

LEADERSHIP AND INNOVATION IN R&D TEAMS

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Akademisk avhandling som för avläggande av filosofie doktorsexamen i psykologi vid Göteborgs universitet kommer att försvaras vid offentlig disputation fredagen den 6 september, 2013, kl. 10:00 i sal F1, Psykologiska institutionen, Haraldsgatan 1, Göteborg.

Avhandlingen försvaras på engelska. Fakultetsopponent är Professor Bernard A. Nijstad, University of Groningen, Holland.

Artiklar som ingår i avhandlingen:

- I. Denti, L., & Hemlin, S. (2012). Leadership and innovation in organizations: A systematic review of factors that mediate or moderate the relationship. *International Journal of Innovation Management*, 16, 1-20. doi: 1142/S1363919612400075.
- II. Denti, L., & Hemlin, S. (2012). *Modeling the link between leader-member exchange and individual innovation in R&D*. Paper presented at the 72nd annual Academy of Management Conference, Boston, USA. *Submitted for publication*.
- III. Denti, L., Hemlin, S., & Mumford, M. D. (2013). *Leadership and individual innovation: A cross-cultural study of mediating psychological mechanisms*. Paper presented at the 73rd annual Academy of Management Conference, Orlando, USA. *Submitted for publication*.
- IV. Denti, L. (2013). *What do innovative leaders do? A critical incident study of innovation stimulating and hindering leader behaviors in R&D*. Unpublished manuscript. Department of Psychology, University of Gothenburg, Gothenburg, Sweden. *Submitted for publication*.



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ABSTRACT

Denti, L. (2013). *Leadership and Innovation in R&D Teams*. University of Gothenburg, Sweden.

This thesis focuses on the members of industrial research and development (R&D) teams and their leaders. The field of individual innovation is fragmented and lacks research that coherently integrates psychological factors that explain why antecedent variables affect individual innovation. Leadership, the major issue in this thesis, has been shown conclusively to influence employee innovation, but research is especially needed on (1) the psychological factors that explain the relationship between leadership and individual innovation, and (2) the contextual factors that affect leaders' abilities to influence innovation in R&D teams. The aim of this thesis is therefore to identify and empirically test psychological and contextual factors that may explain how and when leaders influence innovation in R&D teams.

This thesis consists of four studies. Study I systematically reviews 30 years of research on leaders' influence on innovation in order to identify the factors that mediate or moderate the relationship. The sample consists of 30 empirical studies in which leadership is the independent variable and innovation is the dependent variable. Study II and Study III are correlational studies based on Study I. In these studies, leadership is conceptualized using leader–member exchange theory (LMX). Individual innovation is measured by innovation outcomes (e.g., new patents, products, scientific publications, and other publications) and by leaders' ratings of team members' innovative work behavior.

The main findings indicate that individual personal initiative—the propensity to take a proactive stance to one's work and to be persistent in overcoming challenges and setbacks—predicts individual innovation. A mediating effect is identified in which LMX is associated with innovation through the personal initiative of team members. Study II shows that organizational support—an organization's active encouragement of innovation through the provision of resources and empowerment—moderates the relationship between LMX and individual personal initiative and thus strengthens the relationship when organizational support is high. Study III shows that creative self-efficacy—the belief in one's ability to be creative—mediates the relationship between leadership and personal initiative. Moreover, Study III finds that the culturally bound value of conservation is negatively related to individual innovation. Highly conservative individuals value the status quo and are inclined to conform to established ways of doing things. Last, Study IV, which is an interview study, concludes that when R&D project leaders actively facilitate the development of new ideas and provide guidance and expertise, they may stimulate idea generation and increase the possibility of successfully completing innovation projects. Project leaders who limit team members' work autonomy and neglect basic project management hinder the generation and implementation of innovative ideas.

The thesis concludes that leaders in R&D influence the innovativeness of their teams and employees. Various contextual and psychological factors at the individual, team, and organizational levels may facilitate or hinder the efforts of leaders to influence innovation outcomes.

Keywords: LMX, leadership, innovation, creativity, personal initiative, creative self-efficacy, intrinsic motivation, mediator, moderator, R&D

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