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If one Steps out of the Phalanx

Analyzing leaders' influence on sales force automation adoption with a quadratic dataset

Mannheim 2009

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ABSTRACT

The implementation of sales force automation applications (SFA) often fails owing to the lack of adoption by salespeople. 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. We introduce a new perspective using a multilevel framework of SFA adoption at several hierarchical levels. The findings demonstrate that coworkers' and superiors' SFA adoption has a positive effect on subordinates' SFA adoption which goes beyond the commonly tested determinants. Also, results reveal differences among predictors of the Technology Acceptance Model (within-level effects) examined at three different hierarchical levels.

CONTENTS

1 Introduction

In a world of overwhelming amounts of data to be accessed, analyzed, and communicated by salespeople, managers widely provide their sales forces with applications of sales force automation (SFA) tools (Hunter and Perreault 2007). This is because managers hope that the automation of salespeople enhances their performance. Therefore, managers dedicate huge financial resources to SFA tools which, however, often go hand in hand with failure rates of 55-75% of such projects.

The major reason for such failure rates seems to be that the sales forces frequently reject the new sales technologies. In search of explanations of such low adoption rates, early research investigated drivers of SFA adoption. Based on the Technology Acceptance Model (TAM) elaborated by Davis (1989), previous studies primarily dealt with features of the new SFA tool, such as perceived ease of use and perceived usefulness and the provision of training and support on SFA usage (e.g., Ahearne et al. 2005; Jelinek et al. 2006; Jones et al. 2002).

In addition to these predictors, it seems reasonable that adoption behavior does not occur in a vacuum but rather takes place in a social environment (e.g., Burkhardt 1994; Kraut et al. 1998). Nevertheless, only a small number of sales technology studies address the question of whether interaction with the social environment - such as coworkers or superiors - also influences individuals' SFA adoption decisions. However, the few existing studies almost exclusively tested models at a single level of analysis using self-reported measures of salespeople. Consequently, research to date was mostly not able to capture potential coworker effects as well as cross-level effects that superiors' SFA adoption may have on their subordinates' SFA adoption.

Hence, the purpose of the present study is to develop and empirically test a multilevel model reflecting influences of coworkers and superiors on salespeople's SFA adoption by using data from three hierarchical levels. Thereby, the key proposition of our model is that, to achieve salespeople's SFA adoption, adoption is necessary by direct (e.g., sales managers) and higher level superiors (e.g., regional managers) as well as coworkers. This multilevel approach should yield "a deeper, richer portrait of organizational life – one that acknowledges the influence of organizational context on individuals' actions and perceptions" (Klein et al. 1999, p. 243) and should help to shed further light on salespeople's SFA adoption.

2 Deriving a multilevel framework

Figure 1 depicts our conceptual framework. Besides the well known within-level effects elaborated within the TAM, the figure illustrates the occurrence of a *vertical cascade* by demonstrating that the SFA adoption is sequentially conveyed from regional managers via sales managers to salespeople. We therefore adopt the view that in a sales organization, which consists of decentralized sales units subject to a regional manager, regional managers will decide first on the implementation of a new sales technology with subordinates (i.e., sales managers and salespeople) subsequently becoming aware of the adoption behaviors of their superiors as well as of their coworkers (Leonard-Barton and Deschamps 1988). This awareness, in turn, "can influence the attitudes they adopt and the behaviors in which they elect to engage" (Rapp et al. 2008, p. 13).

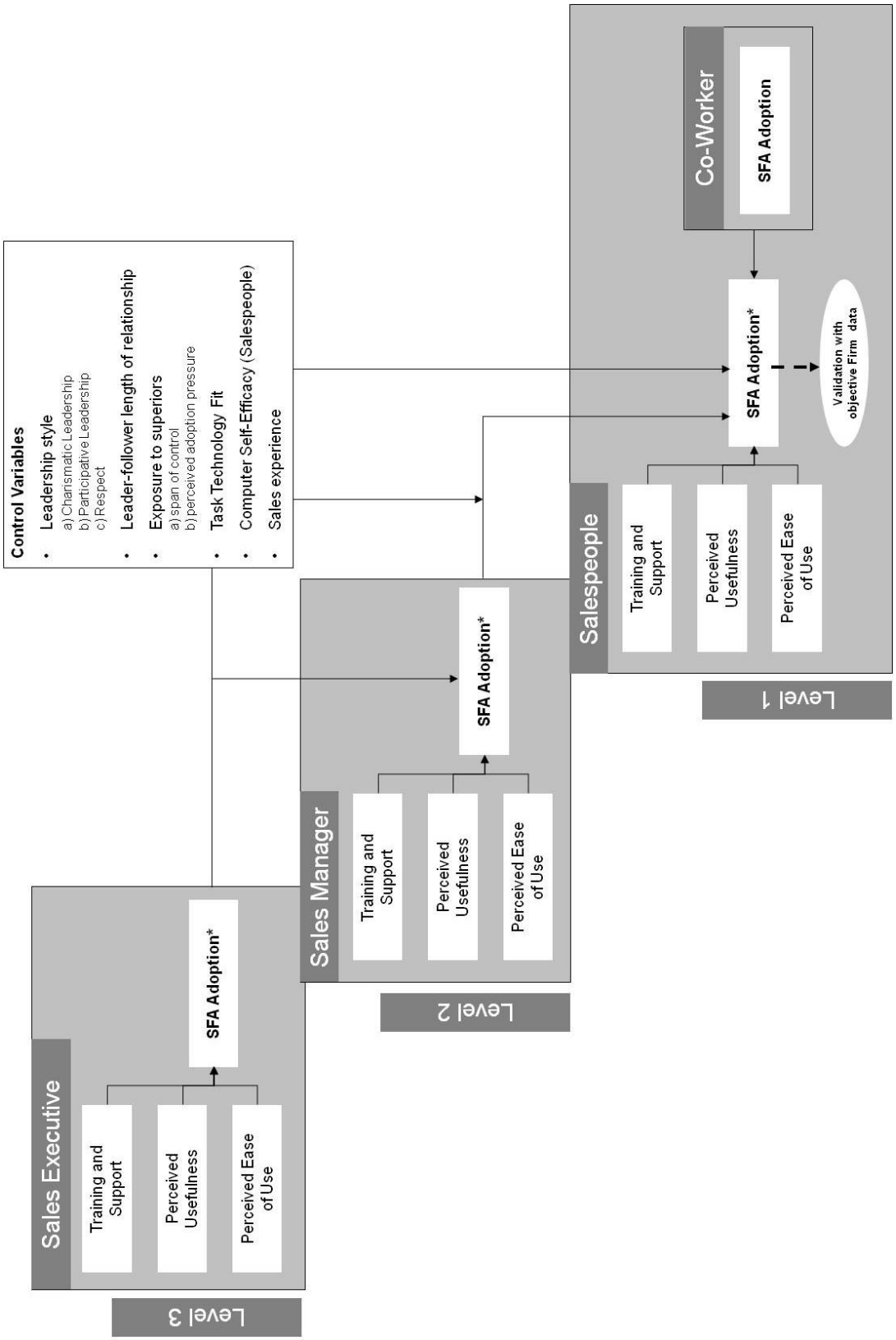

Figure 1: Research Framework

* SFA adoption was measured with an attitudinal as well as a behavioral measure. In our study, both measures have a strong correlation ranging from .70 to .75 ($p < .01$) on the three hierarchical level

3 Hypotheses development

3.1 Effects related to TAM at the individual level

Prior research provides strong conceptual as well as empirical evidence for within-level relationships at the salespeople's level (e.g., Ahearne et al. 2005; Speier and Venkatesh 2002). Therefore, we straightly adopt the existing hypotheses as stated in previous literature (e.g., Jelinek et al. 2006; Jones et al. 2002; Schillewaert et al. 2005).

***H1**: The SFA adoption is higher the higher is*

a) perceived usefulness of the SFA tool,

b) perceived ease of use of the SFA tool, and

c) perceived extent of training and support.

3.2 Effects related to coworkers' social influence

The influence of coworkers' use which we define "as the extent to which a focal salesperson's colleagues in the organization employ the company's SFA tool" (Schillewaert et al. 2005, p. 328) can take many forms. On the one hand, it can stem from direct persuasion by overt statements and recommendation to use the new SFA tool (e.g., Salancik and Pfeffer 1978). On the other hand, coworkers' social influence can encourage SFA adoption indirectly through the mechanism of social learning, e.g., by calling an individual's attention to specific features of the tool, by hearing others talk about a new SFA tool (e.g., Kraut et al. 1998; Schmitz and Fulk 1993) or by observing a specific SFA-related behavior or consequences of this behavior (Bandura 1977). Hence, we expect that coworkers' SFA adoption will affect an individual salesperson's SFA adoption over and above the hypothesized impact of the major determinants of the TAM (cf. H1). We hypothesize:

***H2**: The SFA adoption of coworkers has a positive influence on salespeople's SFA adoption which goes beyond the previously hypothesized TAM-variable effects.*

3.3 Effects related to superiors' social influence

"Without management advocacy and involvement, the full benefits of the innovation or technology are unachievable" (Rapp et al. 2008, p. 13). In this vein, regional managers and

sales managers tend to support and encourage salespeople to use the SFA (Avlonitis and Panagopoulos 2005; Leonard-Barthon and Deschamps 1988). Hence, managers can assume a major role in the SFA acceptance process by championing the adoption of the technology.

To explain superiors' social influence on subordinates' SFA adoption, we rely on Deutsch and Gerard's (1955) theory of informational and normative social influence. Similar to coworkers' informational influence, superiors can also have a verbal effect on salespeople's SFA adoption since superiors and subordinates communicate about a new SFA tool as well. Thus, when sales managers or regional managers emphasize the benefits and minimize the drawbacks of the new SFA tool, they can have a strong impact on subordinates' adoption through "persuasive communication" (Leonard-Barton and Deschamps 1988).

In addition, social information can signal the direction of an attitudinal norm (Fishbein and Ajzen 1975). Being exposed to a subjective norm implies that a person's behavior may also be influenced indirectly by other individuals, such as an individual inferring that others think he or she should use a SFA tool (Venkatesh and Davis 2000). In this way, salespeople may adopt the new SFA tool if they believe their supervisors expect them to do so. For this reason, we expect that superiors' SFA adoption will affect subordinates' SFA adoption over and above the hypothesized impact by the major determinants of the TAM (cf. H1). We hypothesize:

H3a: *The SFA adoption of a sales manager has a positive influence on salespeople's SFA adoption which goes beyond the previously hypothesized TAM-variable effects.*

H3b: *The SFA adoption of a regional manager has a positive influence on salespeople's SFA adoption which goes beyond the previously hypothesized TAM-variable effects.*

H3c: *The SFA adoption of a regional manager has a positive influence on sales managers' SFA adoption which goes beyond the previously hypothesized TAM-variable effects.*

3.4 Interaction effect related to both superiors' SFA adoption

Another key notion of our framework is that if one superior rejects the new SFA tool (i.e., either a sales manager or regional manager), the SFA adoption by salespeople will decrease accordingly. This means that the impact of sales managers' adoption on salespeople's SFA-related decision is nested within the regional managers' SFA adoption or rejection decision.

Hence, we suppose that sales managers' effect on salespeople's adoption is affected by the SFA adoption of their superordinate regional managers (Tangirala et al. 2007).

We base this idea on the concept of informational cascades (Banerjee 1992; Bikhchandani et al. 1992) as it explains how unanimous SFA adoption decisions of superordinates can influence salespeople's SFA adoption. More specifically, an informational cascade relates to the occurrence of a sequence of identical choices through the observation and imitation of previous decisions, i.e., through the observation of the SFA adoption made first by regional managers, followed by sales managers and subsequently by salespeople. This can happen because decision makers are inclined to ignore their 'private information' (e.g., low degree of perceived ease of use of the new SFA tool) and rely exclusively on the information obtained by the action of their predecessors (e.g., previous adoption by sales executive and sales manager; Banerjee 1992; Bikhchandani et al. 1992).

Such a behavior has several possible explanations. People analyze "similar information [e.g., the new SFA tool is useful], face similar alternatives [e.g., adoption or rejection of the new SFA tool], and face similar payoffs [e.g., performance benefits due to SFA usage]. As a result, they make similar choices [e.g., adoption of the new SFA tool]" (Bikhchandani et al. 1998, p. 152). In particular, salespeople will obtain information concerning the new SFA tool from either sales managers and/or regional managers. Thus, similar information is conveyed from superiors to subordinates, which eventually leads to an informational cascade (e.g., Scharfstein and Stein 1990). In keeping with the saying "four eyes see more than two" regional managers' SFA adoption can increase the impact of sales managers' SFA adoption on salespeople's decision by legitimizing their subordinates' behavior. In sum, we propose:

H4: *There is an interactive effect of regional managers' and sales managers' SFA adoption on salespeople's SFA adoption, such that the SFA adoption at the level of the salespeople will be highest when both regional managers and sales managers adopt the SFA tool.*

3.5 Control variables

Besides the factors examined in the previous sections, other factors can enhance or impede the SFA adoption by the sales force. As we have argued that superiors' behavior affects salespeople's adoption, we consider it essential to control for charismatic, participative, and

respectful leadership style (e.g., Mathieu et al. 2007). Other control variables which we account for relate to the length of relationship between our interaction partners (Sallee and Flaherty 2003), span of control (number of persons a manager supervises), perceived adoption pressure (as opposed to adoption voluntariness; Moore and Benbasat 1991), computer self-efficacy (an individual's belief of capabilities to perform a specific task using a computer; Compeau and Higgins 1995), and sales experience (e.g., Speier and Venkatesh 2002). Finally, we controlled for Goodhue and Thompson's (1995) concept of Task Technology Fit, which "predicts that individuals' use of IT affects their performance and that the performance benefits will be greater if the IT fits the task" (Ahearne et al. 2008 pp. 672). Consequently, when a technology matches its organizational environment an individual can perform a particular task more effectively and more efficiently (Mathieson and Keil 1998). Previous research has found a positive impact of task technology fit on technology use and on salespeople's sales performance (e.g., Ahearne et al. 2008). Hence, task technology fit plays an important role in salespeople's SFA-related behavior.

4 Methodology

4.1 Collection of a four-source dataset

The context of the study is a large travel agency franchise system that introduced a new SFA tool. We chose a franchise context as it represents a typical sales organizational structure, exhibiting a close relationship between all interaction partners in a sales office. In addition, our research setting exhibits features of a decentralized sales unit, with its own management, which can also be found in insurance companies, banks and financial service providers, pharmaceutical firms, supplier firms in B2B industries, and retailing companies.

In our research setting, salespeople could freely choose whether and to what extent they would employ the new SFA tool during a sales operation, although the implementation process took place from top to bottom. The main objective of the SFA tool was to simplify and automate the booking processes of journeys and flights. As a secondary objective, the management pursued the simplification of the accounting process, since a back office system has also been integrated in the new SFA tool.

Data for the study were collected in several stages. First, a qualitative study was conducted

with five sales managers and 20 salespeople. The aim of this pre-study was to gain an additional understanding of the SFA issue and to clarify concepts and appropriate construct measurement. Second, data were collected via a postal survey, which took place four months after the SFA introduction. We were able to work with matched (via codes) data from 22 regional managers (response rate: 96%), 416 sales managers (response rate: 39%), and 1040 salespeople (response rate: 30%). Additionally, six months after the collection of sales members' SFA adoption data, information on objective SFA usage relating to a six month period has been recorded by the travel agency company.

Tests showed no significant differences between the responses from early versus late respondents on all of our major constructs as well as on key demographic variables, thus suggesting that non-response bias is not a problem in our data (Armstrong and Overton 1977).

4.2 Measure development and assessment

The measurement scales for this study were inspired by the existing literature with modifications originated from the extensive qualitative pre-study as needed to fit the study's context. In addition, we calculated coworkers' influence by the average SFA adoption of the other salespeople within a travel agency. The appendix provides an overview of items used in the quantitative study. We assessed the discriminant validity of the construct measures using the criterion proposed by Fornell and Larcker (1981). All constructs passed this test.

5 Results

5.1 Analytical Approach

Owing to the multilevel data structure in the present study, we employed hierarchical linear modeling (HLM) (e.g., Raudenbush and Bryk 2002) to test our hypotheses. We conducted these analyses using the MLwiN software (Version 2.0) as it allows for analyzing multilevel data sets. It also enables us to conduct a simultaneous test of the major determinants of the classical TAM, coworkers', and superiors' influence on SFA adoption in one HLM model.

Table 1: Estimated Path Coefficients for Sales Force Automation Adoption

Dependent Variable	Salespeople's SFA Adoption		Sales Managers' SFA Adoption		Regional Managers' SFA Adoption	
	Unstandardized Coefficient (Standard Errors)	*Standardized Coefficient*	*Unstandardized Coefficient (Standard Errors)*	*Standardized Coefficient*	*Unstandardized Coefficient (Standard Errors)* [a]	*Standardized Coefficient* [a]
Within-Level-Predictors						
Perceived usefulness	.440(.037)**	.34**	.493(.030)**	.47**	.476 (.020)**	.60**
Perceived extent of training and support	.106(.038)**	.09**	.095(.027)**	.10**	.343 (.021)**	.41**
Perceived ease of use	.094(.038)**	.10**	.340(.028)**	.38**	.178 (.026)**	.26**
Coworkers' SFA adoption	.290(.044)**	.25**				
Sales experience (control variable)	-.013(.059)	-.06	.028(.027)	.03	-.112 (.018)**	-.38**
Perceived adoption pressure (control variable)	-.064(.038)*	-.07*	-.010(.025)	-.01	-.119(.022)**	-.20**
Task technology fit (control variable)	.135(.037)**	.12**	-.001(.026)	-.01	.313(.019)**	.41**
Computer self-efficacy (control variable)	-.029(.035)	-.02				
Relationship length: salesperson – sales manager (control variable)	-.006(.055)	-.02				
Relationship length: salesperson – regional manager (control variable)	.030(.046)	.05				
Relationship length: sales manager – sales manager (control variable)			-.024(.034)	-.05		
Cross-Level-Predictors						
Sales manager's SFA adoption	.273(.045)**	.23**				
Sales manager's charismatic leadership style (control variable)	-.086(.045)*	-.05*				
Sales manager's participative leadership style (control variable)	.010(.042)	.01				
Sales manager's respect (control variable)	.035(.049)	.02				
Sales manager's span of control (control variable)	-.091(.036)**	-.16**				
Regional manager's SFA adoption	.127(.053)**	.09**	.156(.059)**	.13**		
Regional manager's charismatic leadership (control variable)	-.039(.046)	-.02	-.051(.060)	-.03		
Regional manager's participative leadership (control variable)	.062(.041)	.04	.025(.056)	.02		
Regional manager's respect (control variable)	-.048(.039)	-.02	-.016(.054)	-.01		
Regional manager's span of control (control variable)	.007(.033)	.18	-.130(.054)**	-.09**		
Sales manager's SFA adoption x Regional manager's SFA adoption	.339(.055)**	.19**				

[a] based on ordinary least squares (OLS) regression; * $p < .05$ ** $p < .01$

Notes: Significance is based on one-tailed tests; We tested the model with, and without, the inclusion of our control variables and found similar results for the hypothesized relationships.

5.2 Results related to hypotheses testing

The results of our hypothesis testing are displayed in table 1. In accordance with prior research in this field, H1 is largely corroborated. In terms of social interaction effects, we first proposed a positive influence of coworkers' adoption on an individual salesperson's SFA adoption (H2). In congruence with our reasoning, our results display a significant positive relationship ($b = .25$, $p < .01$).

Second, at the salespeople's level, we find a significant influence of both the superior sales manager's SFA adoption ($b = .23$, $p < .01$) as well as the regional manager's SFA adoption ($b = .09$, $p < .01$) on salespeople's SFA adoption. That is, in support of H3a and H3b, SFA adoption on both superior levels directly influences the SFA adoption of salespeople.1 At the level of sales managers, we find support for H3c, which states that their SFA adoption is significantly related to regional managers' SFA adoption ($b = .13$, $p < .01$).

Third, we also find support for the hypothesized cross-level interaction effect of sales managers' and regional managers' SFA adoption ($b = .19$, $p < .01$) on salespeople's SFA adoption. The pattern of the interactive effect is in line with our theoretical reasoning. The highest level of salespeople's SFA adoption is reached if both superior levels indicate a high SFA adoption. Moreover, sales managers' adoption only exerts influence on salespeople's SFA adoption if it is coupled with a high level of regional managers' SFA adoption.

To test whether these effects have an impact over and above the TAM variables' effects, we first calculated an HLM model which contained only TAM variables. Second, we calculated an HLM model which additionally included the coworkers' SFA adoption (χ2diff (Δ df = 1) = 405.52, $p < .01$). Third, superiors' SFA adoption variables were added. Afterwards, we tested whether the model fit had significantly improved with the inclusion of coworkers' and superiors' SFA adoption (χ2diff (Δ df = 3) = 60.12, $p < .01$).

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1 Our theory and empirical models assume a unidirectional causal relationship between sales manager's SFA adoption and salespeople's SFA adoption. To test the possibility of reversed causality we calculated a nonrecursive model with both paths tested simultaneously. This procedure is applicable if there is an additional exogenous variable that correlates with one of the predictors and not with the other (Kline 2005). In principle, any variable that explains variance in the one but not the other latent factor can be used. Organizational identification of the manager (we used one item "When I talk about [organization's name], I usually say 'we' rather than 'they'") proved to be such a variable; it was significantly related to sales manager's SFA adoption but not to salespeople's SFA adoption. Using AMOS 16.0 we calculated a model with sales manager's SFA adoption and salespeople's SFA adoption as latent variables. Finally, we entered organizational identification of the manager as the additional exogenous variable. As predicted, the path from sales manager's SFA adoption to salespeople's SFA adoption was significantly larger ($ß = .38$, $p < .01$), than the opposite path ($ß = .04$, n.s.). Finally, a model with a path from sales manager's SFA adoption to salespeople's SFA adoption fits much better than one with a path from salespeople's SFA adoption to sales manager's SFA adoption (1, $\Delta\chi^2 = 7{,}97$).

6 Discussion

6.1 Research issues

This study makes two major contributions to SFA research. First, with respect to superiors' social influence, previous sales technology studies have mainly treated managerial impact as a horizontally influencing, subjective norm predictor based on the individual salesperson's perceptions. Our study challenges these assumptions by showing that a strong effect originates from superiors' adoption on salespeople's (sales managers') SFA adoption. Furthermore, our results provide evidence that even superiors who have a less intense relationship with salespeople still exert a significant influence on their SFA adoption. Regional managers obviously function as a contingency factor for the effectiveness of direct leaders. Knowledge with respect to the impact exerted in such further distance leader-follower relations is very scarce in the sales as well as in the marketing literature. We therefore believe that our results can provide some first important insights into this research area. Besides, we find support for a cross-level interaction effect. This non-trivial finding emphasizes the need for further research with respect to the role of higher level leaders.

Second, we consider our results of TAM variables examined at three distinct hierarchical levels also worth mentioning, as these predictors have only been tested at the salespeople's level by previous research. Our results provide evidence that among the TAM predictors, especially perceived usefulness proved to be a key determinant of SFA adoption. Additionally, with respect to the differences of the TAM effects, our findings suggest that all examined TAM predictors have an increased impact the higher the hierarchical level. Against this background, we believe that we have taken first steps into a research area largely neglected by previous studies.

In sum, our empirical findings show that within-level effects proposed by the TAM are indeed very important for SFA adoption among salespeople, sales managers, and regional managers, but cannot sufficiently explain this phenomenon alone. Rather, social influence, and particularly cross-level effects, need to be considered. More precisely, social influence effects may overlay the impact of the TAM variables on salespeople's SFA adoption. Hence, by hypothesizing and testing coworkers' and superiors' influence and more importantly, cross-level effects exerted by superiors' SFA adoption on salespeople's SFA adoption which go beyond the frequently tested (within-level) determinants of the Technology Acceptance

Model, our study enriches existing theories of SFA adoption. Based on the findings of this study, we encourage further research in SFA adoption to theorize and evaluate multi- and cross-level SFA adoption models. Also, it would be interesting to learn more about the mechanisms why co-workers have an influence. In addition, future research should further investigate the differential impact of the TAM variables on different hierarchical levels while controlling for social influences.

6.2 Managerial implications

The key finding of managerial relevance is that managers must recognize the stealthy impact of others' decisions on their own and their subordinates' choices. Leaders must be aware that superiors' as well as coworkers' SFA adoption affects salespeople's SFA adoption. Thus, top managers should strive for the adoption of a new SFA tool at several hierarchical levels. Consequently, the same attention needs to be directed to salespeople's superiors as to the sales force itself.

In addition, salespeople's SFA adoption will rank highest when all leaders are on board. Against this background, however, superiors' conviction with respect to the benefits gained by the new SFA tool must also be taken into account. As we find evidence for an even stronger effect of the provision of training and support to superiors than to salespeople, we caution managers not to neglect efforts directed toward these groups. In practical terms, what is good for salespeople's SFA adoption can also be beneficial to superiors' SFA adoption.

Finally, our results indicate that perceived usefulness and ease of use exert a stronger influence on the sales manager and regional manager level than on the usually investigated sales force level. Therefore, our final managerial implication is that SFA vendors must specifically emphasize the usefulness and ease of use of SFA tools to sales managers and regional managers just as they do to salespeople.

Appendix

Construct and Items	Hierarchical level	Mean	SD	CD	CR	AVE
SFA adoption (attitude)[1] adapted from Davis 1989; Davis et al. 1989						
My personal attitude concerning the new SFA tool is that its usage is (1) "bad", (7) "good"; (1) "unfavorable", (7) "favorable"; (1) "negative", (7) "positive"; (1) "unimportant", (7) "important"	**Salespeople**	4.89	1.38	.94	.94	.79
	Sales Manager	5.07	1.23	.92	.92	.75
	Regional Manager	5.64	.85	.93	–[2]	–[2]
SFA adoption (behavior)[1] new scale inspired by Davis et al. (1989)						
▪ I use the new SFA tool as often as possible. ▪ I use the new SFA tool most often in my operations. ▪ I use the new SFA tool rather seldom compared to other SFA tools. [rc] ▪ I do not use the new SFA tool since I cannot benefit from its usage. [rc] ▪ I do not use the new SFA tool since I am afraid of making a mistake during my operations. [rc]	**Salespeople**	4.96	1.39	.85	.85	.56
▪ I take care that my employees / sales managers and their employees use the new SFA tool as often as possible. ▪ I instruct my employees / sales managers and their employees to use the new SFA tool. ▪ I support and train my employees / sales managers and their employees in the usage of the new SFA tool.	**Sales Manager**	5.11	1.17	.86	.86	.52
▪ I recommend the usage of the new SFA tool to my employees / sales managers and their employees. ▪ I do not recommend the usage of the new SFA tool to my employees / sales managers and their employees since it does not provide any benefit. [rc] ▪ I do not recommend the usage of the new SFA tool to my employees / sales managers and their employees since I worry that they will make a mistake during its application. [rc]	**Regional Manager**	5.18	.98	.80	–[2]	–[2]
Perceived usefulness[1] inspired by Davis (1989); Venkatesh and Davis (2000)						
The usage of the new SFA tool in our travel agency / by sales managers and their employees... ▪ … enhances long-term customer satisfaction. ▪ ... enhances long-term customer loyalty. ▪ ... increases profit of the company. ▪ … makes the travel agencies more successful. ▪ ... increases stress in my work. [rc]	**Salespeople**	2.46	1.06	.89	.90	.56
	Sales Manager	3.95	1.12	.88	.89	.54
	Regional Manager	3.60	1.24	.70	–[2]	–[2]
Perceived ease of use[1] new scale inspired by Davis (1989)						
▪ If I put all my efforts in it, I can use the new SFA tool. ▪ If I try, I succeed in using the new SFA tool for all my sales activities. ▪ Concentrating on the new SFA tool's usage, it is no problem for me to use it.	**Salespeople**	4.28	1.45	.69	.72	.47
▪ Ensuring the usage of the new SFA tool is not a huge deal when I concentrate on that issue. ▪ It is easy for me to motivate my employees / my sales managers and their employees to use the new SFA tool. ▪ If I make an effort the new SFA tool is often used in my travel agencies / by my sales managers and their employees.	**Sales Manager**	4.94	1.32	.80	.80	.55
	Regional Manager	4.32	1.45	.85	–[2]	–[2]

Construct and Items	Hierarchical level	Mean	SD	CD	CR	AVE
Perceived extent of training and support[1] inspired by Goodhue and Thompson (1995); Thompson and Higgins (1991)						
During the implementation stage of the SFA tool... ▪ … I was provided with detailed training. ▪ … I was regularly provided with advice and tips for its usage. ▪ ... I was provided with sufficient information by my company. ▪ ... I was provided with support by my company. ▪ ... there has been the possibility to receive adequate support in case of doubt. ▪ ... I was provided with support by my sales manager / my company. ▪ ... I was provided with information by my sales manager / my company.	**Salespeople**	3.31	1.16	.85	.85	.47
	Sales Manager	3.13	1.17	.87	.87	.58
	Regional Manager	2.99	1.18	.83	–[2]	–[2]
Coworkers' SFA adoption:						
Average SFA adoption by other salespeople within a travel agency	**Salespeople**	4.94	1.19			
Sales experience (in years)	**Salespeople**	6.87	6.53	–	–	–
	Sales Manager	12.94	8.37	–	–	–
	Regional Manager	5.74	3.30	–	–	–
Length of relationship with Sales Manager (in years)	**Salespeople**	5.43	4.57	–	–	–
Length of relationship with Regional Manager (in years)	**Salespeople**	3.77	2.42	–	–	–
	Sales Manager	4.76	2.44	–	–	–
Charismatic leadership style[1] inspired by Conger and Kanungo (1994)						
▪ I am very successful in inspiring my employees / my sales managers and their employees for a shared vision. ▪ I can inspire my employees / my sales managers and their employees even on bad days. ▪ In difficult times I find it easy to convey a sound optimism to my employees / my sales managers and their employees. ▪ I have a vision that I try to achieve with creative ideas. ▪ I provide inspiring strategic and organizational goals. ▪ I permanently create new ideas to make my travel agencies ready for the future. ▪ I am an entrepreneurial person and readily take opportunities. ▪ I recognize new opportunities in the market that may facilitate our achievement of organizational objectives. ▪ I am able to motivate my employees / my sales managers and their employees by articulating effectively the importance of what they are doing. ▪ I am a convincing representative to the external public.	**Sales Manager**	5.35	.86	.91	.91	.50
	Regional Manager	5.80	.70	.88	–[2]	–[2]
Participative leadership[1] inspired by Arnold et al. (2000)						
I discuss freely all up-coming, important decision with my employees / my sales managers and their employees.	**Sales Manager**	5.67	1.29	–[2]	–[2]	–[2]
	Regional Manager	5.50	.96	–[2]	–[2]	–[2]

Construct and Items	Hierarchical level	Mean	SD	CA	CR	AVE
Respect[1] adapted from Tyagi (1985)						
▪ I show my employees / my sales managers and their employees that I respect their work. ▪ I show my employees / my sales managers and their employees that I respect their ideas. ▪ I am eager to recognize and reward good performance. ▪ I show my employees / my sales managers and their employees that I appreciate them as members of the company.	**Sales Manager**	6.19	.89	.92	.93	.76
	Regional Manager	6.43	.57	.87	–[2]	–[2]
Perceived adoption pressure[1] adapted from Moore and Benbasat (1991)						
▪ The headquarters urges me to adopt SFA tool	**Salespeople**	3.59	1.58	–	–	–
▪ The headquarters urges me to adopt SFA tool	**Sales Manager**	3.89	1.62	–	–	–
▪ The headquarters urges me to adopt SFA tool	**Regional Manager**	4.05	1.68	–	–	–
Task Technology Fit[1] new scale						
The usage of the new SFA tool matches my tasks / the tasks of my employees due to ▪ its operation speed ▪ possibility to find cheaper flights than with alternative systems ▪ few system errors	**Salespeople**	3.59	1.27	.69	.70	.44
	Sales Manager	3.10	1.34	.75	.75	.51
	Regional Manager	3.36	1.29	.76	–[2]	–[2]
Computer self-efficacy[1] drawn from Shoemaker (1991)						
My technical knowledge pertaining to computer usage and utilization of booking systems is low (1)- high (7)	**Salespeople**	5.73	1.03	–	–	–
Span of Control						
Number of persons a superordinate supervises	**Sales Manager**	4.21	2.36	–	–	–
	Regional Manager	41.73	27.5	–	–	–
Objective Usage						
Generated sales via SFA tool		77,856	68.610		–	–

SD = Standard deviation; CA = Coefficient alpha; CR = Composite reliability; AVE = Average Variance Extracted; [rc] = reverse coded

[1] Seven-point rating scale with anchors 1 = strongly disagree and 7 = strongly agree
[2] Composite reliability and average variance extracted were not calculated on regional manager level due to low sample size.

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