self-efficacy in the domain of computer technology is significantly related to the perceptions users hold about these technologies.

Adoption of innovation is typically considered a discrete or dichotomous phenomenon (Westphal,et al.,1997). Sales force technology usage has changed the methods of selling and requires salespeople to develop a technological orientation to access, analyze, and communicate information in order to establish a strong relationship with customers (Hunter and Perreault 2007). Sales technology enables salesperson's answering the queries of customers to effectively provide competent solutions. This can lead to strong relationships between a salesperson and a customer. Thus, technology tools are used not only for smoothing the work process but they also have strategic utilizations.

The ongoing changes and challenges that characterize today's business environment have made it far more difficult for firms to compete effectively based on traditional marketing. As a consequence, we have begun to witness a transition wherein firms are extending their focus from simply selling to business customers to serving them more effectively in different ways (Parasuraman and Grewal 2000). This transition includes the dramatic growth and use of customer relationship management (CRM) technology to building a competitive strategy (Musalem and Joshi 2009). The tremendous growth in CRM and sales force automation (SFA) systems that integrate tools such as planning and product configuration to make salespeople more efficient and effective (Moutot and Bascoul 2008) and the successfully adoption help firms exploit their sales force capability and enhance selling techniques, thereby increasing performance (Hollenbeck et al. 2009; Rapp et al. 2010).

Research Methodology

The study adopted explanatory research design in order to establish causal relations between the variables. This study used primary data which was obtained from sales agents in the insurance industry. The population was 2665 registered insurance sales agents as per the Insurance Regulatory Authority (2013). Using stratified random sampling a sample of 173 sales agents was taken and respondents issued with questionnaires adopted and modified from previous studies. From the questionnaires issued, 163 were accepted and seven (7) questionnaires were rejected because they were incomplete leaving 156 usable.

There were four independent variables in the study. System characteristics variable has two sub-constructs; Perceived usefulness and perceived ease of use and were measured using a Likert scale. Salesperson characteristics variable also has two sub-constructs, innovativeness and computer self-efficacy, and was measured using a likert scale. While organizational facilitators variable has two sub-constructs, user training and technical support, measured through a likert scale. The fourth variable of social influence was measured with a likert scale addressing peer usage among other sales agents. The dependent variable was a binary measure of usage or not using SFA systems.

A Logit model was used to determine the effects of the study variables. The major focus of the study was the likelihood or probability of the outcome, that is, whether the respondent had adopted technology or not,. The binary response in this study was whether the respondent had adopted technology ("Success") or had not adopted technology (failure) and the analytical model was as follows: Logit $P(Y) = \alpha + \sum \beta_i X_i + \mu_i$

Where:

Y_i = 1 if success (respondent has adopted technology

0 if failure (respondent has not adopted technology α =
Constant term

β_i's = Logistic coefficients for the independent variables μ_i =
Error term

X_i's = Independent variables such that:

X_1 = social characteristics X_2 = system characteristics

X_3 = organization facilitators X_4 = Salesperson characteristics.

Results
A total of 163 questionnaires were received out of the possible 173. Out of the 163, seven questionnaires were rejected because they were incomplete. The respondents had only answered the personal information section and the rest of the questions were left un- answered.

The majority of the insurance sales agents who responded were between the age of 26 – 35 years (65,4%), only 16% of the respondents were above age of 36 years. Most (57.7%) of the insurance agents are diploma holders with 7.1% are degree holders and the rest 35.3 % only had secondary level education. The results indicate that most (74.4%) agents had only three years in the profession due to the fact, sales agents do not work for long, they opt to look for other jobs.

Descriptive Statistics
The results indicate that the majority of the respondents had not adopted technology (mean 1.4786, sd .37898) in their selling process. The respondents perceived that it is not very difficult to use. The results indicated that a few agents would experiment on a new technology while it was clear that a few would really innovate on information technology. The results indicated that majority of the sales agents computer efficacy was high with the mean being above 50% on all items that were being measured. The results indicated that majority of the sales people in the insurance industry actually do receive training on the usage of SA-tools of their organizations.

Sales agents work in teams and so there is a lot of influence from the peers. This was confirmed by the analysis done in that above 50% of the sales agents do make use of the SA tools and influences others to follow suit. The support given by the management is quiet good; with above 50% of those interviewed feeling that enough support is given. Insurance sales agents really do require a lot of technology in their selling process; here the results indicated that they

have adopted technology differently. Less than 50% (mean = 1.4786) of all those interviewed uses the companies SA tools frequently. Some of the sales agents fully use the capabilities of the SA program of their companies.

Table 1: Descriptive Statistics of the study Variables

Variable	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
System Characteristics	3.0248	.49588	-.170	.194	-.355	.386
Salesperson Characteristics	3.5874	.24431	1.216	.194	5.682	.386
Organization Facilitators	3.9268	.90138	-.217	.194	-.774	.386
Social Characteristics	3.1453	1.08570	-.689	.194	-.468	.386
Tech Adoption	1.4786	.37898	.147	.194	-1.380	.386

Source: Research Data (2013)

Relationships

The correlation results (Table 2) show that the four variables identified affecting technology adoption were correlated. Technology adoption has a significant relationship with organizational (p .409) and social (p .304) factors. The relationship with system characteristics was not significant. The results indicated that salesperson characteristics negatively (p -.133) influenced the adoption behavior of the insurance salespeople. The results also show a negative relationship with social and organization characteristics. This implies that sales agents who have advanced in agents or with many years' experience were not willing to change and start using new technologies.

Table 2: Correlation Analysis

Pearson Correlation	Organizational Factors	System Characteristics	Social Characteristics	Salesperson Characteristics	adoption
Organizational factors	1				
system characteristics	.414**	1			
social characteristics	.785**	.304**	1		
salesperson characteristics	-.325**	-.143	-.280**	1	
Adoption	.409**	.086	.304**	-.133	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data 2013

Logit Regression

A logit regression was run to test how various variables affect technology adoption. It was realized that among the four independent variables, the organization variable positively affects the technology adoption of sales agents, while social characteristics and system characteristics affected technology adoption slightly and salesperson characteristics do not have a positive effect on the adoption of technology. The results, it was clear that the sales agents have not used their sales automation capabilities fully because $Y=0.26004452$ which is closer to 0. This showed that the four variables identified in this study influence technology adoption. The results were as shown in table 3.

Table 3: Marginal effects after Logit

y =Pr (techadoptionnew4) (predict) = Y = 0.26004452

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
zorgan~s	-.2531228	.08667	-2.92	0.003	-.423	-.083246	-.004102
zsyste~s	.098604	.051482	1.92	0.055	-.002303	.199511	.003576
zsocia~t	-.0100023	.06245	-0.16	0.873	-.132397	.112392	-.00508
ZSales~r	-.1126984	.08764	-1.29	0.198	-.284465	.059068	-.121806
_Iage_2*	.0135901	.13833	0.10	0.922	-.257526	.284706	.322581
_Iage_3*	-.0255411	.14553	-0.18	0.861	-.310718	.259636	.335484
_Iage_4*	-.0273162	.11849	-0.23	0.818	-.259555	.204922	.16129
_Ieduc~2*	.1846403	.09342	1.98	0.048	.001535	.367745	.574194
_Ieduc~3*	.5155765	.16904	3.05	0.002	.184264	.84689	.070968
_Iexpe~2*	.1704035	.16131	1.06	0.291	-.14575	.486556	.206452
_Iexpe~3*	-.1212711	.15866	-0.76	0.445	-.432235	.189693	.051613

(*) dy/dx is for discrete change of dummy variable
from 0 to 1

The study results show that organizational factors, social and system characteristics do affect technology adoption among insurance agents and that the salesperson characteristics negatively influence technology adoption among insurance agents. The factors that really affect the technology adoption include the age and education levels of the insurance agents. The young people seemed to integrate technology into their work while the old were glued to the old selling methods. It was also noted that the sales agents have not adopted technology in their sales activities as it is supposed to be.

Conclusions

The findings of this study show the challenges in automation of sales force activities. Like in previous studies (Chen et al, 2011), conscientiousness is positively related to the efficient use of sales force automation (SFA) for planning and territory management. Although the benefits of SFA are clear, management require to provide user support. Users of SFA can produce sales forecasts and analyze reasons for won and lost opportunities. In addition sales automation software enables sales representatives to manage their client's lists contacts, products, price lists, orders, documents and electronic mail from remote regions. The SFA also lower the cost of leads and sales, enhancing teamwork

and productivity, improving customer satisfaction and retention, facilitating communication with the office and instantaneous forecasts.

There is need to carry out a continuous training needs assessment to be able to know the gap between what the sales agents already know and what they ought to know so that any time there is a gap, a training session should be carried out in order for them to appreciate and embrace technology. Prior research provides strong conceptual as well as empirical evidence for within-level relationships at

the salespeople's level (Venkatesh, 2002).

The findings demonstrate that coworkers' and superiors' SFA adoption has a positive effect on subordinates' SFA adoption which goes beyond the commonly tested determinants (Homburg, 2010). Sales people work in teams, and such, it is recommended that the management should really try to ensure that the teams are cohesive and they should also come up with team building strategies which will enable the members in various teams to share their experiences and will develop each other as far as technology usage is concerned. Such strategies include holding team building meetings away from the normal working environment.

The management of insurance companies should ensure installations of SFA tools in their companies in order to reap its benefits which will surpass the initial costs. Sales force automation maintains records of customers and allows sales managers to track the activities of their sales people. It also helps sales representatives sell more consultatively by providing survey questions to access customer needs, and helps to attract new representatives to the firm. Other benefits of SFA are faster feedback to the marketing department of product/ service, problems encountered by customers, more accurate pricing and ordering process and the provision of a central database of customer profile.

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