

# WORK ENVIRONMENT PERCEPTIONS AS DETERMINANTS OF AFFECTIVE COMMITMENT AND PARTICIPATION IN FIRM-INTERNAL INNOVATION CONTESTS

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## Abstract

*Cross-divisional innovation efforts in large corporations became increasingly important during the last decade. Therewith, the knowledge-intense innovation process requires ICT support for organising organisational knowledge and facilitating collaboration. Firms are responding to these complex challenges by increasing efforts for implementation of modern innovation mechanisms. Among these mechanisms, innovation contests as the most frequently realised practical approach are assessed to have high potentials for companies. Here, important business challenges are broadcasted to a large group of potential volunteers within the firm. Afterwards, the community starts collaborating by interactively posting, discussing, and evaluating novel ideas. Taking a behavioural perspective, engagement and participation of contributors are critical. Theory highlights that perceptions of individual's work environment positively influence their behaviour, which might be mirrored in participation intention. Supplementary, employees' affective commitment is included as driver of participation. We surveyed employees of a specific subsidiary of a large German company in the telecommunications industry that is responsible for the management of the group's entire product portfolio. The empirical analysis used structured equation modelling for testing the relationships between work environment perceptions, affective commitment, and participation intention. The results indicated especially that a strong organisational encouragement, supervisory encouragement, and affective commitment positively influence individuals' participation intention.*

*Keywords: Work environment perceptions, affective commitment, participation, innovation contests*

## 1 Introduction

Traditionally, innovation activities were executed by a rather small group of people predominantly affiliated with R&D departments (Nobelius, 2004). This method of work organisation in innovation contexts has changed during the last decade towards more modern innovation activities, whereby new products and services are developed organisation-wide (Grote *et al.*, 2012). Against this background, the utilisation of browser-based collaboration tools fundamentally changes existing forms of work leading to new flexible work forms “with its own purpose, leaders, members, structures, resources, and norms” (Bateman *et al.*, 2011, p. 841). Today, innovation contests are some of the most frequently realised practical applications (Diener and Piller, 2013; Leimeister *et al.*, 2009) for integrating different corporate functions and encouraging a company-wide ideation. Innovation contests are

defined as “web-based competition of innovators who use their skills, experiences and creativity to provide a solution for a particular contest challenge defined by an organizer” (Adamczyk *et al.*, 2010, p. 3). One prominent example described by Bjelland and Wood (2008) is IBM’s Innovation Jam where the company could bring together 150,000 employees and external partners. These systems especially support the idea generation and selection phases of the innovation process by broadcasting an idea campaign or an unsolved problem to a large group of employees (cf. Haller *et al.*, 2011). Participation in such firm-internal innovation contests is a voluntary task where involvement and identification are the crucial drivers (Zhou, 2011). To preserve these benefits, innovation contests have to be supported thoroughly by the organisation to reach the underlying goals. “Managing an innovation contest incorporates challenging tasks, but essential ones. There are various aspects closely linked to the management of innovation contests such as the motivation of the participants, [...] or the support of participants, which organizers of innovation contests have to keep in mind” (Adamczyk *et al.*, 2012, p. 344). Taking a behavioural perspective on innovation contest utilisation, active participation of employees is a critical key to success (Zheng *et al.*, 2011; Leimeister *et al.*, 2009) and, therefore, investigating drivers of employee participation in firm-internal innovation contests is of high interest and the central aspect in this study.

According to organisational support theory as well as componential theory of creativity and innovation in organisations, participation as a desired behaviour for innovative tasks should be supported and enforced by the organisation. Existing theory highlighted perceived organisational support (Eisenberger *et al.*, 1990) and several work environment perceptions of employees (Amabile *et al.*, 1996) as influencing individuals work performance and their creativity in terms of generating novel ideas. Supplementary, commitment, interpreted as a decisive attitude and an affective social identity (Zhou, 2011) is seen as an effective determinant of creative work and job performance, expressed in standard jobs and also in extra-role activities (Rhoades and Eisenberger, 2002). Commitment has been of interest for many studies investigating job performance in organisational settings (Meyer *et al.*, 2002; Mathieu and Zajac, 1990), both in general settings and in online communities. However, no studies focus on the relationship between commitment and participation in firm-internal innovation contests.

To date, on one hand, scientific literature clarifies the importance of an overarching organisational support and high level of commitment of employees working on innovative tasks. On the other hand, it paid less attention to work environment perceptions as determinants of affective commitment and participation intention of employees in the context of firm-internal executed innovation contests. One of the few exceptions is the related work by Erickson *et al.* (2012), who argue that proactive leadership could help to overcome organisational barriers (e.g., protection of hierarchical status) for internal crowdsourcing activities. To close this gap, this study focusses on environmental elements within an organisational setting to predict participation in such modern innovation mechanisms. Therefore, the research question for this article reads:

- *Which influence do different work environment perceptions have on employees’ affective commitment and intention for participating in firm-internal organized innovation contests?*

In the next section, the theoretical background and the proposed hypothetical model are detailed. In the following, methodological procedures, the results and a final discussion are presented.

## **2 Theoretical background and research model**

### **2.1 Work environment perceptions and participation in innovative tasks**

For the innovativeness of corporations, assessment of the work environment is an important determinant, as clarified by the following citation: “We know now that the work environment within an organisation [...] can make the difference between the production of new, useful ideas for innovative business growth and the continuance of old, progressively less useful routines” (Amabile, 1997, p. 51). Scott and Bruce (1994) investigated the relationship between the perceptions of the psychological ‘climate for innovation’ and the innovative behaviour of individuals; “At the individual

level, climate is a cognitive interpretation of an organizational situation” (Scott and Bruce, 1994, p. 582). Other researchers also highlighted the psychological empowerment of employees as supporting desired behaviour within their personal work environment; for example, task motivation or creative process engagement (Zhang and Bartol, 2010; Spreitzer, 1995).

Furthermore, the componential theory of creativity and innovation in organisations (Amabile, 1997; Amabile *et al.*, 1996) differentiates several components that influence the behaviour of individuals for creative tasks in an organisational context. The theory distinguishes between positive and negative perceptions of work environment (e.g., encouragement or impediments) that have an impact (positive or negative) on task motivation in the context of innovative and creative work (Amabile, 1997). Because it is assessed as striking (cf. Amabile, 1997, p. 49) and because the focus of this article is on an overarching organisational support, encouragement by the whole organisation (defined as *organisational encouragement*) and by the direct supervisor (defined as *supervisory encouragement*) are at the core of investigations. Regarding the obstacle dimensions, two highlighted constructs (named *organisational impediments* and *workload pressure*) are important.

Focussing on innovation contest literature, only few relevant studies could be found. As mentioned above, Erickson *et al.* (2012) analysed the positive influence of proactive leadership on firm-internal crowdsourcing initiatives. Moreover, some studies explicitly focus on participation in innovation contests but investigate different drivers; Leimeister *et al.* (2009) identified supporting technical components of the underlying platform for activation of participants, whereas Zheng *et al.* (2011) analysed the influence of the contest design (e.g., autonomy, variety, analysability, implicitness, tacitness) on individuals’ motivation and participation intention. Supplementary, researchers found that “users with strong ties to the organisers participated more frequently compared to users with weak ties” (Adamczyk *et al.*, 2010, p. 11).

## 2.2 Commitment and participation in firm-internal communities

Commitment theory describes commitment as “a central focus of research in organizational behavior [...] to understand how the psychological bonds that arise between employees and organisations influence workplace behaviors” (Bateman *et al.*, 2011, p. 842). Employees’ commitment is an important individual attitude, seen as an important determinant of job performance and innovative behaviour that are likely to coincide with the intention to participate. Regarding former research in organisational contexts and job-related outcomes, different types of commitment (affective, normative, continuance, cf. Meyer and Allen, 1991) are assessed and accepted as potential drivers (Bateman *et al.*, 2011).

Bateman *et al.* (2011) analysed the difference between commitment in general and in the context of online communities with the result that “the differences between them [...] suggest that each type of commitment will have analogous, but not identical, effects in online communities” (Bateman *et al.*, 2011, p. 843). Regarding the consequences of commitment in (firm-internal) communities, affective commitment has a positive influence on individuals’ posting behaviour; individuals “want to be part of the conversation” and “find their association with it to be emotionally fulfilling” (Bateman *et al.*, 2011, pp. 843 ff.). Supplementary, Zhou (2011) reported on a significant positive relationship between individuals’ identification with the community (expressed as ‘affective social identity’ or ‘social influence’) and their intention to actively participate in the community. Thus, affective commitment leads individuals “to want to help others who are part of their community by engaging in conversation with them” and affective commitment “helps ensure the long-term success of the community by making it more likely that questions will receive responses” (Bateman *et al.*, 2011, pp. 849–850). By comparison, continuance commitment leads to reading threads, whereas normative commitment leads to protecting and moderating behaviour. Because this study tends to analyse the determinants of creating new content in innovation contests, affective commitment is in our focus. Furthermore, no studies investigating the relationship between commitment and participation, especially for innovation contests, could be found.

### 2.3 Determining employees’ participation intention: A hypothetical model

This study focuses on the premise that work perceptions influence employees’ affective commitment, which in turn induces participation in firm-internal innovation contests. Thus, we drew upon four reasons with a striking influence on creative behaviour in organisations identified by Amabile (1997). Reasons are grouped into (i) positive and (ii) negative work environment perceptions (based on the distinction of stimulants and obstacle dimensions of the original theoretical foundation, cf. Amabile et al., 1996). The entire conceptual model for this study is shown in Figure 1.

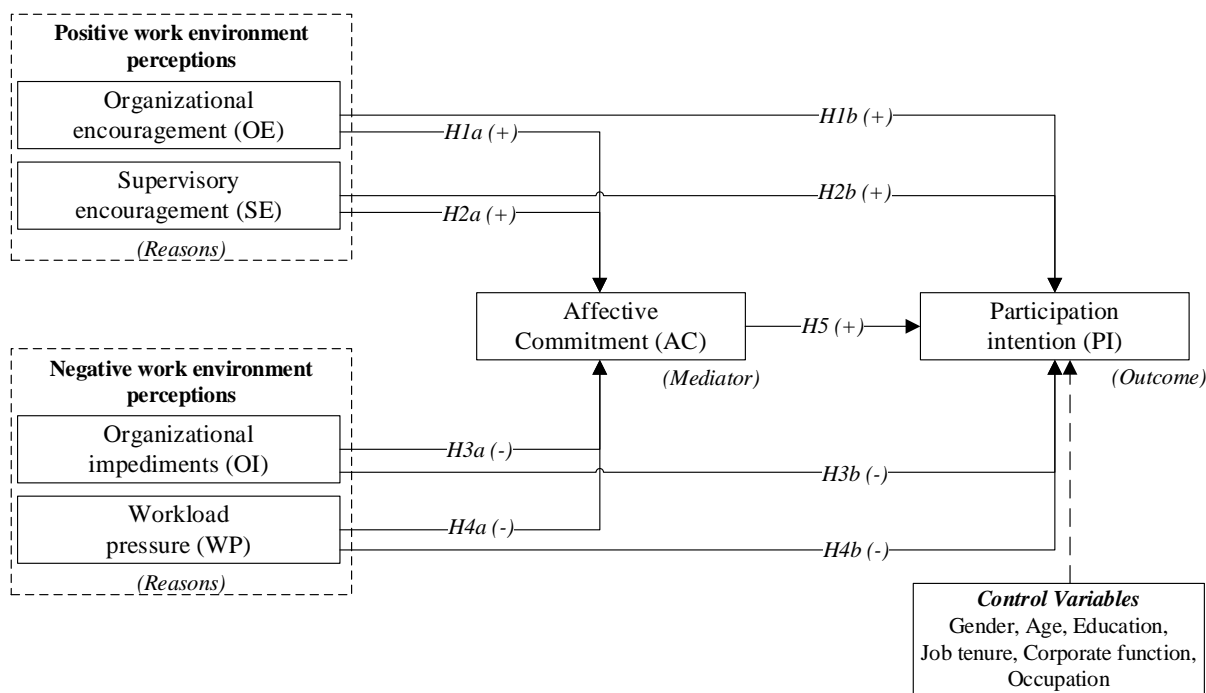


Figure 1. Conceptual model

Regarding positive work environment perceptions, *organisational encouragement* (OE) as well as *supervisory encouragement* (SE) are assumed important determinants of participation intention in firm-internal executed innovation contests. First, *organisational encouragement* as a kind of organisational culture encourages, among others, mechanisms for developing novel ideas, active idea flows, and fair judgements of ideas. For example, Eisenberger et al. (1990) have already confirmed that perceived organisational support is related to “innovation on behalf of the organisation” (Eisenberger et al., 1990, p. 51), *affective commitment* (Rhoades et al., 2001), and that “perceived support might be associated with constructive innovation [...] without the anticipation of direct reward or personal recognition” (Eisenberger et al., 1990, p. 54). Therefore, OE is assumed to be a decisive factor for employees’ *affective commitment* and proactive behaviour, expressed by the *intention to participate* in contests, because perceived support might express stronger feelings of affiliation and loyalty (Eisenberger et al., 1990). Thus, the first two hypotheses read:

**Hypothesis 1a/1b:** A higher level of perceived organisational encouragement is positively related to a) employees’ *affective commitment*, and b) employees’ *intention to participate in innovation contests*.

Second, and consistent with componential theory of creativity and innovation, *supervisory encouragement* is interpreted as the support function of direct supervisors; e.g., facilitating open interactions, immediate support, and clarification of goals (Amabile et al., 1996), and for *affective commitment* (Rhoades and Eisenberger, 2002). Therefore, SE is assumed to be the second determinant, with a positive influence on employees’ *affective commitment* and *participation intention* in innovation contests, because the direct supervisor is seen as an organisational agent, for instance

leading to an incorporation of organisational membership (Rhoades and Eisenberger, 2002) . The corresponding hypotheses state:

**Hypothesis 2a/2b:** *A higher level of perceived supervisory encouragement is positively related to a) employees' affective commitment, and b) employees' intention for participating in innovation contests.*

Regarding negative work environment perceptions, *organisational impediments* (OI) and *workload pressure* (WP) are important dimensions, as identified by Amabile *et al.* (1996). These reasons might be the causes why employees are hindered to participate in creative and innovative work, and might explain hesitant innovation contest participation. *Organisational impediments* aim at a culture that impedes innovative behaviour through internal politics, criticism, destructive competition, and risk avoidance (cf. Amabile, 1997, p. 49). We assume the same rationales to hold for commitment and participation in firm-internal innovation contests. Thus, the authors propose:

**Hypothesis 3a/3b:** *A higher level of perceived organisational impediments is negatively related to a) employees' affective commitment, and b) employees' intention for participating in innovation contests.*

*Workload pressure* focuses on a negative effect of excessive workload pressure perceived as a means of control on individuals (cf. Amabile *et al.*, 1996, p. 1161). High workload pressure might exhaust employees and eat into their available resources. Therefore, people tend to concentrate on their primary tasks instead of focussing on noncore tasks, such as contributing to innovation contests (cf. Walsh *et al.*, 2015). The formulated hypotheses read:

**Hypothesis 4a/4b:** *A higher level of perceived workload pressure is negatively related to a) employees' affective commitment, and b) employees' intention for participating in innovation contests.*

Last, *affective commitment* of employees as an important determinant of their individual innovative behaviour has been investigated in several studies (e.g., Bateman *et al.*, 2011). The most relevant argument is that employees, having a higher commitment and therefore a higher identification with the norms and goals of their employer, are more likely to display behaviour that favours the organisation. Therefore, the authors assume that commitment is also a crucial determinant of the individuals' participation intention for firm-hosted innovation contests. Thus:

**Hypothesis 5:** *A higher level of employees' affective commitment is positively related to employees' intention for participating in innovation contests.*

### 3 Methodological procedures

#### 3.1 Organisational setting

A large German company in the Telecommunications industry represents the scenario for this study. A specific subsidiary responsible for the development of the firm's product and service portfolio was selected, and data was collected exclusively within this subsidiary. The unit coordinates the group-wide new product development, as well as steering of the product portfolio and definition of the product roadmap for the entire company. Supplementary, the unit coordinates the research and development activities for exploiting the synergies across different units and country borders and to extend the group-wide product portfolio concerning all areas of action (e.g., communication and cloud services, television, digital media, online marketing, advertising business, and payment services). With regard to corporate strategy and for driving the growth of the corporation, the unit opens new business fields and opportunities. This 'product house' uses a range of modern innovation and product development approaches, including scrum as well as innovation contests. The self-organisation aspect of the teams has led to enhancements in the development process and quality together with a steady increase in employees' motivation. The unit is headed by the chief innovation officer and consists of the core area responsible for product and service innovations, as well as the innovation laboratories.

#### 3.2 Measures

In a prestudy, more than ten large European companies and their approach for organisational integration of innovation contests were analysed to verify the applicability of the constructs to the

specific context of this study. During the development of the survey instrument, the scales for work environment perceptions (independent variables) were adapted from Amabile (2010) and modified for the context of this study. The dimensions are assessed by the respondents in terms of their current work environment situation and, therefore, independently from the scenario of innovation contests. The scales are part of the 'KEYS' instrument (former: work environment inventory), assessed as reliable and valid instrument for investigations of work environments for creativity (cf. Amabile *et al.*, 1996). Respondents were made on a four-point Likert-type scale (as suggested in original article: to avoid a mid-point and "avoid thinking carefully and accurately about their answers," Amabile *et al.*, 1995, p. 10) ranging from 1='never or almost never' to 4='always or almost always'. All constructs were measured using multiple, but at least three, items. Regarding '*organisational encouragement*', the respondents were asked how much they agree with several statements regarding the encouragement for an innovative work environment throughout their organisation. The measure consists of 15 items. Cronbach's alpha for this scale was 0.854. Eight items measured '*supervisory encouragement*' by asking the respondents several questions about the encouragement of innovative behaviour, including extra role activities by their direct supervisor (e.g., in department, team, or project). Cronbach's alpha on this scale was 0.927. '*Organisational impediments*' consist of twelve items and focusses on the impediment of an innovative behaviour at work, *inter alia* because of political trouble and impediments within the organisation. Cronbach's alpha on this scale was 0.849. '*Workload pressure*' is a 5-item measure. Respondents should assess the level of how much their innovative work behaviour is hindered by a high level of workload pressure in their daily work and within their usual daily social and physical environment at work. Cronbach's alpha on this scale was 0.769. For *affective commitment*, the affective commitment scale (ACS) suggested by Allen and Meyer (1990) was chosen and adapted for this study (five items). Respondents rated the statements to indicate the extent to which he or she agrees in terms of their personal individual commitment to the organisation. Cronbach's alpha on this scale was 0.914. For the measurement of *participation intention* (three items), a scale provided by Zheng *et al.* (2011) was adopted. Respondents rated the level of their individual intention to participate in innovation contests, if their company would organise such activities in the future. Cronbach's alpha on this scale was 0.961. Respondents on both scales (AC, PI) were made on a seven-point Likert scale (as suggested in original articles), which was anchored at 1='strongly disagree' and 7='strongly agree'. Before starting the field period, the questionnaire was pretested in two different ways: a (qualitative) peer-review and a (quantitative) pretest for testing the scales and data-gathering mechanisms. Supplementary, several controls were collected (age, gender, education, corporate function and occupation, tenure and time spent on social media). During reliability analysis, items with factor loadings less than 0.7 were excluded. All scales could be requested from the authors.

## 4 Results

### 4.1 Descriptive statistics and validation of the measurement model

Data collection took place in September and October 2015 with a period of seven weeks and in the German language. The call for participating in the online survey was sent to 430 employees of the firm, which resulted in 267 received questionnaires. During the data clearing questionnaires were excluded because they were incomplete (meaning that the respondent quits the survey before answering the last question) or time for completing the survey was very low (meaning an overall response time of less than 200 seconds). Finally, a total of 129 responses could be used for data analysis (a response rate of approx. 30%). The average duration for participating was 13.2 minutes. The age of the respondents was 38.6 years on average, and women comprised 36% of the group. The validation of the measurement model is done to test the reliability and validity of the instrument. Therefore, a confirmatory factor analysis (CFA) was conducted to examine the quality of the measurement model. Next, to analyse for discriminant validity, Table 1 gives an overview of studied variables and correlations between the latent factors. All correlations show consistent values with respect to their direction and in comparison to former research. The calculated average variance

extracted (AVE) for each scale is more than 0.5 as required in the literature (Chin, 1998). The constructs' internal consistency expressed by the composite reliability (CR) is not less than 0.79. Discriminant analysis (by comparing the square root of the AVE with the absolute values of the correlations with other variables) revealed no validity concerns.

| Variables            | M    | SD   | CR   | AVE   | 1                          | 2                         | 3                         | 4            | 5                         | 6     |
|----------------------|------|------|------|-------|----------------------------|---------------------------|---------------------------|--------------|---------------------------|-------|
| 1 Org. Encouragement | 2.48 | 0.63 | 0.86 | 0.555 | 0.745 <sup>a</sup>         |                           |                           |              |                           |       |
| 2 Sup. Encouragement | 2.80 | 0.77 | 0.93 | 0.655 | <b>0.445<sup>**b</sup></b> | 0.809                     |                           |              |                           |       |
| 3 Org. Impediments   | 2.12 | 0.72 | 0.85 | 0.537 | <b>-0.379<sup>**</sup></b> | <b>-0.147</b>             | 0.733                     |              |                           |       |
| 4 Workload Pressure  | 2.41 | 0.66 | 0.79 | 0.554 | <b>-0.244<sup>**</sup></b> | <b>-0.055</b>             | <b>0.414<sup>**</sup></b> | 0.744        |                           |       |
| 5 Affect. Commitment | 4.64 | 1.42 | 0.90 | 0.654 | <b>0.307<sup>**</sup></b>  | <b>0.378<sup>**</sup></b> | <b>-0.070</b>             | <b>0.117</b> | 0.809                     |       |
| 6 Part. Intention    | 4.74 | 1.47 | 0.95 | 0.865 | <b>0.269<sup>**</sup></b>  | <b>0.067</b>              | <b>-0.079</b>             | <b>0.037</b> | <b>0.280<sup>**</sup></b> | 0.930 |

<sup>a</sup> Diagonal elements are square root of average variance expected (AVE).  
<sup>b</sup> inter-construct correlations, \*\* p < 0.001 (two-tailed tests).

Table 1. Descriptive statistics and correlations of latent variables (n=129)

In general, common method bias could be a problem in this study, because all variables are collected from the same respondents and with the same method. For post-collection statistical analysis, different approaches for detecting common method variance (CMV) were run, according to Podsakoff et al. (2003). Harman's single factor test (using SPSS) shows that one single factor only explains a minority of the explained variance (28%). Additionally, the test by adding a common latent factor (CLF, using AMOS) and marker variable shows that the path estimates of the model are unchanged and therefore the data is not biased. In sum, it could be concluded that common method bias is not a problem in this study.

#### 4.2 Validation of the hypothesis and the model

Next, structural equation modelling (SEM) using IBM SPSS Amos 23 was conducted for testing the hypotheses model and afterwards also mediation effects. We use maximum-likelihood as our estimation procedure for estimating the model. The assessment of the model fit indicates a good fit to the data as proven by several model fit indices:  $\chi^2/d.f. = 1.555$ ; CFI = 0.922; RMSEA = 0.066; SRMR = 0.1499. Table 2 summarizes the predicted paths of the structural model, the path coefficients with their significance levels and the standard errors. Following Chin (1998), only effects with standardized regression weights of more than 0.2 are considered to be meaningful. After assessing the direction and significance of the effects, five out of nine hypotheses could be confirmed.

The SEM model shows that *organisational encouragement* is positively related to *affective commitment* (H1a,  $\beta = 0.23$ ,  $p < 0.05$ ); *supervisory encouragement* is also positively related to *affective commitment* (H2a,  $\beta = 0.32$ ,  $p < 0.01$ ). Therefore, hypotheses H1a and H2a are verified. In addition, *workload pressure* shows a positive relationship to *affective commitment* (H4a,  $\beta = 0.23$ ,  $p < 0.05$ ), which implies a significant positive relationship, but not the support of Hypothesis H4a predicting a negative relationship. Additionally, H5 could be proved; meaning that *affective commitment* is positively related to *participation intention* (H5,  $\beta = 0.23$ ,  $p < 0.05$ ). Furthermore, *organisational encouragement* has a positive direct effect on participation intention (H1b,  $\beta = 0.31$ ,  $p < 0.01$ ) (see Table 2).<sup>1</sup>

<sup>1</sup> We do report results of a model without controls here. However, a model with controls age, gender, education (dummy coded), tenure (in years), and organizational occupation (dummy coded) showed no effect of the controls on the dependent variable and did not change the magnitude or direction of the reported effects. Full results available upon request.

| Dependent Var.  | Hypotheses | Paths                                | Estimates <sup>1</sup>      | S.E.         | C.R.         |
|---|------------|--------------------------------------|-----------------------------|--------------|--------------|
| Affective Commitment  | H1a        | Org. encouragement → Affect. commit. | <b>0.23*</b>                | <b>0.250</b> | <b>2.039</b> |
|   | H2a        | Sup. encouragement → Affect. commit. | <b>0.32**</b>               | <b>0.162</b> | <b>3.259</b> |
|   | H3a        | Org. impediments → Affect. commit.   | <b>0.00<sup>n.s.</sup></b>  | -            | -            |
|   | H4a        | Workload pressure → Affect. commit.  | <b>0.23*</b>                | <b>0.223</b> | <b>2.191</b> |
| Participation Intention   | H1b        | Org. encouragement → Part. intention | <b>0.31**</b>               | <b>0.287</b> | <b>2.757</b> |
|   | H2b        | Sup. encouragement → Part. intention | <b>-0.15<sup>n.s.</sup></b> | -            | -            |
|   | H3b        | Org. impediments → Part. intention   | <b>0.00<sup>n.s.</sup></b>  | -            | -            |
|   | H4b        | Workload pressure → Part. intention  | <b>0.07<sup>n.s.</sup></b>  | -            | -            |
|   | H5         | Affect. commit. → Part. intention    | <b>0.23*</b>                | <b>0.110</b> | <b>2.370</b> |
| * p < 0.05 / ** p < 0.01 / *** p < 0.001 / n.s.=not significant / <sup>1</sup> standardized |            |                                      |                             |              |              |

Table 2. Path coefficients of the structural model

Regarding the path estimates from *organisational encouragement* to *participation intention*, a total effect (direct plus indirect effects) of .37 could be observed. The other relationships as well as the relationships between control variables and the outcome variable do not show significant results. Although not hypothesised, the results involving significant paths from *organisational encouragement* to *affective commitment*, *organisational encouragement* and *participation intention*, and *affective commitment* to *participation intention*, call for further analysis of indirect effects through mediation analysis (Baron and Kenny, 1986). Regarding the indirect effect of *organisational encouragement* on *participation intention* through *affective commitment*, a partial mediation could be determined because the unstandardized direct effect between the variables is reduced (from  $\beta = 0.933$  to  $\beta = 0.792$ ,  $p < 0.01$ ) when integrating the mediator variable into the model.

## 5 Discussion

The aim of this article was the investigation of relationships between work environment perceptions and innovative behaviour such as participation intention in the context of firm-internal innovation contests. Although our theoretical reasoning focuses on work environment in general, the identified explanations serve as a good basis for understanding the effects in the wider context of innovation contests. Especially, facilitating an overarching *organisational and supervisory encouragement* as well as increasing *affective commitment* seems to be crucial for establishing innovation contests as organisational practice, reflected in increase intention to participate. Regarding *workload pressure*, scientific literature shows “seemingly paradoxical influences” (Amabile *et al.*, 1996, p. 1161) reaching from undermining creativity to ‘some positive influence’ of pressure, basing on the urgency and challenging nature of the creative task itself. We added to research that suggests a positive effect of workload pressure on *affective commitment* (e.g., Walsh *et al.*, 2015). Considering *organisational impediments* as a negative work environment perception, there is relatively little evidence of how impeding perceptions drive intentions (cf. Amabile *et al.*, 1996, p. 1162). Our study also could not unravel a significant effect and the influence on *affective commitment* and *participation intention* could not be confirmed.



## 6 References

- Adamczyk, S., Bullinger, A.C. and Moeslein, K.M. (2010), "Call for Attention – Attracting and Activating Innovators", *R&D Management Conference*.
- Adamczyk, S., Bullinger, A.C. and Moeslein, K.M. (2012), "Innovation Contests: A Review, Classification and Outlook", *Creativity and Innovation Management*, Vol. 21 No. 4, pp. 335–360.
- Allen, N.J. and Meyer, J.P. (1990), "The measurement and antecedents of affective, continuance and normative commitment to the organization", *Journal of Occupational Psychology*, Vol. 63 No. 1, pp. 1–18.
- Amabile, T.M. (1997), "Motivating Creativity in Organizations: On Doing What You Love and Loving What You Do", *California Management Review*, Vol. 40 No. 1, pp. 39–58.
- Amabile, T.M. (2010), "KEYS Sample Feedback Report", available at: <http://www.ccl.org/leadership/assessments/KEYSOversview.aspx> (accessed 26 May 2015).
- Amabile, T.M., Burnside, R. and Gryskiewicz, S.S. (1995), "User's guide for KEYS: Assessing the climate for creativity".
- Amabile, T.M., Conti, R., Coon, H., Lazenby, J. and Herron, M. (1996), "Assessing the Work Environment for Creativity", *Academy of Management Journal*, Vol. 39 No. 5, pp. 1154–1184.
- Baron and Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173–1182.
- Bateman, P.J., Gray, P.H. and Butler, B.S. (2011), "Research Note - The Impact of Community Commitment on Participation in Online Communities", *Information Systems Research*, Vol. 22 No. 4, pp. 841–854.
- Bjelland, O.M. and Wood, R.C. (2008), "An Inside View of IBM's' Innovation Jam", *MIT Sloan Management Review*, Vol. 50 No. 1, pp. 32–40.
- Chin, W.W. (1998), "Commentary: Issues and Opinion on Structural Equation Modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. vii–xvi.
- Diener, K. and Piller, F.T. (2013), *The Market for Open Innovation: Increasing the efficiency and effectiveness of the innovation process*, Lulu Publishing, Raleigh.
- Eisenberger, R., Fasolo, P. and Davis-LaMastro, V. (1990), "Perceived Organizational Support and Employee Diligence, Commitment, and Innovation", *Journal of Applied Psychology*, Vol. 75 No. 1, pp. 51–59.
- Erickson, L.B., Trauth, E.M. and Petrick, I. (2012), "Getting inside your employees' heads: Navigating barriers to internal-crowdsourcing for product and service innovation", *Proceedings of the International Conference on Information Systems*.
- Grote, M., Herstatt, C. and Gemünden, H.G. (2012), "Cross-divisional Innovation in the Large Corporation: Thoughts and Evidence on Its Value and the Role of the Early Stages of Innovation", *Creativity and Innovation Management*, Vol. 21 No. 4, pp. 361–375.
- Haller, J.B.A., Bullinger, A.C. and Moeslein, K.M. (2011), "Innovation Contests. An IT-Based Tool for Innovation Management", *Business & Information Systems Engineering*, Vol. 3 No. 2, pp. 103–106.
- Leimeister, J.M., Huber, M., Bretschneider, U. and Krcmar, H. (2009), "Leveraging Crowdsourcing: Activation-Supporting Components for IT-Based Ideas Competition", *Journal of Management Information Systems*, Vol. 26 No. 1, pp. 197–224.

- Mathieu, J.E. and Zajac, D.M. (1990), "A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment", *Psychological Bulletin*, Vol. 108 No. 2, p. 171.
- Meyer, J.P. and Allen, N.J. (1991), "A three-component conceptualization of organizational commitment", *Human Resource Management Review*, Vol. 1 No. 1, pp. 61–89.
- Meyer, J.P., Stanley, D.J., Herscovitch, L. and Topolnytsky, L. (2002), "Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences", *Journal of Vocational Behavior*, Vol. 61 No. 1, pp. 20–52.
- Nobelius, D. (2004), "Towards the sixth generation of R&D management", *International Journal of Project Management*, Vol. 22 No. 5, pp. 369–375.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: A critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879–903.
- Rhoades, L. and Eisenberger, R. (2002), "Perceived organizational support: A review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698–714.
- Rhoades, L., Eisenberger, R. and Armeli, S. (2001), "Affective Commitment to the Organization: The contribution of perceived organizational support", *Journal of Applied Psychology*, Vol. 86 No. 5, pp. 825–836.
- Scott, S.G. and Bruce, R.A. (1994), "Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace", *The Academy of Management Journal*, Vol. 37 No. 3, pp. 580–607.
- Spreitzer, G.M. (1995), "Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation", *Academy of Management Journal*, Vol. 38 No. 5, pp. 1442–1465.
- Walsh, G., Yang, Z., Dose, D. and Hille, P. (2015), "The Effect of Job-Related Demands and Resources on Service Employees' Willingness to Report Complaints Germany Versus China", *Journal of Service Research*, Vol. 18 No. 2, pp. 193–209.
- Zhang, X. and Bartol, K.M. (2010), "Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement", *Academy of Management Journal*, Vol. 53 No. 1, pp. 107–128.
- Zheng, H., Li, D. and Hou, W. (2011), "Task design, motivation, and participation in crowdsourcing contests", *International Journal of Electronic Commerce*, Vol. 15 No. 4, pp. 57–88.
- Zhou, T. (2011), "Understanding online community user participation: a social influence perspective", *Internet Research*, Vol. 21 No. 1, pp. 67–81.