

Is User Perception the Key to Unlocking the Full Potential of Business Process Management Systems (BPMS)?

Enhancing BPMS Efficacy Through User Perception

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ABSTRACT

This study investigates factors influencing employees' perceptions of the usefulness of Business Process Management Systems (BPMS) in commercial settings. It explores the roles of system dependency, system quality, and the quality of information and knowledge in the adoption and use of BPMS. Data were collected using a structured questionnaire from end-users in various firms and analyzed with Partial Least Squares (PLS). The survey evaluated perceptions of service quality, input quality, system attributes, and overall system quality. The findings indicate that service quality, input quality, and specific system attributes significantly influence perceived system quality, while system dependency and information quality are predictors of perceived usefulness. The results highlight the importance of user training, support, and high-quality information in enhancing satisfaction and BPMS. This research offers empirical evidence on the factors impacting user perceptions and acceptance, emphasizing the need for user-centric approaches in BPMS.

KEYWORDS

Business Process Management Systems, BPMS, User Perception, System Quality, Information Quality, System Dependency

INTRODUCTION

Michael Hammer (1996) argued that all organizations that want to function in the 21st century will have to focus on business process management (BPM). Although there is no total consensus, BPM is a methodology for evaluating, analyzing, and improving key processes based on the needs and desires of customers (Reijers, 2006). It represents a customer-oriented approach to managing

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processes within an organization. Scientific management (Taylor, 1911) considered the precursor of BPM, referred only to structured, repeatable mass production processes. However, over more than 100 years of development, BPM has expanded to encompass all organizational processes, regardless of their nature or place in the value chain (Mendling et al., 2020; Szelągowski, 2019). This has resulted in the practical need to adapt the method of identifying, modeling, implementing, and managing business processes, and, as a consequence, it has forced the evolution of information technology system supporting BPM (Szelągowski et al., 2022). They have evolved from traditional workflow systems, which automate business processes but lack flexibility and integration with other tools, into BPMS systems (BPMS). BPMS offer greater flexibility, allow process modeling by the owner, and easily integrate with other technologies, representing a significant advancement over traditional workflows (Martín-Navarro et al., 2018). These systems support the automation of even unpredictable business processes. Additionally, with the advent of process mining techniques, it has become possible to obtain data on the implementation of these processes. This data facilitates artificial intelligence learning and the continuous improvement of the quality of support provided to users (Gartner, 2016; van der Aalst, 2013; van der Aalst et al., 2005). According to the principles of hyperautomation, BPMS allow for the flexible integration of external applications and system modifications without required programming (Gartner, 2019). BPMS are designed not to replace existing applications but to incorporate their use into new processes and leverage their information. This integration allows for more flexible and adaptable process modeling (Arjonilla Domínguez & Medina Garrido, 2009; Wong, 2013).

Undoubtedly, the use of the software affects the way work is carried out as well as employee competencies and human resource management (Dumas et al., 2023). However, over time, user perception of business processes has evolved. When processes were mostly manual, employees had direct control over each task, which initially led to resistance to automation, as systems were perceived as complex or even as a threat to their role within the company. As processes began to be automated, challenges arose, such as the need for continuous training to ensure that employees could adapt and fully leverage the potential of BPMS. Over time, perceptions evolved, and users began to recognize the benefits of reducing time spent on repetitive, manual tasks, allowing for a more strategic focus on their roles. Today, users emphasize significant improvements in data quality and an increased ability to manage complex processes more efficiently. Thus, the way users perceive the usefulness of the tool has become more critical than ever, as the effectiveness of BPMS usage largely depends on how well users adopt and integrate these tools into their daily work (Almatrodi et al., 2023).

Despite all of the above, academic research has yet to establish a consensus on the perceived utility of the systems' use by employees (Jalali, 2023). End-user acceptance is critical to the success of BPMS implementation. Without this acceptance, it is difficult to discuss the day-to-day use of these systems and even more difficult to use their support for innovative and creative implementation of business processes. Therefore, user feedback is considered a good indicator of IS implementation success (Asmah, 2016; Chang et al., 2015).

Similarly, most studies on BPMS use that acknowledge the end user's importance as a fundamental component of the process are primarily qualitative (Martín-Navarro et al., 2020). This provides fragmented knowledge about BPMS use (Poelmans et al., 2013). Given the growing importance and widespread adoption of BPMS, along with their role in enhancing process efficiency, this article aims to analyze these tools in a quantitative way. Specifically, it explores how various factors influence employees' perceived usefulness of BPMS. These factors include system dependency and the quality of both the information and the system itself. In response to Poelmans et al. (2013) calling for further research on these systems in commercial companies, we conducted a study using the partial least squares (PLS) methodology within this organizational context.

To achieve our research goal, this paper is structured as follows. First, we review the relevant theoretical background. Then, we detail the proposed model, define the variables, and outline the main hypotheses. Following that, we describe the research design and define the sample. We proceed

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