EVOLUZIONISMO SISTEMICO
IL FASCINO DELLA PRECARIETÀ

ATTI DI CONVEGNO

a cura di
Paola Maria Anna Paniccia
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Evoluzionismo sistemico
Il fascino della precarietà

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Indice

The effect of cross-functional collaboration on technology commercialization performance The mediating role of knowledge creation and organizational resilience

di SAYED ALIREZA ALERASOUL, IRENE FULCO, FRANCESCA LOIA, PIETRO VITO [1]

Pensiero forte

Drawing on the knowledge-based view and the influence of cross-functional collaboration, the main goal of this study is to unravel the relationships among cross-functional collaboration, knowledge creation, organizational resilience and Technology commercialization performance.

1. Obiettivi

The main question followed in the current study is if cross-functional cooperation has an effect on technology commercialization performance with an emphasis on mediating role of knowledge creation and organizational resilience. To reach the goals of the current study (figure 1), following research hypotheses were formulated:

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H1: Cross-functional collaboration has an impact on knowledge creation;

H2: Cross-functional collaboration has an impact on organizational resilience;

H3: Cross-functional collaboration has an impact on technology commercialization performance;

H4: Knowledge creation has an impact on technology commercialization performance;

H5: Knowledge creation has an impact on organizational resilience;

H6: Organizational resilience has an impact on technology commercialization performance;

H7: Cooperation leadership has an impact on cross-functional collaboration;

H8: Relationships of cooperation have an impact on cross-functional collaboration;

H9: Communication and information sharing has an impact on cross-functional collaboration;

H10: Trust formation has an impact on cross-functional collaboration;

H11: Knowledge creation moderates the impact of cross-functional collaboration on technology commercialization performance;

H12: Organizational resilience moderates the impact of cross-functional collaboration on technology commercialization performance.

2. Metodologia

Since the study involves applied results, it is of the applied type and descriptive- survey in terms of the method. The primary data are collected through the use of a questionnaire and, to develop the theoretical principles of the study, the secondary data are gathered through the books, journals and internet. To analyze the obtained data, SEM method is used. In addition, SPSS and LISREL software are used to answer the research hypotheses.

3. Risultati

Based on the critical analysis of the relevant literature, the conceptual model (Figure 1) was developed. One of the greatest weaknesses of most countries is the lack of achievement to the change of knowledge to wealth. There are different chains for operationalizing the science and technology which are initiated from the scientific as well as higher education centers to industry and market. Commercialization is an important part of the innovation process. In the context of technology commercialization, there are various factors involved such as external and environmental factors (government) and domestic factors (organizational structure). As the study of Lin et al. (2015) suggests, one of the factors which lead to the production of new product or development of the prior product is the cross-functional collaboration (De Luca & Gima, 2007). Creating knowledge is regarded as one of the effective variables on the process of call production trend since knowledge creation within the organization is replaced in the commercialization process, thus affecting the commercialization performance (Frishammar, 2012). Creating knowledge is achieved by several processes such as socialization, internalization, integration, and externalization (Nonaka, 2000). Organizational resilience is an effective moving target that contributes to performance in normal and critic business situations (Mitroff, 2005). Resilience can be seen as the ability to anticipate a perturbation, to resist it by adapting and to recover by restoring the pre-perturbation state as much as possible (Madni, 2007). The numerous concepts that emerge from definitions of organizational resilience include knowledge of the environment, level of preparation, anticipation of perturbations, capacity to deploy resources, degree of adaptation, capacity to recover, etc. (McManus et al., 2008). Castem Vrzen and Chonaik (1985) believe that leadership (supportive management) is part of the management. Robins (1943) argues that the tasks of managers are to plan and organize; however, one expects the leader (supportive manager) to influence others so as to motivate them to follow. The supportive role of the top management is taken into consideration as indispensable elements in collecting the forces and colleague in order to attain the goal. One of the important parameters, out of 30 estimated variables, in the context of innovation, is "management-based communication skills" which has a big part to play on facilitating the interaction and establishing an in-

centive for meeting the goal and prominent performance. The supportive role of the top manager across teams and cooperation among the sectors can have an influential and considerable role on commercialization, and it is a parameter which has been found to accelerate the commercialization among developed countries.

4. Implicazioni per la ricerca e la pratica manageriale

Previous studies have reported positive relations between cross-functional cooperation, knowledge creation and commercialization (Lin et al. 2015); however, such an issue in this study has been investigated through offering a more comprehensive model in the field of management which has been given less attention in previous researches. The conceptual model used in this research study involves cross-functional cooperation as the independent variable which influences the commercialization of technology on two paths, i.e. directly through the organizational resilience mediation, and knowledge creation mediation on technology commercialization. Based on the results of this study, managers may get benefit from a clear understanding of the relationship between cross-functional collaboration, knowledge creation, adaptability and commercialization performance and take into account the following recommendations:

- Organizations through institutionalized policies can effectively manage the collaboration of different functional departments;
- Organizations should create an enabling environment which encourages employee knowledge sharing and innovative capacities;
- The organizational atmosphere should be structured by management in such a way that appreciates and recognizes employee efforts and contributions to the organization and makes them confident in terms of job security;
- Organizations should ensure modification and improvement on their products from time to time.

Parole chiave: Cross-functional Collaboration, Knowledge Creation, Organizational Resilience, Commercialization Performance.

ADENFELT, M, LAGERSTRÖM, K. (2006). Enabling knowledge creation and sharing in transnational projects. *International Journal of Project Management*. 24(3), 191-198.

BSTICLER, L. (2006). Trust Formation in Collaborative New Product Development. *J. Prod. Innov. Manag.* (23), 56-72.

CHOI, B, LEE, H. (2002). Knowledge management strategy and its link to knowledge creation process. *Expert Systems with applications*. 23(3), 173–187.

DE LUCA, L.M. ATUAHENE-GIMA, K. (2007). Market knowledge dimensions and cross-functional collaboration: Examining the different routes to product innovation performance. *J. Mark.* (71), 95–112.

ETTLIE, J.E. (1995). Product-Process Development Integration in Manufacturing. *Manag. Sci.* (41), 1224–1237.

FRISHAMMAR, J., LICHTENTHALER, U. RUNDQUIST,J. (2012). Identifying technology commercialization opportunities: The importance of integrating product development knowledge. *J. Prod. Innov. Manag.* (29), 573–589.

JOLLY, V.K. (1997). Commercializing New Technologies - Getting from Mind to Market. *Innov. Manag. Policy Pract.* (1), 1–30.

LANK, E. (2006). Collaborative Advantage: How Organizations Win by Working together. *Palgrave Macmillan New York, NY.*

LIN, Y., WANG, Y., KUNG, L. (2015). Influences of Cross-functional Collaboration and Knowledge Creation on Technology Commercialization: Evidence from High-tech Industries. *Ind. Mark. Manag.* (49), 128-138.

LIN, Y, WANG, Y, KUNG, L.A. (2015). Influences of Cross-Functional Collaboration and Knowledge Creation on Technology Commercialization: Evidence from High-tech Industries. *Industrial Marketing Management.* Indmarman.

MADNI, A. M. (2007). Designing for Resilience. *ISTI Lecture Notes on Advanced Topics in Systems Engineering.*

MCADAM, R. (2004). Knowledge Creation and Idea Generation: a Critical Quality Perspective. *Technovation.* 24(9), 697-705.

MCMANUS, S., SEVILLE, E., VARGO, J., & BRUNSDON, D. (2008). A Facilitated Process for Improving Organizational Resilience. *Natural Hazards Review*, 9(2), 81-90.

MITROFF, I. I. (2005). From My Perspective: Lessons from 9/11 Are Companies Better Prepared Today? *Technological Forecasting & Social Change*, 72(3), 375-376.

NONAKA, I. (1994). A dynamic theory of organizational knowledge creation. *Organ. Sci.* (5), 14–37.

NONAKA, I. TOYAMA, R.. KONNO. N. (2000). SECI Ba and Leadership: a Unified Model of Dynamic Knowledge Creation. *Long Range Plann.* (33), 5–34.

ROONEY, J.A., GOTTLIEB,B.H. (2007). Development and initial validation of a measure of supportive and unsupportive managerial behaviors. *J. Vocat. Behav.* (71), 186–203.

SINGH, K. (1996). Survival of Businesses using Collaborative Relationships to Commercialize Complex Goods. *Strateg. Manag. J.* (17), 169–195.

TEECE, D.J. (1998). Capturing Value from Knowledge Assets: The New Economy Markets for Know-How. and intangible Assets. *Calif. Manage. Rev.* (40), 55–79.

ZAHRA, S.A., NIELSEN, A.P. (2002). Sources of Capabilities, Integration and Technology Commercialization. *Strateg. Manag. J.* (23), 377–398.