SemeAd 2025
XXVIII Seminários em Administração

10, 11, 12, 13 e 14 de novembro de 2025
ISSN 2177-3866

# Revealing the robotic process automation adoption: Its factors and the disruption of organizational environment

**OSVALDO BRAZ DOS SANTOS MODENRO**
UNIVERSIDADE DE SÃO PAULO (USP)

**PAULO TROMBONI DE SOUZA NASCIMENTO**
FACULDADE DE ECONOMIA, ADMINISTRAÇÃO E CONTABILIDADE DA UNIVERSIDADE DE SÃO PAULO - FEA

10, 11, 12, 13 e 14 de novembro de 2025
ISSN 2177-3866

## Introdução

Improving business processes through innovative adoption technologies has been a relevant issue for organizations and academia. At a time of astonishing progress with digital technologies, Robotic Process Automation (RPA) has emerged under the umbrella of Artificial Intelligence (AI) and has been growing due to its results in efficiency and productivity. Despite its success in organizations, some have faced difficulties and given up without satisfactory results. Therefore, this article aims to understand how specific RPA determinants leverage its adoption in organizations.

## Problema de Pesquisa e Objetivo

RPA interacts with information systems (IS) through user interfaces, eliminating the need for coding skills and facilitating faster adoption than existing solutions (Bosco et al., 2019). However, there is still much to be understood about the technology. Sobczak (2022) notes important issues regarding RPA scalability. He showed that in 43% of firms, adoptions did not exceed 4 robots. Ivančić et al (2019) emphasized a scarcity of RPA publications showing that academia is still in its infancy. This article aims to understand how some determinants of RPA leverage its adoption in organizations.

## Fundamentação Teórica

We developed a theoretical lens based on the two most promising theories in the IS field: the diffusion of innovation (DOI) and the technology acceptance model (TAM). Through an in-depth content analysis, we identified the factors that affect the adoption of RPA in its literature. We then checked the theoretical literature to see which external variables are aligned with the technology adoption factors. With this alignment, we developed a conceptual framework with seven specific determinants of RPA adoption which were then used to draw up the five case interview scripts for our research.

## Metodologia

We applied a multiple case study with a qualitative combined approach of inductive and deductive analysis. The data were collected through semi-structured interviews, with questions elaborated based on a conceptual framework. We deeply studied five Brazilian companies of different industries and profiles. For results analysis, a coding process of several cycles was employed to trigger the creation of new concepts. The coding process was supported by software, as it can efficiently store, organize, and manage data, allowing an analytical reflection.

## Análise dos Resultados

Six determinants of RPA positively influenced its adoption. For Reorganization Level (RL), many impacts were identified in infrastructure and finance. While current literature shows that systems remain unchanged since RPA acts on the user interface, not changing legacy systems, RPA adoption brings relevant disruptions to firms' environment compared to incumbent technologies. It emerged that IT Governance was defined by using IT best practices for innovative technologies adoption. Also, External Support was conceived as essential for achieving RPA scalability through external coding support.

## Conclusão

Our research validated the influence of seven factors on RPA adoption, six of which positively influence and RL negatively. As the unfavorable RL influence causes significant disruption, firms should carry out an impact analysis to avoid the adverse ones and leverage favorable ones. Relative advantage (RA) reports diverge from the current literature. While available literature states that "RPA does not require great programming skills to be implemented", our research showed that RPA adoption requires strong external support with high-level coding skills to achieve efficiency at scale.

## Contribuição / Impacto

We contribute theoretically by pointing out important divergences between our research and current RPA literature, by analyzing the factors that influence the adoption of RPA. We also created a conceptual framework of factors specific to RPA adoption, which supported our content analysis. We also discovered two new factors influencing the adoption of RPA that have not been observed in the current literature. Finally, we have contributed to practice by providing important information that can be used by practitioners to improve RPA organizational adoption processes.

## Referências Bibliográficas

Bosco, A. et al.,(2019). Discovering automatable routines from user interaction logs. Lecture Notes in Business Information Processing,
Eisenhardt, K. M.(2021). What is the Eisenhardt Method, really? Strategic Organization,
Syed, R.et al.,(2020). Robotic Process Automation: Contemporary themes and challenges. Computers in Industry
Moderno, O. B. et al.,(2023). Robotic process automation and artificial intelligence capabilities driving digital strategy: a resource-based view. Business Process Management Journal.
Davenport, T. H., & Ronanki, R.(2018) Artificial intelligence for the real world.