



Working Paper

IIMK/WPS/570/QMOM/2023/02

March 2023

Technology Evaluation for Product Innovation Using Evidential Reasoning Approach

Thangamani Gurunathan¹

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¹Professor, Quantitative Methods and Operations Management Area, Indian Institute of Management, Kozhikode, IIMK Campus PO, Kunnamangalam, Kozhikode, Kerala 673 570, India; Email - gtmani@iimk.ac.in, Phone Number - 0495 2809255

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Abstract

The ability to create, develop, and utilize technology is considered a significant factor in gaining a competitive advantage in today's economy. To respond to the challenges of a highly competitive industry climate, numerous firms highlight the prominence of technology and build their technology-related strategies around their specific resources and abilities. However, there is a scarcity of studies that have presented systematic approaches to evaluate and model technology options that involve complex factors, despite the fact that many works address the challenges of successful technology development and implementation. This study utilizes the evidential reasoning (ER) technique to select the best technology for the consumer appliances sector. It describes how to create a multi-criteria decision model with a hierarchical framework that unifies the representation of both quantitative and qualitative data. The choice of technology is then thoroughly examined in a case study in home appliance industry using the ER method. The study addresses the benefits of using this methodology in practice, as well as the analysis routine itself.

Research Office Indian Institute of Management Kozhikode IIMK Campus P. O., Kozhikode, Kerala, India, PIN - 673 570 Phone: +91-495-2809238 Email: research@iimk.ac.in Web: https://iimk.ac.in/research

