Application of Robotic Process Automation (RPA) in Accounting : A Study of User's Perception At Delhi-NCR and Gujarat[1]

PRANAV SARASWAT*
VINEET CHOUHAN**
SHUBHAM GOSWAMI***

Abstract

Robotic Process Automation (RPA) is an innovative technology that uses automated bots to automate rule-based business processes and activities. Several firms utilize RPA to enhance employee experience, enhance process documentation, reduce mistake rates, more precisely assess process performance, and provide better reports.It ensures that technological capabilities are just one aspect of the RPA implementation project. This paper investigates evolving trends around bot deployment in the area of Accounting, Cost, error reduction, improved performance, and customer service. We compile and analyse data gathered from companies adopted RPA for process accuracy and benefits of for organisational success as outcomes. The data from the 1020 respondents working in the Indian corporate sector was gathered with questionnaire in google docs' form. The results revealed that new technology RPA resulted in organisational success.

I. Introduction

WITH THE ASSISTANCE of ICT technologies processes related to purchasing or selling products or providing services have completely changed (Parsons, 1983). Robotic Process Automation (RPA) is defined as "a pre-configured software instance that uses business rules and predefined activity choreography to complete the autonomous execution of a combination of processes, activities, transactions, and tasks in one or more unrelated software systems." (IEEE CAG 2017) These pre-configured software instances are

References

Baftijari, A., and Hebibi L., (2022), "Trends in Transforming Business Banking", *International Scientific Journal in Economics, Finance, Business, Marketing, Management and Tourism*, Vol. 9, No. 17, pp. 13-24.

Fernández, Balsalobre C., D. Marchante, E. Baz-Valle, I. Alonso-Molero, SL. Jiménez and M. Muñóz-López., (2017), "Analysis of wearable and smartphone-based technologies for the measurement of barbell velocity in different resistance training exercises", *Frontiers in physiology*, Vol. 8, No. 649, pp. 100-102

Bhuiyan, H., G. Governatori, A. Bond and Rakotonirainy A., (2023), "Traffic rules compliance checking of automated vehicle maneuvers", *Artificial Intelligence and Law*, Vol. 8, No. 4, pp. 1-56.

Bradbury, B., (2022), "Dower's uneven demise across nineteenth-century British settler colonies", *Law and history: Journal of the Australian and New Zealand Law and History Society*, Vol. 9, No. 1, pp. 29-56.

Brambilla, N., S. Eidelman, B. K. Heltsley, R. Vogt, G.T. Bodwin, E. Eichten, ...and Yuan C. Z., (2011), "Heavy quarkonium: progress, puzzles, and opportunities", *The European Physical Journal* C, Vol. 71, No. 2, pp. 1-178.

Cohen, M., and Rozario A., (2019), "Exploring the use of robotic process automation (RPA) in substantive audit procedures", *The CPA Journal*, Vol. 89, No. 7, pp. 49-53.

da Silva Costa, D. A., São Mamede, H., and M. M. da Silva, (2022), "Robotic Process Automation (RPA) adoption: a systematic literature review", *Engineering Management in Production and Services*, Vol. 14, No. 2, pp. 1-12.

Deloitte, (2017), "Robots are ready. Are you? By David Wright, Dupe Witherick, Marina Gordeeva"., *International Journal of Computer Techniques*, Vol. 5, No. 6, pp. 12-18.

Dickinson, H., and Yates S., (2023), "From external provision to technological outsourcing: lessons for public sector automation from the outsourcing literature"., *Public Management Review*, Vol. 25, No. 2, pp. 243-261.

El Khatib, M., A. Almarri, A. Almemari and Alqassimi A., (2023), "How Does Robotics Process Automation (RPA) Affect Project Management Practices", *Advances in Internet of Things*, Vol. 13, No. 2, pp. 13-30.

Flechsig, C., F. Anslinger and Lasch R., (2022), "Robotic Process Automation in purchasing and supply management: A multiple case study on potentials, barriers, and implementation", *Journal of Purchasing and Supply Management*, Vol. 28, No. 1, pp. 100718.

Friedland, R., and Alford R. R., (1991), Bringing Society Back in: Symbols, Practices, and Institutional Contradictions', in Powell, W.W. and DiMaggio, P.J. (Eds.), "The New Institutionalism in Organizational Analysis.", *Chicago: University of Chicago Press.*

Gradim, B., and Teixeira L., (2022), "Robotic Process Automation as an enabler of Industry 4.0 to eliminate the eighth waste: a study on better usage of human talent", *Procedia Computer Science*, Vol. 204, No. 4, pp. 643-651.

Hallikainen, P., R. Bekkhus and Pan S. L., (2018), "How OpusCapita Used Internal RPA Capabilities to Offer Services to Clients", *MIS Quarterly Executive*, Vol. 17, No. 1., pp. 191-210.

Herm, L. V., C. Janiesch, A. Helm, F. Imgrund, A. Hofmann and A. Winkelmann. (2022), "A framework for implementing robotic process automation projects", *Information Systems and E-Business Management*, Vol. 10, No. 1, pp. 1-35.

Hindel, J., L. M. Cabrera and Stierle M., (2020, March),

"Robotic process automation: Hype or hope?", *In Wirtschaftsinformatik Zentrale Tracks*, pp. 1750-1762. conference proceedings : Atlantis Press.

Hofmann, P., C. Samp and N. Urbach, N., (2020), "Robotic process automation", *Electronic Markets*, Vol. 30, No. 1, pp. 99-106.

Kaya, C. T., M. Türky?lmaz and Birol B., (2019), "Impact of RPA technologies on accounting systems", *MuhasebeveFinansmanDergisi*, Vol. 82, No. 4, pp. 235-250.

Kokina, J., and Blanchette S., (2019), "Early evidence of digital labor in accounting: Innovation with Robotic Process Automation", *International Journal of Accounting Information Systems*, Vol. 35, No. 2, pp. 100431.

Lounsbury, M., (2002), "Institutional transformation and status mobility: The professionalization of the field of finance", *Academy of Management Journal*, Vol. 45, No. 1, pp. 255-266.

Lyons, S., and Kuron L., (2014), "Generational differences in the workplace: A review of the evidence and directions for future research", *Journal of Organizational Behavior*, Vol. 35, No.1, pp. 139-S157.

Madakam, S., R. M. Holmukhe, and Jaiswal D. K., (2019), "The future digital work force: robotic process automation (RPA)", *JISTEM-Journal of Information Systems and Technology Management,* Vol. 16, No. 1, pp. 1-16.

Moffitt, K. C., A. M., Rozario and Vasarhelyi M. A., (2018), "Robotic process automation for auditing", *Journal of emerging technologies in accounting*, Vol. 15, No. 1, pp. 1-10.

Noppen, P., I., Beerepoot van de Weerd, M. Jonker, and Reijers H. A., (2020, September), "How to Keep RPA Maintainable?", *In International Conference on Business Process Management,* pp. 453-470. Springer, Cham.

Parker, H., and Appel S. E., (2021), "On the path to artificial intelligence: the effects of a robotics solution in a financial services firm", *South African Journal of Industrial Engineering*, Vol. 32, No. 2, pp. 37-47.

Parsons, G. L., (1983), "Information technology: a new competitive weapon", *Sloan Management Review* pre-1986, Vol. 25, No. 1, pp. 3-15.

Prasad, G. R., and John B., (2022), "Challenges of re-engineering through RPA and AI of Accounting and Audit Process-Indian Perspective", *Journal of Contemporary Issues in Business and Government*, Vol. 28, No. 4, pp. 1228-1241.

Qiu, Y., A. Gopal and Hann I. H., (2011), "Synthesizing professional and market logics: A study of independent iOS app entrepreneurs", Vol. 25, No. 1, pp. 3-15.

Rashed, A., M. Alchuban, A. Hamdan and Alareeni B., (2022), "The Impact of Robotic Process Automation (RPA) Technology in Banking Sector in Bahrain", *In Sustainable Finance, Digitalization and the Role of Technology: Proceedings of The International Conference on Business and Technology,* ICBT 2021, pp. 273-281. Cham: Springer International Publishing.

Reynolds, S. J., (2006), "A neurocognitive model of the ethical decision-making process: implications for study and practice", *Journal of Applied Psychology,* Vol. 91, No. 4, pp. 737.

Sahay, S., J. I. Sæbø, S. M. Mekonnen, and Gizaw A. A., (2010), "Interplay of institutional logics and implications for deinstitutionalization: Case study of HMIS implementation in Tajikistan.", *Information Technologies and International Development,* Vol. 9, No. 3, pp. 10-19.

Shafi, S., (2020), "Terrain Draping and Following Using Low-Cost Remotely Piloted Aircraft Systems for Geophysical Survey Applications" (Doctoral dissertation, Carleton University).

Syed, R., S. Suriadi, M. Adams, W. Bandara, S. J. Leemans, C. Ouyang and Reijers H. A., (2020), "Robotic process automation: contemporary themes and challenges.", *Computers in Industry,* Vol. 115, No. 3, pp. 103162.

Tailor, R. K., and Khan S., (2022), "Robotic Process Automation (RPA) in the Aviation Sector", *In Global Air Transport Management and Reshaping Business Models for the New Era,* pp. 289-300. IGI Global.

Tailor, R. K., Pareek, R., and Khang A., (2022), "Robot process automation in blockchain", *In The Data-Driven Blockchain Ecosystem,* pp. 113-125. CRC Press.

Thornton, P. H., (1999), "The sociology of entrepreneurship", *Annual review of sociology,* Vol. 25, No. 1, pp. 19-46.

Thornton, P. H., and Ocasio W., (1999), "Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry-1958-1990", *American journal of Sociology,* Vol. 105, No. 3, pp. 801-843.

Thornton, P. H., and Ocasio W., (2008), "Institutional logics", *The Sage handbook of organizational institutionalism,* Vol. 840, No. 4, pp. 99-128.

Thornton, P. H., W. Ocasio and Lounsbury M., (2012), "The institutional logics perspective: A new approach to culture, structure, and process", *Oxford University Press on Demand.*

Tiron-Tudor, A., A. N. Don?u, and Bresfelean V. P., (2022), "Emerging Technologies' Contribution to the Digital Transformation in Accountancy Firms", *Electronics,* Vol. 11, No. 22, pp. 18-28.

Tucker, R. C., (2017), "Philosophy and myth in Karl Marx.", Routledge.

Waizenegger, L., and Techatassanasoontorn A. A., (2022), "When robots join our team: A configuration theory of employees' perceptions of and reactions to Robotic Process Automation", *Australasian Journal of Information Systems,* Vol. 26, No. 1, pp. 5-26

West, D. M., (2018), "The future of work: Robots, AI, and automation.", *Brookings Institution Press.* US:Washington, D.C.

Yan, Y., F. Li, W. Wang and Wang Z., (2022), "TalentSketch: LSTM-based Sketch for Adaptive and High-Precision Network Measurement", In 2022 IEEE 30th International Conference on Network Protocols (ICNP) (pp. 1-12). IEEE.

Yuvaraja, Devarajan, (2018), "A Study of Robotic Process Automation Use Cases Today for Tomorrow's Business", *International Journal of Computer Techniques*", Vol. 5, No. 6, pp. 12-18.

Zhang, C., (2019), "Intelligent process automation in audit", *Journal of emerging technologies in accounting*, Vol. 16, No. 2, pp. 69-88.

Zhang, C., C. Thomas and Vasarhelyi M. A., (2022), "Attended process automation in audit: A framework and a demonstration", *Journal of Information Systems*, Vol. 36, No. 2, pp. 101-124.

Annexure
Data Reliability statistics (Cronbach's Alpha)

Case Processing Summary		N	%
Cases	Valid	1020	100.0
	Excluded a	0	0.0
	Total	1020	100.0
a. List wise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
0.863	48

Source : Self Computed