The differential effects of sales control systems on salespeople's role stressors and performance in the pharmaceutical industry

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Abstract

Purpose – This paper aims to identify and report the differential effects of activity control and capability control on role stressors, which subsequently affect salespeople's job satisfaction and sales performance.

Design/methodology/approach – Drawing on job demands-resources (JD-R) theory, the authors defined active control and customer demandingness as the job demands and capability control as the job resource, and designed their relationship with role stressors, which are indicated as role ambiguity, role conflict and role overload. The authors enrolled a sample of 223 industrial salespeople from pharmaceutical companies. After collecting the data, the authors used structural equation modeling using AMOS to test and estimate causal relationships along with a two-step approach to examine the interaction effect. The authors have also tested the simple slope of two-way interactions. All of the measured variables were identical to those used in previous studies.

Findings – The study findings indicate that behavior-based control can be counterproductive. Reducing activity control can decrease role stress, increase job satisfaction and improve job performance; increasing capability control, however, can reduce role stress and increase job satisfaction and performance. It is also important to acknowledge the external environment of the sales context in which behavior-based control is most effective: whereas high customer demandingness and capability control are related to reduced role stress, high customer demandingness and activity control are related to increased role stress.

Practical implications – Sales managers should recognize that different control management regimes reinforce or mitigate salespeople's job stressors and outcomes under specific conditions (i.e. work environments marked by higher or lower customer demandingness).

Originality/value – Drawing on JD-R theory, the research shows that a behavior control (i.e. activity control and capability control) has differential, and even opposite, psychological consequences.

Keywords Sales control systems, Role ambiguity, Role conflict, Role overload, Sales performance

Paper type Research paper

1. Introduction

Many firms recognize that the salesforce is the only unit in the organization that can establish relationships with a broad base of new customers and, thereby, generate higher sales revenues. In this light, it is perhaps not surprising that sales are often the heart of marketing departments and that sales management is so important for firm growth and survival.

Academics have noted the large role of sales in the business-to-business (B2B) environment (Anderson *et al.*, 2007; Zimmer *et al.*, 2020). In B2B contexts in which firms focus on building long-term relationships with the customer, salespeople are vital boundary-spanners linking firms with customers (Beverland, 2001; Miao and Evans, 2013). As the salesforce serves as the company's primary point of contact with its corporate customers, it supports development of customized goods and services for customers, relationship marketing and successful new product launches (Good and Schwepker, 2022; Khan *et al.*, 2022; Morgan and Hunt, 1994). At the selling stage, the sales organization provides the sales team with guidelines about a wide range of selling approaches and use of new systems (Corsaro and Maggioni, 2022; Kalra *et al.*, 2023a, 2023b), or information about developed strategic processes such as those related tools, resources and training (Peterson *et al.*, 2021; Rapp and Beeler, 2021).

The research trend in recent years is moving toward a focus on how salespeople, with the products or services they provide, can help customers solve their problems as well as create value for them (Bertini and Koenigsberg, 2020; Keränen et al., 2020; Liu and Leach, 2001). Many researchers are highly interested in the necessity of providing customers with both measurable (in terms of profits) and nonmeasurable (in terms of trust and overall business value) outcomes (Keränen et al., 2021; Keränen et al., 2023). Therefore, according to the trend of academic research and business environments, this leads to the fact that many organizations have reallocated significant resources to sales departments (Kotler, 2003).

In this overall context, sales control systems have appeared in the sales management literature (Anderson and Oliver, 1987; Kalra et al., 2023a, 2023b; Miao and Evans, 2013; Park and Hur, 2023). Among them, behavior control has been much studied as a tool to improve performance. However, much of the literature has focused on control mechanisms for performance maintenance and improvement, stress and its causes having been relatively neglected.

Most of the work that has been done on stress generally has used work stress models, including the demand-control-support model (Karasek et al., 1998) and effort-reward imbalance model (Siegrist et al., 2004). However, these can be applied only to specific determinants of occupational stress and occupational well-being. Alternatively, a new model of work stress recently introduced, the job demands-resources (JD-R) model (Demerouti et al., 2001) relates to role stress and the two job characteristics – i.e. demands and resources – that determine it. Indeed, the JD-R model is applicable to all situations, including new and complex occupational settings, for identification of job demands and resources that affect employees' well-being. Many studies relying on the concept of JD-R have introduced job and personal demands (Peasley et al., 2020) along with job (Xanthopoulou et al., 2007) and personal resources (Kalra et al., 2021) that influence salespeople's responses (psychological and behavioral). Therefore, from the perspective of JD-R theory, this study explicated the behavior control that induce or reduce role stress, and determined how the relationship between behavior-based control and role stresses changes according to environmental factors.

This study helps to fill several research gaps in the literature. The first is with regard to behavior control, which have been extensively studied as a unidimensional global construct. Behavior-based control has a positive impact on both the organization's financial effectiveness and individual revenue attainment. However, despite the fact that behavior-based control may have differential effects on psychological and behavioral outcomes (Miao et al., 2007; Shin et al., 2021), only a few studies have empirically investigated behavior constructs separately (Challagalla and Shervani, 1996; Conde et al., 2023; Miao et al., 2007). The present study drew on JD-R theory to conceptualize behavior-based control mechanisms as job resources (capability control) and job demands (activity control) applied by sales managers to shape salespeople's behavior (Miao and Evans, 2013). In short, then, it sought to examine how behavior-based controls affect employee outcomes.

Second, the JD-R model has been successfully adopted in a number of studies concerned with different occupational settings and correspondingly different sets of job demands and job resources (Bakker et al., 2005; Bakker et al., 2003b; Llorens et al., 2006). According to a recent work-stress-related survey, sales was the second most stressful job, 73% of salespeople believing their job to be highly stressful (Sales Leadership, 2022). Based on this and other evidence, job stress management has been a major priority in sales management. However, JD-R theory has mainly been focused on studies emphasizing engagement aspects, such as selling effort and selling intention (Fu et al., 2009, 2010), brand adoption (Wieseke et al., 2008) and salesforce product adoption (Hultink and Atuahene-Gima, 2000). Given the fact that many researchers have suggested that management of job stress will prove essential to job performance as well as satisfaction in sales management (Behrman and Perreault, 1984; Jaramillo et al., 2006), this study undertook to verify the JD-R theory in sales management.

Third, salespeople are investing more time and effort in identifying a customer problem and then configuring available resources in a manner that addresses the focal problem (Dhar et al., 2004). Accordingly, a growing body of literature in marketing and services addresses the fact that customer demandingness can lead to differential psychological and behavioral outcomes. Previous research has posited the importance of customer demandingness and highlighted the critical role employees play in responding to such demands, but much is still unknown about role stressors (i.e. role ambiguity, role conflict and role overload). Certainly, the level of customer demandingness can contribute to the level of stress experienced by salespeople (Jung et al., 2022; Luu, 2021). Therefore, this study defined the environmental demands on salespeople as customer demandingness and examined the impact of environmental demands on role ambiguity, role conflict and role overload.

The purposes of this study were to examine the effect of the job resources and job demands of behavior controls on role stressors, as grounded in JD-R theory; to investigate the relationship between psychological cost (i.e. three types of role stressors) and job satisfaction; to explore how the supervisory resource (i.e. the second aspect of behavior control) adapts to high levels of customer demandingness and thereby affects the role stress and performance of employees (i.e. salespeople).

Our research advances knowledge in a variety of ways: it appears to be one of the few (if not the first) studies to consider activity controls as job demands and capability controls as job resources and examine how they differently affect role stressors (Solomon et al., 2022; Bakker and de Vries, 2021). The study also progresses knowledge by modeling role ambiguity, role conflict and role overload as role stressors and testing how each influences job satisfaction and how the latter affects sales performance. Besides, our study investigates how customer demandingness moderates the relationships between (the dimensions of) job resources and job demands and (the dimensions of) role stressors.

This study is organized as follows. In the following Section 2, we introduce the literature on sales control systems and job stressors based on the JD-R theoretical framework. In Section 3, we develop the hypotheses of the study and evaluate each proposed hypothesis given the empirical evidence. In Section 4, we conclude the paper with a discussion of the implications as well as the limitations of the study.

2. Literature review and hypothesis development

2.1 Sales control in job demands-resources model

A sales management control system is the key managerial instrument for monitoring, directing, evaluating and compensating employees to help enable them to reach desired organizational objectives (Anderson and Oliver, 1987). A sales management control system entails dual, outcome-based and behavior-based controls. Outcome-based control is focused on objective outcome measures (i.e. sales volume and revenue), and includes little managerial direction for salespeople. Behavior-based control is concerned, not with sales goals, but rather with sales-related knowledge development (e.g. basic procedures in, and capabilities for, the selling process) (Fang *et al.*, 2005; Kohli *et al.*, 1998).

Anderson and Oliver (1987) stated that behavior-based control is more valuable than outcome-based control in terms of salesperson cognition, capabilities, affects and attitudes on organization, intrinsic motivation, behavioral techniques and strategy and performance. In behavior-based control, managers can get more information on salespeople's skills and effort by actively monitoring and establishing clear communication with them and providing feedback on their actions during the selling process and on how they can improve their selling skills. This can lead to salespeople being more willing to accept managerial direction, more committed to the organization, and having better job satisfaction. However, these different results indicate that behavior-based control is a multidimensional, not a unidimensional (global) construct.

Behavior-based control represents the job-demand-and-resource mechanism in the JD-R-based model. The JD-R model is an occupational stress model that posits strain/stress caused by imbalance between the demands that are required of employees in their jobs and the resources needed to handle them (Bakker and Demerouti, 2007; Demerouti *et al.*, 2001). The JD-R model assumes that every job entails both demands and access to resources. Job demands refer to aspects of the job that require sustained physical, emotional and/or cognitive effort (e.g. achieving a challenging sales quota) (Demerouti *et al.*, 2001) and that are thus associated with certain physiological and psychological costs (e.g. exhaustion). Job resources refer to physical, social or organizational aspects of the job that are functional in enabling employees to accomplish work goals, stimulate personal growth, learning and development, and reduce job demands along with physiological and psychological costs.

The JD-R model reflects two psychological processes. First, job demand is shown as a process that activates the energy depletion of employees. Employees' constant efforts to meet perceived job demands correspond to attendant increases in psychological and physiological costs that drain their energy. Increased stress and energy drain from responding to demands can cause employees to become very drained and exhausted over time. The greater the effort or activation made for a job demand, the greater the psychological and physiological costs to the individual. Therefore, excessive job demands have negative outcomes for the individual, such as poor health (Hakanen *et al.*, 2006; Schaufeli and Bakker, 2004) and sickness, and for the organization as well, such as employee absence (Bakker *et al.*, 2003a) or lower performance. The second psychological process, job resources, activates the motivational process. Employees' perceived resources can nurture their growth, learning and development, meet their needs for autonomy and competence, and, so too, increase their ability and willingness to work hard on work tasks and achieve work goals. These perceptions and beliefs increase the extent to which individuals are willing to invest in their role performance. Therefore, abundant job resources activate employees' energy and make them feel engaged, which process ends in better results (Bakker and Demerouti, 2007).

The specific variables considered in JD-R studies tend to vary significantly, because job demands and resources in a given context depend on the characteristics of the specific job or job task (Bakker *et al.*, 2004; Nahrgang *et al.*, 2011). In the terminology of JD-R, activity control can be considered to be a job demand, because it encompasses all selling-related conditions, activities and procedures (e.g. working hours, number of sales calls and number of accounts to visit) salespeople are expected to perform (Challagalla and Shervani, 1996). In contrast, capability control is a job resource, because it is associated with the development of selling skills, knowledge and approaches that enable salespeople to achieve their work goals and reduce their job demands (Kohli *et al.*, 1998).

It is necessary to examine how activity control and capability control affect salespeople's psychological attitudes and results, and also how managers should monitor and control behavior to help salespeople to achieve their goals. We argue that, due to its nature, activity control can increase salespeople's role stress, whereas capability control can reduce salespeople's role stress. We note that because activity control requires managers to monitor salespeople on a daily basis, it can easily put a high level of stress on salespeople who would naturally want to go to any length to meet their targets (Challagalla and Shervani, 1996). Similarly, we argue that because capability control is an approach that actively supports and dedicates salespeople to solving customer-related problems, it can serve to alleviate perceived role stress in the sales process in situations where customers are experiencing problems (Jones *et al.*, 2003).

JD-R theory further suggests that job demands and job resources can interact to affect job outcomes via the mediation process of job stress/strain (Bakker and Demerouti, 2007). The empirical evidence for this interaction effect, however, is limited (cf. Hockey, 1993). For example, there are very few studies supporting the job demands/job control interaction predicted in Karasek's (1979) job demand-control model (De Jonge *et al.*, 2000). Therefore, in the present study, we concentrated on the unique respective contributions job demands and job resources make to explaining variance in each job stressor component.

2.2 Role stressors

Role ambiguity occurs when employees, due to insufficient and unclear information, are not certain of the expectations related to their role; role conflict occurs when there is incongruity or incompatibility with role partners (with supervisors, coworkers, customers and others) (Rizzo *et al.*, 1970), while role overload occurs when employees perceive that their responsibilities or tasks exceed their available time, abilities and/or finite resources necessary to meet them (Kahn *et al.*, 1964).

Ample research findings have suggested that employees appraise each stressor on two dimensions: hindrance and challenge (Gilboa *et al.*, 2008). Hindrance stressors are regarded as threatening and constraining to personal achievement, whereas challenge stressors are considered potential opportunities for achievement (LePine *et al.*, 2005). Typically, role ambiguity is likely to involve hindrance stressors with little involvement of challenge stressors, while role conflict is considered to involve hindrance stressors but also, to a certain extent, challenge stressors, because employees try to negotiate with expectations from any number of sources to meet various job demands. In like manner, role overload may be categorized as both strong hindrance and challenge stressors. Role overload may be regarded as a hindrance stressor if employees feel compelled to meet too many demands given their resources; on the other hand, it may be regarded as a challenging stressor if employees feel that they have enough resources to meet their job demands. Although the role stressors are identified as a critical determinant of a sale representative's job performance, they have different relationships with sales performance.

In much of the organizational behavior literature and sales force research literature, role ambiguity, role conflict and role overload have negative effects on salespeople's job outcomes (cf. Teas, 1983; Walker *et al.*, 1975). It is suggested that role ambiguity or role conflict may have deleterious effects on employee attitudes and cause strain responses (e.g. O'Driscoll and Beehr, 1994) such as stress, anxiety, exhaustion, depression and burnout (Cooke and Rousseau, 1984), thus undermining job satisfaction (Podsakoff *et al.*, 2007). Role overload also elevates strain (Parker *et al.*, 2002), reduces organizational commitment and decreases sales performance (Singh *et al.*, 1994). The various role stressors have been identified as critical factors of workplace stress, and thus researchers have sought to identify the determinants of stressful situations in the workplace. The special characteristics of the sales role that affect role stressors include both organizational variables and individual variables. Organization variables are associated with jobs and tasks (i.e. skill variety, job complexity, job control and autonomy) and supervisory characteristics (i.e. feedback and close supervision) (Brown and Peterson, 1993). Individual variables are related to organizational tenure, tendency to confront situations head-on and tendency to transform situations into opportunities (Onyemah, 2008).

2.3 Conservation of resources theory

According to the conservation of resources (COR) theory (Hobfoll, 1989, 2002), individuals are motivated to gain, retain and protect their resources but experience psychological stress when they are placed in a situation that threatens their ability to obtain or maintain resources. Specifically, Hobfoll (1989) states that stress occurs when people are threatened with the loss of resources, lose resources or fail to obtain invested resources.

Resources are used to cope with threatening demands that cause work-related stress. In the process of coping with threatening demands, individuals may respond to stress using their remaining resources to recover from losses, acquire new resources or withdraw efforts to conserve resources (Halbesleben and Bowler, 2007; Kiazad *et al.*, 2014). Despite

engaging in direct and active coping behaviors through high levels of arousal and the use of many resources, when individuals find that they do not have any effect, they may give up and engage in emotional detachment or defensive behaviors (Hobfoll *et al.*, 2003). During the coping stage, burnout and high anxiety levels typically occur (Halbesleben, 2006). Many studies have shown that burnout occurs because of exposure to job stress such as qualitative and quantitative overload, role conflict and ambiguity, lack of participation and lack of social support (Ambrose *et al.*, 2014; Bolino and Turnley, 2005; Cordes and Dougherty, 1993). Burnout can result in further loss of resources, resource depletion and an inefficient replenishment of resources (Halbesleben, 2006; Hobfoll and Lilly, 1993).

Another peculiarity of COR is that resource loss occurs under high demand, but the degree of resource loss differs (Hobfoll and Shirom, 2000; Hobfoll, 1989) states that individuals with more resources are less vulnerable to resource loss and have a greater capability to gain resources, whereas individuals with fewer resources are more vulnerable to the loss of resources and have a lower capability to gain resources.

In line with the COR perspective, individuals experience burnout when they perceive a net loss of all their energy – physical, emotional and cognitive – which cannot be replenished (Hobfoll and Shirom, 2000). When individuals experience stress, they react with reduced physical vitality, a lack of emotional stamina and decreased cognitive agility. As a result, once a net loss occurs, it cannot be resolved by gaining additional resources, expanding or borrowing other resources or investing more in existing resources; the loss only worsens (Brotheridge and Lee, 2002; Wells *et al.*, 1997).

As previously explained, COR theory describes both situations that cause stress and the consequences thereof (Hobfoll, 1989). COR theory (Hobfoll, 1989) postulates that individuals may perceive the resources expended to prevent loss to be greater than the actual threat of loss due to work-related demands. As individuals attempt to protect themselves from resource losses, losses eventually become more salient than gains (Hobfoll, 2002). In addition, COR states that different types of stressors and their combinations can be viewed as creating different types of demands on individuals. Therefore, this study examined how these demands and resources interact. This understanding not only provides a clear picture of the current situation regarding what factors cause stress to the individual but can also be useful in predicting and planning ahead for what will happen to an organization or individual.

2.4 Model overview

In this study, a research model was developed using the conceptual framework of JD-R theory adapted by Demerouti *et al.* (2001). The model proposed and tested is depicted in Figure 1.

2.5 Behavior-based controls and role stressors

We contend that activity control will increase salespeople's role stress, because it is perceived as formally prescribed behavioral guidelines for salespeople to follow (Kohli *et al.*, 1998; Malek *et al.*, 2018). Through an activity control, the supervisor sets, as the goals of salespeople, activities deemed important to sales performance; and further, the supervisor monitors standardized

Figure 1 Conceptual framework
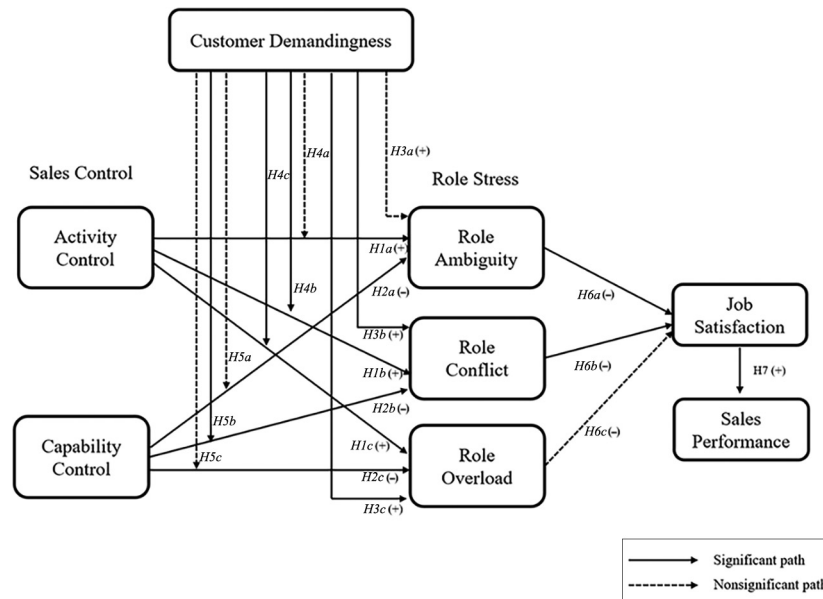
Source: Authors' own work

activities as performed by the salespeople (Challagalla and Shervani, 1996; Katsikeas *et al.*, 2018). However, supervisor management of routine, predictable and standardized activities render deviation from standard practice impossible (Kohli *et al.*, 1998). Salespeople under activity feedback are sometimes placed in situations that do not align with the organization's goals (Kohli *et al.*, 1998), and can experience difficulty in effectively applying their strategies (Mallin and Pullins, 2009), which can lead to increased role conflict. For example, if a salesperson possesses customer-oriented thinking but reinforces sales-oriented management activities, the salesperson will experience role stress in performing customer-oriented activities because the direction the company wants to pursue is in conflict with the direction the salesperson actually pursues (Siguaw *et al.*, 1994).

Activity control checks the extent to which salespeople have performed the required activities (e.g. how many new accounts they acquire each month) but does not provide explanations or advice on how to improve the problems they encounter while doing sales (e.g. the churn of existing customers) (Mallin and Pullins, 2009). Consequently, they feel unclear about their role in achieving high sales performance. Also, required but nonsales-related activities (e.g. filling out expense reports) can reduce the time devoted to sales, resulting in higher role uncertainty (Miao and Evans, 2012).

Activity control limits salespeople's autonomy (Epler *et al.*, 2023) and lowers their level of enjoyment in performing a task (Deci and Ryan, 1985; Miao and Evans, 2014). Top–down decisions mandating and enforcing mechanical activities may cause a sense of an external *locus* of control, loss of self-determination and negative feelings (Challagalla and Shervani, 1996), all of which can dampen intrinsic motivation (Ahearne *et al.*, 2010; Miao and Evans, 2012). Consequently, salespeople undergo job strain, resulting in higher levels of role overload (Bakker and Demerouti, 2007). Salespeople, in fact, tend to perceive themselves as having more control over issues related

to sales calls than their managers (DelVecchio, 1996). Thus, the active control measures and pressure that managers place on salespeople can create greater role stress for them. Therefore, we argue that activity control will increase salespeople's role stressors, and as such, we propose the following hypotheses:

H1. There is a significant positive effect of activity control on (a) role ambiguity, (b) role conflict and (c) role overload.

Relying on conservation of resource theory (Hobfoll, 1989), we assert that capability control, which includes active monitoring and management of salespeople's operations, is an important tool for helping salespeople to meet their objectives while preventing resource depletion (Anderson and Oliver, 1987; Challagalla and Shervani, 1996).

We contend that capability control can be used to provide salespeople with feedback on the knowledge and skills required to provide excellent customer service (Fang *et al.*, 2005) and Capability information is used to improve salespeople's sales skills and capabilities (Epler *et al.*, 2023; Kalra *et al.*, 2023a, 2023b) so that they can skillfully seek, process and understand customer feedback (Carver and Scheier, 1982). Salespeople articulate their goals by gathering and interpreting role information from customers under their capability control (Challagalla and Shervani, 1996).

Capability control enhances salespeople's perception of competence (Evans *et al.*, 2007) and stimulates their intrinsic motivation (Miao *et al.*, 2007) and enhances their sense of their work's meaning (Bande *et al.*, 2021), thus helping them to become more self-confident in their abilities and to get tasks done without suffering role overload (Mulki *et al.*, 2008). Also, a capability-oriented supervisor can contribute to the reduction of salespeople's role ambiguity by helping them to acquire more

systematic procedural knowledge (i.e. how to correctly perform or practice selling skills) (Challagalla and Shervani, 1996). And as regards any role conflict that may arise in the selling process, supervisors who recognize it and alleviate it can better enable salespeople to cope with customer-related problems (Jones *et al.*, 2003). Theoretically, studies show that capability control is more helpful for coaching overall sales activities (Kalra *et al.*, 2023a, 2023b; Kohli *et al.*, 1998) and reduces role ambiguity, role conflict and task overload (Bande *et al.*, 2021; Challagalla and Shervani, 1996). Consequently, capability control can reduce salespeople's role stress to a greater extent. Thus:

H2. There is a significant negative effect of capability control on (a) role ambiguity (b) role conflict and (c) role overload.

2.6 The role of customer demandingness

Customer demandingness is salespeople's perception of customers' requirements and expectations respecting products and/or services (Wang and Netemeyer, 2002, 2004). High customer demand, for example, indicates a gap between the firm's offering and the customer's needs (Gupta *et al.*, 1986; Wang and Netemeyer, 2004).

The present study, in engaging with the literature stream underlining the interaction between job demands and resources according to the job demand-resource interaction model, examines the interaction effect between customer demandingness and the manager's behavior control. We contend that as customer demandingness increases, salespeople's role stress will increase. More and diverse demands of firms by customers are likely to incur conflicts between the company's goals and customers' expectations (e.g. between granting greater promotion application to customers and maximizing the firm's financial outcome). If customers' demands are high, it is more difficult for salespeople to prioritize and integrate their divergent role expectations, potentially resulting in role conflict (Schmitz and Ganesan, 2014). Also, in the context of having to meet the expectations of two or more customers, salespeople might become overwhelmed and feel that they have too much to do within a given time (Jaramillo *et al.*, 2011), leading to role overload. When customers are perceived as more demanding, salespeople are required to devote more efforts and resources than usual (e.g. faster delivery time, additional incentives and discounts) to meet those expectations (Banin *et al.*, 2016). This leads to a reduction in job clarity in terms of the scope of salespeople's role requirements and greater role ambiguity (Schmitz and Ganesan, 2014).

According to marketing control theory (Jaworski, 1988), the control instrument (e.g. activity control or capability control) can be dramatically changed when the environmental context is changed. This theory explains that the relationship between the type of control and its consequences can be controlled by environmental variables. Specifically, it is suggested that three environmental variables (macro, operating or tasks and internal) can play a moderate role in the relationship between the two controls in use (formal and informal) and two consequences (individual effects, such as psychological and behavioral responses and marketing unit effects, such as performance outcomes). Based on Jaworski, (1988)'s argument, this study suggests that customer demandingness

(which includes operating or task environments) plays a role in strengthening or weakening the impact of activity control or capability control (which are types of formal control) on role stressors (which are psychological responses). Therefore, we contend that as customer demandingness increases, the positive relationship between activity control and role stressors is stronger, whereas the negative relationship between capability control and role stressors is weaker.

Activity control evaluates the degree to which salespeople perform the required activities well, but does not provide feedback on how current performance can be improved (Mallin and Pullins, 2009). Salespeople's preoccupation with the activities given to them (e.g. giving a certain number of presentations to new customers) makes it difficult to understand why some customers are reluctant to visit them or reduce their purchases of some products. Activity control cannot always be in harmony with the customer's expectations and demands (Jones *et al.*, 2003), and some routine activities include tasks that do not require customer interaction (Miao and Evans, 2012). As customer demands and expectations rise, salespeople are unable to prioritize their roles between standardized tasks and diverse customer demands, and eventually experience role ambiguity. Moreover, the need to provide nonstandardized selling procedures for each customer (e.g. delivery time, bundling requests and coordination across accounts) while maintaining routine and standardized procedures requires salespeople to put in more coordination effort, with the possible result that they become overwhelmed (Schmitz and Ganesan, 2014), leading to the experience of greater role overload.

In a complex customer environment where a customized offering is needed, capability control, which continuously diagnoses and provides feedback to salespeople on sale techniques and customer relationship management (Katsikeas *et al.*, 2018), provides clear customer solutions and suggests the proper sales approaches. Salespeople can easily solve customers' problems through the diagnostic advice of the supervisor, rather than spending unnecessary time trying to recognize and fix these problems on their own (Kohli *et al.*, 1998). Supervisors can advise salespeople on how to identify their shortcomings in the sales process and how to identify customer complaints or new-customer preferences (e.g. in product-oriented sales or relationship-oriented sales, respectively) (Challagalla and Shervani, 1996). In an environment where more and diverse customer demands arise, supervisors' diagnostic advice on salespeople's capabilities helps them to fine-tune their roles. Furthermore, despite the fact that a high level of customer demandingness increases salespeople's overall workload (Singh, 2000), capability control helps them to feel useful and valuable (Nauta *et al.*, 2009) and prevents resource depletion (Bande *et al.*, 2021). Therefore, we propose the following set of hypotheses:

H3. Customer demandingness will have a significant positive effect on (a) role ambiguity, (b) role conflict and (c) role overload.

H4. The positive effect of activity control on (a) role ambiguity, (b) role conflict and (c) role overload is stronger for salespeople facing high customer demandingness and weaker for salespeople facing low customer demandingness.

H5. The negative effect of capability control on (a) role ambiguity, (b) role conflict and (c) role overload is weaker for salespeople facing higher customer demandingness and stronger for salespeople facing low customer demandingness.

2.7 Role stressors and job satisfaction

Role stress theory suggests that role stressors such as role ambiguity, role conflict and role overload incur psychological strain and negative outcomes (Rizzo *et al.*, 1970). Role stressors thus affect salespeople's job satisfaction (Podsakoff *et al.*, 2007; Singh, 1998; Vandenberghe *et al.*, 2011). Existing studies on the relationship between role stress and job satisfaction show that when salespeople perceive that their job requirements are incompatible and inconsistent or are confused about their responsibilities, job satisfaction suffers (Brown and Peterson, 1993; Rizzo *et al.*, 1970). Furthermore, overworked salespeople feel exhausted and have lower job satisfaction (Mulki *et al.*, 2008). Two meta-analyses have demonstrated that there is a significant relationship between role stress and job satisfaction (Chang *et al.*, 2009; Lee and Ashforth, 1996). Hence, we suggest that:

H6. (a) Role ambiguity, (b) role conflict and (c) role overload have significant negative effects on job satisfaction, respectively.

2.8 Job satisfaction and sales performance

Previous studies have found relationships between role stress, job satisfaction and sales performance (Brown and Peterson, 1994; Judge *et al.*, 2001). Some studies have shown that role ambiguity and role conflict are negatively associated with job performance (Bagozzi, 1978), but others have indicated that the relationship between role ambiguity, role conflict and job performance is weak (Abramis, 1994; Jackson and Schuler, 1985), or less consistent supported (Brown and Peterson, 1993; Jackson and Schuler, 1985). These inconsistent findings in previous studies have also been demonstrated in meta-analyses (Abramis, 1994; Jackson and Schuler, 1985).

However, in a common conclusion of role stress research, role stress is associated with negative value states, leading to tension and low job satisfaction (Jackson and Schuler, 1985; Kim *et al.*, 2009; Schwepker and Hartline, 2005). For example, according to the COR theory, interrole conflict can result in a loss of resources or an imbalance between resources and needs, leading to negative psychological outcomes that include dissatisfaction with the job, depression, anxiety, burnout, physiological tension (Bagozzi and Verbeke, 2020; Jex, 1998; Kahn *et al.*, 1964; Kalra *et al.*, 2023a, 2023b; Talukder, 2019). In addition, Kohli (1985) demonstrated that greater role clarity increases job satisfaction. Multiple meta-analytic reviews have investigated the relationship between both role ambiguity and role conflict and job satisfaction (Brown and Peterson, 1993; Tubre and Collins, 2000). Zablah *et al.* (2012) supported using the result of meta-analysis that job stress affects outcomes through engagement, represented by job satisfaction and organizational commitment, rather than directly affecting job outcomes.

Furthermore, numerous studies demonstrated that salespeople's job satisfaction positively affects sales and their performance (Bettencourt and Brown, 2003; Brown and Peterson, 1994; Christen *et al.*, 2006; Churchill *et al.*, 1974; Schmitz and Ganesan, 2014). Some scholars propose that job satisfaction and sales performance were only weakly related (Brown and Peterson, 1994; Christen *et al.*, 2006; Singh and Das, 2013). However, many meta-analyses have shown that job attitudes such as job satisfaction and commitment are accompanied by job-related behavior, the most pivotal of which is performance (Harrison *et al.*, 2006; Judge *et al.*, 2001; Riketta, 2002). Similarly, Frank and Park (2006) discussed the relationship between job satisfaction and performance. Through a meta-analysis based on a sample of 31,428 salespeople, they found that job satisfaction affects performance (i.e. self-rated, manager-rated and objective) rather than job performance. As a result, we propose the following hypothesis:

H7. There is a significant positive relationship between job satisfaction and sales performance.

3. Method

3.1 Data collection and sample

To test our proposed hypotheses, we collected data from salespeople belonging to the top 50 pharmaceutical companies in South Korea as provided by the Korea Investor's Network for Disclosure system. South Korea is considered to be one of the major Asian pharma countries, with a market size that exceeded KRW 23.2tn (US$19.2bn) in 2020. Since its domestic market currently shows a rapid annual growth rate of 10%, greatly exceeding the global average of 3–5% (Korea Drug Research Association, 2023), Korea recognizes the future pharmaceutical industry as a potential driving force of economic growth.

This study used the following procedures for gathering data from participants. First, we started with a pilot test among 5 sales managers from five sales departments, respectively, and then contacted two academic marketing researchers in South Korea to assess the questionnaires from the perspective of the study's objectives. Based on measurement items taken from previous literature, a questionnaire was prepared in English first and then translates into Korean. The Korean questionnaire was then back-translated into English, and all measurements were double-checked for accuracy.

After a minor adjustment process based on the feedback received, we completed the final questionnaire. After that, we obtained, from a leading list broker, a list of sales managers representing each of the companies that had agreed to provide access to their employees for participation in the survey. To ensure participation, we sent the sales managers a summary of the study's objectives, the questionnaire, including all variables and findings. We promised to guarantee the confidentiality of all survey responses and to reward each participant ten thousand won (about $8). The sales managers identified the salespeople who were willing to participate in the questionnaire, and accordingly, we mailed questionnaires (with cover letter) to 410 salespeople, providing them additionally with prepaid envelopes for the questionnaires' return. We received responses from 310 salespeople (response rate: 75.60%), to whom we then provided the promised $8 compensation via their managers. We had to exclude 87 completed questionnaires due to missing or incomplete

information, and thus, the total number of samples analyzed in the study was 223.

The demographic data on the 223 salespeople are as follows. The average number of regular employees was 540.34 (s.d.= 472.32). The average participant had eight years and four months (s.d. = seven years and one months) of experience in sales, with 23.3% of the sample within the range of 5–10 years. As for the sizes of companies to which the participants belonged, 14.3% had less than 100 people, 27.4% 100–300 people and 68.2% greater than 300 people. In addition, the tenure with the company was seven years and nine months (s.d. = seven years), with 42.6% having less than five years, 24.7% of the sample in the range of 5–10 years, 22.8% of the sample in the range of 10–20 years and 9.9% greater than 20 years. A total of 10.8% of the employees were females, 89. 2% were males and 100% had at least a two-year college degree.

We considered two factors as control variables that can influence sales performance. Two control variables – tenure and sales experience – were included in the model. Overall, we find that tenure has a significant impact on job satisfaction and performance at the 0.05 level while sales experience does not have an impact on job satisfaction and performance (for details, see the Table 3).

3.2 Measurement of variables

The hypotheses proposed in this study were tested using a quantitative survey method based on structured questionnaires. Some variables were provided additional explanations to facilitate clearer understanding (i.e. how I negotiate). For customer demandingness, we choose a four-item scale from Wang and Netemyer (2002). The behavior control was divided into an activity control and a capability control, which are described by the studies of Miao and Evans (2012), and a four-item scale was adopted for each. Role stress was divided into role ambiguity, role conflict and role overload. For role ambiguity and role conflict, we used a four-item scale from Rizzo et al. (1970). Role overload was measured with four-item scale from Jones et al.'s (2007) work. For Job satisfaction, a four-item scale was used from Churchill et al. (1974). Salesperson performance usually has been measured in terms of objective aspects (e.g. sales quotas, revenue, profits or consumer satisfaction) (Singh and Das, 2013; Zallocco et al., 2009). According to Churchill et al. (1974)'s meta-analysis, self-reported performance measures lead to the same results as evaluations made by supervisors or coworkers. Thus, we used a three-item scale of sales performance adapted from Johnson and Sohi (2014). With the exception of the demographic data, all of the other variables were evaluated using a seven-point Likert scale anchored on "1 = strongly disagree, and 7 = strongly agree." We adapted all multi item measures for most constructs from the existing literature and used a seven-point scale, where 1 = strongly disagree and 7 = strongly agree. The measurement items for each variable are shown in the Appendix.

Generally, researchers consider two types of structural equation modeling analysis, namely, covariance-based structural equation modeling (CB-SEM) (Jöreskog, 1970, 1978, 1993) and partial least square (PLS) path modeling (Wold, 1982, 1985). Both methods are useful for analyzing relationships among factors (Dash and Paul, 2021) and reveal few differences or produce almost identical results (Shmueli

et al., 2016); however, CB-SEM is more efficient for a factor-based model (Sarstedt *et al.*, 2016) and PLS is more relevant for a composite-based model (Dash and Paul, 2021). CB-SEM has a long tradition of use across virtually all business areas (Baumgartner and Homburg, 1996; Garver and Mentzer, 1999; Shook *et al.*, 2004), and has recently been widely used in both CB-SEM and in PLS. According to Fornell and Bookstein (1982), neither CB-SEM nor PLS is superior to the other, and so researchers should apply the method that best suits their research purpose, data characteristics and model settings (Gefen *et al.*, 2011; Hair *et al.*, 2012). We used CB-SEM analysis using AMOS for the following reasons. First, if all variables are the same, or one or more of the key variables is changed based on the past model, it is appropriate to use CB-SEM to verify the goodness of fit of the linear model and test the hypothesis (Dash and Paul, 2021). However, unlike existing studies, when conducting research wherein all variables are changed, the PLS statistical package should be used (Dijkstra, 2010). Second, many existing studies have used CB-SEM to handle the disadvantages of bias in parameter estimation, the inability to model measurement errors, and a piecemeal approach to estimating the overall research model (Joreskog, 1970). This approach is preferred because it enables researchers to track measurement error, provide data on the model's degree of fit, and assess multiple linkages (Byrne, 2013). Therefore, this study used, and this paper proposes, CB-SEM analysis using AMOS for more clear findings, interpretations and conclusions.

3.3 Reliability and validity of variables

CFA was used to validate the measurement items. Cronbach's α values ranged from 0.80 to 0.94, emphasizing the internal consistency. Similarly, we could confirm that the constructs were sufficiently psychometrically reliable, with standard estimates ranging between 0.59 and 0.97. (Nunnally and Bernstein, 1978). The overall model fit was examined, and it met all of the baseline comparison indices ($\chi^2(df)$ = 649.6(376), IFI = 0.93, TLI = 0.91, CFI = 0.93), indicating that the model adequately fit the data. Table 1 summarizes the CFA findings. By comparing the AVE values with their respective squared correlations, discriminant validity was determined. The AVE values for each set of constructs were always greater than the squared correlations, highlighting the construct's discriminant validity (Fornell and Larcker, 1981). The correlation coefficients ranged from 0.02 to 0.68, while the AVEs ranged from 0.51 to 0.84, indicating the distinctness of the variables (see Tables 1 and 3).

In addition, the variance inflation factor (VIF) was used to check for multicollinearity. Multicollinearity can be safely ignored when the VIF value is greater than five (VIF < 5). Consequently, we found that multicollinearity could not be present because all values of VIF ranged from 1.00 to 1.97 (see Table 2).

3.4 Model test (main effects)

Table 3 shows the parameter estimates that explain the findings of the study in light of the proposed hypotheses. The fit indices of the structural model indicate good model fitness ($\chi^2(df)$ = 655.6(375), IFI = 0.93, TLI = 0.91, CFI = 0.92)

In support of *H1a*, the study discovered a significant positive relationship between activity control and role ambiguity (γ = 0.36, t = 2.48, p < 0.05). The study also found a significant

Table 1 Results of reliability and validity test

Item	Construct	St. estimate	S.E.	C.R.	Cronbach's α	AVE	CR
AC1	Activity control	0.67			0.82	0.61	0.79
AC2		0.80	0.12	10.59			
AC3		0.88	0.13	10.37			
AC4		0.74	0.14	8.70			
CC1	Capability control	0.66			0.80	0.51	0.80
CC2		0.77	0.12	9.65			
CC3		0.74	0.11	9.29			
CC4		0.67	0.12	8.60			
CD1	Customer demandingness	0.70			0.83	0.52	0.77
CD2		0.77	0.12	9.62			
CD3		0.71	0.13	7.72			
CD4		0.72	0.14	7.73			
RA1	Role ambiguity	0.59			0.85	0.62	0.81
RA2		0.91	0.17	9.33			
RA3		0.85	0.16	9.09			
RA4		0.76	0.16	8.64			
RC1	Role conflict	0.63			0.84	0.57	0.71
RC2		0.81	0.16	9.51			
RC3		0.85	0.15	9.74			
RC4		0.72	0.16	8.73			
RO1	Role overload	0.73			0.89	0.66	0.76
RO2		0.85	0.09	13.56			
RO3		0.89	0.11	12.19			
RO4		0.78	0.10	11.12			
JS1	Job satisfaction	0.79			0.86	0.61	0.77
JS2		0.84	0.08	13.06			
JS3		0.79	0.09	12.32			
JS4		0.70	0.08	10.80			
SP1	Sales performance	0.90			0.94	0.84	0.85
SP2		0.97	0.05	24.36			
SP3		0.87	0.05	19.37			

Source: Authors' own work

Table 2 Collinearity measured by VIF

Variables	Tolerance	VIF
Activity control	0.53	1.88
Capability control	0.51	1.98
Customer demandingness	0.87	1.15
Role ambiguity	0.96	1.03
Role conflict	0.76	1.13
Role overload	0.78	1.28
Job satisfaction	1.00	1.00

Source: Authors' own work

positive effect of activity control on role conflict ($\gamma = 0.48$, $t = 2.95$, $p < 0.01$), in support of *H1b*. In support of *H1c*, the study found a significant positive effect of activity control on role overload ($\gamma = 0.76$, $t = 4.39$, $p < 0.01$). The study further found a significant negative effect of capability control on role ambiguity ($\gamma = -0.49$, $t = -2.95$, $p < 0.01$), in support of *H2a*; a significant negative effect of capability control on role conflict ($\gamma = -0.59$, $t = -3.21$, $p < 0.01$), in support of *H2b*; as well as a significant negative effect of capability control on role overload ($\gamma = -0.62$, $t = -3.40$, $p < 0.01$), in support of *H2c*. In

addition, the study found a significant negative effect of customer demandingness on role ambiguity ($\gamma = -0.44$, $t = -4.56$, $p < 0.01$) (*H3a* not supported); a significant positive effect of customer demandingness on role conflict ($\gamma = 0.44$, $t = 4.07$, $p < 0.01$), in support of *H3b*, as well as a significant positive effect of customer demandingness on role overload ($\gamma = 0.24$, $t = 2.52$, $p < 0.05$), in support of *H3c*. Moreover, the study found a significant negative effect of role ambiguity on job satisfaction ($\gamma = -0.33$, $t = -4.30$, $p < 0.01$), in support of *H6a*; a significant negative effect of role conflict on job satisfaction ($\gamma = -0.21$, $t = -2.69$, $p < 0.01$), in support of *H6b*, while finding an insignificant positive effect of role overload on job satisfaction ($\gamma = 0.17$, $t = 1.91$) (*H6c* not supported). Finally, the study found a significant positive effect of job satisfaction on sales performance ($\gamma = 0.16$, $t = 2.25$, $p < 0.05$), in support of *H7*. Table 4 summarizes these findings.

3.5 Test of moderating effects

To test the moderating effects of job resources and job demands, we tested using the structural equation model in AMOS, following a two-step approach suggested by Ping (1996). In addition, we conducted a simple slope test to visually depict how the relationships between independent and

Table 3 Results of correlation analysis

Variable	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Activity control (1)	4.86	1.07	1	0.68**	0.29**	−0.22**	0.10	0.27**	0.36**	0.21**	0.05	0.05
Capability control (2)	5.02	0.94		1	0.36**	−0.34**	0.048	0.19**	0.42**	0.06	0.09	0.10
Customer demandingness (3)	5.57	0.92			1	−0.49**	0.28**	0.11	0.30**	0.21**	0.19**	0.21**
Role ambiguity (4)	2.40	1.01				1	−0.17**	−0.05	−0.32**	−0.12	−0.08	−0.08
Role conflict (5)	4.71	1.21					1	0.47**	−0.06	0.09	−0.02	−0.02
Role overload (6)	4.31	1.37						1	0.14*	−0.03	−0.07	−0.07
Job satisfaction (7)	4.98	1.16							1	0.15*	0.09	0.08
Sales performance (8)	4.80	1.54								1	0.08	0.04
Tenure (9)	7.81	7.02									1	0.92**
Sales experience (10)	8.41	7.13										1

Notes: ** $p < 0.01$; * $p < 0.05$
Source: Authors' own work

Table 4 Results of the structural equations model: main effect

H(+/−)	Path	St. estimate	S.E.	C.R.	Collinearity statistics		Results
					Tolerance	VIF	
H1							
H1a	Activity control → Role ambiguity	0.36*	0.10	2.48	0.53	1.88	Supported
H1b	Activity control → Role conflict	0.48**	0.11	2.95	0.53	1.88	Supported
H1c	Activity control → Role overload	0.76**	0.19	4.39	0.53	1.88	Supported
H2							
H2a	Capability control → Role ambiguity	−0.49**	0.15	−2.95	0.50	1.98	Supported
H2b	Capability control → Role conflict	−0.59**	0.15	−3.21	0.50	1.98	Supported
H2c	Capability control → Role overload	−0.62**	0.25	−3.40	0.50	1.98	Supported
H3							
H3a	Customer demandingness → Role ambiguity	−0.44**	0.09	−4.56	0.87	1.15	Not supported
H3b	Customer demandingness → Role conflict	0.44**	0.09	4.07	0.87	1.15	Supported
H3c	Customer demandingness → Role overload	0.24*	0.13	2.52	0.87	1.15	Supported
H6							
H6a	Role ambiguity → Job satisfaction	−0.33**	0.12	−4.30	0.96	1.03	Supported
H6b	Role conflict → Job satisfaction	−0.21**	0.13	−2.69	0.76	1.13	Supported
H6c	Role overload → Job satisfaction	0.17	0.09	1.91	0.78	1.28	Not supported
H7							
H7	Job satisfaction → Sales performance	0.16*	0.10	2.25	1.00	1.00	Supported
Tenure → Job satisfaction		0.17**	0.01	2.72			
Sales experience → Job satisfaction		−0.11	−0.01	−1.65			
Tenure → Sales performance		0.20**	0.01	3.04			
Sales experience → Sales performance		−0.13	−0.01	−1.92			

Notes: ** $p < 0.01$; * $p < 0.05$
Source: Authors' own work

dependent variables changed with high and low levels of the moderating variable, as shown in Figure 2.

The goodness-of-fit indices for the structural equation model are as follows: ($\chi^2(df) = 836.2(421)$, IFI = 0.90 and CFI = 0.90) indicating that the model adequately fit the data. The following hypothesized relationships were investigated, as shown in Table 5: *H4a*, which stated that customer demandingness moderates the relationship between activity control and role ambiguity, and which was not supported ($\gamma = -0.33$, $t = -4.77$, $p < 0.01$); *H4b*, which stated that customer demandingness moderates the relationship between activity control and role conflict, and which was supported ($\gamma = 0.30$, $t = 3.63$, $p < 0.01$).

We found that the relationship between activity control and role conflict is stronger for high customer demandingness and weaker for low customer demandingness (Figure 2, Panel A); *H4c*, which states that customer demandingness moderates the relationship between activity control and role overload, and which was supported ($\gamma = 0.19$, $t = 2.64$, $p < 0.01$). We found that the relationship between activity control and role overload is stronger for high customer demandingness and weaker for low customer demandingness (see Figure 2, Panel B). Furthermore, *H5a*, which stated that customer demandingness moderates the relationship between capability control and role ambiguity, was not supported ($\gamma = 0.25$, $t = 3.24$, $p > 0.01$); *H5b*, which stated

that customer demandingness moderates the relationship between capability control and role conflict, was supported ($\gamma = -0.27$, $t = -2.91$, $p > 0.01$). Furthermore, we found that the relationship between capability control and role conflict is stronger when customer demandingness is high but weaker when customer demandingness is low (see Figure 2, Panel C); *H5c*, which stated that customer demandingness moderates the relationship between capability control and role overload, was not supported ($\gamma = -0.17$, $t = -1.67$). In effect, except for *H3a*, *H4a*, *H5a*, *H5c* and *H6c*, all of the hypotheses advanced in the current study were supported.

4. Discussion, limitations and conclusions

4.1 Summary of findings

Using the JD-R theory, we found that behavior-based control creates a psychological climate of role stressors (role conflict, role ambiguity and role overload) in their varying dimensions.

Salespeople's role stressors shape their job satisfaction, which, in turn, affects their sales performance. The study also looked at the moderating effect of job demand (customer demandingness) on the relationship between job resources and role stressors. The nested model empirically demonstrates that categorizing job demand into activity control and job resource into capability control can have varying effects on role stress among salespeople. We discovered statistically significant positive relationships between activity control and (all dimensions of) role stressors. This finding supports previous scholars' (Kohli *et al.*, 1998) contention that the nature of an activity control can easily trigger role stress in salespeople. The study also found that a capability control negatively affects (all dimensions of) role stressors. This outcome reinforces Challagalla and Shervani (1996) assertion that under capability control, salespeople can articulate their goals by gathering and interpreting role information from customers, which can improve salespeople's sales skills and capabilities so that they

Figure 2 Analysis of interaction effects of customer demandingness

(a)

(b)
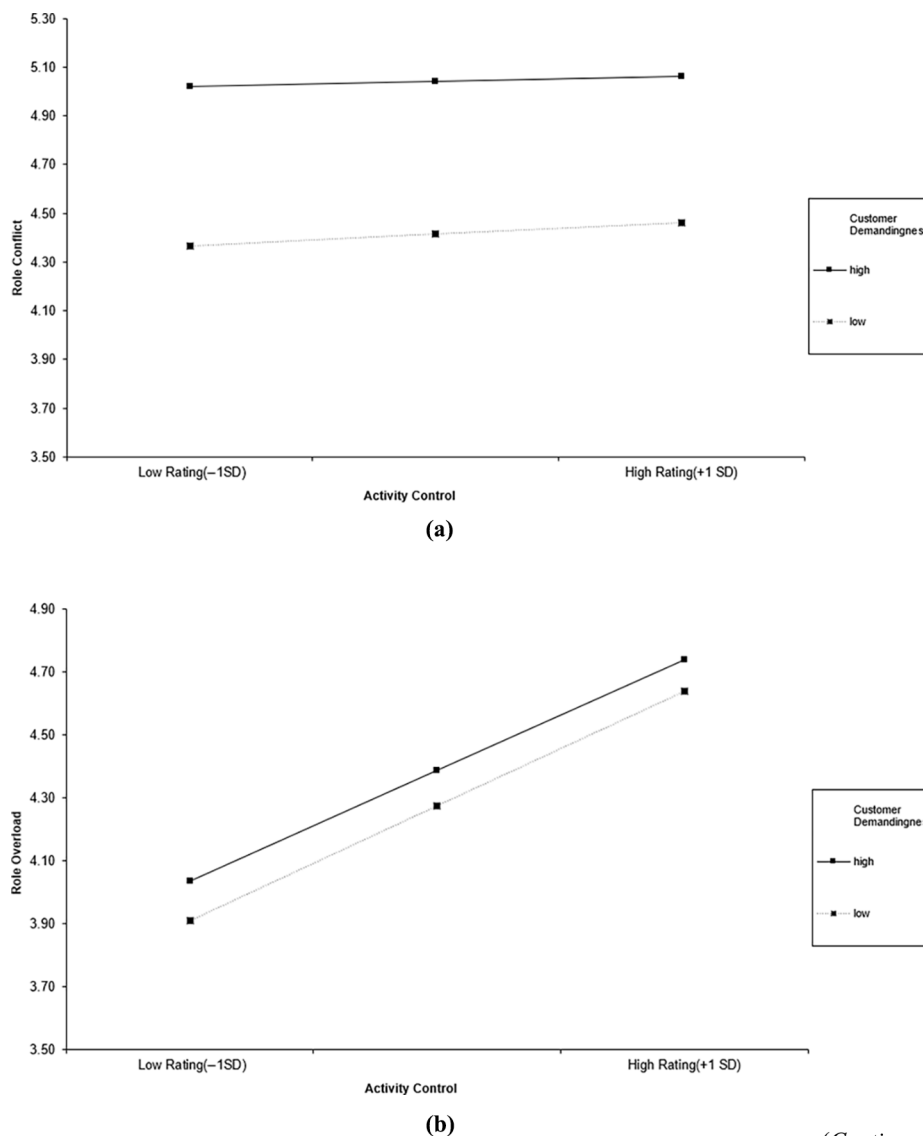
(*Continued*)

Figure 2

(c)
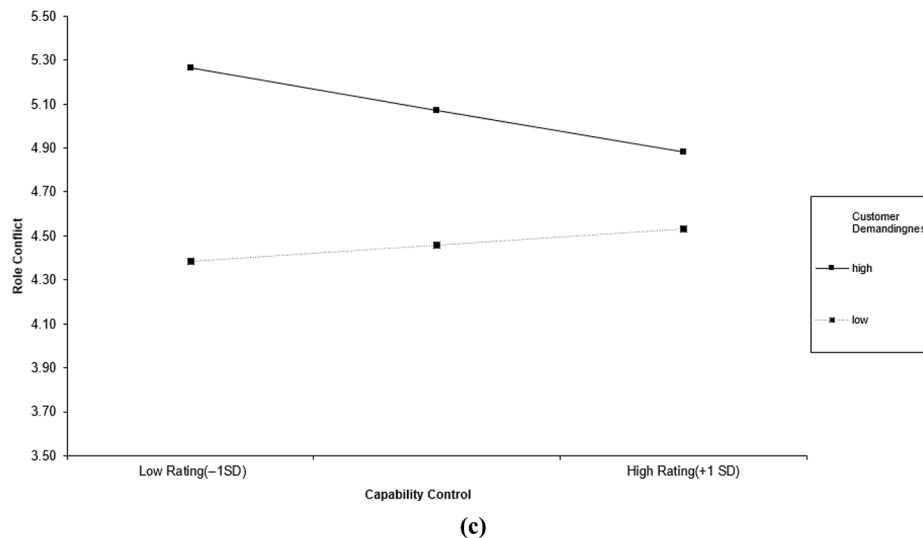
Notes: (a) Activity control x customer demandingness on role conflict; (b) activity Control x customer demandingness on role overload; (c) capability control x customer demandingness on role conflict
Source: Authors' own work

Table 5 Results of the structural equations model: interaction effect

H(+/−)	Path	St. estimate	S.E.	C.R.	Results
H4					
H4a	AC*CD → Role ambiguity	−0.33**	0.06	−4.77	Not supported
H4b	AC*CD → Role conflict	0.30**	0.07	3.63	Supported
H4c	AC*CD → Role overload	0.19**	0.10	2.64	Supported
H5					
H5a	CC*CD → Role ambiguity	0.25**	0.08	3.24	Not supported
H5b	CC*CD → Role conflict	−0.27**	0.10	−2.91	Supported
H5c	CC*CD → Role overload	−0.17	0.16	−1.67	Not supported

Notes: **$p < 0.01$; *$p < 0.05$
Source: Authors' own work

can skillfully seek, process and understand customer feedback, thereby reducing their role stress to a greater extent.

The study further found that customer demandingness has a significant positive effect on both role conflict and role overload. This result confirms previous scholars' claim that high customer demandingness can broaden the scope of salespeople's role responsibilities and sales performance expectations (Schmitz and Ganesan, 2014). Hence, salespeople may struggle to maximize performance or prioritize aspects of their role, which can easily lead to role conflict and role overload. When salespeople are first confronted with diverse customer demands, it can be difficult to clearly understand what they want, which can lead to role conflict and role overload (Ingram *et al.*, 2011).

The study also discovered that role ambiguity and role conflict have significant negative effects on job satisfaction. This finding supports MacKenzie *et al.*'s (1998) claim that role stress (in the form of role conflict and role ambiguity) can have a negative impact on salespeople's behavior. Previous research (Burke and

Greenglass, 1995) discovered that stress, manifested as role conflict and role ambiguity, has a negative impact on salespeople's job satisfaction, manifesting as negative job attitudes and lower levels of job performance. Correspondingly, our findings confirm that both role conflict and role ambiguity have a negative impact on salespeople's job satisfaction. This result also implies that if salespeople's roles are unclear and they are placed in incompatible situations, it can lead to a decrease in job satisfaction. These findings further accentuate Brown and Peterson's (1993) contention that when salespeople perceive inconsistency in behavioral expectations or lack clarity about their responsibilities, job satisfaction deteriorates. Similarly, the study discovered that job satisfaction boosts sales performance. This finding reechoes the views of scholars such as Schwab and Cummings (1970), who argue that job satisfaction is a precondition for salespeople's performance.

Finally, the study discovered that customer demandingness moderates the relationship between activity control and role

conflict, as well as the relationship between activity control and role overload. The findings also revealed that customer demandingness moderates the relationship between capability control and both role conflict and role overload. These findings highlight the fact that the positive effect of activity control on role conflict and role overload is stronger for salespeople who face high customer demandingness and weaker for salespeople who face low customer demandingness. The findings also emphasize that the fact that the negative effect of capability control on both role conflict and role overload is weaker for salespeople dealing with high customer demandingness and stronger for salespeople dealing with low customer demandingness.

4.2 Theoretical implications

First, few studies apply the JD-R model to the sales context. Therefore, we contribute to JD-R theory in the following way. The basic assumption of the JD-R model is that job demands increase physiological and psychological costs (Bakker *et al.*, 2004), whereas job resources lower psychological costs (Bakker and Demerouti, 2007; Demerouti *et al.*, 2001). Based on this theory, we propose that job demands and job resources (i.e. two types of behavior control) occur when supervisors produce or mitigate psychological costs and ultimately impact salespeople's performance (Monnot and Beehr, 2014). For instance, two types of behavior control – capability control (as a job resource) and activity control (as a job demand) – emerge as conceptually and empirically distinct, and which lead to separate psychological responses (i.e. role conflict, role ambiguity and role overload) which, in turn, affect a salesperson's job satisfaction and performance.

Second, this paper emphasizes the importance of resources that can meet job demands according to the COR theory. This theory holds that people seek to acquire and maintain their psychological, physical and social resources, and that when those resources are lost, or the amount of resources obtained decreases, or the resources invested do not match the rewards, people experience stress (Hobfoll, 1989; 2002). If employees have, or at least can obtain, resources to cope with various stressful situations in an organization, their psychological well-being is positively affected (Hobfoll, 2002), but otherwise their psychological well-being is compromised. The results of this study confirmed that there is a difference in the increase and decrease of role stress according to the manager's different behavior-based control. More specifically, this study showed that the manager's capability control plays a very important role as a resource that can solve job demands and reduce stress during job performance, according to the resource conservation theory. It should be noted that unlike the essential control systems of managers, the capability control is a form of managerial support that prevents burnout and increases engagement (Schaufeli, 2017).

Third, this study provides a great extension for supporting the JD-R theory (Bakker and Demerouti, 2007) by showing that the effectiveness of supervisory resources becomes stronger or weaker depending on specific demands in a working setting. The level of efficiency of supervisory resources can vary according to their matching of certain demands. In other words, the degree to which job resources are actually helpful will be contingent on specific market conditions and demands (Schmitz and Ganesan, 2014; van den Tooren *et al.*, 2012). We identified customer demandingness as a job demand and its

important role in moderating the relationship between the behavior-based controls investigated and their respective role stressors. Activity control can be a valuable managerial resource for enhancing salespeople's expected activities, but it can be associated with higher psychological costs if it gets in the way of coping with complex customer demands. Capability control can be a beneficial resource associated with lower psychological costs when faced with the same demands (i.e. high customer demand); as such, it helps to more effectively mitigate role stress. Certainly, capability control provides detailed capability coaching and diagnostic feedback that enables salespeople to learn new selling strategies and apply different procedures to cope with varying job demands.

4.3 Practical implications

First, the realization that customer demandingness can lead to role conflict and role overload has significant strategic implications. Due to excessive psychological, emotional and customer demands, both role conflict and role overload are common occurrences in the sales profession (Caplan and Jones, 1975; Singh *et al.*, 1994). Even though managers cannot easily control events such as increasing customer demandingness, they will be better prepared to deal with them if they thoroughly plan ahead of time. Customer management, for example, can be improved through training that teaches how to properly negotiate with customer needs, how to understand different types of customer situations and how to perform roles in accordance with customer expectations (Homburg *et al.*, 2011). In the pharmaceutical industry in particular, sales managers need to reduce role confusion among salespeople by establishing various market response strategies to meet customer needs based on a diversified portfolio, including such items as new products, general/raw drug products and beverages. Managers can improve customer management through ongoing training (Cova and Salle, 2007; Sawhney, 2006) to help predict the customer's internal processes, the customer's situation and position in the market, and where the customer and the market, are headed in the future.

Second, to reduce role ambiguity, role conflict and role overload, the manager's activity control should be minimized and the capability control should be enhanced. Although the activity control may be considered beneficial to the improvement of the salesperson's ability in terms of managing essential activities, it does not necessarily lead to a successful outcome. In particular, a complex environment makes it difficult to understand customer expectations, and lack of information on role expectations makes it difficult to have clarity on whether role performance has been performed properly. Sometimes, controlling salespeople in terms of the requirements of their activities can limit their flexibility and autonomy, which negatively affects their ability to properly steer the attention of customers and organizations.

Managers must set the visit rate of the account considering the appropriate number of customers and induce essential participation in minimum education programs related to products, competitors and customers and rather than executing everything according to their own knowledge and plans, efforts should be made to equip themselves with the ability to respond to changes in the environment.

The manager's diagnostic advice on the salesperson's competency should include information on what he or she lacks

or needs to improve (such as product descriptions, negotiation, communication skills, interpersonal and customer relationship management skills), and it should also provide information on customer complaints or new-customer preferences. To do so, managers must be well-trained to understand how they can use optimal knowledge and skills according to various environmental changes and to respond quickly and effectively when faced with a crisis. For example, if sales managers rapidly supplement product portfolios and provide appropriate coaching and feedback when the external environment changes, it will help salespersons to improve their capabilities. Indeed, the capability control of managers will help salespeople learn better sales approaches, increase their procedural knowledge to improve performance, and provide excellent customer service (Fang *et al.*, 2005). Therefore, the capability control not only builds customer management and relationships within the organization, but also minimizes the obstacles that hinder the salesperson from fulfilling his or her role.

Third, to help their salesforce, managers might use the customer relationship management technology as an early warning system. For instance, if a sales manager notices that a salesperson is dealing with a customer or group of customers who are placing increasing demands on the former, the manager may decide to either offer the salesperson proactive support to lessen role stress or, possibly, transfer the customer to another salesperson who is better able to handle role stress. It is necessary for sales managers to set specific performance goals differently according to individual salespeople's experiences and abilities rather than instructing all salespeople on the same rules and tasks. For example, employees in the early stage of their employment should be supported in their use of the new skills they have learned to attain better performance, while employees in a late stage can be supported in more challenging tasks, such as development of new accounts, drawing higher revenues from current accounts and achieving greater service provision.

Fourth, the results of this study can provide important management guidelines for managers experiencing role stress. In South Korea, more than 631 domestic and multinational pharmaceutical companies are competing with each other (Statista Research Department, 2023). In 2021, the revenue of the top 10 companies in Korea was $34.925bn (average profit growth rate of 12.42%). Since the market is not dominated by a few companies and companies with similar revenues are competing, the pharmaceutical industry in South Korea is not free from the influence of excessive competition. As pharmaceutical companies upgrade performance targets (e.g. annual and monthly sales targets), they put more pressure on salespeople to meet revised sales targets. As a result, salespeople not only are forced to deal with high workloads to bring efficiency and effectiveness to their work, but also experience job stress while constantly coordinating with the company's product managers or customers (doctors or pharmacists) to provide results that meet customer needs. Overall, the results of this study will help sales managers of pharmaceutical companies in Korea to suggest ways to relieve job stress stemming from origins such as role ambiguity, role conflict and role overload, and, so, bring constructive changes to the organization. This study's findings show that it is very

important for managers to clearly guide salespeople in what they are to do and to reduce their job stress to enhance job satisfaction and job performance.

4.4 Limitations and future research

While the discussion of job resources and job demands in the context of sales is expanded by our study, further research is needed to determine how role stressors are impacted by job resources. The current study adds to a growing body of literature that highlights the benefits and drawbacks of behavior-based control. Future studies might reveal the optimal levels for behavior-based control.

In a similar vein, we only included behavior-based control in this study as sources for job resources. If outcome-based control and behavior-based control are combined as job resources in one model, further research may yield more insights. Last but not least, our model's current iteration only focuses on the salesforce and sales managers. Future studies that attempt to incorporate customer dimensions into the model, however, will produce insightful results.

Finally, to minimize potential sources of bias, this study collected questionnaires from salespersons working for pharmaceutical companies in Korea since the nature of the industry lies in its various demands, and the strategy required for each situation may differ. However, the specific target sample selection may limit the generalizability of the results to other groups or populations. Therefore, future studies should be cautious when applying these findings to industries or nations with different cultures.

References

Abramis, D.J. (1994), "Work role ambiguity, job satisfaction, and job performance: meta-analyses and review", *Psychological Reports*, Vol. 75 No. 3_suppl, pp. 1411-1433.

Ahearne, M., Rapp, A., Hughes, D.E. and Jindal, R. (2010), "Managing sales force product perceptions and control systems in the success of new product introductions", *Journal of Marketing Research*, Vol. 47 No. 4, pp. 764-776.

Ambrose, S.C., Rutherford, B.N., Shepherd, C.D. and Tashchian, A. (2014), "Boundary spanner multi-faceted role ambiguity and burnout: an exploratory study", *Industrial Marketing Management*, Vol. 43 No. 6, pp. 1070-1078.

Anderson, E. and Oliver, R.L. (1987), "Perspectives on behavior-based versus outcome-based salesforce control systems", *Journal of Marketing*, Vol. 51 No. 4, pp. 76-88.

Anderson, J.C., Kumar, N. and Narus, J.A. (2007), *Value Merchants: Demonstrating and Documenting Superior Value in Business Markets*, Harvard Business Press.

Bagozzi, R.P. (1978), "Salesforce performance and satisfaction as a function of individual difference, interpersonal, and situational factors", *Journal of Marketing Research*, Vol. 15 No. 4, pp. 517-531.

Bagozzi, R.P. and Verbeke, W.J. (2020), "Genetic and psychological underpinnings of motivation and satisfaction of industrial salespeople", *Industrial Marketing Management*, Vol. 85, pp. 69-83.

Bakker, A.B. and Demerouti, E. (2007), "The job demands – resources model: state of the art", *Journal of Managerial Psychology*, Vol. 22 No. 3, pp. 309-328.

Bakker, A.B. and de Vries, J.D. (2021), "Job demands–resources theory and self-regulation: new explanations and remedies for job burnout", *Anxiety, Stress, and Coping*, Vol. 34 No. 1, pp. 1-21.

Bakker, A.B., Demerouti, E., De Boer, E. and Schaufeli, W.B. (2003a), "Job demands and job resources as predictors of absence duration and frequency", *Journal of Vocational Behavior*, Vol. 62 No. 2, pp. 341-356.

Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2003b), "Dual processes at work in a call centre: an application of the job demands-resources model", *European Journal of Work and Organizational Psychology*, Vol. 12 No. 4, pp. 393-417.

Bakker, A.B., Demerouti, E. and Verbeke, W. (2004), "Using the job demands-resources model to predict burnout and performance", *Human Resource Management*, Vol. 43 No. 1, pp. 83-104.

Bakker, A.B., Demerouti, E. and Euwema, M.C. (2005), "Job resources buffer the impact of job demands on burnout", *Journal of Occupational Health Psychology*, Vol. 10 No. 2, pp. 170-180.

Bande, B., Kimura, T., Fernández-Ferrín, P. and Jaramillo, F. (2021), "Capability management control and salesperson turnover: a double-edged sword in a product complexity scenario", *Industrial Marketing Management*, Vol. 96, pp. 100-112.

Banin, A.Y., Boso, N., Hultman, M., Souchon, A.L., Hughes, P. and Nemkova, E. (2016), "Salesperson improvisation: antecedents, performance outcomes, and boundary conditions", *Industrial Marketing Management*, Vol. 59, pp. 120-130.

Baumgartner, H. and Homburg, C. (1996), "Applications of structural equation modeling in marketing and consumer research: a review", *International Journal of Research in Marketing*, Vol. 13 No. 2, pp. 139-161.

Behrman, D.N. and Perreault, W.D. (1984), "A role stress model of the performance and satisfaction of industrial salespersons", *Journal of Marketing*, Vol. 48 No. 4, pp. 9-21.

Bertini, M. and Koenigsberg, O. (2020), *The Ends Game: How Smart Companies Stop Selling Products and Start Delivering Value*, MIT Press.

Bettencourt, L.A. and Brown, S.W. (2003), "Role stressors and customer-oriented boundary-spanning behaviors in service organizations", *Journal of the Academy of Marketing Science*, Vol. 31 No. 4, pp. 394-408.

Beverland, M. (2001), "Contextual influences and the adoption and practice of relationship selling in a business-to-business setting: an exploratory study", *Journal of Personal Selling & Sales Management*, Vol. 21 No. 3, pp. 207-215.

Bolino, M.C. and Turnley, W.H. (2005), "The personal costs of citizenship behavior: the relationship between individual initiative and role overload, job stress, and work-family conflict", *Journal of Applied Psychology*, Vol. 90 No. 4, pp. 740-748.

Brotheridge, C.M. and Lee, R.T. (2002), "Testing a conservation of resources model of the dynamics of emotional labor", *Journal of Occupational Health Psychology*, Vol. 7 No. 1, p. 57.

Brown, S.P. and Peterson, R.A. (1993), "Antecedents and consequences of salesperson job satisfaction: meta-analysis and assessment of causal effects", *Journal of Marketing Research*, Vol. 30 No. 1, pp. 63-77.

Brown, S.P. and Peterson, R.A. (1994), "The effect of effort on sales performance and job satisfaction", *Journal of Marketing*, Vol. 58 No. 2, pp. 70-80.

Burke, R.J. and Greenglass, E. (1995), "A longitudinal study of psychological burnout in teachers", *Human Relations*, Vol. 48 No. 2, pp. 187-202.

Byrne, B.M. (2013), *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications, and Programming*, Psychology Press.

Caplan, R.D. and Jones, K.W. (1975), "Effects of work load, role ambiguity, and type a personality on anxiety, depression, and heart rate", *Journal of Applied Psychology*, Vol. 60 No. 6, p. 713.

Carver, C.S. and Scheier, M.F. (1982), "Control theory: a useful conceptual framework for personality-social, clinical, and health psychology", *Psychological Bulletin*, Vol. 92 No. 1, p. 111.

Challagalla, G.N. and Shervani, T.A. (1996), "Dimensions and types of supervisory control: effects on salesperson performance and satisfaction", *Journal of Marketing*, Vol. 60 No. 1, pp. 89-105.

Chang, C.H., Rosen, C.C. and Levy, P.E. (2009), "The relationship between perceptions of organizational politics and employee attitudes, strain, and behavior: a meta-analytic examination", *Academy of Management Journal*, Vol. 52 No. 4, pp. 779-801.

Christen, M., Iyer, G. and Soberman, D. (2006), "Job satisfaction, job performance, and effort: a reexamination using agency theory", *Journal of Marketing*, Vol. 70 No. 1, pp. 137-150.

Churchill, G.A., Jr. Ford, N.M. and Walker, O.C. Jr. (1974), "Measuring the job satisfaction of industrial salesmen", *Journal of Marketing Research*, Vol. 11 No. 3, pp. 254-260.

Conde, R., Prybutok, V. and Thompson, K. (2023), "The moderating role of cultural controls on the relationship between traditional formal sales controls and inside salesperson performance", *Journal of Business & Industrial Marketing*, Vol. 38 No. 3, pp. 622-636.

Cooke, R.A. and Rousseau, D.M. (1984), "Stress and strain from family roles and work-role expectations", *Journal of Applied Psychology*, Vol. 69 No. 2, pp. 252-260.

Cordes, C.L. and Dougherty, T.W. (1993), "A review and an integration of research on job burnout", *The Academy of Management Review*, Vol. 18 No. 4, pp. 621-656.

Corsaro, D. and Maggioni, I. (2022), "Sales transformation: conceptual domain and dimensions", *Journal of Business & Industrial Marketing*, Vol. 37 No. 3, pp. 686-703.

Cova, B. and Salle, R. (2007), "Introduction to the IMM special issue on 'project marketing and the marketing of solutions' a comprehensive approach to project marketing and the marketing of solutions", *Industrial Marketing Management*, Vol. 36 No. 2, pp. 138-146.

Dash, G. and Paul, J. (2021), "CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting", *Technological Forecasting and Social Change*, Vol. 173, p. 121092.

De Jonge, J., Dollard, M.F., Dormann, C., Le Blanc, P.M. and Houtman, I.L. (2000), "The demand-control model: specific demands, specific control, and well-defined groups", *International Journal of Stress Management*, Vol. 7 No. 4, pp. 269-287.

Deci, E.L. and Ryan, R.M. (1985), "The general causality orientations scale: self-determination in personality", *Journal of Research in Personality*, Vol. 19 No. 2, pp. 109-134.

DelVecchio, S. (1996), "Differences in salesperson and manager perceived control: a comparison of dyadic disagreements", *Journal of Business & Industrial Marketing*, Vol. 11 No. 2, pp. 60-72.

Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W. B. (2001), "The job demands-resources model of burnout", *Journal of Applied Psychology*, Vol. 86 No. 3, p. 499.

Dhar, R., Menon, A. and Maach, B. (2004), "Toward extending the compromise effect to complex buying contexts", *Journal of Marketing Research*, Vol. 41 No. 3, pp. 258-261.

Dijkstra, T.K. (2010), "Latent variables and indices: herman wold's basic design and partial least squares", in Vinzi, V.E., Chin, W.W., Henseler, J. and Wang, H. (Eds), *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields*, Springer, Berlin, pp. 23-46.

Epler, R.T., Schrock, W.A., Leach, M.P., White, K.D. and Hochstein, B. (2023), "Managing ambiguity: salesperson bricolage behavior and its organizational determinants", *Journal of Personal Selling & Sales Management*, pp. 1-20.

Evans, K.R., Landry, T.D., Li, P. and Zou, S. (2007), "How sales controls affect job-related outcomes: the role of organizational sales-related psychological climate perceptions", *Journal of the Academy of Marketing Science*, Vol. 35 No. 3, pp. 445-459.

Fang, E., Evans, K.R. and Zou, S. (2005), "The moderating effect of goal-setting characteristics on the sales control systems–job performance relationship", *Journal of Business Research*, Vol. 58 No. 9, pp. 1214-1222.

Fornell, C. and Bookstein, F.L. (1982), "Two structural equation models: LISREL and PLS applied to consumer exit-voice theory", *Journal of Marketing Research*, Vol. 19 No. 4, pp. 440-452.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Fu, F.Q., Richards, K.A. and Jones, E. (2009), "The motivation hub: effects of goal setting and self-efficacy on effort and new product sales", *Journal of Personal Selling & Sales Management*, Vol. 29 No. 3, pp. 277-292.

Fu, F.Q.K.A., Richards, D.E., Hughes. and Jones, E. (2010), "Motivating salespeople to sell new products: the relative influence of attitudes, subjective norms, and Self-Efficacy", *Journal of Marketing*, Vol. 74 No. 6, pp. 61-76.

Garver, M.S. and Mentzer, J.T. (1999), "Logistics research methods: employing structural equation modeling to test for construct validity", *Journal of Business Logistics*, Vol. 20 No. 1, pp. 33-57.

Gefen, D., Rigdon, E.E. and Straub, D. (2011), "Editor's comments: an update and extension to SEM guidelines for administrative and social science research", *MIS Quarterly*, Vol. 35 No. 2, p. III-XIV.

Gilboa, S., Shirom, A., Fried, Y. and Cooper, C. (2008), "A meta-analysis of work demand stressors and job performance: examining main and moderating effects", *Personnel Psychology*, Vol. 61 No. 2, pp. 227-271.

Good, M.C. and Schwepker, C.H. Jr, (2022), "Business-to-business salespeople and political skill: relationship building, deviance, and performance", *Journal of Business Research*, Vol. 139 No. 1, pp. 32-43.

Gupta, A.K., Raj, S.P. and Wilemon, D. (1986), "A model for studying R&D–marketing interface in the product innovation process", *Journal of Marketing*, Vol. 50 No. 2, pp. 7-17.

Hair, J.F., Sarstedt, M., Ringle, C.M. and Mena, J.A. (2012), "An assessment of the use of partial least squares structural equation modeling in marketing research", *Journal of the Academy of Marketing Science*, Vol. 40 No. 3, pp. 414-433.

Hakanen, J.J., Bakker, A.B. and Schaufeli, W.B. (2006), "Burnout and work engagement among teachers", *Journal of School Psychology*, Vol. 43 No. 6, pp. 495-513.

Halbesleben, J.R.B. (2006), "Sources of social support and burnout: a meta-analytic test of the conservation of resources model", *Journal of Applied Psychology*, Vol. 91 No. 5, pp. 1134-1145.

Halbesleben, J.R.B. and Bowler, W.M. (2007), "Emotional exhaustion and job performance: the mediating role of motivation", *Journal of Applied Psychology*, Vol. 92 No. 1, pp. 93-106.

Harrison, D.A., Newman, D.A. and Roth, P.L. (2006), "How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences", *Academy of Management Journal, Vo*, Vol. 49 No. 2, pp. 305-325.

Hobfoll, S.E. (1989), "Conservation of resources: a new attempt at conceptualizing stress", *American Psychologist*, Vol. 44 No. 3, p. 513.

Hobfoll, S.E. (2002), "Social and psychological resources and adaptation", *Review of General Psychology*, Vol. 6 No. 4, pp. 307-324.

Hobfoll, S.E. and Lilly, R.S. (1993), "Resource conservation as a strategy for community psychology", *Journal of Community Psychology*, Vol. 21 No. 2, pp. 128-148.

Hobfoll, S.E. and Shirom, A. (2000), "Conservation of resources theory: applications to stress and management in the workplace", *Handbook of Organization Behavior*, Vol. 2, pp. 57-81.

Hobfoll, S.E., Johnson, R.J., Ennis, N. and Jackson, A.P. (2003), "Resource loss, resource gain, and emotional outcomes among inner city women", *Journal of Personality and Social Psychology*, Vol. 84 No. 3, p. 632.

Hockey, G.R.J. (1993), "Cognitive-energetical control mechanisms in the management of work demands and psychological health", in Baddeley, A.D. and Weiskrantz, L. (Eds), *Attention, Selection. Awareness and Control: A Tribute to Donald Broadbent*, Oxford University Press, Oxford.

Homburg, C., Müller, M. and Klarmann, M. (2011), "When does salespeople's customer orientation lead to customer loyalty? The differential effects of relational and functional customer orientation", *Journal of the Academy of Marketing Science*, Vol. 39 No. 6, pp. 795-812.

Hultink, E.J. and Atuahene-Gima, K. (2000), "The effect of sales force adoption on new product selling performance", *Journal of Product Innovation Management*, Vol. 17 No. 6, pp. 435-450.

Ingram, T.N., LaForge, R.W. and Schwepker, C.H. (2011), "Addressing job stress in the sales force", in Cravens, D.W., Meunier-FitzHugh, K.L. and Piercy, N.F. (Eds), *The Oxford Handbook of Strategic Sales and Sales Management*, Oxford University Press, Oxford, pp. 253-276.

Jackson, S.E. and Schuler, R.S. (1985), "A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings", *Organizational Behavior and Human Decision Processes*, Vol. 36 No. 1, pp. 16-78.

Jaramillo, F., Mulki, J.P. and Boles, J.S. (2011), "Workplace stressors, job attitude, and job behaviors: is interpersonal conflict the missing link?", *Journal of Personal Selling & Sales Management*, Vol. 31 No. 3, pp. 339-356.

Jaramillo, F., Mulki, J.P. and Solomon, P. (2006), "The role of ethical climate on salesperson's role stress, job attitudes, turnover intention, and job performance", *Journal of Personal Selling & Sales Management*, Vol. 26 No. 3, pp. 271-282.

Jaworski, B.J. (1988), "Toward a theory of marketing control: environmental context, control types, and consequences", *Journal of Marketing*, Vol. 52 No. 3, pp. 23-39.

Jex, S.M. (1998), *Stress and Job Performance: Theory, Research, and Implications for Managerial Practice*, Sage Publications Ltd.

Johnson, J.S. and Sohi, R.S. (2014), "The curvilinear and conditional effects of product line breadth on salesperson performance, role stress, and job satisfaction", *Journal of the Academy of Marketing Science*, Vol. 42 No. 1, pp. 71-89.

Jones, E., Chonko, L.B. and Roberts, J.A. (2003), "Creating a partnership-oriented, knowledge creation culture in strategic sales alliances: a conceptual framework", *Journal of Business & Industrial Marketing*, Vol. 18 Nos 4/5, pp. 336-352.

Jones, E., Chonko, L., Rangarajan, D. and Roberts, J. (2007), "The role of overload on job attitudes, turnover intentions, and salesperson performance", *Journal of Business Research*, Vol. 60 No. 7, pp. 663-671.

Jöreskog, K.G. (1970), "A general method for estimating a linear structural equation system", *ETS Research Bulletin Series*, Vol. 1970 No. 2, p. 41.

Jöreskog, K.G. (1978), "Structural analysis of covariance and correlation matrices", *Psychometrika*, Vol. 43 No. 4, pp. 443-477.

Jöreskog, K.G. (1993), "Testing structural equation models", in Bollen, K.A. and Long, J.S. (Eds), *Testing Structural Equation Models*, Sage, Newbury Park, pp. 294-316.

Judge, T.A., Thoresen, C.J., Bono, J.E. and Patton, G.K. (2001), "The job satisfaction-job performance relationship: a qualitative and quantitative review", *Psychological Bulletin*, Vol. 127 No. 3, p. 376.

Jung, J.H., Brown, T.J. and Zablah, A.R. (2022), "How customer requests influence frontline employee job outcomes: the role of personal appraisal tendencies and situational customer demandingness", *Journal of Retailing*, Vol. 98 No. 2, pp. 315-334.

Kahn, R.L., Wolfe, D.M., Quinn, R.P., Snoek, J.D. and Rosenthal, R.A. (1964), "Organizational stress: studies in role conflict and ambiguity", *American Sociological Review*, Vol. 30 No. 4, p. 620.

Kalra, A., Agnihotri, R., Singh, R., Puri, S. and Kumar, N. (2021), "Assessing the drivers and outcomes of behavioral self-leadership", *European Journal of Marketing*, Vol. 55 No. 4, pp. 1227-1257.

Kalra, A., Briggs, E. and Schrock, W. (2023a), "Exploring the synergistic role of ethical leadership and sales control systems on salesperson social media use and sales performance", *Journal of Business Research*, Vol. 154, p. 113344.

Kalra, A., Itani, O.S. and Sun, S. (2023b), "'Turning role conflict into performance': assessing the moderating role of self-monitoring, manager trust and manager identification", *Journal of Service Theory and Practice*, Vol. 33 No. 3, pp. 436-461.

Karasek, R.A. Jr, (1979), "Job demands, job decision latitude, and mental strain: implications for job redesign", *Administrative Science Quarterly*, Vol. 24 No. 2, pp. 285-308.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P. and Amick, B. (1998), "The job content questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics", *Journal of Occupational Health Psychology*, Vol. 3 No. 4, pp. 322-355.

Katsikeas, C.S., Auh, S., Spyropoulou, S. and Menguc, B. (2018), "Unpacking the relationship between sales control and salesperson performance: a regulatory fit perspective", *Journal of Marketing*, Vol. 82 No. 3, pp. 45-69.

Keränen, J., Salonen, A. and Terho, H. (2020), "Opportunities for value-based selling in an economic crisis: managerial insights from a firm boundary theory", *Industrial Marketing Management*, Vol. 88, pp. 389-395.

Keränen, J., Terho, H. and Saurama, A. (2021), "Three ways to sell value in B2B markets", *MIT Sloan Management Review*, Vol. 63 No. 1, pp. 64-70.

Keränen, J., Totzek, D., Salonen, A. and Kienzler, M. (2023), "Advancing value-based selling research in B2B markets: a theoretical toolbox and research agenda", *Industrial Marketing Management*, Vol. 111, pp. 55-68.

Khan, R.U., Salamzadeh, Y., Iqbal, Q. and Yang, S. (2022), "The impact of customer relationship management and company reputation on customer loyalty: the mediating role of customer satisfaction", *Journal of Relationship Marketing*, Vol. 21 No. 1, pp. 1-26.

Kiazad, K., Seibert, S.Eand. and Kraimer, M.L. (2014), "Psychological contract breach and employee innovation: a conservation of resources perspective", *Journal of Occupational and Organizational Psychology*, Vol. 87 No. 3, pp. 535-556.

Kim, B.P., Murrmann, S.K. and Lee, G. (2009), "Moderating effects of gender and organizational level between role stress and job satisfaction among hotel employees", *International Journal of Hospitality Management*, Vol. 28 No. 4, pp. 612-619.

Kohli, A.K. (1985), "Some unexplored supervisory behaviors and their influence on salespeople's role clarity, specific self-esteem, job satisfaction, and motivation", *Journal of Marketing Research*, Vol. 22 No. 4, pp. 424-433.

Kohli, A.K., Shervani, T.A. and Challagalla, G.N. (1998), "Learning and performance orientation of salespeople: the role of supervisors", *Journal of Marketing Research*, Vol. 35 No. 2, pp. 263-274.

Korea Drug Research Association (2023), "Overview of Korean pharmaceutical industry", available at: www.kdra.or.kr/english/03web01.php (accessed 5 September 2023).

Kotler, P. (2003), *Marketing Management*, 11th ed., Pearson Education, Upper Saddle River.

Lee, R.T. and Ashforth, B.E. (1996), "A meta-analytic examination of the correlates of the three dimensions of job burnout", *Journal of Applied Psychology*, Vol. 81 No. 2, p. 123.

LePine, J.A., Podsakoff, N.P. and LePine, M.A. (2005), "A meta-analytic test of the challenge stressor-hindrance stressor framework: an explanation for inconsistent

relationships among stressors and performance", *Academy of Management Journal*, Vol. 48 No. 5, pp. 764-775.

Liu, A.H. and Leach, M.P. (2001), "Developing loyal customers with a value-adding sales force: examining customer satisfaction and the perceived credibility of consultative salespeople", *Journal of Personal Selling & Sales Management*, Vol. 21 No. 2, pp. 147-156.

Llorens, S., Bakker, A.B., Schaufeli, W.B. and Salanova, M. (2006), "Testing the robustness of the job demands-resources model", *International Journal of Stress Management*, Vol. 13 No. 3, pp. 378-391.

Luu, T.T. (2021), "Activating salesperson resilience during the covid-19 crisis: the roles of employer event communication and customer demandingness", *Industrial Marketing Management*, Vol. 96 No. 1, pp. 18-34.

MacKenzie, S.B., Podsakoff, P.M. and Ahearne, M. (1998), "Some possible antecedents and consequences of in-role and extra-role salesperson performance", *Journal of Marketing*, Vol. 62 No. 3, pp. 87-98.

Malek, S.L., Sarin, S. and Jaworski, B.J. (2018), "Sales management control systems: review, synthesis, and directions for future exploration", *Journal of Personal Selling & Sales Management*, Vol. 38 No. 1, pp. 30-55.

Mallin, M.L. and Pullins, E.B. (2009), "The moderating effect of control systems on the relationship between commission and salesperson intrinsic motivation in a customer-oriented environment", *Industrial Marketing Management*, Vol. 38 No. 7, pp. 769-777.

Miao, C.F. and Evans, K.R. (2012), "Effects of formal sales control systems: a combinatory perspective", *International Journal of Research in Marketing*, Vol. 29 No. 2, pp. 181-191.

Miao, C.F. and Evans, K.R. (2013), "The interactive effects of sales control systems on salesperson performance: a job demands–resources perspective", *Journal of the Academy of Marketing Science*, Vol. 41 No. 1, pp. 73-90.

Miao, C.F. and Evans, K.R. (2014), "Motivating industrial salesforce with sales control systems: an interactive perspective", *Journal of Business Research*, Vol. 67 No. 6, pp. 1233-1242.

Miao, C.F., Evans, K.R. and Shaoming, Z. (2007), "The role of salesperson motivation in sales control systems–intrinsic and extrinsic motivation revisited", *Journal of Business Research*, Vol. 60 No. 5, pp. 417-425.

Monnot, M.J. and Beehr, T.A. (2014), "Subjective well-being at work: disentangling source effects of stress and support on enthusiasm, contentment, and meaningfulness", *Journal of Vocational Behavior*, Vol. 85 No. 2, pp. 204-218.

Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.

Mulki, J.P., Lassk, F.G. and Jaramillo, F. (2008), "The effect of self-efficacy on salesperson work overload and pay satisfaction", *Journal of Personal Selling & Sales Management*, Vol. 28 No. 3, pp. 285-297.

Nahrgang, J.D., Morgeson, F.P. and Hofmann, D.A. (2011), "Safety at work: a meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes", *Journal of Applied Psychology*, Vol. 96 No. 1, pp. 71-94.

Nauta, A., Van Vianen, A., Van der Heijden, B., Van Dam, K. and Willemsen, M. (2009), "Understanding the factors that promote employability orientation: the impact of employability culture, career satisfaction, and role breadth self-efficacy", *Journal of Occupational and Organizational Psychology*, Vol. 82 No. 2, pp. 233-251.

Nunnally, J.C. and Bernstein, I.H. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.

O'Driscoll, M.P. and Beehr, T.A. (1994), "Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates", *Journal of Organizational Behavior*, Vol. 15 No. 2, pp. 141-155.

Onyemah, V. (2008), "Role ambiguity, role conflict, and performance: empirical evidence of an inverted-U relationship", *Journal of Personal Selling & Sales Management*, Vol. 28 No. 3, pp. 299-313.

Park, H. and Hur, W.M. (2023), "Customer showrooming behavior, customer orientation, and emotional labor: sales control as a moderator", *Journal of Retailing and Consumer Services*, Vol. 72, p. 103268.

Parker, S.K., Griffin, M.A., Sprigg, C.A. and Wall, T.D. (2002), "Effect of temporary contracts on perceived work characteristics and job strain: a longitudinal study", *Personnel Psychology*, Vol. 55 No. 3, pp. 689-719.

Peasley, M.C., Hochstein, B., Britton, B.P., Srivastava, R.V. and Stewart, G.T. (2020), "Can't leave it at home? The effects of personal stress on burnout and salesperson performance", *Journal of Business Research*, Vol. 117, pp. 58-70.

Peterson, R.M., Malshe, A., Friend, S.B. and Dover, H. (2021), "Sales enablement: conceptualizing and developing a dynamic capability", *Journal of the Academy of Marketing Science*, Vol. 49 No. 3, pp. 542-565.

Ping, R.A. Jr. (1996), "Latent variable interaction and quadratic effect estimation: a two-step technique using structural equation analysis", *Psychological Bulletin*, Vol. 119 No. 1, p. 166.

Podsakoff, N.P., LePine, J.A. and LePine, M.A. (2007), "Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis", *Journal of Applied Psychology*, Vol. 92 No. 2, pp. 438-454.

Rapp, A. and Beeler, L. (2021), "The state of selling & sales management research: a review and future research agenda", *Journal of Marketing Theory and Practice*, Vol. 29 No. 1, pp. 37-50.

Riketta, M. (2002), "Attitudinal organizational commitment and job performance: a meta-analysis", *Journal of Organizational Behavior*, Vol. 23 No. 3, pp. 257-266.

Rizzo, J.R., House, R.J. and Lirtzman, S.I. (1970), "Role conflict and ambiguity in complex organizations", *Administrative Science Quarterly*, Vol. 15 No. 2, pp. 150-163.

Sales Leadership (2022), "How much is stress costing your sales organization?", available at: www.salesleadershipdevelopment. com/how-much-is-stress-costing-your-sales-organization/ (accessed 6 September 2023).

Sarstedt, M., Hair, J.F., Ringle, C.M., Thiele, K.O. and Gudergan, S.P. (2016), "Estimation issues with PLS and CBSEM: where the bias lies!", *Journal of Business Research*, Vol. 69 No. 10, pp. 3998-4010.

Sawhney, M. (2006), "Going beyond the product: defining, designing, and delivering customer solutions", in Lusch, R.F. and Vargo, S.L. (Eds), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions, M.E,* Sharpe, Armonk, New York, NY.

Schaufeli, W.B. (2017), "Applying the job demands-resources model", *Organizational Dynamics*, Vol. 46 No. 2, pp. 120-132.

Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25 No. 3, pp. 293-315.

Schmitz, C. and Ganesan, S. (2014), "Managing customer and organizational complexity in sales organizations", *Journal of Marketing*, Vol. 78 No. 6, pp. 59-77.

Schwab, D.P. and Cummings, L.L. (1970), "Theories of performance and satisfaction: a review", *Industrial Relations: A Journal of Economy and Society*, Vol. 9 No. 4, pp. 408-430.

Schwepker, C.H., Jr. and Hartline, M.D. (2005), "Managing the ethical climate of customer-contact service employees", *Journal of Service Research*, Vol. 7 No. 4, pp. 377-397.

Shin, K.S., Amenuvor, F.E., Boateng, H. and Basilisco, R. (2021), "Formal salesforce control mechanisms and behavioral outcomes", *Marketing Intelligence & Planning*, Vol. 39 No. 7, pp. 924-943.

Shmueli, G., Ray, S., Estrada, J.M.V. and Chatla, S.B. (2016), "The elephant in the room: predictive performance of PLS models", *Journal of Business Research*, Vol. 69 No. 10, pp. 4552-4564.

Shook, C.L., Ketchen, D.J., Hult, G.T.M. and Kacmar, K.M. (2004), "An assessment of the use of structural equation modeling in strategic management research", *Strategic Management Journal*, Vol. 25 No. 4, pp. 397-404.

Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I. and Peter, R. (2004), "The measurement of effort-reward imbalance at work: European comparisons", *Social Science & Medicine*, Vol. 58 No. 8, pp. 1483-1499.

Siguaw, J.A., Brown, G. and Widing, R.E. (1994), "The influence of the market orientation of the firm on sales force behavior and attitudes", *Journal of Marketing Research*, Vol. 31 No. 1, pp. 106-116.

Singh, J. (1998), "Striking a balance in boundary-spanning positions: an investigation of some unconventional influences of role stressors and job characteristics on job outcomes of salespeople", *Journal of Marketing*, Vol. 62 No. 3, pp. 69-86.

Singh, J. (2000), "Performance productivity and quality of frontline employees in service organizations", *Journal of Marketing*, Vol. 64 No. 2, pp. 15-34.

Singh, R. and Das, G. (2013), "The impact of job satisfaction, adaptive selling behaviors and customer orientation on salesperson's performance: exploring the moderating role of selling experience", *Journal of Business & Industrial Marketing*, Vol. 28 No. 7, pp. 554-564.

Singh, J., Goolsby, J.R. and Rhoads, G.K. (1994), "Behavioral and psychological consequences of boundary spanning burnout for customer service representatives", *Journal of Marketing Research*, Vol. 31 No. 4, pp. 558-569.

Solomon, B.C., Nikolaev, B.N. and Shepherd, D.A. (2022), "Does educational attainment promote job satisfaction? The bittersweet trade-offs between job resources, demands, and stress", *Journal of Applied Psychology*, Vol. 107 No. 7, p. 1227.

Statista Research Department (2023), "Number of pharmaceutical manufacturers South Korea 2008-2021", available at: www.statista.com/statistics/646426/pharmaceutical-companies-south-korea/ (accessed 2 September 2023).

Talukder, A.M.H. (2019), "Supervisor support and organizational commitment: the role of work–family conflict, job satisfaction, and work–life balance", *Journal of Employment Counseling*, Vol. 56 No. 3, pp. 98-116.

Teas, R.K. (1983), "Supervisory behavior, role stress, and the job satisfaction of industrial salespeople", *Journal of Marketing Research*, Vol. 20 No. 1, pp. 84-91.

Tubre, T.C. and Collins, J.M. (2000), "Jackson and Schuler (1985) revisited: a meta-analysis of the relationships between role ambiguity, role conflict, and job performance", *Journal of Management*, Vol. 26 No. 1, pp. 155-169.

van den Tooren, M., de Jonge, J. and Dormann, C. (2012), "A matter of match? An experiment on choosing specific job resources in different demanding work situations", *International Journal of Stress Management*, Vol. 19 No. 4, pp. 311-332.

Vandenberghe, C., Panaccio, A., Bentein, K., Mignonac, K. and Roussel, P. (2011), "Assessing longitudinal change of and dynamic relationships among role stressors, job attitudes, turnover intention, and well-being in neophyte newcomers", *Journal of Organizational Behavior*, Vol. 32 No. 4, pp. 652-671.

Walker, O.C., Jr. Churchill, G.A., Jr. and Ford, N.M. (1975), "Organizational determinants of the industrial salesman's role conflict and ambiguity: the right organizational structure and supervisory style can help salesmen understand their jobs, but they don't reduce the conflicts experienced by salesmen", *Journal of Marketing*, Vol. 39 No. 1, pp. 32-39.

Wang, G. and Netemeyer, R.G. (2004), "Salesperson creative performance: conceptualization, measurement, and nomological validity", *Journal of Business Research*, Vol. 57 No. 8, pp. 805-812.

Wang, G. and Netemyer, R.G. (2002), "The effects of job autonomy, customer demandingness, and trait competitiveness on salesperson learning, self-efficacy, and performance", *Journal of the Academy of Marketing Science*, Vol. 30 No. 3, pp. 217-228.

Wells, J.D., Hobfoll, S.E. and Lavin, J. (1997), "Resource loss, resource gain, and communal coping during pregnancy among women with multiple roles", *Psychology of Women Quarterly*, Vol. 21 No. 4, pp. 645-662.

Wieseke, J., Homburg, C. and Lee, N. (2008), "Understanding the adoption of new brands through salespeople: a multilevel framework", *Journal of the Academy of Marketing Science*, Vol. 36 No. 2, pp. 278-291.

Wold, H. (1982), "Soft modeling: the basic design and some extensions", in Jöreskog, K.G. and Wold, H. (Eds), *Systems under Indirect Observations: Part II*, North-Holland, Amsterdam, pp, pp. 1-54.

Wold, H. (1985), "Partial least squares", in Kotz, S. and Johnso, N.L. (Eds), *Encyclopedia of Statistical Sciences*, Wiley, New York, NY, pp. 581-591.

Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2007), "The role of personal resources in the job demands-resources model", *International Journal of Stress Management*, Vol. 14 No. 2, p. 121.

Zablah, A.R., Franke, G.R., Brown, T.J. and Bartholomew, D.E. (2012), "How and when does customer orientation influence frontline employee job outcomes? A meta-analytic evaluation", *Journal of Marketing*, Vol. 76 No. 3, pp. 21-40.

Zallocco, R., Pullins, E.B. and Mallin, M.L. (2009), "A reexamination of B2B sales performance", *Journal of Business & Industrial Marketing*, Vol. 24 No. 8, pp. 598-610.

Zimmer, M., Salonen, A. and Wangenheim, F.V. (2020), "Business solutions as market signals that facilitate product sales", *Industrial Marketing Management*, Vol. 91, (November), pp. 30-40.

Further reading

Franke, G.R. and Park, J.E. (2006), "Salesperson adaptive selling behavior and customer orientation: a meta-analysis", *Journal of Marketing Research*, Vol. 43 No. 4, pp. 693-702.

Appendix. Measurement items

Customer demandingness (four-item scale adapted from Wang and Netemeyer, 2002; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

The clients I serve demanding in regard to product/service quality and reliability.

My clients have high expectations for service and support.

My clients require a perfect fit between their needs and our product/service offering.

My clients expect me to deliver the highest levels of product and service quality.

Activity control (four-item scale adapted from Miao and Evans, 2012; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

My manager informs me about the sales activities I am expected to perform.

My manager monitors how I perform required sales activities.

My manager informs me on whether I meet his/her expectations on sales activities.

My manager readjusts my sales activities when necessary.

Capability control (four-item scale adapted from Miao and Evans, 2012; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

My manager periodically evaluates the selling skills I use to accomplish a task.

My manager evaluates how I make sales presentations and communicate with customers.

My manager assists me by illustrating why using a particular sales approach may be effective.

I would be commended if I improve my selling skills.

Role ambiguity (four-item scale adapted from Rizzo *et al.*, 1970; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

I know what my responsibilities are. ®

I know exactly what is expected of me. ®

My goals and objectives have been clearly defined. ®

I am certain how frequently I should call on my customer. ®

Role conflict (four-item scale adapted from Rizzo *et al.*, 1970; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

I receive incompatible requests from two or more people.

I have to work under vague directives and orders.

I have to do things that should be done differently.

I have to work on unnecessary things.

Role overload (four-item scale adapted from Jones *et al.*, 2007; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

I have to do things that I do not have the time and energy for.

There are too many demands on my time.

I need more hours in the day to do the things expected of me.

I cannot ever seem to get caught up.

Job satisfaction (four-item scale from Churchill *et al.*, 1974; 1 = "Strongly Disagree," 7 = "Strongly Agree"):

I find my work very satisfying.

I feel that I am really doing something worthwhile in my job.

My work is challenging.

My job is very interesting.

Sales performance (three-item scale from Johnson and Sohi, 2014; 1 = "Strongly Disagree," 7 = "Strongly Agree").

During the past year, I performed much higher than my objectives on the following:

- Sales
- Profitability
- Market share.

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