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Linking thinking styles to sales performance: The importance of creativity and subjective knowledge

Mark D. Groza^{a,*}, David A. Locander^{b,1}, Charles H. Howlett^{c,2}

^a Enterprise Holdings Professor of Sales, Department of Marketing, Northern Illinois University, DeKalb, IL 60115, USA

^b Department of Marketing and Entrepreneurship, College of Business, University of Tennessee at Chattanooga, 615 McCallie Avenue, Chattanooga, TN 37403, USA

^c Northern Illinois University, DeKalb, IL 60115, USA

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ABSTRACT

This study examines the roles of thinking styles, role ambiguity, and knowledge in predicting salesperson creative selling behaviors. It also examines the importance of salesperson industry knowledge (i.e., an understanding of the industry's regulatory environment) and salesperson organizational knowledge (i.e., an understanding of customers' internal political environment) in the creative selling–sales performance relationship. Survey data come from 262 business-to-business benefits broker salespeople to test the conceptual model. The results of the structural equations modeling confirm that a judicial thinking style has a positive effect on creative selling and that role ambiguity and organizational knowledge are also important antecedents of creative selling. Importantly, the analysis confirms that industry and organizational knowledge moderate the creative selling–sales performance relationship.

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1. Introduction

Although academics and practitioners generally agree that understanding more about creativity and fostering increased creativity in organizations are important, few studies address the linkage between engaging in a creative process and job performance (Zhang & Bartol, 2010). Exploring creativity in the domain of personal selling provides insights into gaining competitive advantage by building stronger customer relationships. Selling tasks such as finding new prospects, uncovering and identifying customer needs, and tailoring solutions to those needs all require creative thinking (Wang & Netemeyer, 2004). With so much emphasis put on customer-oriented and solution selling, research on salesperson creativity is relevant and is one of the five most underresearched topics in the sales literature (Evans, McFarland, Dietz, & Jaramillo, 2012).

This research aims to link Sternberg's (1988, 1997) theory of mental self-government with the theory of creativity, specifically creative selling (Wang & Netemeyer, 2004). Creative selling refers to “the amount of new ideas generated and novel behaviors exhibited by the salesperson in performing his or her job activities” (Wang & Netemeyer, 2004,

p. 806) and is an important factor leading to the successful implementation of unique client solutions and in enhancing firm performance. Coelho, Augusto, and Lages (2011) extend the theory of creativity in marketing by examining the mediating effect of role stress and intrinsic motivation on employee creativity. Recently, Agnihotri, Rapp, Andzulis, and Gabler (2013) introduce a service-specific, solution-centric model of boundary spanners' (e.g., salespeople's) creativity and show the importance of emotional intelligence, salesperson knowledge, and managerial feedback in creative selling. However, an aspect missing from the marketing and sales literature is a deeper understanding of the cognitive processes that foster creative selling.

Sternberg's (1997) theory of mental self-government uses the three functions of the U.S. government (judicial, executive, and legislative) to describe different thinking styles. Sternberg addresses questions such as “Why do so many people who fail in school succeed in life, and vice versa? ... And why do some of those doctors who were straight-A students in medical school fail their patients?” (p. 18). Sternberg argues that what happens to individuals in life depends not just on *how well* they think but also on *how* they think. This line of reasoning raises an important question: If creative selling positively affects salespeople's job performance, what type of thinking style is most beneficial to facilitate the creative selling process?

Accordingly, this study makes four contributions to the marketing and sales literature. First, by including Sternberg's (1997) theory of mental self-government, this research offers a rich understanding of the cognitive processes salespeople use when engaging in creative selling. Second, the findings answer Coelho et al.'s (2011) call to extend

* Corresponding author. Tel.: +815 753 6228.

E-mail addresses: mgroza@niu.edu (M.D. Groza), dlocander70@gmail.com (D.A. Locander), chowlett@niu.edu (C.H. Howlett).

¹ Tel.: +904 568 8869.

² Tel.: +815 753 6219.

their research on the impact of role stressors on creativity in other organizational settings. Specifically, this study addresses role ambiguity's impact on salespeople's creative selling behaviors. Third, this work extends the knowledge component of Agnihotri et al.'s (2013) model to both industry and organizational knowledge separately. Fourth, this study sheds more light on the link between creative selling and performance. While previous research shows that creative selling has a positive effect on performance (Agnihotri et al., 2013; Wang & Miao, 2015), the present study extends these findings by examining the moderating effect of both the salesperson's industry and organizational knowledge on this relationship.

2. Theoretical framework

2.1. Thinking styles

An essential part of a salesperson's job is to transfer information to customers and assist in problem solving. Salespeople are knowledge brokers managing different sources of information. Research shows thinking styles capture an important aspect of knowledge brokering (Verbeke, Belschak, Bakker, & Dietz, 2008). Rooted in the theory of mental self-government, a thinking style reflects the different ways people prefer to use information to organize and govern themselves (Sternberg, 1988, 1997). A thinking style "is not an ability, but rather how we use the abilities we have" (Sternberg, 1997, p. 19) and reflects the way people integrate and transfer knowledge (Verbeke et al., 2008). Thus, people's thinking style represents their preferred means of acquiring and disseminating information.

Sternberg's (1988, 1997) theory characterizes the functions of thinking premised on the three government branches (judicial, executive, and legislative), which represent "external reflections of ways people can organize or govern themselves" (Sternberg & Zhang, 2005, p. 247). The styles do not represent people's ability to think, but rather are preferences for a thinking style that uses their abilities in a certain way. Styles are neither right nor wrong, and a person acquires preferences for a certain way of thinking through socialization. Also, people are flexible in their use of styles and adapt their way of thinking to the demands of a situation (Sternberg & Zhang, 2005). For example, a person at home may be more of a creative thinker (legislative style) but, given the conditions of a work environment, may adapt to become more of a rule-based thinker (executive style). Thus, the three functions of Sternberg's thinking styles are, to varying degrees, domain specific and situationally dependent.

The judicial thinking style consists of people who prefer to make judgments and use relativistic ways of reasoning (Sternberg, 1997). They evaluate rules and procedures and have a preference "for tasks, projects, and situations that require evaluation, analysis, comparison-contrast, and judgment of existing ideas, strategies, projects, etc." (Sternberg & Zhang, 2005, p. 247). Judicial thinkers like to solve each problem using a unique but pre-existing solution and tend to be suitable for occupations such as judges, critics, systems analysts, and consultants (Sternberg, 1997). For example, judicial salespeople might analyze the benefit of a previously used solution in one industry and then apply that solution to a customer in another industry. Verbeke et al. (2008) find that salespeople with high general mental ability and high judicial thinking style have the highest sales performance. This style aids in identifying the heart of their customers' problems, which is critical for executing creative selling.

The executive style resonates with people who like structure. They prefer to be told what to do and are comfortable in following rules and carrying out procedural tasks. This style involves solving problems with existing, pre-structured solutions. With their preferences for highly structured environments and rule-following behaviors, executive thinkers can be valuable to sales organizations with structured sales protocols (e.g., scripted selling) (Verbeke et al., 2008). Executive thinkers also likely thrive in passive sales roles, such as order takers

and customer-support specialists. Salespeople who prefer the executive style, however, may not feel comfortable developing and implementing new and innovative ideas.

Legislative thinkers prefer situations in which no pre-structured solutions exist. They like to analyze and structure problems for themselves, which allows them to create and implement new and innovative ideas (Verbeke et al., 2008). People with a legislative style value the autonomy to decide what needs to be done and to identify the possible courses of action (Sternberg & Zhang, 2005). Legislative salespeople deal with customers' problems by finding new, innovative, and creative solutions, preferring to treat every customer as a new case. Verbeke et al. (2008) find that salespeople with high legislative thinking style and high general mental ability produce the lowest sales performance among the three thinking styles. They conclude that legislative salespeople are too outside-the-box in their thinking, and so customers perceive them as too far-fetched for the actual business problem at hand. Research on the role of creative selling in the legislative thinking style-sales performance relationship, however, is lacking.

2.2. Role ambiguity

Role theory asserts that order within an organizational hierarchy is critical to the satisfaction and performance of employees (Rizzo, House, & Lirtzman, 1970). A role is a person's perception of the expected pattern of behavior during work engagements. Walker, Churchill, and Ford (1975) suggest that role ambiguity is a dysfunction particularly detrimental to the boundary-spanning sales force. Ambiguity within an organization may be the product of miscommunication from the supervisor, poor training, and/or an ill-defined role by management (Dubinsky & Skinner, 1984). In a study of frontline employees, Coelho et al. (2011) examine the relationship between contextual factors and creativity and find that role ambiguity has a negative effect on employee creativity. They infer that this negative effect derives in part from employees' uncertainty about their job activities and the amount of autonomy they possess when conducting those activities. Role ambiguity limits salespeople's freedom to act, thus creating uncertainty about how to employ their personal talents and use their knowledge base (Dubinsky & Skinner, 1984). This uncertainty fosters negative consequences for salespeople who, over time, experience emotional exhaustion, increasing the negative impact on their performance (Mulki, Jaramillo, & Locander, 2008).

2.3. Subjective knowledge

When salespeople engage in selling activities they act as brokers, transferring knowledge to customers (Verbeke, Dietz, & Verwaal, 2011). In their knowledge transfer activities, salespeople can convert customer attitudes into desired behaviors. More important from the perspective of sales management, salesperson knowledge structures may explain up to 50% of variance in salesperson performance (Sharma, Levy, & Evanschitzky, 2007). Although prior research shows that knowledge is an important element to salespersons success, the operationalization of knowledge is inconsistent. For example, some research conceptualizes salesperson knowledge as consisting of technical and market knowledge (Agnihotri, Rapp, & Trainor, 2009; Agnihotri et al., 2013), whereas Leigh, DeCarlo, Allbright, and Lollar (2014) examine salesperson-contingent procedural knowledge. Thus, specifying which dimension of salesperson knowledge is being examined is important.

In the field of strategic management, Grant (1996) identifies two general types of knowledge. First, explicit knowledge is associated with codified information and involves knowing facts that can be written down, easily learned, or diffused through an organization. Second, tacit knowledge is knowledge that "cannot be codified and can only be transferred through its application and acquired through practice"

(Grant, 1996, p. 111). Based on this theoretical foundation two types of knowledge are particularly relevant to salespeople. First, industry knowledge reflects salespeople's understanding of the regulatory environment of their industry (Coulter & Coulter, 2003). In addition, this knowledge is situationally dependent on encompassing salespeople's knowledge of the governing rules and statutes of their industry. In this sense, industry knowledge is a type of explicit knowledge that can be codified and easily learned through industry journals, conferences, peer interactions, and training modules. Second, organizational knowledge represents salespeople's understanding of their customers' bureaucratic processes (Biong & Selnes, 1997). This knowledge refers to salespeople's ability to navigate the political environment of their customers and identify key decision makers in these organizations. Thus, organizational knowledge is a type of tacit knowledge that can only be acquired through practice and cannot be easily transferred to other people.

2.4. Creative selling

Researchers tend to adopt a systems approach, emphasizing the complex interplay between people and their environment as elements for creativity to occur (Agnihotri et al., 2013). Salespeople continuously deal with factors such as changing customer needs, organizational dynamics, government and regulatory influences, and complex competitive forces. Coelho et al. (2011) state that creative employees are better at discovering customers' needs, developing good customer relationships, and solving problems in a creative and effective manner. Within the domain of sales and job performance, creativity represents one of five critical but underresearched areas (Evans et al., 2012). One reason for the lack of research may be the contextual nature of creativity. Research suggests that both job characteristics and specific work situations can facilitate or hinder creative problem solving (Wang & Netemeyer, 2004).

Agnihotri et al. (2013) extend the theory of creativity and sales by adapting Amabile's (1983) componential conceptualization of creativity to a service-specific, solution-centric model of creativity. Their conceptual framework outlines three primary components of salesperson creativity: domain-relevant skills and abilities, creativity-relevant skills and abilities, and task motivation. Agnihotri et al. (2013) test their conceptual framework using Wang and Netemeyer's (2004) measure of creative selling and find that creative selling improves both service behaviors and sales performance.

The present study extends prior research by simultaneously examining the antecedent effects of thinking style, role ambiguity, and individual knowledge on creative selling. Fig. 1 depicts the conceptual model.

3. Hypotheses development

Judicial thinkers prefer to evaluate and judge both the structure and the content of a situation. Judicial thinking is characterized by an inquisitive mind that prefers to connect ideas, evaluate actions, analyze situations, and compare alternatives (Sternberg, 1997). In practice, people with this style examine the strengths and weaknesses of various viewpoints and ideas before implementing a solution (Sternberg, 1997). These judicial tendencies may aid the creative selling process by fostering salespeople's understanding of the selling situation and/or problem. In a series of interviews with sales managers and executives from various industries, Wang and Netemeyer (2004, p. 806) state that "customers are satisfied only when their problems are correctly understood and tailored solutions successfully generated and implemented." Therefore, salespeople who employ a judicial thinking style likely develop a deep understanding of their customers' situation and are able to judge and select an appropriate solution that best fits the customers' needs. This deeper understanding can serve as a basis for generating and evaluating creative alternatives (Wang & Netemeyer, 2004). Therefore, theory suggests a positive relationship between judicial thinking and creative selling.

H1a. Judicial thinking style has a positive effect on creative selling.

Executive thinkers prefer a well-organized and structured routine. They embrace being told what to do and like solving problems with a limited number of known alternatives. They tend to be implementers who enjoy enforcing rules and perceive themselves as doers, favoring projects that follow a step-by-step process to completion (Sternberg, 1997). As a result of their system-like approach, they are not likely to employ selling techniques that require implementing novel and imaginative behaviors. This does not mean that executive thinkers cannot be effective salespeople, as Verbeke et al. (2008) find that this style has a significant and positive main effect on salesperson performance. However, given executive thinkers' preference for structure and being told what to do, they most likely avoid implementing creative selling.

H1b. Executive thinking style has a negative effect on creative selling.

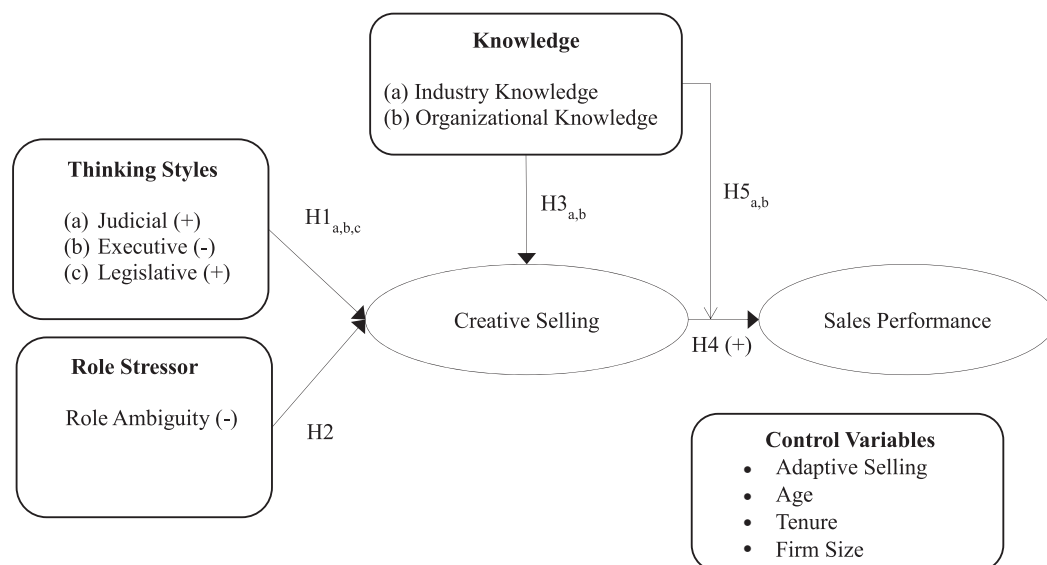


Fig. 1. Hypothesized model.

The opposite of executive thinkers are the free-thinking legislators who prefer problems with no pre-determined solutions. Legislative thinkers orchestrate projects, design new systems, and give orders. They display characteristics in common with entrepreneurs by inventing and implementing customized solutions for new and unique problems (Sternberg, 1997). At the heart of creative selling is the need to generate new and relevant ideas (Wang & Netemeyer, 2004). The link between legislative thinking and creative selling may seem intuitive but may not be as straightforward as expected. For example, prior research within the domain of sales shows a negative relationship between legislative thinking salespeople and sales performance (Verbeke et al., 2008). In explaining this finding, Verbeke et al. (2008) conjecture that the ideas legislative salespeople generate may be too far-fetched. These findings demonstrate the potential for legislative thinking to have a negative effect on salespeople's performance, but another variable that can also harness legislators' creative ability in a productive manner is creative selling. Given legislative thinkers' preference for problems with no pre-determined solutions and for coming up with new and innovative ideas, this style and creative selling should be positively related.

H1c. Legislative thinking style has a positive effect on creative selling.

Work environments may also influence levels of creativity (Agnihotri et al., 2013; Wang & Netemeyer, 2004). To implement creative techniques, salespeople must have the support from their organizations to do so (Zhou & George, 2003). Wang and Netemeyer (2004, p. 810) state that because of the "close connection between salespeople and their customers, it is only rational and appropriate for management to encourage salespeople to think independently and creatively, and to empower them so that they are able to decide how to best configure and deliver the product." Employees experiencing role ambiguity are unsure of the freedom to perform their jobs and are unclear about how their jobs fit with the firm's overall goals (Coelho et al., 2011). Salespeople experiencing such ambiguity likely have uncertainties about performing their job activities. With such uncertainties, salespeople have difficulties implementing creative selling techniques.

H2. Role ambiguity has a negative effect on creative selling.

Knowledge is an integral aspect of salesperson effectiveness explaining more than half the variance in sales performance (Sharma et al., 2007). Research on salesperson knowledge suggests that knowledgeable salespeople are better at handling customer problems, identifying solution requirements, and diagnosing relationship potential leading to more successful sales calls (Leigh et al., 2014). Thus, specific knowledge dimensions may be more critical than others in explaining creative selling and sales performance (Leigh et al., 2014).

Prior research conceptualizes salesperson knowledge as consisting of both technical and product-market knowledge (Agnihotri et al., 2009, 2013) and as being positively linked to communication of product-relevant information (Agnihotri et al., 2009) and creative selling (Agnihotri et al., 2013). The present study extends these findings by examining two additional knowledge types and their impact on creative selling. First, industry knowledge is a type of explicit knowledge that involves salespeople's understanding of their industry's regulatory environment (Coulter & Coulter, 2003). This situationally dependent type of knowledge represents how well salespeople know the rules and regulations of their industry. Given that salespeople often deploy creative selling when problems are ill-defined or poorly structured (Wang & Netemeyer, 2004), they must understand the regulatory boundaries in which they operate. Having a clear understanding of the industry rules and regulations allows them to channel their creative efforts and employ creative selling.

H3a. Industry knowledge has a positive main effect on creative selling.

Second, organizational knowledge is a type of tacit knowledge that involves understanding customers' bureaucratic processes (Biong & Selnes, 1997), specifically how salespeople navigate the political environments of their customers and identify key decision makers in their organizations. In B2B selling contexts salespeople must sell to buying teams, manage different organizational structures, and identify different buyer and decision maker roles throughout the sales process (Sharma et al., 2007). Salespeople who possess knowledge of their customers' organizations are likely more effective in managing customer dynamics. The concept of creative selling is not just limited to coming up with innovative and novel solutions; it also includes building rapport, making presentation, transferring knowledge and skills, handling objections, and persuading customers (Wang & Netemeyer, 2004). Therefore, organizational knowledge adds to creative selling by providing salespeople with insight on how to navigate customers' organizations structures and identify decision makers.

H3b. Organizational knowledge has a positive main effect on creative selling.

3.1. Outcomes of creative selling

Two of the dominant cognitive characteristics of creative people are (1) creativity is strongly related to a particular domain and (2) creativity uses existing knowledge as a base for new ideas (Tardif & Sternberg, 1988). A third feature is an aesthetic ability that allows creative people to recognize and focus on "good problems" while ignoring others (Tardif & Sternberg, 1988). This type of focused behavior should have a positive effect on sales performance. Recent research indeed identifies a positive relationship between creative selling and job performance (Agnihotri et al., 2013). Thus, H4 yields a replication hypothesis:

H4. Creative selling has a positive effect on sales performance.

3.2. Moderating factors

Building on the above hypotheses development, this study aims to further understand the interaction among knowledge types, creative selling, and performance. Given its importance, salespeople's knowledge likely influences the creative selling–performance relationship. Salespeople's understanding of and knowledge about both their industry and their customers' organizations should amplify the positive effect of creative selling on performance. That is, salespeople with greater industry knowledge better understand the regulatory environment in which they conduct business, enabling them to implement creativity within industry boundary conditions. In addition, salespeople with high organizational knowledge are better able to employ creativity throughout the sales process and navigate their customers' organizational structures. Consider, for example, a salesperson who is innovative in his or her sales approach and develops creative ideas to solve a customer's problems but does not have a strong understanding of the customer organization or industry. With such boundary conditions, innovation and creativity will likely not manifest in a successful outcome. Therefore, creative selling has an optimal effect on sales performance when the salesperson has a solid knowledge base of the industry and the customer's organizational structure.

H5a. Industry knowledge positively moderates the effect of creative selling on sales performance.

H5b. Organizational knowledge positively moderates the effect of creative selling on sales performance.

4. Methods

4.1. Sample

An online survey was administered to a sample of U.S.-based insurance benefits brokers. The e-mail addresses were provided by a professional association seeking to advance the industry. Benefits brokers are business-to-business salespeople who sell a wide variety of products to customers from virtually every industry and of every size. The products sold include group (i.e., employee) health insurance plans, life insurance plans, retirement investment products, and business property and casualty insurance. The complex nature of the products sold by benefits brokers and their ability to creatively implement customized solutions for individual customers make this sample particularly appropriate for a study on creative selling. In addition, researchers studying employee creativity have used samples of benefits brokers to empirically test their models (e.g., Gong, Huang, & Farh, 2009).

In total, 1299 surveys were delivered to benefits brokers. In exchange for their participation, the brokers received an aggregated summary of the study's main findings. After two reminders, 262 (20%) completed surveys were returned. The average age of the sample is 53.6 years, the overall sales experience is 24.6 years, the average tenure with the current employer is 12.4 years, and 25% of the sample is female. All respondents are employed with different companies.

4.2. Measures and controls

Existing scales are adapted to measure the study's constructs. Judicial, executive, and legislative thinking styles are measured with four items (each) from the thinking styles battery Sternberg and Wagner (1991) develop. Role ambiguity is measured with Rizzo et al.'s (1970) scale. Industry and organizational knowledge are measured by adapting Flynn and Goldsmith's (1999) subjective knowledge scale to fit the context of the study. Creative selling is measured with five items from the creative sales scale Wang and Netemeyer (2004) develop. Finally, sales performance is measured with six items from Behrman and Perreault (1982). In line with prior research in this area, the control variables included in this study are age, tenure, firm size (Gong et al., 2009) and adaptive selling. Adaptive selling is a unique concept from creative selling and thus is included here to identify the incremental variance explained by creative selling.

4.3. Measurement assessment

A confirmatory factor analysis confirms the psychometric properties of the nine constructs used in the study (Anderson & Gerbing, 1988). The fit indices from the analysis provide initial evidence of the validity of the constructs' dimensionality ($\chi^2(df) = 758(558)$, $p < .001$; TLI = 0.96; CFI = 0.96; RMSEA = 0.037; 90% confidence interval [CI] = .030–.044). All but one standardized factor loading exceed 0.6, and the average variance extracted (AVE) of each construct is greater than 0.50, providing evidence of convergent validity (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Each construct yields a Cronbach's alpha score above 0.70. Table 1 lists the individual items and factor loadings, and Table 2 contains the descriptive statistics, construct reliabilities, and AVE of each construct as well as the correlations between the constructs.

Fornell and Larcker's (1981) protocol serves to assess discriminant validity. The AVE of each construct exceeds the squared correlation of each pair of constructs, indicating that the constructs are discriminant. Nonresponse bias was assessed by comparing early and late responders; no statistical differences existed between them on any study construct (Armstrong & Overton, 1977).

Table 1
Measurement items and factor loadings.

	Loading
Thinking styles	
Judicial	
I like situations where I can compare and rate different ways of doing things.	.79
I like to check and rate opposing points of view or conflicting ideas.	.74
I like projects where I can study and rate different views or ideas.	.78
When working on a task, I can see how the parts relate to the overall goal of the task.	.65
Executive	
I enjoy working on things that I can do by following directions.	.74
I like to figure out how to solve a problem following certain (definite) rules.	.80
I like projects that have a clear structure and set plan and goal.	.59
I like to follow definite rules or directions when solving a problem or doing a task.	.77
Legislative	
When faced with a problem, I use my own ideas and strategies (ways) to solve it.	.78
I like to play with my ideas and see how far they go.	.66
I like problems where I can try my own ways of solving them.	.75
When working on a task, I like to start with my own ideas.	.69
Role ambiguity	
There are clear, planned goals and objectives for my job. (Reverse)	.77
I know exactly what is expected of me. (Reverse)	.91
I know what my job responsibilities are. (Reverse)	.72
Organizational knowledge	
I easily navigate the organizational hierarchy of my clients.	.70
I am very good at identifying the decision maker in organizations.	.90
I usually know the important people I need to talk to within organizations.	.79
Industry knowledge	
I feel quite knowledgeable about my industry's regulatory environment.	.93
Among my colleagues, I'm one of the "experts" on our industry's regulatory environments.	.76
I do not feel knowledgeable about my industry's regulatory environment. (Reverse)	.62
I know pretty much about my industry's regulatory environment.	.83
Creative selling	
Make sales presentations in innovative ways.	.77
Carry out sales tasks in ways that are resourceful.	.75
Come up with new ideas for satisfying customer needs.	.74
Generate creative selling ideas.	.80
Have fresh perspectives on old problems.	.74
Adaptive selling	
When I feel that my sales approach is not working, I can easily change to another approach.	.67
I am very flexible in the selling approach I use.	.75
I can easily use a variety of selling approaches.	.82
Overall sales performance	
My ability to sell products with higher profit margins.	.88
My ability to generate a high dollar amount of sales.	.86
My ability to quickly generate sales of new company products or offerings.	.93
My ability to produce a high market share for my business/company.	.87
My ability to exceed the sales targets and objectives that I assign or are assigned to me.	.93
My ability to identify and sell to major accounts.	.79

4.4. Common method bias

To alleviate concerns about common method bias, an unmeasured latent common methods factor model was run as a robustness check (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). All items in this model are loaded onto a common latent factor in addition to their proposed factor. The results of the latent methods model are consistent with the structural model, indicating that the relationships are not affected by common method bias (see Table 3).

5. Analysis and results

To test the main effect hypotheses (H1–H4), the data are fit to the hypothesized model by means of structural equation modeling (SEM) (see Table 3). The fit indices suggest adequate overall model fit

Table 2
Correlation matrix and descriptive statistics of study measures.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Judicial thinking style	1													
2. Executive thinking style	.43**	1												
3. Legislative thinking style	.70**	.32**	1											
4. Role ambiguity	-.25**	-.20**	-.19*	1										
5. Industry knowledge (IK)	.35**	.15*	.26**	-.35**	1									
6. Organizational knowledge (OK)	.47**	.19*	.40**	-.41**	.46**	1								
7. Adaptive selling	.48**	.27**	.42**	-.37**	.29**	.66**	1							
8. Age	-.16*	-.15*	-.22**	-.07	-.08	-.10	-.20**	1						
9. Tenure	-.05	-.17*	-.12	-.10	-.03	.10	-.10	.42**	1					
10. Firm size	.07	.10	.08	-.09	.17**	-.03	-.07	-.13*	-.13*	1				
11. Creative selling (CS)	.61**	.25**	.52**	-.31**	.38**	.59**	.67**	-.24**	-.05	-.01	1			
12. IK × CS	-.07	.04	-.01	.16*	-.22**	-.19*	-.24**	.04	.09	.06	-.15*	1		
13. OK × CS	-.06	-.03	-.03	.10	-.10	-.21*	-.20*	.02	.06	.03	-.17*	.40**	1	
14. Performance	.41*	.10	.36**	-.41**	.39**	.59**	.43**	-.11	.08	.05	.51**	-.04	-.16*	1
M	3.64	3.25	3.45	5.58	4.90	5.31	5.55	53.62	12.30	3.46	3.84	.29	.31	5.00
SD	(0.80)	(0.86)	(0.78)	(0.96)	(1.27)	(0.88)	(0.95)	(9.67)	(10.18)	(2.40)	(0.69)	(1.02)	(0.66)	(1.28)
Alpha reliability	.83	.81	.81	.83	.86	.83	.79	–	–	–	.87	.78 ^a	.79 ^a	.95
AVE	.55	.53	.52	.64	.64	.63	.58	–	–	–	.56	–	–	.77

** $p < .01$, * $p < .05$.
^a : interaction reliability calculated using Ping's (1995) procedure.

($\chi^2(df) = 1039(678), p < .001$; TLI = 0.93; CFI = 0.94; RMSEA = 0.045; 90% CI = .040, .051). The variance explained (i.e., squared multiple correlations) of creative selling is 44% and for sales performance is 28%. The model in Fig. 1 implies that creative selling fully mediates the effect of thinking styles, knowledge, and role ambiguity on performance. To confirm this, an alternative full model, including all possible direct paths from the exogenous variables to performance, is tested ($\chi^2(df) = 999(672), p < .001$; TLI = 0.94; CFI = 0.94; RMSEA = 0.043; 90% CI = .038, .049). The chi-square difference between the full, direct paths model and the hypothesized model is 40 ($\Delta df = 6, p < .01$). In addition, the direct unmediated paths between role ambiguity and performance ($\beta = -0.25, p < .01$) and between organizational knowledge and performance ($\beta = 0.36, p < .01$) are significant. Furthermore, the variance explained increases for sales performance (from 28% to 35%). Collectively, this result indicates that the full, direct paths model fits the data better than the hypothesized model, and thus tests of

hypotheses are conducted using this model (Iacobucci, Saldanha, & Deng, 2007).

To test the significance of the mediating effect of creative selling, Preacher and Hayes's (2008) bootstrapping approach was employed. Specifically, the indirect effect of the independent variables on the dependent variable (though creative selling) is assessed by estimating the bias-corrected CIs (95%) on the basis of bootstrapping with 5000 resamples. When the CI does not contain zero, the indirect effect is significant, indicating the presence of a mediating effect (Preacher & Hayes, 2008).

Age is the only control variable to have a significant relationship with creative selling ($\beta = -0.13, p < .01$). For the hypothesized relationships, as H1a suggests, judicial thinking style has a significant, positive relationship to creative selling ($\beta = .38, p < .01$). H1b predicts that executive thinking style is negatively related to creative selling, and H1c predicts that legislative thinking style is positively related to

Table 3
Structural modeling results.

	Constructs		Hypothesized model	Direct effect model	Direct effect with moderation	CMB-corrected model ^a
	Independent	Dependent				
H1a (+)	Judicial thinking	Creative selling	.38**	.38**	.39**	.37**
H1b (-)	Executive thinking	Creative selling	-.04	-.03	-.03	-.05
H1c (+)	Legislative Thinking	Creative selling	.15	.14	.14	.12
H2 (-)	Role ambiguity	Creative selling	-.14**	-.12*	-.13*	-.16*
H3a (+)	Industry knowledge (IK)	Creative selling	.09	.08	.04	.06
H3b (+)	Organizational knowledge (OK)	Creative selling	.37**	.36**	.35**	.34**
	Age	Creative selling	-.13**	-.13**	-.13**	-.13**
	Tenure	Creative selling	.02	.03	.03	.03
	Firm size	Creative selling	-.06	-.05	-.05	-.06
H4	Creative selling (CS)	Performance	.35**	.19*	.17	.16
H5a	IK × CS	Performance			.15**	.15**
H5b	OK × CS	Performance			-.10*	-.10*
	Judicial thinking	Performance		.09	.10	.10
	Executive thinking	Performance		-.10	-.12	-.12
	Legislative thinking	Performance		.09	.08	.07
	Role ambiguity	Performance		-.25**	-.25**	-.27**
	Industry knowledge (IK)	Performance		.07	.09	.09
	Organizational knowledge (OK)	Performance		.36**	.33**	.33*
	Adaptive selling	Performance	.22**	-.06	-.03	-.03
	Age	Performance	-.02	-.05	-.06	-.06
	Tenure	Performance	.14**	.08	.07	.07
	Firm size	Performance	.09	.04	.03	.03

Standardized path coefficients reported.

^a Common method bias (CMB) corrected model estimated using an unmeasured latent common methods factor.

* $p < .05$.

** $p < .01$.

creative selling. Neither H1b ($\beta = -0.03, p > .10$) nor H1c ($\beta = 0.14, p > .10$) are supported. As H2 predicts, role ambiguity has a significant and negative effect on creative selling ($\beta = -0.12, p < .01$). The analysis fails to support H3a, as industry knowledge ($\beta = 0.08, p > .10$) does not have a significant relationship to creative selling. Conversely, H3b is supported; organizational knowledge ($\beta = 0.36, p < .01$) has a significant and positive effect on creative selling. Finally, H4 is supported; creative selling has a positive and significant effect on sales performance ($\beta = 0.19, p < .05$).

In Table 4, the results of the bootstrapping mediation tests indicate that judicial thinking style has a positive and significant indirect effect on performance (95% CI = .02–.18). This result, together with the non-significant direct effect of judicial thinking style on performance, confirms that creative selling fully mediates the relationship between judicial thinking style and sales performance (Iacobucci et al., 2007). The analysis finds support for the predicted indirect relationship between role ambiguity and performance (95% CI = -.08 to -.01) and between organizational knowledge and sales performance (95% CI = .01–.16). The significant direct effects of role ambiguity and organizational knowledge on sales performance indicate that creative selling partially mediates these relationships.

To test the moderating effects of industry and organizational knowledge on the relationship between creative selling and performance, two interaction variables were created by multiplying the mean-centered value of creative selling with the mean-centered value of industry and organizational knowledge, respectively. The measurement error for the interaction variables is estimated with Ping's (1995) suggested procedure. Another SEM model was run, including the two interaction terms in the analysis ($\chi^2(df) = 1157 (749), p < .001; TLI = 0.92; CFI = 0.93; RMSEA = 0.046; 90\% CI = .040, .051$).

The interaction term of creative selling and industry knowledge is significant ($\beta = 0.15, p < .01$), lending support to H5a; Fig. 2 depicts this interaction. In Fig. 2, the positive effect of creative selling on sales performance is positively moderated (i.e., amplified) when the salesperson has high industry knowledge. The coefficient for the interaction term of creative selling \times organizational knowledge is significant and negative ($\beta = -0.10, p < .05$). This finding is counter to the prediction in H5b and provides important implications. As Fig. 3 shows, when organizational knowledge is high, creative selling has little positive impact on sales performance. However, when organizational knowledge is low, creative selling has a more pronounced positive impact on performance.

6. Discussion and theoretical implications

The results offer support to research demonstrating the importance of creativity in sales performance. The study suggests that thinking style and both industry and organizational knowledge are important concepts in the creative selling–sales performance relationship. That is, judicial thinking is an important predictor of creative selling, and a person's level of knowledge is a key factor in transforming creative selling into greater sales performance.

This research makes several important theoretical contributions to creative selling and thinking styles. First, the findings raise an important

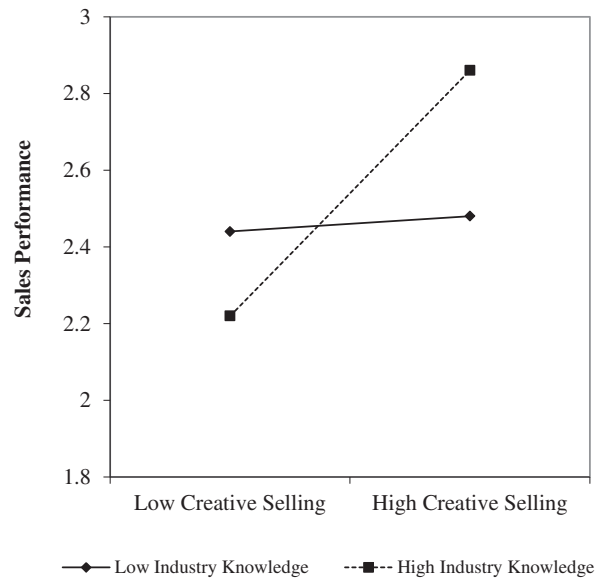


Fig. 2. Industry knowledge as a moderator of creative selling and performance.

question about the legislative thinking style. H1c followed from the wealth of literature and findings suggesting that this style manifests in a free-thinking person who orchestrates projects, designs new things, and embraces entrepreneurial solutions. The results do not support the expected relationship between legislative thinking and creative selling. While Verbeke et al. (2008) find a negative relationship between legislative thinking style and sales performance, this study's introduction of creative selling as a mediator in the legislative style–performance relationship should have created an optimal selling situation for legislative success; the expected relationship, however, is not significant. Perhaps the structure of many selling situations is not suitable for free-thinking legislative salespeople. That is, salespeople who are too far-reaching or non-traditional might actually diminish their credibility with a particular client.

Second, the findings provide insight into the cognitive processes that foster creative selling by identifying judicial thinking style (H1a) as a positive antecedent to creative selling. Furthermore, creative selling turns out to be a key mediating variable linking judicial thinking style

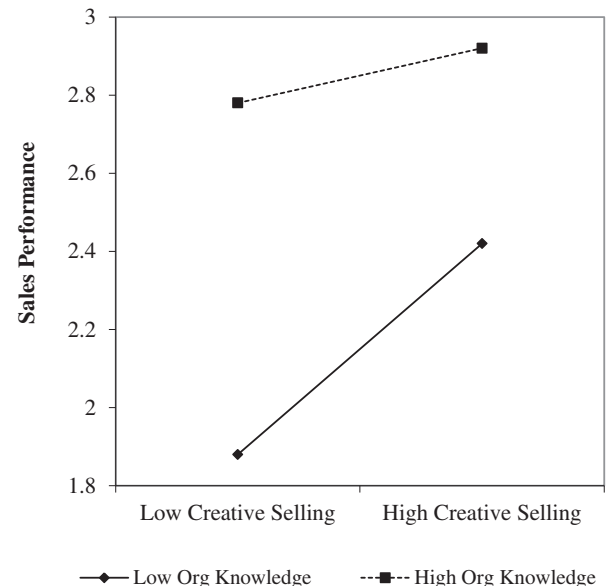


Fig. 3. Organizational knowledge as a moderator of creative selling and performance.

Table 4 Mediating effect tests.

	Direct effect		Indirect effect		
	Coefficient	t-value	Point estimate	Bias-corrected bootstrap 95% CI	
				Lower	Upper
JTS on performance	0.13	1.20	0.08	0.02	0.18
RA on performance	-0.27	3.57	-0.02	-0.08	-0.01
OK on performance	0.35	3.95	0.07	0.01	0.16

JTS: judicial thinking style. RA: role ambiguity. OK: organizational knowledge. Bootstrapping 95% CI based on 5000 bootstrap samples.

to sales performance. This finding extends the theory on thinking styles and creativity by identifying a mechanism (creative selling) through which salespeople's preferred mode of thinking can influence their selling behaviors. That is, salespeople who prefer a judicial thinking style possess cognitive qualities that complement the creative selling process, which leads to greater sales performance. Judicial thinkers possess both the structured qualities of the executive and the creativity of the legislative thinking styles. This combination is in line with emerging research that demonstrates that effective salespeople use a combination of deliberative and intuitive thought processes (Locander, Mulki, & Weinberg, 2014).

Third, this research answers Coelho et al.'s (2011) call for additional research on the effect of role stressors on creativity. Thus, the study examines the effects of role ambiguity on Wang and Netemeyer's (2004) conceptualization of creative selling. The results confirm Coelho et al.'s findings, showing a significant and negative relationship between role ambiguity and creative selling. This research extends previous work by lending support to the prediction that role ambiguity exerts an indirect effect on sales performance, which is partially mediated by creative selling.

Finally, building on Agnihotri et al.'s (2013) finding that knowledge plays an important role in creative selling, this study delves deeper into this relationship by examining salesperson industry and organizational knowledge separately and by treating knowledge as a moderating factor. The findings show that only organizational knowledge has a significant main effect on creative selling, while industry knowledge is not significant. A particularly important aspect of the findings is the moderating effect of the two types of knowledge on the relationship between creative selling and sales performance. While salesperson industry knowledge yields the hypothesized positive effect, salesperson organizational knowledge has a significant but *negative* effect on the creative selling–sales performance relationship.

An important theoretical implication arises from this unanticipated finding. Theorists suggest that highly contextualized knowledge structures can actually hinder people's creative performance (Amabile, 1983). People with high levels of context-specific knowledge may be biased when applying such knowledge in new and novel situations. Since organizational knowledge refers to information about specific customers and is highly contextual, our findings confirm Amabile's (1983) theorizing as salespeople with low levels of organizational knowledge are more effective at executing creative selling. Note that organizational knowledge has a significant and positive direct effect on creative selling. As Fig. 3 indicates, salespeople with high organizational knowledge outperform those with low organizational knowledge, regardless of the level of creative selling. These results suggest that creative selling affects performance more when organizational knowledge is low.

6.1. Managerial implications

This research also offers several substantive contributions. First, sales training programs that advocate more fixed- or “canned”-selling methods might detract from salespeople's creative selling skills. The implementation of such a strategy must be considered with caution because, as the study shows, creative selling leads to greater sales performance. Specifically, creativity and knowledge, both industry and organizational, work together to enhance sales performance. Thus, training programs should focus on increasing industry and organizational knowledge by educating salespeople about the industry as a whole and the possible bureaucratic processes of customers.

Second, management should note that salespeople with low levels (vs. high levels) of organizational knowledge appear better at leveraging their creative selling efforts into sales performance. This finding is counter to the hypothesized effect but provides important substantive insights. Management should caution knowledgeable salespeople not to generalize too broadly about customers' bureaucratic processes

when performing their jobs; rather, management should help salespeople leverage their past experiences.

Third, this research sheds additional light on how to select and deploy a sales force. This study identifies thinking styles as an important factor to consider when assembling a sales force. Managers should consider adding Sternberg and Wagner's (1991) thinking styles inventory to employee candidate screenings (see Table 1 for items). By doing so, managers could select a sales force to balance thinking types and create discussions in which all salespeople share in the development of a creative sales strategy. While salespeople who favor a judicial thinking style seem more apt to engage in creative selling, executive and legislative thinkers can also play important roles in the sales force. Managers must be trained to identify different thinking styles and to coach each style individually to achieve sales potential.

6.2. Future research

Research in creative selling appears fertile for researchers interested in the many facets of creativity. While the judicial thinking style is identified as a key antecedent of creative selling, future research should work to uncover additional individual factors that lead to creative selling. Future research should also focus on what types of knowledge beyond industry and organizational lead to salesperson sales performance. Perhaps a thorough understanding of the bureaucratic processes of one's own organization may help salespeople offer their customers creative solutions. Or perhaps knowledge about customers' competitive environments may be useful. Additional research should also delve deeper into the finding that salespeople with low organizational knowledge are better able to transform creative selling into sales performance. Is this result due to the highly contextual nature of organizational knowledge, as argued herein, or are other factors involved?

References

- Agnihotri, R., Rapp, A. A., Andzulis, J. M., & Gabler, C. B. (2013). Examining the drivers and performance implications of boundary spanner creativity. *Journal of Service Research*, 17(2), 164–181.
- Agnihotri, R., Rapp, A., & Trainor, K. (2009). Understanding the role of information communication in the buyer–seller exchange process: Antecedents and outcomes. *Journal of Business & Industrial Marketing*, 24(7–8), 474–486.
- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), 357.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Armstrong, J. U. S. T., & Overton, T. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14, 396–402.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.
- Behrman, D. N., & Perreault, W. D. (1982). Measuring the performance of industrial salespersons. *Journal of Business Research*, 10(3), 355–370.
- Biong, H., & Selnes, F. (1997). The strategic role of the salesperson in established buyer–seller relationships. *Journal of Business-to-Business Marketing*, 3(3), 39–78.
- Coelho, F., Augusto, M., & Lages, L. F. (2011). Contextual factors and the creativity of frontline employees: The mediating effects of role stress and intrinsic motivation. *Journal of Retailing*, 87(1), 31–45.
- Coulter, K. S., & Coulter, R. A. (2003). The effects of industry knowledge on the development of trust in service relationships. *International Journal of Research in Marketing*, 20(1), 31–43.
- Dubinsky, A. J., & Skinner, S. J. (1984). Impact of job characteristics on retail salespeople's reactions to their jobs. *Journal of Retailing*, 60, 35–62.
- Evans, K. R., McFarland, R. G., Dietz, B., & Jaramillo, F. (2012). Advancing sales performance research: A focus on five underresearched topic areas. *Journal of Personal Selling & Sales Management*, 32(1), 89–106.
- Flynn, L. R., & Goldsmith, R. E. (1999). A short, reliable measure of subjective knowledge. *Journal of Business Research*, 46(1), 57–66.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382–388.
- Gong, Y., Huang, J. C., & Farh, J. L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, 52(4), 765–778.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, 17(2), 139–153.

- Leigh, T. W., DeCarlo, T. E., Allbright, D., & Lollar, J. (2014). Salesperson knowledge distinctions and sales performance. *Journal of Personal Selling & Sales Management*, 34(2), 123–140.
- Locander, D. A., Mulki, J. P., & Weinberg, F. J. (2014). How do salespeople make decisions? The role of emotions and deliberation on adaptive selling, and the moderating role of intuition. *Psychology & Marketing*, 31(6), 387–403.
- Mulki, J. P., Jaramillo, J. F., & Locander, W. B. (2008). Effect of ethical climate on turnover intention: Linking attitudinal-and stress theory. *Journal of Business Ethics*, 78(4), 559–574.
- Ping, R. A., Jr. (1995). A parsimonious estimating technique for interaction and quadratic latent variables. *Journal of Marketing Research*, 32(3), 336–347.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15(2), 150–163.
- Sharma, A., Levy, M., & Evanschitzky, H. (2007). The variance in sales performance explained by the knowledge structures of salespeople. *Journal of Personal Selling & Sales Management*, 27(2), 169–181.
- Sternberg, R. J. (1988). Mental self-government: A theory of intellectual styles and their development. *Human Development*, 31, 197–224.
- Sternberg, R. J. (1997). *Thinking styles*. New York: Cambridge University Press.
- Sternberg, R. J., & Wagner, R. K. (1991). MSG thinking styles inventory: Unpublished manual.
- Sternberg, R. J., & Zhang, L. F. (2005). Styles of thinking as a basis of differentiated instruction. *Theory Into Practice*, 44(3), 245–253.
- Tardif, T. Z., & Sternberg, R. J. (1988). What do we know about creativity? In R. J. Sternberg (Ed.), *The nature of creativity* (pp. 429–440). Cambridge, UK: Cambridge University Press.
- Verbeke, W., Belschak, F., Bakker, A., & Dietz, B. (2008). When intelligence is (dys)functional for achieving sales performance. *Journal of Marketing*, 72(4), 44–57.
- Verbeke, W., Dietz, B., & Verwaal, E. (2011). Drivers of sales performance: A contemporary meta-analysis. have salespeople become knowledge brokers? *Journal of the Academy of Marketing Science*, 39(3), 407–428.
- Walker, O. C., Jr., Churchill, G. A., Jr., & Ford, N. M. (1975). Organizational determinants of the industrial salesman's role conflict and ambiguity. *Journal of Marketing*, 39(1), 32–39.
- Wang, G., & Miao, C. F. (2015). Effects of sales force market orientation on creativity, innovation implementation, and sales performance. *Journal of Business Research*, 68, 2374–2386.
- Wang, G., & Netemeyer, R. G. (2004). Salesperson creative performance: Conceptualization, measurement, and nomological validity. *Journal of Business Research*, 57(8), 805–812.
- Zhang, X., & Bartol, K. M. (2010). The influence of creative process engagement on employee creative performance and overall job performance: A curvilinear assessment. *Journal of Applied Psychology*, 95(5), 862–873.
- Zhou, J., & George, J. M. (2003). Awakening employee creativity: The role of leader emotional intelligence. *The Leadership Quarterly*, 14(4), 545–568.