Cognitive BPM: Business Process Automation and Innovation with Artificial Intelligence

This paper was written by Aleš Zebec, scholar at the University of Ljubljana, School of Economics and Business. The main keywords of this paper are: Cognitive business process management and cognitive computing.

Cognitive computing mimics human thinking to automate business processes, leading to event-driven, adaptive, and goal-oriented models. This paper aims to examine how cognitive computing improves performance through automation and innovation. The scholar used a survey to measure business process performance and cognitive computing, contributing to IT business value research. The objectif of this research is to provide insights for managers on the impact of cognitive computing and AI on business operations and performance.

The paper focuses on Cognitive Business Process Management (CBPM) and the potential impact of Cognitive Computing (CC) on Business Process Management (BPM) for improving performance. It emphasizes the role of automation and innovation in business processes and their correlation with corporate performance. The author seeks to develop measurement scales for CC/BPM adoption and Business Process Automation (BPA) and explore the connection between Cognitive Business Process Management and corporate performance. The paper discusses the potential of AI technology and cognitive computing to transform business processes, making them more adaptive, goal-oriented, and event-driven, ultimately leading to process innovation and the development of truly Intelligent Enterprises. It uses a theoretical argument based on the Resource Based View (RBV) of the firm to examine the impact of IT resources on corporate performance and aims to provide empirical evidence on the relationship between CC/BPM adoption and improved corporate performance. The research entails a mixed-method approach involving in-depth interviews, development of new measures for CBPM adoption and BPA, and a structured questionnaire for the main survey. The sample for the survey will consist of participants from EU companies using BPM/iBPM software with integrated AI technology. The author plans to analyze the data using SEM and mediation analysis to test a sequential multiple-mediator model. The research also includes a systematic literature review, construct development, examination of AI techniques and algorithms in the context of BPM, and identification of open issues for resolution.