

# Vlerick Repository

## Linking behavioral control to frontline employee commitment and performance: a test of two alternative explanations using motivation theories

Authors	Dewettinck, Koen;Buyens, Dirk
Download date	2026-03-08 07:41:51
Link to Item	<a href="http://hdl.handle.net/20.500.12127/1967">http://hdl.handle.net/20.500.12127/1967</a>



the Autonomous Management School of  
Ghent University and Katholieke Universiteit Leuven

**Vlerick Leuven Gent Working Paper Series 2006/13**

**LINKING BEHAVIORAL CONTROL TO FRONTLINE EMPLOYEE COMMITMENT  
AND PERFORMANCE: A TEST OF TWO ALTERNATIVE EXPLANATIONS USING  
MOTIVATION THEORIES**

KOEN DEWETTINCK

Koen.Dewettinck@vlerick.be

DIRK BUYENS

Dirk.Buyens@vlerick.be

**LINKING BEHAVIORAL CONTROL TO FRONTLINE EMPLOYEE COMMITMENT  
AND PERFORMANCE: A TEST OF TWO ALTERNATIVE EXPLANATIONS USING  
MOTIVATION THEORIES**

KOEN DEWETTINCK

Vlerick Leuven Gent Management School

DIRK BUYENS

Vlerick Leuven Gent Management School

**Contact:**

Koen Dewettinck

Vlerick Leuven Gent Management School

Tel: +32 09 210 97 40

Fax: +32 09 210 97 00

Email: [Koen.Dewettinck@vlerick.be](mailto:Koen.Dewettinck@vlerick.be)

## **ABSTRACT**

We propose and empirically test a model in which behavioral control is linked to frontline employee commitment and performance. We test two alternative explanations by examining the intermediate role of job autonomy and situational learning orientation. The hypotheses are tested using multiple-source survey data from a sample of 1184 frontline employees and their supervisors. Results indicate that situational learning orientation is an important construct in linking behavioral control to performance. Job autonomy shows to be important in explaining employee outcomes but is only marginally related to behavioral control. Theoretical and managerial implications are discussed.

# **LINKING BEHAVIORAL CONTROL TO FRONTLINE EMPLOYEE COMMITMENT AND PERFORMANCE: A TEST OF TWO ALTERNATIVE EXPLANATIONS USING MOTIVATION THEORIES**

Managers in contemporary organizations pursuing performance improvement typically de-emphasize management control in favor of empowering employees to make work-related decisions (Blackburn & Rosen, 1993; Heneman, Heneman, & Judge, 1997; Renn & Fedor, 2001; Riordan & Gatewood, 1996; Thomas & Velthouse, 1990). This tendency has partly been triggered by theoretical insights on human motivation that stressed the importance of autonomy for successful job execution. Behavioral control does not fit such an approach, as it would curb employees' autonomy levels, motivation and therefore commitment and performance (Daft, 1995; Mills & Ungson, 2003). Despite the practical appeal of such reasoning, human motivation theories do not provide an unequivocal view about the appropriateness of behavioral control in the workplace.

Behavioral control refers to the mechanisms through which management attempts to influence the means to achieve desired ends, with a focus on behavior and/or activities rather than on the end results. Typically, behavioral control concerns monitoring, evaluation and controlling of behavior (methods and procedures) enacted by employees in achieving performance outcomes (Baldauf, Cravens, & Grant, 2002; Piercy, Cravens, & Lane, 2001; Jaworski, 1988).

In this study, we propose and test two alternative propositions on how behavioral control relates to employee attitudes and performance. We integrate them in a single research model, allowing a simultaneous empirical investigation.

Representing the first perspective, several scholars have argued that behavioral control may be less effective in workplaces where employees are expected to take initiative, such as when dealing with often non-expected customers demands (Daft, 1995; Mills & Ungson, 2003). This idea fits into the empowerment approach, which has gained considerable attention from academics in recent years (e.g. Ahearne, Mathieu, & Rapp, 2005; Campbell & Martinko, 1998; Conger & Kanungo, 1988; Seibert, Silver, & Randolph, 2004; Spreitzer, 1995, 1996; Thomas & Velthouse, 1990). Central to the notion of empowerment is that it entails the delegation of

decision-making prerogatives to employees, along with the discretion to act on one's own (Mills & Ungson, 2003). Argyris (1998), Simons (1985), Randolph (2000) and Mills and Ungson (2003) argued however that empowerment is in practice often not working because of the fundamental empowerment – control dilemma. The proposed issue is that more discretion and autonomy for employees to make work-related decisions, which is assumed to be fostered by empowering practices, is again curbed by management's tendency to keep exercising control on employee behavior. In this stream of research, perceived autonomy in the job is seen as a crucial construct in linking behavioral control to employee outcomes.

In sharp contrast, other scholars are arguing that behavioral control is most necessary because it would foster employee development, which is crucial for company survival in the long run. The beneficial effect of supervisory behavioral control is argued to stem from supervisor's opportunity for coaching, counseling and making adjustments to work allocations (Babakus et al., 1996; Baldauf et al., 2002; Cravens et al., 1993; Oliver & Anderson, 1994; Piercy et al., 2001). In this stream of research, workplace learning orientation or the extent to which employees feel supported in their professional development is seen as a crucial construct in linking behavioral control to employee outcomes.

Below, we present our conceptual model in which both constructs, job autonomy and situational learning orientation, are used to explore the relationship between behavioral control and employee outcomes. Furthermore, we explicitly consider the role of individual employee characteristics such as locus of control and personal learning orientation. Before elaborating on each of the proposed hypotheses, Figure 1 shows the conceptual model. It provides a global overview of the variables that are taken into account along with the hypothesized relationships.

---

Insert Figure 1 about here

---

## **HYPOTHESES**

### **Relationship between Behavioral Control and Job Autonomy**

Autonomy, equivalently referred to as “self-direction” or “self-management”, is the extent to which an individual or group of individuals has the freedom, independence, and direction to determine what actions are required and how best to execute them (Hackman & Oldham, 1976; Henderson & Lee, 1992). Because structural empowerment entails the delegation of decision-making prerogatives to employees, along with the discretion to act on one’s own (Mills & Ungson, 2003), job autonomy is a key construct in the structural empowerment literature (e.g. Bowen & Lawler, 1992, 1995). Autonomy is also core in the psychological empowerment literature, as choice is one of the four main empowerment cognitions identified by Conger and Kanungo (1988) and Thomas and Velthouse (1990).

Because behavioral control has been defined as the extent to which managers monitor, direct, evaluate and reward employee activities in the workplace, the definitions of autonomy and behavioral control itself suggest that they are negatively related. Not surprisingly, several scholars have argued that behavioral control curbs experienced autonomy. Some have proposed that this effect stems from the ‘paternalistic’ character of behavioral control (Child, 1973; Hitt et al., 1990; Inkson et al., 1970). Others proposed that it is more likely that behavior is prescribed and routinized in working procedures when behavioral control strategies are put in place (Ramaswami et al., 1997). This may explain why employees, who have to take these procedures into account, experience less autonomy in executing their jobs. Empirical support for these claims is however, as far as we know, not available. Consequently, enabling us to empirically test the behavioral control – autonomy relationship, we propose the following hypothesis:

*Hypothesis 1. Behavioral control is negatively related to job autonomy.*

### **Relationship between Behavioral Control and Situational Learning Orientation**

Situational learning orientation reflects the degree to which employees experience their working context to be learning oriented, or to support their personal professional development (Ames & Archer, 1988; Button, Mathieu, & Zajac, 1996; Sujan, Weitz, & Kumar, 1994). Cognitive Evaluation Theory (Deci & Ryan, 1985) provides a theoretical framework to

investigate the relationship between behavioral control and situational learning orientation. Cognitive Evaluation theory proposes that a control mechanism may foster situational learning orientation when it provides information (feedback) to the individual that is relevant to improve performance and competence. Because behavioral control requires the manager to monitor, evaluate and direct employee behavior, it is more likely that guidelines can be provided on how to change behavior so that improved levels of performance can be achieved and feelings of competence enhanced. In this sense, behavioral control seems naturally suited to foster competence development. Several researchers have indeed proposed that the beneficial effects of behavioral control in the workplace may stem from the fact that it provides the manager with the opportunity for coaching, counseling, and making adjustments to work allocations (Babakus et al., 1996; Baldauf et al., 2002; Cravens et al., 1993; Oliver & Anderson, 1994; Piercy et al., 2001). Based on these arguments, we propose the following hypothesis:

*Hypothesis 2. Behavioral control is positively related to situational learning orientation.*

## **Controlling for Individual Characteristics: Internal Locus of Control and Personal Learning Orientation**

Both the amount of experienced autonomy and the degree to which the situation is perceived as learning oriented could be influenced by employee dispositions. Consequently, the previously proposed hypotheses should be tested while controlling for such individual characteristics. Two specific personality traits that seem especially relevant in this context are locus of control and personal learning orientation.

Autonomy in the job has been directly linked to ‘perceived control’, which concerns the amount of control an employee believes to have in the work environment (Ganster & Fusilier, 1989). There is however ample research that has shown that this feeling of personal control is influenced by an individual’s propensity to locate causality for outcomes either in oneself or in the external environment (e.g. Judge & Larsen, 2001). This individual propensity has been labeled locus of control (Rotter, 1966). Individuals who view themselves as having the ability to affect reinforcing events are labeled “internals”, whereas those persons who see reinforcing events as resulting from luck, chance, or others are labeled “externals”.

We propose a direct relationship between internal locus of control and the degree of experienced autonomy in the job. That is, irrespective of the work situation, employees who locate causality for outcomes more in one self would also be more inclined to perceive their job as providing more discretion and autonomy. This proposition results in the following hypothesis.

*Hypothesis 3. Internal locus of control is positively related to experienced job autonomy.*

Dweck and her colleagues (Dweck, 1989; Dweck & Legget, 1988; Heyman & Dweck, 1992) have proposed that the goals pursued by individuals create the framework for their interpretations and reactions to events or outcomes. They have identified two classes or types of goals: performance goals and learning or mastery goals. As we conceptualized situational learning orientation as an intermediate variable between behavioral control and employee outcomes, we focus here on learning orientation as a personal characteristic. Button et al. (1996) have demonstrated that dispositional and situational goal orientations (i.e. learning orientation as a disposition and as a characteristic of the working context) are positively correlated but distinct constructs. Consequently, assessing the impact of control mechanisms on situational learning orientation or the degree to which the situational is perceived to support employee development, without considering the dispositional orientation of the employee seems not warranted. Consequently, we integrate individual learning orientation in our conceptual model and propose the following hypothesis:

*Hypothesis 4. Personal learning orientation is positively related to situational learning orientation.*

### **Two Critical Outcome Variables: Affective Commitment and Performance**

In our model, we focus on two outcome variables at the individual employee level that are widely accepted as being crucial to organizational success: affective organizational commitment and performance levels. Affective or attitudinal organizational commitment is the “relative strength of an individual’s identification with and involvement in a particular organization” (Clugston, 2000; Meyer & Allen, 1991; Mowday, Steers, & Porter 1979).

Affective organizational commitment is assumed to influence almost any behavior that is beneficial to the organization, such as performance, attendance, withdrawal behavior and staying within the organization (See Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowday, Porter, & Steers, 1982; Randall, 1990, Riketta, 2002).

Performance refers in this study to employees' contribution to the realization of company objectives. Considering the specificity of the frontline jobs, we distinguish between economically oriented and service oriented goals. With this approach, we take into account that providing excellent service is not the sole expectation one may have towards service employees' role in the organization. Indeed, with increased competition in the service industry, an ever augmenting need to balance between service quality at the one hand and cost efficiency at the other hand emerges. Recently, several studies on frontline employee performance have used a similar approach (e.g. Singh, 2000; Renn & Fedor, 2001; Van Dyne, Jehn, & Cummings, 2002).

### **Relationship between Job Autonomy, Affective Commitment and Performance**

In our model, job autonomy is conceptualized to directly relate to affective organizational commitment and employee performance levels. Several streams of research suggest a positive relationship between job autonomy and employee affective responses, such as job satisfaction and organizational commitment (e.g. Brown & Peterson, 1994; Niehoff et al., 1990; Westman, 1992). However, sound theoretical arguments for a positive relationship between job autonomy and organizational commitment are rare. Some have argued that autonomy may contribute to a sense of commitment and loyalty to the organization through a process of reciprocation (Eisenberger, Fasolo, & Davis-La Mastro, 1990; Kraimer, Seibert, & Liden, 1999; Liden, Wayne, & Sparrowe, 2000). Individuals tend to appreciate organizations that provide opportunities for decision latitude, challenge, and responsibility. They are likely to reciprocate by being more committed and loyal to the organization. Thus, the concept of reciprocation provides a theoretical explanation why autonomy should result in increased organizational commitment. This leads to the following hypothesis:

Hypothesis 5. Job autonomy is positively related to affective organizational commitment.

In a comprehensive meta-analysis summarizing the relationship of perceived control (including participation and autonomy) with a range of outcomes, Spector (1986) found strong evidence of positive associations with job performance. Both cognitive and motivational explanations link autonomy with performance. From a cognitive perspective, employees generally have more complete knowledge and information about their work than their bosses and are, thus, in a better position to plan and schedule work, and to identify and resolve obstacles to achieving job performance (Cooke, 1994; Lawler, 1992). Thus, job performance can be enhanced when employees are given autonomy over how their work is to be accomplished (Locke & Schweiger, 1979; Miller & Monge, 1986). Using a framework of intrinsic motivation, Thomas and Tymon (1994) found that employees who had a choice regarding how to do their own work were found to be higher performers than those with little work autonomy. Consequently, we propose the following hypotheses:

*Hypothesis 6. Job autonomy is positively related to employee performance levels.*

### **Relationship between Situational Learning Orientation, Affective Commitment and Performance**

It has been amply documented that a situational learning orientation has overall beneficial effects in the workplace. Both self-determination theory and goal orientation theory have argued that contexts in which employee learning is emphasized elicit employee enjoyment, positive affectivity and optimism (Butler, 1987; Deci & Ryan, 1985; Dweck, 1989, Dweck & Leggett, 1988; Van Dijk & Kluger, 2001), which should lead to increased job satisfaction and affective commitment. As with job autonomy, experiencing a workplace that fosters personal employee development may contribute to a sense of commitment to the organization through a process of reciprocation (Eisenberger, Fasolo, & Davis-La Mastro, 1990; Kraimer, Seibert, & Liden, 1999; Liden et al., 2000). This leads to the following hypothesis:

*Hypothesis 7. Situational learning orientation is positively related to affective commitment.*

Furthermore, there is initial evidence that performance outcomes are fostered in learning oriented experimental (Tabernerero & Wood, 1999; Wood & Bandura, 1989) and workplace settings (see e.g. Button et al., 1996; Sujana et al., 1994) because they foster mastery-oriented response patterns (Rawsthorne & Elliot, 1999; Steele-Johnson et al., 2000). When the work situation fosters learning, employees will be more committed to challenging goals, will be less reluctant to explore new behavior and will be less hampered by the possible negative effects of failure (VandeWalle et al., 2001), such as receiving negative feedback. This line of research provides initial evidence that situational learning orientation is likely to lead to positive performance outcomes. Consequently, we propose the following hypothesis:

*Hypothesis 8. Situational learning orientation is positively related to performance levels.*

## **METHOD**

### **Sample and Data Collection**

Web-based and paper and pencil survey questionnaires were administered during normal working hours to frontline service employees and their supervisors in four service organizations: a bank, a temporary staffing organization, a hospital and a health insurance company. All employee respondents spend considerable time in direct contact with customers. The employee survey focused on job and work unit experiences. Supervisors were requested to rate the performance of their employees. Each supervisor had to evaluate several performance indicators per employee working under his or her supervision. On average, supervisors had to rate 6.7 employees, which is the average span of control in this sample. Frontline employees and supervisors were asked, before filling out their questionnaire, to meet and to agree upon a fictitious work unit and individual employee code they were asked to mention on their survey. With these codes, we were able to match employee responses with employee performance ratings by the supervisor, without compromising confidentiality and anonymity. To foster collaboration, one week prior to sending out our request to fill out the survey, respondents received a motivating mail from their CEO or HR-director. Respondents were given two weeks to respond. After that time, a reminding mail was sent, again by top management of the companies. For those who filled out the paper and pencil version of the survey, a package was

sent by mail to the respondents, containing a motivating letter from the CEO, the survey and a pre-paid envelope to return the completed survey to the researchers.

In total, 2439 employee surveys and 365 supervisor surveys were sent out, of which 1748 employee surveys (71.7 % response rate) and 255 supervisor surveys (69.9 % response rate) were filled out and returned to the researchers. After deletion of cases with missing values, 1184 employee-supervisor dyads remained for analysis.

A majority of the total employee sample is female (71.3 %) with an average age between 31 and 35 years. 0.3 % has a primary school diploma, 24.4 % has a high school diploma, 57.2 % a bachelor and 18 % a master degree. Average seniority is between six and ten years.

## Measures

Appendix A provides the items utilized for each construct, and Table 1 provides the basic statistics and inter-correlations. We discuss the measures below.

---

Insert Table 1 About Here

---

***Internal locus of control.*** To measure internal locus of control, we used five items (e.g. “I have noticed that there is a direct connection between how hard I work and my performance”) adapted from Rotter (1971). Items were rated on a 5-point Likert scale, ranging from ‘totally disagree’ to ‘totally agree’. Two items that originally relate to an external locus of control (e.g. “Sometimes I have the feeling that I have little to do with my performance”) were reverse scored and integrated in the internal locus of control scale. Reliability for the scale (Cronbach’s alpha) in this sample was .64.

***Personal learning orientation.*** To measure personal learning orientation, we used five items from Ames and Archer’s (1988) personal achievement goal scale (e.g. “It’s important to keep trying even though you make mistakes”). Items were rated on a 5-point Likert scale, ranging from ‘totally disagree’ to ‘totally agree’. Reliability for the scale (Cronbach’s alpha) in this sample was .71.

***Behavioral control.*** To measure behavioral control, we used four items (e.g. “I receive feedback on how I accomplish my performance goals”) from Jaworski and MacInnis’ (1989) behavioral control scale. Items were rated on a 5-point frequency scale, ranging from ‘never’ to ‘always’. Reliability for the scale (Cronbach’s alpha) in this sample was .83.

***Job autonomy.*** To measure job autonomy, we used three items (e.g. “My job permits me to decide on my own how to complete my work”) from Hackman and Oldham’s (1980) job description survey. Items were rated on a 5-point Likert scale, ranging from ‘totally disagree’ to ‘totally agree’. Reliability of this scale (Cronbach’s alpha) in this sample was .74.

***Situational learning orientation.*** To measure situational learning orientation, we used five items (e.g. “Colleagues are given a chance to correct their mistakes”) adapted from Ames and Archer’s (1988) situational learning orientation scale. Items were revised to be relevant in a working context. Items were rated on a 5-point Likert scale, ranging from ‘totally disagree’ to ‘totally agree’. Reliability of this scale (Cronbach’s alpha) in this sample was .77.

***Affective commitment.*** To measure affective commitment, we used seven items (e.g. “I talk up this organization to my friends as a great organization to work for”) from the Organizational Commitment Questionnaire (Meyer, Bobocel, & Allen, 1991). These items reflect the affective component of organizational commitment. Items were rated on a 5-point Likert scale, ranging from ‘totally disagree’ to ‘totally agree’. Reliability for the scale (Cronbach’s alpha) in this sample was .89.

***Supervisor rated performance.*** To measure employee performance, we used four items adapted from Singh (2000). Supervisors were asked to compare performance aspects of their employees and to rate individual (economic and service related) performance over the last six months on a 7-point scale ranging from ‘Not good at all’ to ‘top performer’. For economic performance, supervisors were asked to rate cost consciousness and productivity. For service performance, supervisors were asked to rate customer focus and contribution to customer satisfaction and loyalty. Items were combined into one overall performance scale. Reliability (Cronbach’s alpha) of this scale is .84 in this sample.

## **Analysis**

Measurement properties were tested in a two-stage procedure. First, exploratory and confirmatory factor analysis was executed in SPSS and AMOS (maximum likelihood estimation), simultaneously for all constructs in the model. The exploratory factor structure was tested for confirmation using SEM. All items were directly modeled to load on their respective constructs. We used a unidimensional measurement model because this is more useful for the interpretation of latent constructs as it allows for a more precise test of the convergent and discriminant validity of the indicators (Kline, 1998). All constructs were allowed to correlate with each other. For each latent construct included in the simultaneous analysis, the standardized factor loadings and the variance extracted and shared variance with any other construct were computed. This enabled us to test Kline's (1998) criterion for convergent validity and Fornell and Larcker's (1981) criterion for discriminant validity.

The hypotheses were simultaneously tested in a structural model, using maximum likelihood estimation in AMOS (Arbuckle & Wothke, 1999). Although we used supervisor ratings for one of the outcome variables, employee performance, the validity of our structural model may still be biased by common-method variance. Drawing upon Lindell and Whitney (2001) and Podsakoff, MacKenzie, Lee and Podsakoff (2003), we estimated a common method factor to control for this variance. Specifically, we included a common method factor such that each manifest item was hypothesized to have a common loading on this method factor in addition to a loading on its theoretic construct. Further, we constrained the method factor loadings to be equal. By estimating this common method factor, the variance due to common method is partialled out of the estimated theoretic constructs and thereby from the estimated structural relationships in our model.

## RESULTS

### **Convergent and Discriminant Validity of the Constructs**

To assess the convergent and discriminant validity of our constructs, we compared the shared and extracted variances (Kline, 1998; Fornell & Larcker, 1981). For each construct, the extracted variance (the mean of the standardized regression weights per construct) is higher than 0.50 and substantially larger than the shared variance (squared correlations) between constructs. The highest correlation we find between situational learning orientation and behavioral control. Even in this case however, the average variance explained (i.e. .75 for behavioral control and .64 for situational learning orientation) is almost twice as large as the squared correlation between these two constructs (.33). This provides compelling evidence for the discriminant validity of our scales (Fornell & Larcker, 1981).

### **Relationship between Behavioral Control, Autonomy and Situational Learning Orientation**

The hypotheses were tested in a simultaneous path analytical model. The fit statistics for this model are as following:  $\chi^2 = 1621,38$ ,  $df = 483$ ,  $p < .001$ ,  $NFI = .89$ ,  $NNFI = .92$ ,  $CFI = .92$ ,  $SRMR = .05$ ,  $RMSEA = .05$  (90% CI = .04 to .05). The relative fit indicators exceed .90 and the absolute fit indicators suggest that the residuals are small ( $< .05$ ) and tightly distributed (cf. 90 % confidence interval of  $RMSEA = .04$  to .05). This suggests that our model provides a reasonable fit to the data. However, the modification indices indicated that including four additional paths would substantially improve model fit. It concerned four direct paths from the personality characteristics (internal locus of control and personal learning orientation) to the outcome variables (affective commitment and performance). The fit statistics for this extended model are:  $\chi^2 = 1558,34$ ,  $df = 479$ ,  $p < .001$ ,  $NFI = .90$ ,  $NNFI = .92$ ,  $CFI = .93$ ,  $SRMR = .05$ ,  $RMSEA = .04$  (90% CI = .041 to .046). A further assessment indicates that the extended model provides a significantly better fit ( $\Delta\chi^2 = 63.04$ ;  $\Delta df = 4$ ;  $p < .001$ ) to the data. The results that are presented in Table 2 and that are further discussed are based on this extended model. Figure 2 provides an overview of the found relationships.

The regression weights show that behavioral control is negatively related to job autonomy ( $B = -.07, p < .05$ ). Thus, our analysis provides support for hypothesis 1. The degree to which employees experience their manager to control behavior is modestly though significantly related to their experience of job autonomy. Hypothesis 2, in contrast, is strongly supported. Our results show that the extent to which employees feel that their behavior is monitored, evaluated and directed shows to be strongly related to perceived situational learning orientation ( $B = .43, p < .001$ ). This indicates that employees who are more controlled on behavior experience their working environment as being more supportive to their own development and learning.

Our results also indicate that, at least in this sample, the individual employee dispositions were important in explaining our outcome variables, but not so much in explaining the intermediate variables (i.e. job autonomy and situational learning orientation). We found no clear relationship between internal locus of control and experienced autonomy in the job ( $B = .08, p > .05$ ) and between personal learning orientation and situational learning orientation ( $B = -.02, p > .05$ ). Thus, hypotheses 3 and hypothesis 4 are not confirmed in our empirical study.

### **Attitudinal and Behavioral Consequences of Autonomy and Situational Learning Orientation**

Table 2 also summarizes the relationships between job autonomy and situational learning orientation on the one hand and employee attitude and behavior on the other hand. The results show that job autonomy is clearly related to employee organizational commitment ( $B = .12, p < .001$ ), providing support for hypothesis 5. We also found a strong relationship between job autonomy and supervisor rated performance ( $B = .29, p < .001$ ), providing support for hypothesis 6. Our analysis further shows that situational learning orientation is not related to organizational commitment ( $B = .05, p > .05$ ), but positively related to employee performance levels ( $B = .14, p < .01$ ). Thus, hypothesis 7 is not confirmed. Hypothesis 8 on the other hand is clearly confirmed. The modification indices of our structural model did suggest four additional paths that significantly improved the overall fit of the model. All of them relate to direct relationships between employee dispositions and our outcome variables. Internal locus of control shows to be positively related both to organizational commitment ( $B = .14, p < .01$ ) and employee

performance ( $B = .23, p < .001$ ). Similarly, personal learning orientation shows to be positively related to organizational commitment ( $B = .25, p < .001$ ) and performance levels ( $B = .22, p < .001$ ).

## DISCUSSION

While companies are still struggling in designing and implementing the optimal management control system, academia is also characterized by a lot of debate around this issue. Especially, there is a lot of unclarity concerning the role of behavioral control in the workplace. Several lines of research, especially those that focus on management control in sales and service contexts (Babakus et al., 1996; Baldauf et al., 2002; Cravens et al., 1993; Jaworski, Stathakopoulos, & Krishnan, 1993; Lusch & Jaworski, 1991; Oliver & Anderson, 1994; Piercy et al., 2001) bear on motivational theories (e.g. Deci & Ryan, 1985, 2000) and consider behavioral control as an important element of a high-performing work context. In contrast, organizational theorists connected to the empowerment literature (Argyris, 1998; Mills & Ungson, 2003; Randolph, 2000; Simons, 1995) suggest that behavioral control may be less effective to deal with the challenges contemporary organizations are confronted with, because behavioral control is thought to curb autonomy levels.

The objective of this study was to gain some more insights into these issues. We did so by proposing a process model in which autonomy and situational learning orientation are used to link behavioral control to important work-related individual outcome variables, at the same time controlling for employee dispositions. This approach enabled us to address Oliver and Anderson's (1994) call to expand the conceptual structure surrounding the control concept and Challagalla and Shervani's (1996) and Baldauf et al.'s (2002) call to explore the role of alternative variables in explaining the individual work-related outcomes of control mechanisms. Furthermore, as autonomy is conceptualized as an intervening variable in the behavioral control – outcome relationships, our study provides some insights in the interplay between management control on the one hand and employee empowerment on the other. Below, the major conclusions drawn from this study are discussed.

A first important insight is that behavioral control clearly has a contribution to make in optimizing the workplace. In our study, we found a strong relationship between behavioral

control and situational learning orientation. Frontline employees who experience more behavioral control clearly perceive their situational as being more learning oriented, which in turn, is clearly positively related to their performance levels. Piercy et al. (2001) suggested that it is likely that behavioral control provides managers with the opportunity for coaching, counseling and making adjustments to work allocations and that this could explain why behavioral control seems to improve employee performance. From a theoretical perspective, our study provides some initial field-study support to Cognitive Evaluation Theory's (Deci & Ryan, 1985, 2000) proposition about the impact of behavioral control on performance levels. Behavioral control seems to contribute to the creation of a work context in which employees' basic need of competence development gets fulfilled. Because of this need fulfillment, extrinsic, organizational goals get more easily integrated as personally valued goals, in turn fostering goal alignment and employee performance levels.

A second important finding is that behavioral control is not strongly related to experienced autonomy in the job. Though we found a significant negative relationship between behavioral control and job autonomy, the strength of it is rather small, limiting the practical significance of this finding. Thus, at least in our sample, whether employees felt more or less management involvement in the monitoring, guidance and evaluation of procedures they used, it did not heavily affect the amount of freedom and autonomy they experienced in doing their job. There may be several explanations for this rather counter-intuitive finding. A first explanation may be, as Oliver and Anderson (1994) argued, that managerial judgments of on-the-job behaviors can be made more informative and oriented toward enhancing the esteem and the competence of the employee and, thus, less intimidating and controlling.

A second explanation may be that not the amount of behavioral control itself, but rather the underlying motive to do so is more important in explaining the impact on job autonomy. In this study, we did not capture what the underlying purpose of the control mechanism is: whether it is intended for guiding employees (reflecting a high trust environment) or whether it is intended for monitoring (reflecting a low trust environment). It seems plausible that behavioral control will curb experienced job autonomy when it is used in a strict controlling manner, while it may have no impact or even foster autonomy when it is used in a supportive way. Consequently, an interesting next step would be to take these underlying motives into account.

Nevertheless, our study compellingly shows that behavioral control is not counterproductive in empowered working contexts. Several scholars have observed that managers in contemporary organizations pursuing performance improvement typically de-emphasize management control in favor of empowering employees to make workrelated decisions (Blackburn & Rosen, 1993; Heneman, Heneman, & Judge, 1997; Renn & Fedor, 2001; Riordan & Gatewood, 1996; Thomas & Velthouse, 1990). Our study provides however some preliminary evidence that both empowerment and management control may be valuable in optimizing the work context, be it through different underlying mechanisms. While the beneficial effects of empowerment in the workplace are mainly explained through a motivational mechanism, the beneficial role of behavioral control seems to be best explained through a personal development mechanism.

A third noteworthy finding is the role of individual dispositions in explaining work related outcome variables. In our study, we controlled for locus of control and personal learning orientation, mainly to enable us to rigorously test the relationship between behavior control, experienced autonomy and situational learning orientation. Our empirical results indicate however direct relationships between employee dispositions and the outcome variables. Most notable is the direct positive relationship with individual performance. Others already came to similar conclusions. For example, Spector (1982) in his narrative review on the consequences of locus of control, supported the conclusion that internals perform better than externals. Similarly, Dweck and her colleagues (Dweck, 1989; Dweck & Legget, 1988; Heyman & Dweck, 1992) argue that learning oriented individuals perform better because they strive to understand something new or to increase their level of competence in a given activity. When these individuals are faced with failure, they behave as though they have received useful feedback. They respond with solution-oriented self instructions, as well as sustained or increased positive affect and sustained or improved performance (Dweck, 1989; Dweck & Legget, 1988; Heyman & Dweck, 1992).

## **Study limitations**

Our study has several limitations. First, although we build on theoretical insights that suggest causal relationships, our design does not allow to empirically test such relationships because of its cross-sectional nature. Therefore, future studies could use longitudinal or field experimental designs to provide a more rigorous test of the proposed causal relationships. Secondly, common-method variance may have biased the validity of the structural relationships. Therefore, we modeled a latent common-method factor that was constrained to equally load on all observed variables in the model. By doing so, we attempted to partial out the variance due to common method from the estimated structural relationships. Furthermore, we used a separate data source, supervisor ratings, to capture individual employee performance levels. A third important limitation is that data for our empirical study were provided by frontline service employees and supervisors from four Western-European service companies. Consequently, more research in distinct employee samples (e.g. non frontline jobs) and other business contexts is needed to check the generalizability of our findings.

## **Managerial implications**

This study also has some noteworthy implications for practitioners. First, our findings suggest that creating a work environment in which employees feel supported in their personal development clearly is a valuable path to pursue, as it fosters employee performance. Such a work context can be created by giving more attention and feeding back on the way people accomplish certain performance goals and by monitoring and evaluating work procedures and modifying them when desired results are not obtained. Though one might suspect that such interventions may curb feelings of autonomy, our study findings indicate that this is true, but only to a small extent. At the same time however, our results indicate that much is to gain by providing employees with sufficient discretion and freedom in deciding how to go about the work. Employees experiencing more autonomy are more committed to their company and better performing. Thus, creating a work context in which front line employees experience substantial autonomy while at the same time experiencing support towards their personal development not only improves employee morale and affect but also has beneficial effects on performance levels. Among managers, empowerment has often been a perfect alibi to withdraw from providing

developmental support. In trying to foster employee discretion, an often heard credo is “I’m only telling my people what needs to be achieved, not how to they should do it.” At least, our findings suggest that it may be beneficial for managers not to forget the ‘how’ question too, as it may help in creating a learning oriented workplace that fosters employee performance levels.

## REFERENCES

- Agarwal, S., & Ramaswami, S. 1993. Marketing controls and employee responses: The moderating role of task characteristics. *Journal of the Academy of Marketing Science*, 21: 293–306 .
- Ahearne, M., Mathieu, J., & Rapp, A. 2005. To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology*, 90(5): 945–955.
- Ames, C., & Archer, J. 1988. Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80: 260–267.
- Anderson, E., & Oliver, R. L. 1987. Perspectives on behavior-based versus outcome-based salesforce control systems. *Journal of Marketing*, 51: 76–88.
- Arbuckle, J. L., & Wothke, W. 1999. *AMOS 4 user's reference guide*. Chicago: Smallwaters Corporation.
- Argyris, C. 1998. Empowerment: The emperor's new clothes. *Harvard Business Review*, 76(3): 98–105.
- Arrow, K. J. 1974. *The limits of organization*. New York: Norton.
- Babakus, E., Cravens, D. W., Grant, K., Ingram, T. N., & Laforge, R. W. 1996. Investigating the relationships among sales management control, sales territory design, salesperson performance and sales organization performance. *International Journal of Research in Marketing*, 13(4): 345–363.
- Baldauf, A., Cravens, D. W., & Piercy, N. F. 2001. Examining business strategy, sales management, and salesperson antecedents of sales organization performance. *Journal of Personal Selling and Sales Management*, 21(2): 109–22.

Baldauf, A., Cravens, D. W., & Grant, K. 2002. Consequences of sales management control in field sales organizations: A cross-national perspective. *International Business Review*, 11: 577–609.

Blackburn, R. & Rosen, B. 1993. Total quality and human resource management: Lessons learned from Baldrige award-winning companies. *Academy of Management Executive*, 7: 49–66.

Bluedorn, A. C. 1982. A unified model of turnover from organizations. *Human Relations*, 35: 135–153.

Bowen, D. E., & Lawler, E. E. 1992. The empowerment of service workers: What, why, how and when? *Sloan Management Review*, 33(3): 31–9.

Bowen, D. E. & Lawler E. E. 1995. Organizing for service: Empowerment or production line? In W. J. Glynn & G. B. Barnes (Eds.), *Understanding services management*: 269–294. Chichester: Wiley.

Brown, S. P., & Peterson, R. A. 1994. The effect of effort on sales performance and job satisfaction. *Journal of Marketing*, 58: 70–80.

Butler, R. 1987. Task-involving and ego-involving properties of evaluation: Effects of different feedback conditions on motivational perceptions, interest and performance. *Journal of Educational Psychology*, 78: 210–216.

Butler, R. 1993. Effects of task-achievement and ego-achievement goals on information seeking during task engagement. *Journal of Personality and Social Psychology*, 65(1): 18–31.

Button, S. B., Mathieu, J. E., & Zajac, D. M. 1996. Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes*, 67(1): 26–48.

Campbell, J. P. 1990. Modeling the performance prediction problem in industrial and organizational Psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed.), vol. 1: 687–732. Palo Alto, CA: Consulting Psychologists Press.

Campbell, C. R., & Martinko, M. J. 1998. An integrative attributional perspective of empowerment and learned helplessness: A multimethod field study. *Journal of Management*, (24)2: 173–200.

Challagalla, G. N., & Tasadduq, A. S. 1996. Dimensions and types of supervisory control: effects on salesperson performance and satisfaction. *Journal of Marketing*, 60: 89–105.

Child, J. 1973. Strategies of control and organizational behavior. *Administrative Science Quarterly*, 18(1): 1–17.

Churchill, G. A., Ford, N. M., & Walker, O. C. 1974. Measuring the job satisfaction of industrial salesmen. *Journal of Marketing Research*, 11(3): 254–260.

Clugston, M. 2000. The mediating effects of multidimensional commitment of job satisfaction and intent to leave. *Journal of Organizational Behavior*, 21: 477–486.

Conger, J. A., & Kanungo, R. N. 1988. The empowerment process: Integrating theory and practice. *Academy of Management Review*, 13: 471–482.

Cooke, W. N. 1994. Employee participation programs, group-based incentive, and company performance – a union/nonunion comparison. *Industrial and Labor Relations Review*: 47, 594–609.

Cravens, D. W., Ingram, T. N., Laforge, R. W., & Young, C. E. 1993. Behavior-based and outcome-based salesforce control systems. *Journal of Marketing*, 57: 47–59.

Daft, R. L. 1995. *Organization theory and design*. St.-Paul, MN: West Educational Publishing.

Das, T. K., & Teng, B. S. 1998. Between trust and control: developing confidence in partner cooperation alliances. *Academy of Management Review*, 23(3): 491–512.

Deci, E. L., & Ryan, R. M. 1985. *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Deci, E. L., & Ryan, R. M. 2000. The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4): 227–68.

Dewettinck, K., Singh, J., & Buyens, D. 2003. *The missing link? Why past research shows a weak relationship between employee empowerment and performance*. Paper presented at the EMAC-conference, Glasgow, Scotland.

Dweck, C. S. 1989. Motivation. In A. Lesgold & R. Glaser (Eds.), *Foundation for a psychology of education*: 87–13. Hillsdale, NJ: Erlbaum.

Dweck, C. S., & Legget, E. L. 1988. A social-cognitive approach to motivation and personality. *Psychological Review*, 95: 256–273.

Eisenberger, R., Fasolo, P., & Davis-La Mastro, V. 1990. Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75: 51–59.

Eisenhardt, K. M. 1989. Agency theory – an assessment and review. *Academy of Management Review*, 14(1): 57–74.

Flamholtz, E. G., Das, T. K., & Tsui, A. S. 1985. Toward an integrative framework of organizational control. *Accounting, Organizations and Society*, 10(1): 35–50.

Fornell, C., & Larcker, D. F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18: 39–50.

Ganster, D. C., & Fusilier, M. R. 1989. Control in the workplace. In C. L. Cooper & I. Robertson (Eds.), *International review of industrial and organizational psychology*: 235–280. London: Wiley.

Hackman, J. R., & Oldham, G. O. 1976. Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16: 250–279.

Hackman, J. R., & Oldham, G. O. 1980. *Work redesign*. Reading, MA: Addison-Wesley.

Hartline, M. D., & Ferrell, O. C. 1993. *Service quality implementation: The effects of organizational socialization and managerial actions on customer-contact employee behaviors*. Report No. 93–122. Cambridge: Academy of Marketing Science.

Henderson, J. C., & Lee, S. 1992. Managing I/S design teams: A control theories perspective. *Management Science*, 38(6): 757–778.

Heneman, H. G., Heneman, R. L., & Judge, T. A. 1997. *Staffing organizations* (2nd ed.). Middletown, WI: Irwin.

Heyman, G. D., & Dweck, C. S. 1992. Achievement goals and intrinsic motivation: Their role and their relation in adaptive motivation. *Motivation and Emotion*, 16: 231–247.

Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. 1990. Mergers and acquisitions and managerial commitment to innovation. *Strategic Management Journal*. 11: 29–47.

Inkson, J. H., Pugh, D. S., & Hickson, D. J. 1970. Organization structure and context: an abbreviated replication. *Administrative Science Quarterly*, 15: 318–329.

Jaworski, B. J. 1988. Toward a theory of marketing control: environmental context, control types, and consequences. *Journal of Marketing*, 52: 23–39.

Jaworski, B. J., & MacInnis, D. J. 1989. Marketing jobs and management controls: toward a framework. *Journal of Marketing Research*, 26: 406–419.

Jaworski, B. J., & Stathakopoulos, V., & Krishnan, H. S. 1993. Control combinations in marketing: Conceptual framework and empirical evidence. *Journal of Marketing*, 57: 57–69.

Jex, S. M. 1998. *Stress and job performance: Theory, research, and implications for managerial practice*. Thousand Oaks, CA: Sage Publications.

Judge, T. A., & Larsen, R. J. 2001. Dispositional affect and job satisfaction: A review and theoretical extension. *Organizational Behavior and Human Decision Processes*, 86(1): 67–98.

Kline, R. B. 1998. *Principles and practice of structural equation modeling*. New York: Guilford Press.

Krafft, M. 1999. An empirical investigation of the antecedents of sales force control systems. *Journal of Marketing*, 63: 120–134.

Kraimer, M. L., Seibert, S. E., & Liden, R. C. 1999. Psychological empowerment as a multidimensional construct: a test of construct validity. *Educational and Psychological Measurement*, 59: 127–142.

Lawler, E. E. 1992. *The ultimate advantage*. San Francisco: Jossey-Bass.

- Lindell, M. K., & Whitney, D. J. 2001. Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86: 114–121.
- Liden, R. C., Wayne, S. J., & Sparrowe, R. T. 2000. An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships and work outcomes. *Journal of Applied Psychology*, 85(3): 407–16.
- Locke, E. A., & Schweiger, D. M. 1979. Participation in decision-making: One more look. In B. Staw & L. L. Cummings (Eds.), *Research in Organizational Behavior*: 265–339. Greenwich, CT: JAI Press.
- Lusch, R. F., & Jaworski, B. J. 1991. Management controls, role stress, and retail store manager performance. *Journal of Retailing*, 67: 397–419.
- MacCallum, R. C., & Austin, J. T. 2000. Application of structural equation modeling in psychological research. *Annual Review of Psychology*, 51: 201–226.
- Mathieu, J. E., & Zajac, D. M. 1990. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108: 171–194.
- Mowday, R., Porter, L., & Steers, R. 1982. *Employee-organizational linkages*. New York: Academic Press.
- Merchant, K. 1985. *Control in business organizations*. Boston: Pitman Publishing.
- Meyer, J. P., & Allen, N. J. 1991. A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1): 61–89.
- Meyer, J. P., & Allen, N. J. 1997. *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage Publishing.

- Meyer, J.P., Bobocel, D.R., & Allen, N.J. 1991. Development of organizational commitment during the first year of employment: A longitudinal study of pre- and post-entry influences. *Journal of Management*, 17(4): 717-33.
- Miller, K. I., & Monge, P. R. 1986. Participation, satisfaction and productivity: a meta-analytic review. *Academy of Management Journal*, 29: 727–753.
- Mills, P. K., & Ungson, G. R. 2003. Reassessing the limits of structural empowerment: organizational constitution and trust as controls. *Academy of Management Review*, 28(1): 143–53.
- Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. *Journal of Vocational Behavior*, 14: 224–247.
- Mowday, R.T., Porter, L.W., & Steers, R.M. 1982. **Employee-organization linkages**. New York: Academic Press.
- Niehoff, B. P., Enz, C. A., & Grover, R. A. 1990. The impact of top management actions on employee attitudes and perception. *Group and Organization Studies*, 15: 337–352.
- Oldham, G. R., & Hackman, J. R. 1980. Work design in organizational context. In B. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*: 247–278. Greenwich, CT: JAI Press.
- Oliver, R. L., & Anderson, E. 1994. An empirical test of the consequences of behavior- and outcome-based sales control systems. *Journal of Marketing*, 58: 53–67.
- Oliver, R. L., & Anderson, E. 1995. Behavior- and outcome-based sales control systems: evidence and consequences of pure-form and hybrid governance. *Journal of Personal Selling and Sales Management*, 15: 1–15.

Ouchi, W. G. 1979. A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25: 833–49.

Piercy, N. F., Cravens, D. W., & Lane, N. 2001. Sales manager behavior control strategy and its consequences: the impact of gender differences. *Journal of Personal Selling and Sales Management*, 21(1): 39–49.

Ping, R. A. 2001. A suggested standard error for interaction coefficients in latent variable regression. *Academy of Marketing Science Conference Proceedings*. Miami: Academy of Marketing Science.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5): 879–903.

Ramaswami, S. N., Srinivasan, S. S., & Gorton, S. A. 1997. Information asymmetry between salesperson and supervisor: postulates from agency and social exchange theory. *Journal of Personal Selling and Sales Management*, 17(3): 29–50.

Randall, D. M. 1990. The consequences of organisational commitment: Methodological investigation. *Journal of Organizational Behavior*, 11: 361–378.

Randolph, W. A. 2000. Re-thinking empowerment: why is it so hard to achieve? *Organizational Dynamics*, 29(2): 94–107.

Rawsthorne, L. J., & Elliot, A. J. 1999. Achievement goals and intrinsic motivation: A meta-analytic review. *Personality and Social Psychology Review*, 3: 326–344.

Renn, R. W., & Fedor, D. D. 2001. Development and field test of a feedback seeking, self-efficacy, and goal setting model of work performance. *Journal of Management*, 27: 563–583.

Ricketta, M. 2002. Attitudinal organizational commitment and job performance: a meta-analysis. *Journal of Organizational Behavior*, 23: 257–266.

Riordan, C. M., & Gatewood, R. D. 1996. Putting the “E” (Employee) into quality efforts: a process model of organizational practices, quality principles, and employee reactions. In D. B. Fedor & S. Ghosh (Eds.), *Advances in the management of organizational quality*: 299–335. Greenwich, CT: JAI Press.

Rotter, J. B. 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80: 1014-1053.

Rotter, J. B. 1971. Generalized expectancies of interpersonal trust. *American Psychologist*, 26: 443–452.

Seibert, S. E., Silver, S. R., & Randolph, W. A. 2004. Taking empowerment to the next level: A multiple-level model of empowerment, performance, and satisfaction. *Academy of Management Journal*, 47(3): 332–49.

Simons, R. 1985. Control in an age of empowerment. *Harvard Business Review*: 80–88.

Singh, J. 2000. Performance productivity and quality of front line employees in service organizations. *Journal of Marketing*, 64: 15–34.

Spector, P. E. 1982. Behavior in organizations as a function of employee’s locus of control. *Psychological Bulletin*, 91(3): 482–497.

Spector, P. E. 1986. Perceived control by employees: a meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39: 1005–1016.

Spreitzer, G. M. 1995. Psychological empowerment in the workplace: dimensions, measurement, and validation. *Academy of Management Journal*, 38(5): 1442–65.

Spreitzer, G. M. 1996. Social structural characteristics of psychological empowerment. *Academy of Management Journal*, 39 (2): 483–504.

Steele-Johnson, D., Beauregard, R. S., Hoover, P. B., & Schmidt, A. M. 2000. Goal orientation and task demand effects on motivation, affect, and performance. *Journal of Applied Psychology*, 85(5): 724–738.

Stevens, C. K., & Gist, M. E. 1997. Effects of self-efficacy and goal orientation on negotiation skill maintenance: What are the mechanisms? *Personnel Psychology*, 50: 955–978.

Sujan, H., Weitz, B. A., & Kumar, N. 1994. Learning orientation, working smart, and effective selling. *Journal of Marketing*, 58: 39–52.

Taberner, C. & Wood, R. E. 1999. Implicit theories versus the social construal of ability in self-regulation and performance on a complex task. *Organizational Behavior and Human Decision Processes*, 78(2): 104–127.

Thomas, K. W., & Tymon, W. G. 1994. Does empowerment always work: understanding the role of intrinsic motivation and personal interpretation. *Journal of Management Systems*, 6: 1–13.

Thomas, K. W., & Velthouse, B. A. 1990. Cognitive elements of empowerment: an “interpretive” model of intrinsic task motivation. *Academy of Management Review*, 15 (4): 666–81.

VandeWalle, D., Cron, W. L., & Slocum, J. W. 2001. The role of goal orientation following performance feedback. *Journal of Applied Psychology*, 86: 629–640.

Van Dijk, D., & Kluger, A. N. 2001. **Goal orientation versus self-regulation: different labels or different constructs?** Paper presented at the 16th annual convention of the Society for Industrial and Organizational Psychology, San Diego, CA.

Van Dyne, L., Jehn, K. A., & Cummings, A. 2002. Differential effects of strain on two forms of work performance: individual employee sales and creativity. *Journal of Organizational Behavior*, 23: 57–74.

Westman, M. 1992. The moderating effects of decision latitude on stress-strain relationships: Does organizational level matter? *Journal of Organizational Behavior*, 13: 713–722.

Wood, R. E., & Bandura, A. 1989. Social cognitive theory of organizational management. *Academy of Management Review*, 14(3): 361–384.

## APPENDIX A

### Items in scales

<b>Individual characteristics</b>	
Internal locus of control	<ul style="list-style-type: none"> <li>- I have noticed that there is a direct connection between how hard I work and my performance</li> <li>- My performances are the result of my own efforts; luck has little or nothing to do with it</li> <li>- Promotions are earned through hard work and persistence</li> <li>- Getting promoted is really a matter of being a little luckier than the next person*</li> <li>- Sometimes I have the feeling that I have little to do with my performance*</li> </ul>
Personal learning orientation	<ul style="list-style-type: none"> <li>- I enjoy learning new things</li> <li>- I feel good when I know I have worked hard</li> <li>- It's important to keep trying even though you make mistakes</li> <li>- I work hard because I want to learn new things</li> <li>- I feel good when I'm working on a difficult assignment</li> </ul>
<b>Work context variables</b>	
Behavioral control	<ul style="list-style-type: none"> <li>- My immediate boss monitors the extent to which I follow established procedures</li> <li>- My immediate boss evaluates the procedures I use to accomplish a given task</li> <li>- My immediate boss modifies my procedures when desired results are not obtained</li> <li>- I receive feedback on <i>how</i> I accomplish my performance goals</li> </ul>
Job autonomy	<ul style="list-style-type: none"> <li>- My job allows me to decide on my own how to complete my work</li> <li>- In my job there is a lot of opportunity to decide freely and independently how to do my work</li> <li>- In my job I don't get any chance to take initiative or to decide on my own how to do my work*</li> </ul>
Situational learning orientation	<p>In our unit...</p> <ul style="list-style-type: none"> <li>- My boss pays attention to whether I am improving</li> <li>- Colleagues are encouraged to find answers to their problems on their own</li> <li>- My boss tries to find out what each colleague wants to learn about</li> <li>- My boss wants us to try new things</li> <li>- Colleagues are given a chance to correct their mistakes</li> </ul>
<b>Outcome variables</b>	
Organizational commitment	<ul style="list-style-type: none"> <li>- I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.</li> <li>- I talk up this organization to my friends as a great organization to work for</li> <li>- I find that my values and the organization's values are very similar</li> <li>- I am proud to tell others that I am part of this organization</li> <li>- This organization really inspires the very best in my in the way of job performance</li> <li>- I am extremely glad that I chose this organization to work for</li> <li>- I really care about the fate of this organization</li> </ul>
Supervisor rated performance	<p>Relative to co-workers in your unit, rate the performance of this employee over the last six months on ...</p> <ul style="list-style-type: none"> <li>- cost consciousness</li> <li>- productivity</li> <li>- customer orientation</li> <li>- providing high levels of customer satisfaction and loyalty</li> </ul>

\* = reversed scored item

**TABLE 1****Means, standard deviations and correlations among constructs<sup>a</sup>:**

Variable	M	SD	1	2	3	4	5	6	7
1. Internal locus of control	3.56	.59	.64 <sup>b</sup>						
2. Personal learning orientation	4.04	.49	.40 <sup>c</sup>	.71					
3. Behavioral control	3.30	.82	.23	.09	.83				
4. Job autonomy	3.72	.74	.36	.20	.09	.74			
5. Situational learning orientation	3.70	.60	.32	.24	.58	.33	.77		
6. Affective commitment	3.60	.68	.42	.44	.17	.34	.30	.89	
7. Performance	4.58	1.07	.20	.16	.09	.24	.15	.12	.84

<sup>a</sup> =  $N = 1184$ . Construct mean and standard deviation based on raw score composites.

Correlations are the estimated correlations between constructs, derived from the SEM measurement model [Fit:  $\chi^2=1751.5$ ,  $df = 474$  ( $p < 0.001$ ), NFI = 0.89, NNFI = 0.90, CFI = 0.92, SRMR = 0.048, en RMSEA = 0.048 (90 % CI = 0.045 to 0.05)]

<sup>b</sup> = Entries on the diagonal are Cronbach alpha reliabilities.

<sup>c</sup> = Correlations  $> .06$ ,  $p < .05$ ; correlations  $> .09$ ,  $p < .01$ ; correlations  $> .10$ ,  $p < .001$

**TABLE 2**

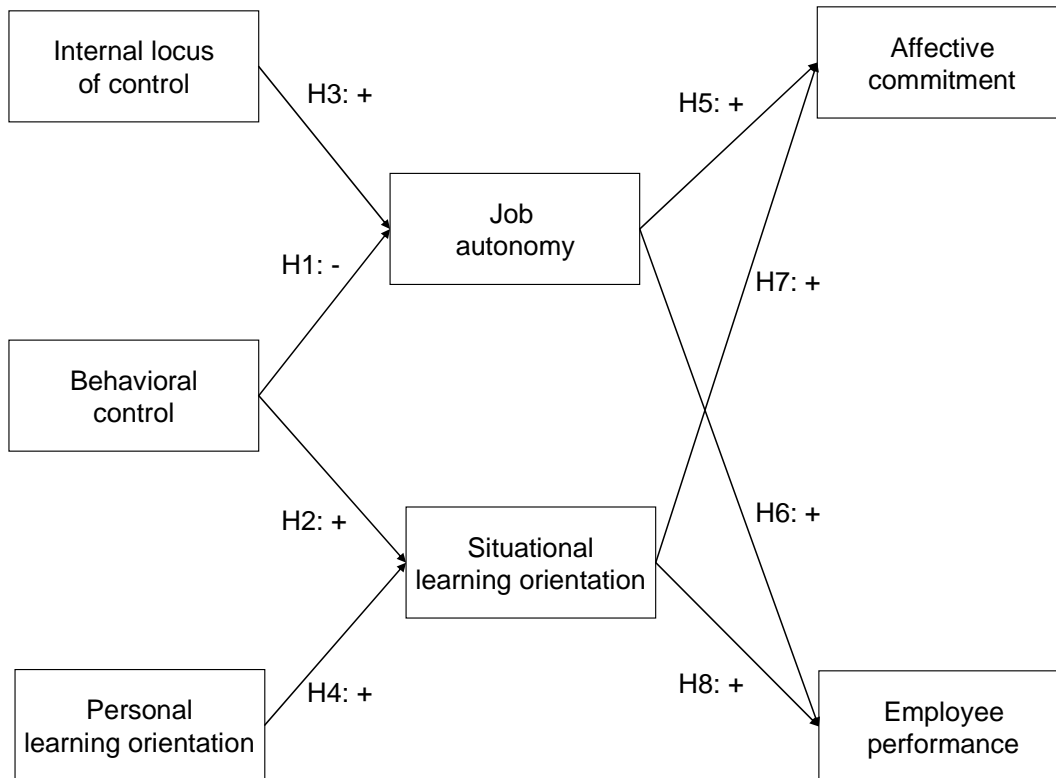
**Estimated parameters en fit statistics for the structural model**

Independent Variable	Dependent Variable							
	Job autonomy		Situational learning orientation		Affective commitment		Performance	
	B ( S.E.)	t-value	B (S.E.)	t-value	B (S.E.)	t-value	B (S.E.)	t-value
Internal locus of control	.08 (.07)	1.14	---	---	<b>.14 (.05)</b>	<b>2.80**</b>	<b>.23 (.08)</b>	<b>2.88***</b>
Personal learning orientation	---	---	-.02 (.05)	0.40	<b>.25 (.04)</b>	<b>6.25***</b>	<b>.22 (.06)</b>	<b>3.67***</b>
Behavioral control	<b>-.07 (.04)</b>	<b>1.75*</b>	<b>.43 (.04)</b>	<b>10.75***</b>	.02 (.03)	0.67	.04 (.05)	0.80
Situational learning orientation	---	---	---	---	.05 (.04)	1.25	<b>.14 (.06)</b>	<b>2.33**</b>
Job autonomy	---	---	---	---	<b>.12 (.03)</b>	<b>4.00***</b>	<b>.29 (.05)</b>	<b>5.80***</b>
	$R^2 = .01$		$R^2 = .23$		$R^2 = .12$		$R^2 = .11$	

\*\*\* =  $p \leq .001$  (critical t-value = 3.14)  
 \*\* =  $p \leq .01$  (critical t-value = 2.33)  
 \* =  $p \leq .05$  (critical t-value = 1.65)  
 --- = relationship not hypothesized /specified  
 A latent common method factor was included that equally loaded on all the observed variables (except for the performance items, rated by the supervisor). The estimated weight of the method factor is .34 (SE = .01;  $p < .001$ ).  
 Fit:  $\chi^2=1558.34$ ,  $df = 479$  ( $p < 0.001$ ), CFI = 0.93, NFI = 0.90, NNFI = 0.92, CFI = 0.93, SRMR = 0.05, RMSEA = 0.044 (90 % CI = 0.041 to .046).

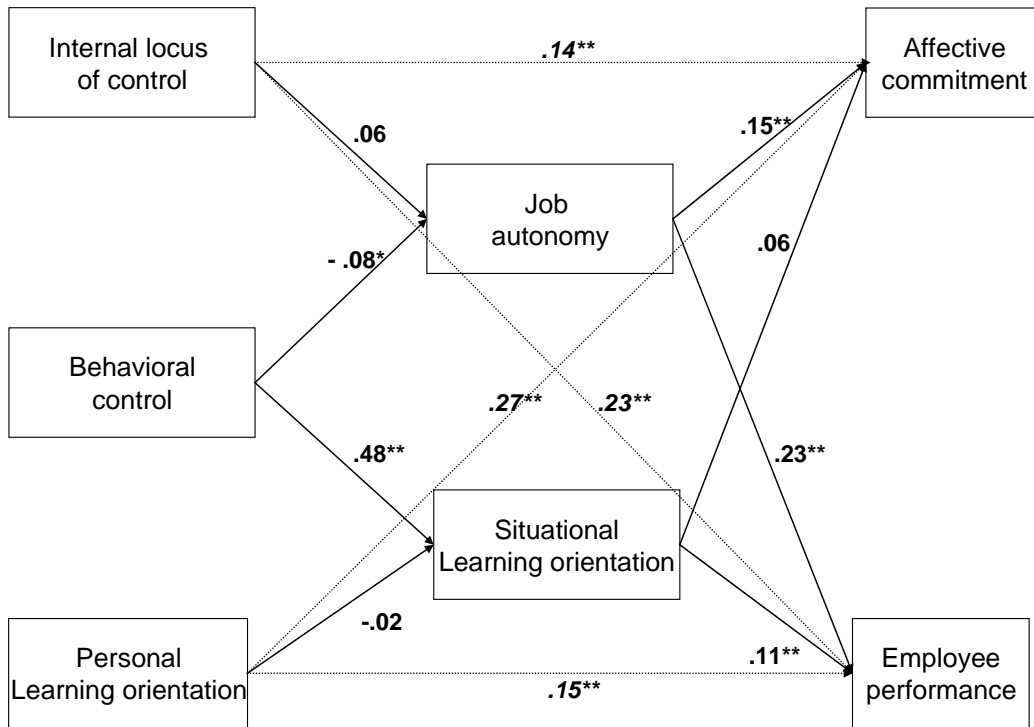
**FIGURE 1**

**Conceptual model and hypothesized relationships**



**FIGURE 2**

**Study findings (standardized regression weights)**



N = 1184; \* = significant at .05 level; \*\* = significant at .01 level