12-12-2021

Digital Innovation Potency in SMEs: A Study of Barriers to Employee Participation in Digital Innovation

Liliann Andrade
San Diego State University, landrade@sdsu.edu

Vincent Tran
San Diego State University, vtran9815@sdsu.edu

Kaveh Abhari
kabhari@sdsu.edu

Follow this and additional works at: https://aisel.aisnet.org/treos_icis2021

Digital Innovation Potency in SMEs
A Study of Barriers to Employee Participation in Digital Innovation

Liliann Andrade, landrade@sdsu.edu; Vincent Tran, vtran9815@sdsu.edu; and Kaveh Abhari, kabhari@sdsu.edu; Digital Innovation Lab, San Diego State University.

Digital Innovation is going to be the crux of digital transformation initiatives and a necessity for overall business success. In this study, we focus on the limitations and challenges of advancing digital innovation in small-medium enterprises (SMEs) from the 'employee innovation' perspective. Employee innovation refers to the systematic engagement of employees—whose primary functions are not innovation—in innovation activities such as process innovation and new product development within an organization boundary. Prior research argued that employee participation in innovation is critical to the success of SMEs, for example, due to limited resources and expertise; however, significant barriers stand in the way of actualizing the values of employee innovation, especially in the digital innovation context.

In this study, we first conducted a systematic literature review centered around the key dynamics and determinants of digital intrapreneurship in SMEs. This review helped us to identify common barriers that can inhibit the participation of employees in digital innovation (digital intrapreneurship) in the context of SMEs. We classified these barriers into four groups—structural, technological, procedural, and individual barriers. Structural barriers are related to the organizational setups such as R&D structure and work climate. These barriers mainly hinder the systematic engagement of all employees in innovation activities. The technological barriers range from the employees' lack of access to digital infrastructure to the complexity of digital integration. The technological barriers primarily prevent employees from access to and experimenting with new technologies and operationalizing new solutions. Procedural barriers are associated with engagement mechanisms such as reward systems, management support, and dynamic coordination. These barriers have negative effects on the effectiveness as well as the sustainability of employee innovation behavior. At the individual level, we noted both relational and personal challenges such as competence, collaboration, and confidence to name a few. We also identified the possible interactions between the barriers within and between each barrier group. We discuss how these interactions can pose additional problems in inhibiting digital innovation (e.g., the lack of management support for experimenting with new technology).

Lastly, this study introduces and theorizes the notion of *digital innovation potency* and argues how the identified barriers individually and collectively can affect employee innovation productivity at three levels, Inter-team, intra-team, and individual levels. Accordingly, we propose a digital innovation potency framework that can help SMEs to evaluate their readiness to engage employees in digital innovation at these three different levels. We also offer a set of recommendations on how to monitor and respond to digital innovations barriers in a more systematic way. More generally, this study contributes to digital innovation and digital intrapreneurhsip literature by laying a foundation for future research and development.

Presentation at TREO Talks in conjunction with the 42nd International Conference on Information Systems, ICIS 2021
TREO Talks are not peer-reviewed and not a formal part of the ICIS 2021 Proceedings
All TREO Talks are available in the TREO Talks section of the AIS e-Library