Predicting Innovation Capability at Team Level: An Exploratory Analysis

ABSTRACT

Innovation is one of the major concerns for technology-driven organizations. Extensive amount of literature is available on 'managing innovation' within organizations at individual level as well as firm level. However, 'innovation' today is emerging as a 'team-level' phenomenon and organizations are increasingly using 'teams' as an important tool to harness employee talents. Unfortunately, the existing literature on 'managing innovation' at team-level, seems to suffer from several inconsistencies in definition, conceptualization and modelling of the phenomenon. This current research work is an attempt to explore some of these inconsistencies and improve upon them in order to build long-term 'innovation capabilities' in research teams operating in technology-driven organizations. A multivariate cross-level conceptual model has been proposed to identify those "organizational-level" factors which significantly impact 'innovation capabilities' of research teams operating in government-funded research organizations in India.

This top-down cross-level model assesses the impact of five organizational-level (higher-level) factors (leadership, culture, structure, knowledge, network) on team-level (lower-level) innovation capability through two team-level mediating factors ('focus' and 'intensity' of team's efforts towards innovation). Stratified sampling technique was used to collect responses through an online questionnaire from 136 research teams operating in some of the most elite government-funded research organizations pursuing cutting-edge academic or industrial research. Factor Analysis (FA) and Structural Equation Modelling (SEM) was used to identify those factors which tend to significantly influence the 'innovation capability' of research teams. Results were validated by using the 'triangulation' approach through descriptive case studies. Triangulation helped us in contrasting and comparing the results across academic and industrial research organizations.

Findings revealed the composition of 'team-level innovation capability' as a bivariate construct constituted of aspects such as 'manifestation' and 'customer-orientation'. Importance of mediators such as 'team focus' and 'team intensity' while mediating the impact of organizational-level 'cardinal' factors such as 'leadership' and 'expertise' on 'team-level innovation capability' was found to be significant. The top-down influence of organizational-level 'flexibility' for academic research organizations and 'knowledge protection' for industrial research organizations was also found to be significant. Conceptualization and validation of this multivariate cross-level model to predict 'team-level innovation capability' can be considered as an important theoretical contribution of this study. Methodologically, it integrates the findings from theoretical literature, statistical analysis and empirical case studies to come up with a robust framework to predict innovation capability at team levels. Construction of this robust and empirically validated model which can be used by the Top Management Teams (TMTs) at technology-driven organizations for diagnostic, interventional and organizational developmental purposes may be considered as one of the major practical contributions of this study.