

Strategic Technology Innovation Management and Leadership Theory – Knowledge Structure and Research Front Implications

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Abstract

Strategic technology innovation management (TIM) is critical for organizations to evolve and succeed (Barney et al., 2011; Earle et al., 2019). A recent McKinsey survey (Am et al., 2020) indicated that although 90% of executives believed the Covid-19 crisis was going to fundamentally change their businesses in the next five years, only 21% felt their organizations were equipped to face the challenge. Can effective TIM be the “secret source” of competitive differentiation in a world of increasing commoditization of technology building blocks for knowledge-intensive products and services in highly competitive markets? (Azam, 2019; Mavroeidis & Tarnawska, 2017; Pisano, 2015).

The orchestration of resources and proper setting of directions and priorities are critical for strategic management (SM) and TIM integration, representing a fundamental responsibility of leadership roles. Thus, to properly comprehend the interrelationship between SM and TIM and the challenges associated with said orchestration and prioritization of resources, one needs to consider how leadership affects this dynamic, i.e., look at the interplay of *strategic management*, *technology innovation management*, and *leadership theory* as an interdisciplinary topic.

The study aims to conduct a bibliometric review to map the existing interdisciplinary knowledge structure of the three domains, including the critical knowledge base, research front, and key areas of current and future interdisciplinary research. The implication for practitioners of TIM is a better understanding of the key interdisciplinary challenges currently under investigation, through a view of both practical and theoretical tools used, leading to a roadmap of topics shaping the evolution of these synergistic domains.

Keywords

Technology Management, Innovation Management, Business Management, Leadership Theory, Bibliometric Study.

Biographies

Flavio Lobo is a doctoral student in the PhD in Technology program at Purdue University. He is currently serving as a graduate research assistant for the U.S. Department of Homeland Security grant project Cyber Resilience Adaptive Virtual Reality Experiences (CRAVRE). He holds an MBA and a MSc in Business Administration from the University of São Paulo, Brazil. Prior to joining the graduate program at Purdue, he had 30 years of industry experience in the areas of information technology adoption and diffusion, working for organizations in Brazil, US and Canada..

Mesut Akdere is a Professor of Human Resource Development in the Department of Technology Leadership & Innovation at Purdue University. As the director of the Purdue HRD Virtual Lab and Purdue HR Analytics Interactive Learning Lab, Dr. Akdere’s research focuses on simulated training in virtual reality and augmented reality platforms for skills development, organizational leadership and performance, and human resource analytics. He has received over \$16 million in funded external research grants from the National Science Foundation, the U.S. Department of State, the U.S. Department of Labor, the U.S. Department of Homeland Security, the US Department of Agriculture, and other federal and state agencies.

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