

Robotic Process Automation (RPA) and E-Commerce

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Abstract

An e-commerce business runs 24 x 7. In all possibility, it should be running and accepting orders all the time without any glitch. In most scenarios it is not possible to have a completely dedicated team managing the business all the time. Every single e-commerce business requires high level of automation. Robotic Process Automation (RPA) software is used in automating various tasks that are routine based, rule based and time consuming. This research study aims to compare two leading Robotic Process Automation (RPA) tools, Blue Prism and Automation Anywhere, in the context of the e-commerce sector. The purpose of the study is to determine which tool performs better on various parameters, including accuracy, ease of use, scalability, security risks, recorders, and reliability. The research methods involved conducting a Shapiro-Wilk test to assess the normality of data distribution and a Kruskal-Wallis test to identify significant differences between the tools. Additionally, a Mann-Whitney U test was employed to determine the performance superiority of each tool across different parameters. The research findings indicate that Blue Prism demonstrates higher ratings and is perceived as performing better in terms of accuracy, ease of use, scalability, and reliability when compared to Automation Anywhere. However, no significant differences were observed in the ratings for security risks and recorders between the two tools. The applications of RPA in the e-commerce sector were explored, including finance and accounting, customer service, human resources, healthcare, manufacturing, and banking and insurance. Limitations of this study include the reliance on survey data, potential bias in responses, and the focus on only two specific RPA tools. The implications of these findings are substantial for businesses in the e-commerce industry seeking to implement RPA solutions. They can make informed decisions based on the comparative strengths and weaknesses of the tools, aligning their specific requirements with the tool that best suits their needs. It is recommended that organizations initiate pilot projects, establish cross-functional teams, optimize processes, and provide adequate training for successful RPA integration. Future research could explore a broader range of RPA tools and industries to provide a more comprehensive understanding of the RPA landscape.

Keywords: Automation, E-commerce, E-business, RPA, Blue Prism, Automation Anywhere

1. Introduction:

In the dynamic landscape of global commerce, the e-commerce industry has demonstrated an extraordinary trajectory of growth and transformation. With a remarkable ascent from a valuation of \$9.09 trillion in 2019 to an astonishing \$13 trillion in 2021, the e-commerce sector stands as a testament to the profound impact of technological innovation on business paradigms. Bolstered by this momentum, projections project an even more remarkable evolution, envisioning an unprecedented climb to \$55.6 trillion by 2027. This exponential surge, characterized by a projected