Employees’ perceptions at work and firm-internal Innovation Contests

Bjoern Hoeber, University of Koblenz-Landau

&

Harald F.O. von Korflesch, University of Koblenz-Landau

The use of internal innovation contests to facilitate innovation activities within large corporations has been given increased attention in theory and practice; this group of large, well-known companies includes SIEMENS, BASF, AIRBUS, DEUTSCHE POST DHL, BOSCH, and GENERAL ELECTRIC. Innovation contests are defined as “IT-based and time-limited competitions arranged by an organization or individual calling on the general public or a specific target group to make use of their expertise, skills or creativity in order to submit a solution for a particular task previously defined by the organizer who strives for an innovative solution”. This study contributes to the body of literature in case of opening up the innovation process at the intra-organizational level. This strategy is also described as ‘boundedly open innovation’ strategy. Here, a focus on the exploitation of the knowledge and expertise of the entire internal staff is sought by integrating so-called peripheral inside innovators. These employees from all business units sit at the periphery (from the perspective of the R&D department) but become knowledgeable and involved experts through their daily work and therefore have the potential to produce innovative ideas regarding the firm’s products and services.

The topic of innovation contests has been investigated by researchers in various disciplines. The literature differentiates the overall group of publications on innovation contests into those that take either an economic perspective or a management perspective. Whereas the former consolidates studies investigating issues such as the efforts and costs of organizers and contestants, the size of contests, or the optimal design of prizes and incentives, the latter perspective tends to focus on the aspects of the management and design of innovation contests and how they should be operated. Although a number of research activities can be found in the area of innovation contests in the recent past, surprisingly little is known about the influence that the corporate environment has on the success of innovation contests. This highly relevant practical phenomenon has not been completely understood to date, although it is seen as important. In this context, this study investigates the impact of a supportive work environment on employees’ attitude toward participating in firm-internal innovation contests. This study’s research question is stated as follows: What influence do different work environment perceptions have on employees’ affective organizational commitment, motivation and intention to participate in internal-organized innovation contests?

The ‘Componential Theory of Creativity and Innovation in Organizations’, mainly shaped by Teresa M. Amabile from Harvard Business School, offers a strong theoretical foundation for this research. The theory highlights employees’ perceptions regarding their work environment as determinants of their work-related behavior. As a consequence, these perceptions strongly influence individual’s creativity (interpreted as production of novel and useful ideas) and, finally, the development of innovation within the firm.
We use a web survey and multi-variate data analysis methods (EFA, CFA, structural equation modeling, moderation and mediation analysis) to investigate the causalties between work environment perceptions (both positive and negative) and employees’ motivation, affective organizational commitment and participation intention for internal innovation contests (see Figure 1). As perceptions, ‘organizational encouragement’ as well as ‘supervisory encouragement’ as stimulant scales of creative and innovative work behavior are considered. Additionally, the perceptions of ‘organizational impediments’ and ‘workload pressure’ as obstacle scales for creativity and innovative work behavior are integrated. Affective organizational commitment and motivation were included because both are assessed as ‘energizing forces with implications for behavior’. Additionally, participation intention is valued as ‘reliable predictor of real participation’. We surveyed approx. 750 employees within a subsidiary of a German DAX 30 company in the telecommunications industry which is responsible for the group-wide (further) development of the product and service portfolio. Finally, a total of 154 responses could be used for data analysis (approx. 20%).

The results indicate high factor reliability for the latent variables (org. encouragement: 0.862, sup. encouragement: 0.935, org. impediments: 0.832, workload pressure: 0.768, affective org. commitment: 0.913, motivation: 0.879, participation intention: 0.947). The model fit of the structural equation model shows good values as indicated by χ2/d.f. = 1.382, comparative fit index (CFI) = 0.954, root-mean-square-error-of-approximation (RMSEA) = 0.050, and the standardized-root-mean-square-residual (SRMR) = 0.088. The path estimates of the structural model proofed several hypothesized relationships. First, a positive relationship between organizational encouragement and affective organizational commitment (β = 0.298, p < 0.01) could be verified; supervisory encouragement is also positively related to affective organizational commitment (β = 0.234, p < 0.05). Supplementary, workload pressure significantly affects affective organizational commitment (β = 0.171, p < 0.05). Additionally, organizational encouragement is also positively related to motivation (β = 0.378, p < 0.001). Workload pressure shows a positive direct influence on participation intention (β = 0.834, p < 0.001) but was hypothesized to be negative. Finally, motivation shows a positive direct effect on participation intention (β = 0.834, p < 0.001) as well as affective organizational commitment is positively related to participation intention (β = 0.154, p < 0.05). The other relationships do not show significant results. Supplementary, age, gender, and tenure were considered as control variables in a separate model, indicating only marginal changes in the model fit. Here, age and tenure show a significant relationship with participation intention; in contrast, gender did not.

Additional analysis of interactive effects reveals that organizational encouragement moderates the relationship between affective organizational commitment and participation intention. Regarding mediation, an ‘indirect-only’ mediation effect from organizational encouragement to participation intention with motivation as mediation variable and an indirect-only mediation effect from supervisory encouragement to participation intention with affective organizational commitment as mediator were identified.

Summarizing, this study reveals several significant effects originating in diverse work environment perceptions. Theoretically, this study discloses the adoption of the Componential Theory of Creativity and Innovation and the differentiated perceptions into the area of innovation contests as a novel application field. Practically, especially the determined certainty and importance of organizational encouragement and supervisory encouragement as determinants of desired behavior in innovation contests might help managers in the future.

A previous version of the present paper was accepted for presentation at the European Conference on Information Systems 2016.
Figure 1: Conceptual model