Sales innovativeness—that is, flexibility and willingness to accept new ways of problem solving (Evans et al. 2007)—is indispensable for any sales force in dealing with the increasing complexity of the environment. Technological innovation, product complexity, customer demands, and competition require salespeople to create knowledge-based solutions and provide them to customers (Bettencourt et al. 2002; Jones et al. 2005; Verbeke et al. 2008). Despite the importance of innovativeness for corporate growth (Dess and Lumpkin 2005; Lumpkin and Dess 1996), few empirical studies have examined the antecedents of innovativeness in sales departments.

This study focuses on the role of sales management control in facilitating innovativeness in sales departments. A sales management control system—an organization’s set of procedures for monitoring, directing, evaluating, and compensating its employees (Anderson and Oliver, 1987)—is regarded as a key management tool because it is intended to influence salespeople’s attitude, behavior, motivation, and performance in attaining desired organizational objectives (Anderson and Oliver 1987; Fang, Evans, and Zou 2005). Although some studies have investigated the relationship between sales control systems and innovativeness (e.g., Evans et al. 2007; Oliver and Anderson 1994), as yet no consensus on the nature of this relationship has been achieved.

In addition to conventional management control dimensions (outcome-based and behavior-based control), this study developed and examined the effect of knowledge-based control on sales innovativeness. Knowledge-based control was introduced because the role of the salesperson has changed from order taking to partnering with clients and prospects (Weitz and Bradford 1999; Wotruba 1991). Salespeople increasingly need to act as knowledge brokers (Sarvay 1999), and their knowledge structure has a strong effect on their performance (Sharma, Levy, and Evanschitzky 2007). One of the contributions of this paper is to examine the role of knowledge-based control in promoting sales innovativeness.

Greater understanding of the effects of different forms of management control on the outcomes of sales force efforts will provide a basis for more effective management of salespeople in today’s hypercompetitive business environment. This study develops and tests a structural model that incorporates three dimensions of management control that influence the innovativeness and ultimately the financial performance of sales departments.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES

Drawing on literature on sales control and organizational innovativeness, the conceptual framework is proposed in Figure 1. This framework points out that three types of sales control are key determinants of sales innovativeness influencing sales performance. The model’s key constructs and hypothesized relationships are discussed in the remainder of this section.

Innovativeness and Sales Performance

Innovativeness reflects a firm’s tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes (Lumpkin and Dess 1996, p. 142). Roehrich (2004) describes firm innovativeness as the “creation of newness.” Inventions and new ideas are a source of competitive advantage and need to be nurtured, even if their benefits may be unclear (Dess and Lumpkin 2005). Thus, in today’s rapidly changing climate, cultivating organizational innovativeness can be an important avenue in achieving a competitive advantage.

Deshpandé, Farley, and Webster (1993) surveyed Japanese firms and found that innovativeness was positively related to a firm’s financial performance. Hurley and Hult (1998) also
reported that the innovativeness of divisions in government agencies promoted the divisions' capacity to innovate, as well as the ability of the organizations to adopt or implement new ideas, processes, or products successfully.

In recent sales research, Evans et al. (2007) conceptualized sales innovativeness as the extent to which salespeople perceive an organization as demonstrating flexibility and willingness to accept new ways of problem solving with regard to the sales function. They found that sales innovativeness was positively related to salespeople's job satisfaction, but it was not significantly related to salespeople's performance. These results were inconsistent with previous research reporting a positive relationship between innovativeness and performance (e.g., Damanpour and Evan 1984; Han, Kim, and Srivastava 1998; Selvarajan et al. 2007; Subramanian and Nilakanta 1996). These inconsistent results suggest the need for further investigation of the innovativeness–performance relationship in a sales context.

Following Evans et al. (2007) and Scott and Bruce (1994), this study defines innovativeness of a sales department (sales innovativeness) as the degree to which salespeople view the organization as open to change and as willing to accept new ways of problem solving. Innovativeness may help sales departments to cope with technological and market changes by “creating newness.”

Innovativeness enhances performance for two reasons. First, innovations function as coping mechanisms for environmental change and uncertainty (Damanpour and Evan 1984; Han, Kim, and Srivastava 1998). A firm’s ability to generate and adopt ideas that are new to the organization and new to the market is key to survival in a changing environment. More concretely, sales innovativeness may encourage salespeople to come up with new selling methods or proposals that solve customers’ problems and enhance customers’ satisfaction and loyalty to the firm.

Second, sales innovativeness may have a psychological effect on salespeople. Strutton, Pelton, and Lumpkin (1993) reported that salespeople who perceived their department as innovative tended to trust sales managers. The researchers’ interpretation of this finding was that granting salespeople the freedom to act more innovatively should increase their involvement in their work, which in turn leads to better sales performance. Thus, the following hypothesis is proposed:

_Hypothesis 1: Sales innovativeness positively affects sales performance._

Management Control and Innovativeness

Anderson and Oliver (1987) and Oliver and Anderson (1994) categorized control systems into outcome control and behavior control. Outcome-based control systems involve relatively little monitoring of salespeople by management; rely on straightforward, objective measures of results (e.g., sales); and use compensation methods that shift risk to the salesperson (i.e., commission or bonus). In contrast, a behavior-based control system emphasizes considerable levels of supervisor monitoring, direction, and intervention in activities and results, and subjective and more complex methods of evaluating performance based on the salesperson’s job inputs (e.g., aptitude, product knowledge, activities, and sales strategies).
Challagalla and Shervani (1996) distinguished two types of behavioral control—activity control and capability control. Activity control refers to the specification of the activities a person is expected to perform on a regular basis, the monitoring of actual behavior, and the administering of rewards and punishments based on the performance of specified activities. Capability control emphasizes improving competence through better skills and abilities. It involves setting goals for the level of skills and abilities salespeople must possess, monitoring their skills and abilities, providing guidance for improvement, and rewarding and punishing individuals based on their level of skills and abilities.

Past studies have investigated the effect of sales management control on salespersons’ motivation (Miao, Evans, and Zou 2007), satisfaction with supervisors (Challagalla and Shervani 1996), role stress (Lusch and Jaworski 1991), sales force performance (Piercy, Cravens, and Morgan 1999), and ethical standards (Ingram, LaForge, and Schwepker 2007). The results of these empirical studies suggest that sales management control has an impact not only on a salesperson’s thoughts, feelings, and behaviors, but also on sales force effectiveness. This study extends the research on management control of sales departments by adding innovativeness as an outcome.

However, few empirical studies have explored this relationship, and the influence of sales management control on sales innovativeness remains unclear. Oliver and Anderson (1994) reported that behavior control managerial styles are perceived by salespeople as more innovative, and argued that behavior control permits and encourages salespeople to pursue intrinsic goals. In contrast, Evans et al. (2007) found that process control, emphasizing sales behaviors, had no significant effect on innovativeness, although capability control positively affected innovativeness. These findings may be logically explained. Because the scale of process controls developed by Evans et al. (2007) involved items measuring whether established sales procedures were followed by salespeople, process control may restrict innovative behavior by strictly prescribing and controlling salespeople’s behavior. On the other hand, capability control allows individual capabilities to range, leaving room for salespeople to use their capabilities innovatively.

Baldauf, Cravens, and Piercy (2005) reviewed previous empirical studies and concluded that a consensus existed that behavior controls had a positive influence on salespersons’ attitudes, behaviors, and performance, as well as on sales organization effectiveness (sales revenue, market share, profitability, customer satisfaction). A behavior-based control system has several advantages for enhancing sales innovativeness. First, sales managers are more directly and actively involved with salespeople and work with them in a behavioral control system (Piercy, Cravens, and Morgan 1999). In such a system, a sales manager’s support may help salespeople generate innovative selling approaches. Second, behavioral control (activity control) improves salespeople’s performance by enhancing intrinsic motivation (Miao, Evans, and Zou 2007), which is regarded as a source of innovation (Amabile 1988). Third, in behavior-based supervisory modes, salespeople may be expected to spend a greater proportion of their time on planning and other nonselling activities and have a more thorough knowledge of the customer’s organization (Anderson and Oliver 1987; Rouzies and Macquin 2003). Thus, the following hypothesis is offered:

**Hypothesis 2:** Behavior-based control positively affects sales innovativeness.

This study hypothesizes that outcome-based control has a negative effect on innovativeness for the following reason. Because sales volume and profitability are comparatively short-term indicators of performance and are affected by the presence of sales volatility (Cravens et al. 1993; Menguc and Barker 2003), salespeople may think that the attainment or nonattainment of output goals is beyond their control under outcome-based control systems (Challagalla and Shervani 1996). Lee et al. (2004) reported that individuals under high evaluative pressure were less likely to engage in experimental behavior, which is critical to organizational innovation. Because failures are inevitable in the experimentation process (Lee et al. 2004), outcome-based control may inhibit experimentation behavior by reducing psychological safety. Thus, the following hypothesis is proposed:

**Hypothesis 3:** Outcome-based control negatively affects sales innovativeness.

In addition to conventional types of sales control systems, this study examines the effect of knowledge-based control. Knowledge-based control is defined as the extent to which salespeople are evaluated and rewarded for generating and sharing transferable knowledge (e.g., sales proposals) within a sales force.

The reason the present research focuses on knowledge-based control is that as the economy becomes increasingly knowledge intensive, salespeople are tending to sell knowledge-based solutions to customers (Bettencourt et al. 2002). Sharma, Levy, and Evanschitzky (2007) reported that knowledge structure variables (declarative and procedural knowledge) explained about 50 percent of the variance in salesperson performance. Knowledge management systems permit firms to collaborate more effectively; thus the crucial knowledge and information locked in the heads of salespeople can be shared across the organization (Shoemaker 2001). In organizational research, Hansen and Haas (2001) conceptualized the “knowledge market” as an electronic document dissemination system in an organization, in which suppliers of electronic documents compete for the limited attention of users of the documents.
Knowledge-based control can be conceptualized as a particular type of process-based control that involves behavior-based (activity-based) and capability-based control. Knowledge-based control emphasizes the role of transferable knowledge that salespeople generate (e.g., sales proposals), whereas behavior control and capability control (Challagalla and Sherani 1996) focus on salespeople's activities, skills, and abilities that are difficult to articulate and share within a sales force.

The importance of managing transferable knowledge has been pointed out in previous research. Dong-Gil and Dennis (2005) reported that the more knowledge management-based sales force automation (SFA) system documents a sales representative read, the greater were his or her sales as a percentage of quota. Shoemaker (2001) also argued that the information or knowledge available to salespeople within a department was key to achieving and sustaining a competitive advantage.

The rationale behind the knowledge-based control/innovativeness relationship is that the organizational ability to transfer knowledge effectively among individuals is critical to a host of organizational processes and outcomes (Reagans and McEvily 2003). Knowledge sharing may lead to better team performance by improving decision making and promoting coordination (Srivastava, Bartol, and Locke 2006). Previous research on knowledge transfer (Dyer and Nobeoka 2000; Gupta and Govindarajan 2000) pointed out the importance of a sender's motivation for sharing knowledge with others in the organization. Knowledge-based control systems may promote the generation and acceptance of new knowledge because they encourage salespeople to generate selling knowledge, and evaluate salespeople based on their sharing valuable knowledge with others. Thus, the following hypothesis is proposed:

**Hypothesis 4:** Knowledge-based control positively affects sales innovativeness.

Although knowledge-based control should be distinguished from behavior-based and capability-based control, the three types of control can be grouped into process control systems that focus on sales inputs, including sales proposals, activities, and skills. A summary of all measures used is provided in Appendix Table A1.

**METHODOLOGY**

**Sample and Data Collection**

The population examined in this study consisted of the sales departments of Japanese companies. A sample of 1,000 companies with headquarters in Tokyo or Osaka was drawn from companies in the first section of the Tokyo Stock Exchange. A questionnaire entitled “Sales Management Survey,” with a cover letter explaining the purpose of the survey, was mailed to the sales directors of these companies. Because it was difficult to identify the sales manager of each firm’s main product or service, the cover letter asked the sales director to pass on the questionnaire to the manager of the sales department dealing with the firm’s main product or service. Four weeks later, a postcard reminder was sent to firms that had not responded. A total of 1,000 questionnaires were mailed; 213 were returned. A summary of the research findings was offered as an incentive to respondents. To ensure the validity of the answers, answers from nonmanagers were deleted because they may not be knowledgeable about the department. In total, 199 questionnaires were considered usable after removing missing answers (final response rate: 19.9 percent). An analysis of early and late respondents on a number of key characteristics revealed no significant differences at the 0.05 level. This indicates that nonresponse bias was not likely a major problem (Armstrong and Overton 1977). The sample was composed of 72.3 percent manufacturers and 27.7 percent nonmanufacturers; 85.5 percent of respondents answered that their main customers were corporations rather than end users. The average number of salespeople in a department was 70.8. Regarding the number of employees, 35.7 percent of the sample employed 999 people or less; 47.4 percent had between 1,000 and 4,999 employees; and 17.0 percent had more than 5,000 employees.

**Measures**

Multiple-item scales were developed based on items previously proposed in survey research studies (Daft and Macintosh 1981; Oliver and Anderson 1994; Scott and Bruce 1994). The scale items were translated from English to Japanese and checked by a bilingual marketing researcher unaware of the purpose of the study.

**Management Control**

The scale items of behavior-based and outcome-based management control were developed using parts of Oliver and Anderson’s (1994) sales management scale (“behavior-based control” and “outcome-based control”) and newly created items. Newly created items were introduced because the original scale on outcome-control (four items focusing on the absence of a bottom-line orientation) developed by Oliver and Anderson (1994) did not seem to clearly measure the extent of an outcome-based control system. The items on knowledge-based control were created specifically for this study. Respondents were asked about their perceptions of how salespeople were monitored, directed, evaluated, and compensated in a sales department using a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).
Because some new items were used, the scale of management control was examined following the procedures recommended in Churchill's (1979) paradigm. The factor analysis (principal factors method with oblique rotation) was conducted with seven items from Oliver and Anderson's (1994) behavior-control/outcome-control index scale and six newly developed items. Items for which the item-to-total correlations were low and the removal of which increased the alpha coefficient were deleted. This procedure resulted in three factors: four items for behavior-based control ($\alpha = 0.74$), three items for outcome-based control ($\alpha = 0.80$), and three items for knowledge-based control ($\alpha = 0.72$). All four items in behavior-based control and one item in outcome-based control were from Oliver and Anderson's (1994) scale. The scores for each item were used as observable variables for the three types of management control.

Sales Innovativeness

To measure sales innovativeness, the scale of the climate for innovation developed by Scott and Bruce (1994) was used. The original measure contained two subscales—support for innovation and resource supply. The support for innovation subscale was adopted in this study because it reflects general innovativeness in an organization. The 16 items were subjected to an exploratory factor analysis for two reasons. First, the subjects in the original study were engineers, scientists, and technicians employed in a large research and development (R&D) facility of a major U.S. industrial corporation; as a result, the scale should be reexamined in the sales context. Second, it was necessary to make the scale more compact to analyze data using structural equation modeling (SEM). A factor analysis (principal factors method with oblique rotation) resulted in a three-factor solution. Factor 1 (six items) was named "tolerance of diversity"; it measures the degree to which members are expected to think and deal with problems in different ways. Factor 2 (six items) was named "encouragement of innovation"; it measures the degree to which members are encouraged to be creative and open to change. Factor 3 (four items) was named "breaking the status quo"; it measures the degree to which members do not stick to previous ways of working. Among the three factors, encouragement of innovation was adopted as a proxy for the innovativeness scale because the factor best reflects the meaning of the original dimension of "support for innovation" developed by Scott and Bruce (1994). The other two factors were eliminated because the alpha coefficient of "breaking the status quo" was below 0.65, and "tolerance of diversity" seemed to be extracted because it consisted of all reverse-scored items. Cronbach's alpha for "encouragement of innovation" was 0.82. Responses to each item assessed innovativeness using a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).

Sales Performance

Sales performance was measured with three items—"overall performance of the department," "profitability (return on investment) of the department," and "sales growth rate of the department" relative to competitors in the last three years. Performance in the last three years may show a sales department's capability to gain competitive advantage in the market. Responses to each item measured performance on a seven-point scale (1 = very low, 7 = very high). The scales were developed based on Deshpandé, Farley, and Webster's (1993) work that asked marketing executives to rate firms' performance in terms of profitability, size, market share, and growth rate in comparison with their competitors. Cronbach's alpha was 0.83. The scores for each item were used as observable variables for sales performance.

Although this study's adoption of only subjective measures of performance instead of objective measures poses some limitation, some researchers have reported that objective measures are highly related to subjective measures. Wall et al. (2004) have shown the validity of subjective (self-reported) measures of company performance by comparing the use of objective and subjective measures in three separate samples. Similarly, Barling, Kelloway, and Cheung (1996) and Jaworski and Kohli (1991) reported a high correlation between output performance and behavioral performance. Thus, using subjective measures alone may not have a significant biasing effect on the results.

Validation of the Measures

The internal consistency of the constructs was evaluated by the alpha coefficient. Table 1 shows the correlations, descriptive statistics (means, standard deviations), and reliability estimates. All scales met the recommended reliability coefficient of 0.7 (Nunnally 1978).

To evaluate the convergent validity of the model constructs, a confirmatory factor analysis (CFA) with five latent constructs (behavior-based control, outcome-based control, knowledge-based control, sales innovativeness, sales performance) and a total of 19 measures was conducted. The results show that all items significantly loaded on the respective constructs ($p < 0.001$), and the goodness-of-fit statistics for the model were as follows: $\chi^2 = 252.05$, degrees of freedom (df) = 143, comparative fit index (CFI) = 0.92, root mean square error of approximation (RMSEA) = 0.06, and Tucker–Lewis index (TLI) = 0.91. That all the items significantly loaded on the assigned constructs and that the fit indices were relatively good provides evidence of convergent validity.
As the knowledge-based control scale was developed for this study, its criterion validity (correlation between scale items and known standard measures) was evaluated by correlating knowledge-based control with “information sharing” (within a sales department), developed by Chalos and Poon (2000) based on Denison, Hart, and Kahn’s (1996) work. The correlation coefficient was 0.54 (p < 0.001), which indicates that salespeople tend to share their information within a sales department in which knowledge-based control is adopted. This provides evidence of the criterion validity of the knowledge-based control scale.

RESULTS

Descriptive statistics and intercorrelations among variables are presented in Table 1. SEM was conducted to test the proposed research model, because SEM provides a simultaneous estimation of the model parameter estimates and overall model fit estimates. The model fit measures indicated acceptable agreement with the covariance in the data (χ² = 263.40, df = 148; CFI = 0.92; RMSEA = 0.06; TLI = 0.91).

The standardized path coefficients for the model are presented in Table 2. Sales innovativeness positively related to performance (β = 0.25, p < 0.01). This is consistent with H1. Both behavior-based control and knowledge-based control were positively related to sales innovativeness (β = 0.33, p < 0.001; β = 0.55, p < 0.001, respectively), indicating that a sales department controlled by salespeople’s behavior and knowledge tends to be innovative. This is consistent with H2 and H4. Outcome-based control was apparently not significantly related to sales innovativeness (β = 0.03, n.s. [not significant]), which does not support H3. The explained variances for sales performance and innovativeness were R² = 0.07 and R² = 0.42, respectively.

DISCUSSION

Theoretical Implications

As the knowledge-based control scale was developed for this study, its criterion validity (correlation between scale items and known standard measures) was evaluated by correlating knowledge-based control with “information sharing” (within a sales department), developed by Chalos and Poon (2000) based on Denison, Hart, and Kahn’s (1996) work. The correlation coefficient was 0.54 (p < 0.001), which indicates that salespeople tend to share their information within a sales department in which knowledge-based control is adopted. This provides evidence of the criterion validity of the knowledge-based control scale.

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Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Items</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>1 (0.74)</th>
<th>2 (0.80)</th>
<th>3 (0.80)</th>
<th>4 (0.72)</th>
<th>5 (0.72)</th>
<th>6 (0.72)</th>
<th>7 (0.72)</th>
<th>8 (0.72)</th>
<th>9 (0.72)</th>
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<tr>
<td>Behavior-Based Control</td>
<td>4</td>
<td>5.72</td>
<td>0.80</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Outcome-Based Control</td>
<td>3</td>
<td>4.40</td>
<td>1.39</td>
<td>0.22***</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Knowledge-Based Control</td>
<td>3</td>
<td>4.74</td>
<td>1.03</td>
<td>0.42***</td>
<td>0.22***</td>
<td></td>
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</tr>
<tr>
<td>Innovativeness</td>
<td>6</td>
<td>5.12</td>
<td>0.94</td>
<td>0.50***</td>
<td>0.19***</td>
<td>0.54***</td>
<td></td>
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<td></td>
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<tr>
<td>Sales Performance</td>
<td>3</td>
<td>4.39</td>
<td>1.39</td>
<td>0.15*</td>
<td>0.11</td>
<td>0.12</td>
<td>0.26***</td>
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</tbody>
</table>

Notes: n = 199. Mean scores are used for all multi-item scales. All are seven-point scales. Coefficient alpha is presented along the diagonal. * p < 0.05; ** p < 0.01; *** p < 0.001.

Table 2

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Paths</th>
<th>Estimate</th>
<th>t-value</th>
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<tbody>
<tr>
<td>H1 Innovativeness → Sales performance</td>
<td>0.25</td>
<td>3.06***</td>
<td></td>
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<tr>
<td>H2 Behavior-based control → Innovativeness</td>
<td>0.33</td>
<td>4.72***</td>
<td></td>
</tr>
<tr>
<td>H3 Outcome-based control → Innovativeness</td>
<td>0.03</td>
<td>0.53</td>
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<tr>
<td>H4 Knowledge-based control → Innovativeness</td>
<td>0.55</td>
<td>6.39***</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ¹ Value represents standardized estimate. ** p < 0.01; *** p < 0.001.
of Oliver and Anderson (1994), who reported that behavior control managerial styles were perceived by salespeople as being more innovative. Behavior-based control systems may require salespeople to think over their selling activities and come up with new ways of problem solving for customers. The systems also allow salespeople and managers to spend their time on planning and gathering information regarding customers (Anderson and Oliver 1987; Rouzies and Macquin 2003).

Second, the most important finding of this study is that knowledge-based control facilitated sales innovativeness. Knowledge-based control is different from capability-based control (Challagalla and Shervani 1996) in its focus. The former encourages salespeople to generate transferable knowledge, such as sales proposals, and share them with others, whereas the latter emphasizes improvement in salespersons’ skills and abilities, which are difficult to transfer to others. Sales innovativeness is enhanced through knowledge-based control because it may promote disseminating and sharing information and knowledge on useful selling activities. It can be interpreted that knowledge-based control facilitates social learning in a sales department by disseminating best practices. Given that most innovations result from borrowing rather than from true invention (Cohen and Levinthal 1990; March and Simon 1958), dissemination of selling information and knowledge should stimulate salespeople to generate new sales solutions for customers by combining a variety of selling ideas.

This can be inferred from the intrinsic motivation principle of creativity (Amabile 1988). That is, behavior-based control and knowledge-based control may promote a salesperson’s intrinsic motivation, a key factor for creative activities. Amabile argued that people can be more creative when they are motivated by interest, fun, satisfaction, and the challenge of the job versus when they are motivated by external pressure. Behavior-based and knowledge-based control systems may make members feel that their jobs are interesting and challenging. Miao, Evans, and Zou (2007) reported that activity control affects challenge seeking (the cognitive dimension of intrinsic motivation) and capability control affects task enjoyment (the affective dimension of intrinsic motivation).

Third, it is possible that behavior-based control and knowledge-based control complement one another. Behavior-based control may prevent free riders who obtain others’ knowledge without providing their own knowledge. Dyer and Nobeoka (2000) pointed out that it was important to prevent free riding to promote knowledge sharing. Moreover, behavior-based control restrains process conflicts or controversies over duty and resource delegation (Jehn and Mannix 2001) by clarifying the behavioral standard for salespeople and lowering role ambiguity. Oliver and Anderson (1994) reported that a behavior-based control system lowers role conflict. Salespeople working in a sales force with behavior-based systems can understand what kind of selling knowledge should be generated.

Fourth, this study indicates that process-based control, which can be distinguished from output-based control, may consist of three types of control—behavior (or activity)-based control, capability-based control, and knowledge-based control. Whereas Challagalla and Shervani (1996) divided behavioral control into activity control and capability control, the present research adds knowledge control to this categorization. These three types of control systems focus on different aspects of salespeople’s inputs—selling activities, selling skills, and selling codified knowledge. This indicates that process control plays an important role in developing innovative and learning-oriented sales departments.

Finally, outcome-based control has apparently no significant relationship with sales innovativeness; this finding is inconsistent with H3, which predicted a negative relationship between these factors. This is also contrary to the results of Evans et al. (2007), who found a positive relationship between outcome control and sales innovativeness. Their interpretation of their results was that effective outcome controls were found most often in organizational settings where firms assumed responsibility for providing adequate sales support and innovation. Although further research is needed to investigate the effect of outcome-based control on sales innovativeness, a possible explanation for the results of this study is that the negative side of outcome-based control (e.g., lowering intrinsic motivation) may offset its positive side (e.g., increasing awareness of the gap between goal and performance).

Managerial Implications

The present research has some managerial implications for developing a high-performing sales force. First, innovativeness can be a key driver in establishing a competitive advantage not only for R&D departments but also for the sales department in rapidly changing environments. It may be possible for sales management to enhance performance by facilitating a department’s flexibility and willingness to accept new ways of problem solving with regard to the sales function.

Second, sales managers desiring to facilitate sales innovativeness need to design sales control systems by combining knowledge-based with behavior-based control. Special attention should be paid to the fact that knowledge-based control has stronger effects than does behavior-based control in facilitating innovativeness of sales departments. This implies that sales managers have to develop procedures for monitoring, directing, evaluating, and compensating salespeople who generate and share valuable selling methods or approaches with others.

Third, in developing a process-based control system, sales managers need to recognize the difference among three types of process control—activity-, capability-, and knowledge-based control. Activity control focuses on selling activities, whereas
capability control emphasizes selling skills. Knowledge control deals with codified and transferable knowledge. These results suggest that outcome-based control systems are not so harmful to sales innovativeness. The combination of these control systems may depend on the nature of the business environment and the firm’s strategy.

Finally, knowledge management systems may be necessary to manage codified knowledge (e.g., selling proposals) that can be shared within a department. It is important for sales managers to manage information and knowledge on who contributes to the sales department by selling know-how. Knowledge management–based SFA (Dong-Gil and Dennis 2005) may play an important role in establishing a knowledge-based sales control system.

Limitations and Future Research
Suggestions

The findings of this study are subject to several limitations that suggest fruitful directions for future research. First, this study focuses on Japanese sales departments engaging in selling activities, primarily to corporate customers. It is important to consider the influence of national culture and firm characteristics of the samples before generalizing these findings. For example, employees in Japanese firms tend to be motivated by intrinsic incentives such as reputation in the workplace. Moreover, 72.3 percent of the sample firms were manufacturers. Future research should investigate sales departments that deal with services, collect samples in other countries, and compare the results with those of this study.

Second, this study relied on a single source to measure the constructs. To cope with this problem, questionnaires were sent to sales departments dealing with main products or services asking middle managers with a grasp of the situation in their departments to answer the questionnaires, and answers from nonmanagers were deleted. In future research, it is advisable to obtain multiple answers per department.

Third, as the concept and scale of knowledge-based control were developed for this study, more work is needed to validate the scale. In particular, the relationship between knowledge-based control and capability control conceptualized by Challagalla and Shervani (1996) should be examined. Previous literature on the knowledge-based theory of the firm (DeCarolis and Deeds 1999; Grant 1996; Zander and Kogut 1995) may provide useful insights for developing a more rigorous scale of knowledge-based control. The economy is becoming increasingly knowledge intensive (Bettencourt et al. 2002), even as empirical studies on knowledge management in the sales force are limited in number (e.g., Shoemaker 2001). It is important to investigate how knowledge is acquired, shared, and created in a sales force.

Finally, the function of outcome control in enhancing sales innovativeness remains unclear. Although this study indicates that outcome control had no significant effect on sales innovativeness, past empirical studies have reported inconsistent results (Challagalla and Shervani 1996; Miao, Evans, and Zou 2007). More work investigating the effect of outcome control on sales innovativeness is needed.

REFERENCES


Damanpour, Fariborz, and Wiliam M. Evan (1984), “Organizational Innovation and Performance: The Problem of


### Appendix Table A1

#### Scale Items

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Alpha</th>
<th>Estimate(^1)</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavior-Based Control (1 = strongly disagree, 7 = strongly agree)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisors stay in close touch with their subordinates.(^2)</td>
<td>0.92</td>
<td>0.91</td>
<td>—</td>
</tr>
<tr>
<td>Supervisors make sure everyone knows what to do and how to do it.</td>
<td>0.81</td>
<td>11.42***</td>
<td></td>
</tr>
<tr>
<td>Supervisors rarely ask subordinates for information on how they're doing. (R)(^3)</td>
<td>0.47</td>
<td>6.68***</td>
<td></td>
</tr>
<tr>
<td>When management rates our performance, they take many things into consideration.</td>
<td>0.51</td>
<td>7.17***</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome-Based Control (1 = strongly disagree, 7 = strongly agree)</strong></td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales managers compare the sales performance among salespeople.(^2)</td>
<td>0.80</td>
<td>0.80</td>
<td>—</td>
</tr>
<tr>
<td>Management decides who's good by looking strictly at each salesperson's bottom line.</td>
<td>0.66</td>
<td>8.61***</td>
<td></td>
</tr>
<tr>
<td>A salesperson's reputation in a department is determined by his or her sales performance ranking as compared to other salespeople.</td>
<td>0.83</td>
<td>9.27***</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge-Based Control (1 = strongly disagree, 7 = strongly agree)</strong></td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our manager positively evaluates salespeople who share their knowledge with others.(^2)</td>
<td>0.81</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>We are encouraged to generate sales proposals that can be shared in a department.</td>
<td>0.73</td>
<td>8.13***</td>
<td></td>
</tr>
<tr>
<td>A salesperson's reputation in a department is determined by the quality of his or her sales proposals.</td>
<td>0.53</td>
<td>6.53***</td>
<td></td>
</tr>
<tr>
<td><strong>Sales Performance (1 = very low, 7 = very high)</strong></td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability (return on investment) of the department.(^2)</td>
<td>0.81</td>
<td>0.81</td>
<td>—</td>
</tr>
<tr>
<td>Overall performance of the department.</td>
<td>0.88</td>
<td>11.21***</td>
<td></td>
</tr>
<tr>
<td>Sales growth rate of the department.</td>
<td>0.68</td>
<td>9.84***</td>
<td></td>
</tr>
<tr>
<td><strong>Sales Innovativeness (1 = strongly disagree, 7 = strongly agree)</strong></td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our ability to function creatively is respected by the leadership.(^2)</td>
<td>0.84</td>
<td>0.84</td>
<td>—</td>
</tr>
<tr>
<td>Creativity is encouraged here.</td>
<td>0.82</td>
<td>12.82***</td>
<td></td>
</tr>
<tr>
<td>Around here, people are allowed to try to solve the same problems in different ways.</td>
<td>0.61</td>
<td>8.87***</td>
<td></td>
</tr>
<tr>
<td>This organization can be described as flexible and continually adapting to change.</td>
<td>0.55</td>
<td>7.85***</td>
<td></td>
</tr>
<tr>
<td>This organization is open and responsive to change.</td>
<td>0.60</td>
<td>8.67***</td>
<td></td>
</tr>
<tr>
<td>The reward system here encourages innovation.</td>
<td>0.50</td>
<td>7.10***</td>
<td></td>
</tr>
</tbody>
</table>

Notes: \(^1\) Value represents standardized estimate. \(^2\) The corresponding parameter is fixed to a value of 1.00 to set the scale of measurement. \(^3\) Item was reverse coded. *** \(p < 0.001\).