

Special Issue Editors 4/2025:

Prof. Dr. Leo Brecht, Dr. Arabella Nigg-Stock

Innovation Efficiency and Effectiveness

It is widely recognized that the capability to innovate is a key requirement for almost all organizations, as it plays a crucial role in achieving sustainable market-success. In today's fast-changing world, effectively and efficiently managing innovation becomes more and more important, not only for enhancing performance but sometimes merely for survival. To leverage innovation for competitive advantage and long-term growth, effective and efficient routines and practices need to be in place (Hernandez-Vivanco et al., 2018).

Innovation means that less input generates the same output, or the same input results in higher innovation output. Innovation effectiveness, on the other hand, ensures that these capabilities are deployed appropriately to maximize performance.

On the one hand it is challenging for managers and scholars to quantify a firm's innovation efficiency or effectiveness. On the other hand, innovation capability is a confluence of multiple abilities. This dual challenge makes it difficult for companies and its managers to identify patterns and practices that have to be adjusted to sustainably improve a firm's innovation management and enhance a company's long-term success. Thus, we invite scholars from different disciplines and backgrounds to develop and forward quantitative methods on how to measure the efficiency and/or effectiveness of innovation processes and to link these measures to the financial performance and success of companies. Additionally, we encourage researchers to explore and identify patterns and practices that contribute to innovation efficiency and innovation effectiveness.

Numerous innovation input or output measures exist. While, to our knowledge no explicit measurement for "innovation effectiveness" is in place today, there are existing approaches for innovation efficiency, notably stochastic frontier analysis (SFA; e.g. Barasa et al., 2019) or data envelopment analysis (DEA; e.g. Aviles-Sacoto et al. 2020; Cruz-Cázares et al., 2013). Each of them comes with their respective challenges such as (innovation) data availability, data requirements, time lags and assumptions about the « production frontier », among others. Also the relatively new research quotient (RQ), which uses publicly available financial data to approximate the efficiency of innovation practices (Cooper et al. 2021), has been used to drive the first studies. However, these approaches are not yet widely adopted among innovation management researchers, especially when it comes to innovation research from a firm-level perspective. Therefore, we invite practitioners and scholars to explore accessible quantitative models and methods on measuring the efficiency or effectiveness of innovation management practices in an organization, and to compare them. We also encourage researchers to quantitatively assess the relationship between innovation management practices and financial performance.

Given the challenges, the literature gets scarce when it comes to setting innovation practices and patterns into context with their respective innovation efficiency. Examples of studies that explore practices and patterns affecting innovation effectiveness and efficiency of a company's innovation management are e.g. Asimakopoulos et al. (2020) and Hernandez-Vivanco et al. (2018), which examine the effect of cooperation or open-innovation on innovation efficiency. Also, the qualitative study of Nigg-Stock et al. (2023) reveals a set of patterns and practices that supports the innovation efficiency of firms. Such studies are needed as they link practices and patterns to their impact on overall innovation management

and performance of a firm. They help to develop a more complete understanding on suggestions for practitioners and firms on how to enhance their innovation performance (again). Moreover, such qualitative studies contribute to reconsider and rethink practices and approaches in innovation management in the light of the current macro-level changes: the rising importance of green innovation and sustainability (Tidd & Bessant, 2018) but also digitalization and technological advancements such as artificial intelligence (AI) (Appio et al. 2021; Haefner et al. 2021). We invite practitioners and scholars to use quantitative but also qualitative methods to contribute to the topic of practices and patterns that share the potential of increasing the effectiveness as well as the efficiency of the innovation management within an organization.

Core issues within both academic and practitioners' spheres that we aim to address with this special issue include, but are not limited to:

- How is innovation efficiency and innovation effectiveness related to (financial) success of a company?
- How can we measure the performance of innovation in terms of its efficiency or effectiveness?
- How do the innovation efficiency and effectiveness measurement approaches perform compared to each other? What are the advantages and disadvantages of the models?
- How can we facilitate measuring innovation efficiency or innovation effectiveness?
- What are the long-term effects of innovation efficiency and innovation effectiveness on companies (success and competitive advantage)?
- What practices should organizations pursue to improve the efficiency and/or effectiveness of their innovation management?
- What patterns can we find within “innovation efficient” and/or “innovation effective” companies: What business models are more likely pushing innovation efficiency or innovation effectiveness? What strategies of firms improve innovation efficiency and innovation effectiveness?
- What established narratives or practices in the innovation management literature will have to be reconfigured?
- How do digitalization and technological advancements, such as AI, influence innovation efficiency and innovation effectiveness?

Literature

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Contact Details of Special Issue Editors

Prof. Dr. Leo Brecht

University of
Liechtenstein
Entrepreneurship &
Management
Fürst-Franz-Josef-Strasse
9490 Vaduz
LIE – 9490 Vaduz

leo.brecht@uni.li

Dr. Arabella Nigg-Stock

University of
Liechtenstein
Entrepreneurship &
Management
Fürst-Franz-Josef-
Strasse 9490 Vaduz
LIE – 9490 Vaduz

arabella.nigg-stock@uni.li



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EHL Hospitality Business School Lausanne
Route de Berne 301
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