

The Influence of Risk-Taking on Knowledge Exchange and Combination

Désirée Laubengaier¹, Heinz-Theo Wagner², Gerd J. Hahn¹

¹ German Graduate School of Management & Law, Operations Management and Process Innovation, Heilbronn, Germany
{desiree.laubengaier,gerd.hahn}@ggs.de

² German Graduate School of Management & Law, Management and Innovation, Heilbronn, Germany
{heinz-theo.wagner}@ggs.de

Abstract. Knowledge exchange and combination build the core of innovative activity. However, the processes of knowledge exchange and combination are inherently associated with risk. Consequently, for knowledge exchange and combination to occur in an organizational setting, the organization members must be encouraged towards risk-taking. Organizational cultural norms promote a certain behavior among organization members. Accordingly, this study focuses on risk-taking an organizational cultural norm and investigates risk-taking's influence on knowledge exchange and combination.

Keywords: Organizational culture, risk-taking, innovation, knowledge exchange and combination, knowledge management.

1 Introduction

In organization science, knowledge has gained great attention and a “legitimate and important role” [1] has been attributed to it [1, 2]. Knowledge is not only an essential asset for its owners but also an important source of sustainable competitive advantage [3, 4]. Specifically knowledge creation “is essential for the success and survival of firms competing in dynamic environments” [5], and can be considered “the precursor of innovation” [6]. From a knowledge-based perspective, innovation can be thought of as the “creation and application of knowledge to create new knowledge regarding novel products and processes” [6]. Knowledge creation involves two underlying processes, namely knowledge exchange and knowledge combination [7, 8]. These two build the core of any innovative activity which is in accordance with the Austrian School of Economics [8]. Knowledge exchange refers to “interchanging knowledge and information” [9] located in the organization and its members. Knowledge combination, on the contrary, depicts establishing connections between unconnected knowledge pieces or developing new types of connections [7].

Yet, innovative activity is inherently associated with risk [10] and represents a complex endeavor marked by uncertainty [11]. Similarly, knowledge exchange and

combination are related to risk, and for organization members to engage in exchange and combination, they need to be willing to take risks [7]. In this regard, risk-taking – which is defined as a mindset that encourages the members of an organization to be open towards risks [12] – is essential. Accordingly, extant literature deals with risk-taking in the light of knowledge-related subjects [13], and risk-taking appears to be particularly relevant for knowledge exchange and combination [5, 7]. Research commonly states that risk-taking largely depends on organizational context factors (e.g. [14, 15]). A plethora of studies take the organizational climate for risk-taking into account, and analyze its influence on knowledge creation (e.g. [5]). However, risk-taking might “manifest the cultural variables that exist in and dominate” [16] the organization. This is underlined by several organization scholars who point out that risk-taking is attached to organizational culture (e.g. [12, 17]). In line with current research (e.g. [18]), we consider risk-taking as a norm. Norms define appropriate attitudes and behaviors of organization members [19]. As they convey which conduct is expected and appropriate, they guide organization members’ behavior [20]. Accordingly, risk-taking norms direct organization members towards being more apt to take on risks. As norms are proposed to be influential with regards to knowledge exchange and combination, we assume that risk-taking norms may influence knowledge exchange and combination among organization members significantly. However, empirical research on the influence of risk-taking norms on knowledge exchange and combination is scant.

Considering the above research issues, this study analyzes how risk-taking relates to knowledge exchange and combination. Thereby, we address the following research question: *What is the influence of risk-taking on knowledge exchange and combination?* Drawing on social capital theory, we empirically examine risk-taking’s influence on both knowledge exchange and knowledge combination.

2 Related Literature

2.1 Knowledge Exchange and Combination

Social capital theory by Nahapiet and Ghoshal [7] posits that social capital can facilitate knowledge creation which involves two underlying processes, namely knowledge exchange and combination.

Knowledge refers to “a high value form of information that is ready to apply to decisions and actions” [21]. The exchange of knowledge describes “interchanging knowledge and information residing in different organizational members and subunits” [9]. Obviously, knowledge can be located at myriad entities, and its exchange not merely involves, but, necessarily requires more than one sole party. Knowledge exchange continuously provides new knowledge which serves as the basis for new combinations. Combination is the process of bringing together “elements previously unconnected or by developing new ways of combining elements previously associated” [7].

Social capital refers to “the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit” [7]. It is an important driver of knowledge exchange and combination [22] and researchers commonly identify three dimensions of social capital [7, 22, 23]: (1) the structural, (2) the cognitive, and (3) the relational dimension. The relational dimension concerns “assets created and leveraged through relationships” [7]. This dimension pertains to resources that bond the members of a social system and transmit influence on their behavior. One form of social capital that is attached to the relational dimension is norms. Norms represent “a degree of consensus in the social system” [7] such as an organization. Norms that are effectively in use impart collectively binding demands on the members’ conduct and can have a significant impact on their knowledge exchange and combination activities [7].

2.2 Risk-Taking as a Cultural Norm

Conform with Yates and Stone [50], we define risk as “the degree of uncertainty and potential loss that may follow from a given behavior or set of behaviors” [17]. People generally dislike risk – and risk ambiguity even more [24]. However, knowledge exchange and combination processes are associated with risk and organization members’ willingness to take risks is critical for these two processes. Risk-taking refers to taking bold actions, and not only involves venturing into the unknown but also dealing with insecurities [25]. Consequently, organizations need to support and encourage risk-taking so that the organization members can cope with risk [26], and consequently engage in knowledge exchange and combination.

Cultural norms represent “a degree of consensus in the social system” [7] such as an organization. Due to the fact that cultural norms are “socially created standards” [18], they are to be grasped as the collectively binding demands and expectations regarding the conduct within the organizations [19]. They give direction to behavior, and if effectively in use, norms have a powerful effect on organization members’ conduct [7]. Similarly, whether and to what extent organization members take the risk and engage in knowledge exchange and combination could be significantly affected by risk-taking norms. Accordingly, we assume that risk-taking positively affects both knowledge exchange and knowledge combination.

3 Research Method

A survey is used for the means of data collection. All variables are measured with multiple-item scales using a seven-point-Likert-scale ranging from “strongly disagree” to “strongly agree”. Risk-taking, our independent variable, is measured with seven items adapted from Tellis et al. (2009) [26], Hogan and Coote (2014) [27], and Miller and Friesen (1982) [28]. Knowledge exchange (first dependent variable) is measured with 4 items and knowledge combination (second dependent variable) with 5 different items which are all adapted from Shu et al. (2009) [9]. The questionnaire

undergoes a preliminary test. Researchers as well as innovation-related employees from different sub-divisions of the organizational unit under investigation serve as a pilot for the survey, helping to ensure that the items are appropriate and clearly worded for this particular sample. Data source is an organizational unit of production control and logistics in a major German, and internationally operating automotive manufacturer. Informants range from top management to lower employees. This sample is appropriate because the organization unit and informants are concerned with knowledge-intensive work. We seek to reach an overall sample size of approximately 400 participants. The data collection process consists of two phases. First, emails with the link to the online-questionnaire on the academic survey platform “Unipark” are sent out. In the second step, a reminder-email is sent out after two weeks.is sent out via email.

This study uses structural equation modelling (SEM) for estimating the research model. SEM is appropriate because it allows us to test the relationships between the variables simultaneously.

4 Expected Contribution

We will contribute to extant research by providing empirical insights on risk-taking’s influence on both knowledge exchange and knowledge combination. This will shed light on the norm “risk-taking” – which we consider the form of social capital that has the power to shape organization members’ behavior to a large extent – and its role for knowledge exchange and combination. Thereby, this study will help create a more thorough understanding of the significance of risk-taking norms for organizational innovation. The results of this study will inform practitioners about the importance of embedding risk-taking as a norm within the organizational culture in order to strengthen organization members’ knowledge exchange and combination activities.

References

1. Nonaka, I., Krogh, G. von: Tacit Knowledge and Knowledge Conversion. Controversy and Advancement in Organizational Knowledge Creation Theory. *Organization Science* 20, 635–652 (2009)
2. Teece, D.J.: Capturing Value from Knowledge Assets. *The New Economy, Markets for Know-How, and Intangible Assets. California Management Review* 40, 55–79 (1998)
3. Grant, R.M.: Toward a Knowledge-Based Theory of the Firm. *Strategic Management Journal* 17, 109–122 (1996)
4. Kogut, B., Zander, U.: Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology. *Organization Science* 3, 383–397 (1992)
5. Smith, K.G., Collins, C.J., Clark, K.D.: Existing Knowledge, Knowledge Creation Capability, and the Rate of New Product Introduction in High-Technology Firms. *AMJ* 48, 346–357 (2005)
6. Shujahat, M., Sousa, M.J., Hussain, S., Nawaz, F., Wang, M., Umer, M.: Translating the Impact of Knowledge Management Processes into Knowledge-Based innovation. *The*

- Neglected and Mediating Role of Knowledge-Worker Productivity. *Journal of Business Research* (2018)
7. Nahapiet, J., Ghoshal, S.: Social Capital, Intellectual Capital, and the Organizational Advantage. *The Academy of Management Review* 23, 242 (1998)
 8. Schumpeter, J.A.: *Theory of Economic Development*. Transaction, Cambridge, MA (1934)
 9. Shu, C., Page, A.L., Gao, S., Jiang, X.: Managerial Ties and Firm Innovation. Is Knowledge Creation a Missing Link? *J Prod Innov Manag* 29, 125–143 (2012)
 10. Greve, H.R.: A Behavioral Theory of R&D Expenditures and Innovations. Evidence from Shipbuilding. *Academy of Management Journal*, 685 (2003)
 11. Baer, M.: Putting Creativity to Work. The Implementation of Creative Ideas in Organizations. *Academy of Management Journal* 55, 1102–1119 (2012)
 12. Kitchell, S.: Corporate culture, environmental adaptation, and innovation adoption. A qualitative/quantitative approach. *Journal of the Academy of Marketing Science* 23, 195–205 (1995)
 13. Mueller, J.: The Interactive Relationship of Corporate Culture and Knowledge Management. A Review. *Rev Manag Sci* 6, 183–201 (2012)
 14. Pennings, J.M.E., Smidts, A.: Assessing the Construct Validity of Risk Attitude. *Management Science* 46, 1337–1348 (2000)
 15. Sitkin, S.B., Pablo, A.L.: Reconceptualizing the Determinants of Risk Behavior. *The Academy of Management Review* 17, 9–38 (1992)
 16. Zahra, S.A.: Entrepreneurial Risk Taking in Family Firms. *Family Business Review* 18, 23–40 (2005)
 17. Mullins, J.W., Forlani, D., Walker, J.O.C.: Effects of organizational and decision-maker factors on new product risk taking. *J Prod Innov Manag* 16, 282–294 (1999)
 18. Chatman, J.A., Caldwell, D.F., O'Reilly, C.A., Doerr, B.: Parsing organizational culture. How the norm for adaptability influences the relationship between culture consensus and financial performance in high-technology firms. *J. Organiz. Behav.* 35, 785–808 (2014)
 19. O'Reilly, C.A., Chatman, J.A.: Culture as Social Control. Corporations, Cults, and Commitment. *RESEARCH IN ORGANIZATIONAL BEHAVIOR* 18, 157–200 (1996)
 20. Parks, L., Guay, R.P.: Personality, values, and motivation. *PERSONALITY AND INDIVIDUAL DIFFERENCES* 47, 675–684 (2009)
 21. Davenport, T.H., Long, D.W. de, Beers, M.C.: Successful Knowledge Management Projects. *Sloan Management Review* 39, 43–58 (1998)
 22. Kang, S.C., Snell, S.A.: Intellectual Capital Architectures and Ambidextrous Learning. A Framework for Human Resource Management. *J Management Studies*, 65 (2009)
 23. Kang, S.-C., Morris, S.S., Snell, S.A.: Relational Archetypes, Organizational Learning, and Value Creation. Extending the Human Resource Architecture. *The Academy of Management Review*, 236 (2007)
 24. Loch, C.H.: Creativity and Risk Taking Aren't Rational. *Behavioral Operations in MOT. Production & Operations Management* 26, 591–604 (2017)
 25. Rauch, A., Wiklund, J., Lumpkin, G.T., Frese, M.: Entrepreneurial Orientation and Business Performance. An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice* 33, 761–787 (2009)
 26. Tellis, G.J., Prabhu, J.C., Chandy, R.K.: Radical Innovation across Nations. The Preeminence of Corporate Culture. *Journal of Marketing* 73, 3–23 (2009)
 27. Hogan, S.J., Coote, L.V.: Organizational Culture, Innovation, and Performance. A Test of Schein's Model. *Journal of Business Research* 67, 1609–1621 (2014)
 28. Miller, D., Friesen, P.H.: Innovation in Conservative and Entrepreneurial Firms. Two Models of Strategic Momentum. *Strategic Management Journal* 3, 1–25 (1982)