

## A STUDY OF ADOPTION & IMPACT OF ROBOTIC PROCESS AUTOMATION IN ACCOUNTING AND AUDITING

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### ABSTRACT

*Technology has advanced fast in recent decades, gaining relevance for accounting and auditing as a result of its discovered potentials. New technologies are growing capable of simulating human behavior, doing repetitive activities faster and more precisely than humans. Robotic Process Automation (RPA) is a new technology that utilizes software bots to automate business processes and tasks that are based on rules. The bot can carry out tasks that are repetitive, predictable, and based on rules. It has simplified and expedited formerly difficult tasks in less time. RPA has been widely used to automate very well repetitive processes in a variety of sectors, including accounting. In many concerns today, accounting is undergoing massive digital revolutions, and RPA is at the center of those efforts. Robotic software can help improve audit quality by automating organized audit processes that are principle-based, recurring, and manual. It has the ability to disrupt the customary auditing approach. Data gathering and entry, which used to take up a significant portion of the workday, is now handled by programmable software robots or bots. RPA is improving employee career opportunities while also improving the work that they do. Business executives, on the other hand, feel that RPA will boost job satisfaction. Robotic process automation (RPA) is transforming accounting and finance processes at a breakneck pace, maybe faster than any other advanced technology. Future accountants will be responsible for more than just bookkeeping and financial reporting; they will also be in charge of business advising and guiding the RPA revolution. The relevance of robotic process automation (RPA) and its effects on accounting and auditing operations are explained in this article. This study shows the future of audit by introducing the concept of RPA and describing its usage in auditing.*

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**Keywords:** RPA, Accounting, Auditing, Accounting Profession, Software Robots.

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### Introduction

The importance of robotization and automation has been steadily increasing in the digital economy. As the economic world moves toward globalization and the Internet advances, information flows become increasingly fluid, and we are witnessing a rapid process of digitalization of society as a whole, including "Dataism." (Harari, 2018). Disruptive technologies are more important in today's corporate world. One of the major variables influencing how businesses create value and achieve competitive advantages is digital transformation (Kotarba, 2018). By boosting production rates, improving efficiency, and lowering manufacturing costs, industrialized automation, such as robotics, boosts production capacity. In the present digital world, however, "robots" also revolutionize administrative operations, IT processes, firm workflow management, back-office duties, and distant infrastructure. Accounting services has been directly influenced by the emergence and acceptance of information technologies due to the nature of its unique tasks (Toader, 2012). Around the year 2000, the term

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"Robotic Process Automation" (RPA) was coined. It appears to be a mechanical robot that does human tasks. It is, in fact, software that does a work in place of humans (Willcocks et al ,2017). "Robotic process automation is software that interacts with other application software at the user interface level (i.e., in the same way as a human) and is used to automate structured, rule-based, and repetitive processes, as well as those with machine-readable data" (Cohen, 2019). RPA is capable of executing actions that are carried out across multiple software systems." RPA implementation is simple, and employees only need a few months of training to learn how to configure software robots and automate manual tasks; they don't need to know anything about software engineering or coding (Fersht et al, 2012). A literature review was used to provide a quick overview of accounting automation and to situate RPA as a progressive (rather than transformative) approach. RPA's key properties, as well as its actual applications and consequences in accounting, have been explained using some recent state-of-the-art sources. To set the stage for RPA, the paper opens with a brief overview of accounting automation. After that, the definition and benefits of RPA are discussed. The paper focuses on the relevance of robotic process automation (RPA) in accounting and auditing. The remaining part of the paper covers the challenges and impacts related to RPA implementation and operation. On the basis of analogous, previously documented impacts of other automation technologies, potential difficulties are highlighted (mainly ERP and AI). As a result, more research on the impact of RPA on accounting is suggested. By analysing the potential consequences of RPA on accounting and auditing, the research contributes to the existing literature.

#### **Objective of the Study**

To study the relevance and impact of RPA in accounting and auditing.

#### **Research Methodology**

- **Type of Research:** Descriptive/Expressive Research
- **Type of Data Source used:** Secondary Data/Data source. The data has been extracted from various sources like research articles, publications, accounting websites and article

#### **RPA relevance in Accounting**

In the accounting profession, robotic accounting is a type of robotic process automation (RPA). Robotic submissions are being used to eliminate the requirement for human labour in traditional accounting processes. RPA software can run on a physical or digital machine, in sync with all client-inherited systems, including ERP, web applications, cloud, Citrix, Java, mainframe programmers, and other sorts of applications (Anagnoste,2017). Robotic accounting is a type of artificial intelligence that assists a motivated finance staff. Accounting is an essential and chronological recording of transactions and economic activity over time. Given the recurring nature of activities with a significant volume of transactions within a period and from one period to the next, such as invoicing, salaries, and settlements, organizations can streamline the entire activity by automating these procedures, lowering costs and risk of error (Tucker, 2017). Furthermore, because the entire accounting activity entails following well-defined processes through work procedures, businesses that provide accounting services could reap the full benefits of RPA. Because software updates can be done extremely fast, RPA can deal with changes in legislation, which are normally rather regular in the tax industry (Jdrzejka, 2019).

Accounting and finance activities were supposed to be aided by software robots. The recording of numerical transactions requires a high level of precision and accuracy, and most of them include the administration of several transactions. Employees at the company collect data from a range of dismantled devices, then perform procedures before entering the information into the accounting system. Manual data collecting and processing takes time and is prone to errors. (Tucker, 2017; Susan Parcels CPA, 2016). Robotic process automation (RPA) is a term that refers to the automation of robotic processes. Robotic process automation (RPA) refers to software (bots) that can execute tasks by mimicking human behavior and activities. In order to carry out business operations, robotic process automation can work with legacy systems and on top of online and desktop applications. To manage jobs involving structured data, robotic process automation can be used. Because the technology must be scripted or recorded to mimic the activities that a people would perform, it is best suited to jobs that are rule-based, straightforward, and repetitive. By upgrading databases on consumers, suppliers, debtors, and creditors, approving or accepting and processing invoices, approving, validating, and making a payment at maturity or sending payment notices for total amount receivable, and checking the connections between the invoices issued and the products and/or services to be supplied and respectively between the invoices pertaining the products or services and the e-invoices, RPA can be amazingly efficient in managing receivables and payables.

### Impact of RPA in Accounting

RPA is useful in functional accounting, which contains data for receivable accounts, billings, and collections, among other things. It assists with general accounting operations such as allocations, adjustments, and adjusting entries processing, among other things. It implies that the tedious process of data input and accounting for millions of everyday transactions will no longer necessitate a large number of individuals sitting next to their computers all day. Financial information, forecasting, strategy, projection, and other treasury responsibilities are also handled by it. RPA can be effectively applied in shared service environments, and it not only replaces human workers efficiently while also reducing the danger of human mistake. (<https://www.accelirate.com>)

The advantages of robotic accounting include both financial and operational, including:

- **Non-invasive Application:** Robotic accounting is a bond and a layer that sits on top of/across existing infrastructure, decreasing the requirement for a company's IT architecture to be changed.
- **Adaptable Processes:** RPA in accounting and finance isn't limited to a single step in the process. Trade payable, trade receivables, financial closure, controller work, financial management, cost management, and even tax can all be applied at the same time.
- **Nonstop Activity Around the Watch:** RPA in finance and accounting has no working hours. They may operate 24 hours a day, seven days a week, raising output to levels that traditional labour cannot match.
- **Consistency and Zero Errors in Work:** Robotic accounting excels at transferring data without errors and reducing output inconsistencies.
- **More Productive Employees:** With accounting robots taking care of the tedious data entry labour, individual employees are free to focus on higher-value tasks. You wouldn't believe it, but robotic systems can make people happier!
- **Efficiency and Frequency in Installation:** A robot may be placed in even less than a week. However, you must first conduct the analysis to determine the most return on investment in respect of where to use these in your accounting systems. (www.istnetworks.com, Yasmin Abdelfattah,2019)
- **Cost-Effective:** RPA is a cost-effective solution. By automating repeated operations, it dramatically reduces costs of manual labour and removes necessity back-office staff. (<https://www.accelirate.com>)
- **Inter - company Reconciliations:** Instead, accounting efforts are employed to determine open issues and flush out the inter - company plug (imbalances) throughout the month rather than at the end, that can cause subsequent consolidation, budgeting, and financial reporting procedures to be delayed. Companies can use RPA to consolidate documents, transactional information, intercompany agreements, and reconciliation.



### Relevance of RPA to Audit

In auditing, robotics is not a novel notion. RPA is unique in that it allows you to connect previously unconnected automated audit processes. RPA is a layer of software that sits on top of the presentation layer, or the code that converts programmed data into something that a user can comprehend. It may be used to streamline the gathering of audit evidence. The collection of many of the audit information comes from a number of sources which can be time consuming for auditors. By merging standardized data from several sources into a single audit workpaper, RPA may automate audit evidence collecting and perhaps preparation tasks. As a consequence, RPA can run audit procedures that have been pre-programmed in other software systems, such as Excel or Case Ware IDEA (Moffitt et al.).

RPA can assist auditors in achieving near-end-to-end audit process automation. (<https://www.cpajournal.com>, 2019, exploring the use of robotic process automation in substantive audit procedures). Audit companies, particularly major ones, have gradually begun to include a range of computer and software technologies meant to increase their accuracy and efficiency into their job. Even today, a vast number of manual, repetitive, and monotonous duties based on well-defined processes consume a significant portion of the auditors' time. The auditor conducts a variety of processes, some of which can be effectively automated, during the audit task of the financial statements: rearranging data for auditing task, managing files, trying to integrate data from various files, perform regular audit work, copying and pasting data, and manual annotations. On the one hand, audit processes are clearly defined, related to professional norms and regulations, subject to quality assurance by expert and supervisory authorities, and have high-risk stakes, thus they may be automated and from the other hand, it would save time and money, as well as eliminate human errors. (Cohen et al., 2019; Cooper et al., 2019). An RPA for revenue auditing covers all recording activities in the income accounts, saves time on audit jobs, and directs auditors to focus on higher-priority tasks, such as analyzing non-compliant or non-conforming exceptions (Moffitt et al., 2018).

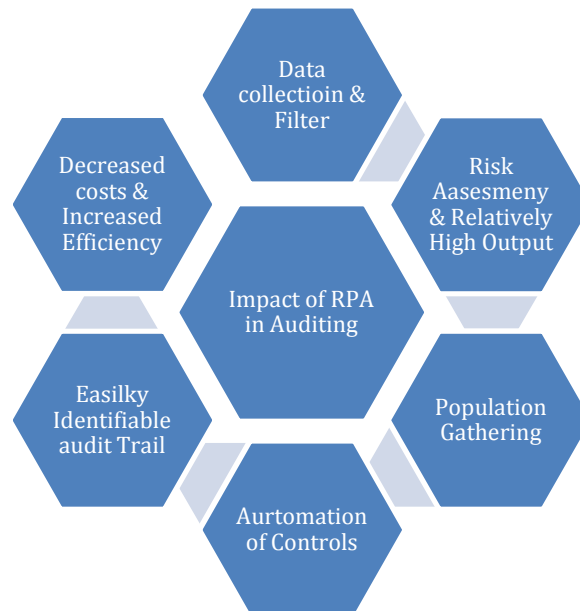
### Impact of RPA in Auditing

The audit quality will be impacted by an RPA-enabled audit assembly line. The audit process should be more efficient intrinsically because RPA replaces the organized, time-consuming, and repetitive actions that auditors do. Furthermore, because auditors will have more time to conduct extensive testing including the identification of accounting abnormalities, the audit's efficacy will improve. RPA can finish the audit and hand it over to the auditor to develop the audit judgment based on the data given (Gotthardt et al., 2020). RPA is a type of technology-assisted process improvement; when used to auditing, it is anticipated to not only replace human and routine audit duties, but also to encourage the re-engineering of auditing process. An RPA must also provide a high-performance dashboard that auditors may utilise to get data on the correctness (error rates, detected exceptions) and efficiency of the RPA (processing time, idle time, and workflow time). RPA enables organisations to take complete control of operational difficulties and thrive with greater speed, agility, and scalability. Internal audit can assist firms in identifying opportunities to incorporate audit automation controls into business systems and procedures.

The places where RPA can have the most influence is listed below.

- **Data Collecting and Filtering for Analyses:** An RPA Center of Excellence may create and standardize data to perform bespoke analytics, comprising automated checks for fullness of fields, duplication, and validity, among other things. Internal audit will no longer have to pay time organizing and acquiring data.
- **Risk Assessment:** Robots can assist in automating the collection and classification of initial data for the yearly risk assessment process. They accomplish this by obtaining early input from participants and detecting key patterns. This enables in-person discussions to focus on data analysis and deep investigations into the organization's concerns.
- **Population Gathering:** Bots can assist analyse data populations more effectively and correctly than humans during the gathering and early evidence collection for standardized evidence for controls. This is particularly useful when dealing with big populations that require a lot of processing time, such as evaluating hundreds of statement papers.
- **Automation of Controls:** Controls testing may be automated using bots, which is especially useful in standardized control areas like tickets and fields. Internal audit will no longer be necessary to execute the regular checkmarks. (<https://www.auditboard.com>.robotic process automation can assist internal audit)

- **Easily Identifiable Audit Trail:** When Digital Workers are utilized in a firm, they usually automate the repetitive and uncomplicated operations, freeing up capacity for teams and allowing staff to focus on higher-value activities like exception management, quality assurance, and reviews. However, Blue Prism's Digital Workers go one step further and leave a clear audit trail, allowing auditors to observe the process' structure and confirm compliance with a single check. As a result, the audit will be completed more quickly.
- **Decreased costs and Increased Efficiency:** Digital Employees can execute and run audit duties, lowering expenses and improved productivity. This is due to the fact that data manipulation happens as a result of the auditing function, and it is simple to automate to the agreed-upon accepted standard for compliance purposes. By lowering the volume of time people are required to participate in audits, such automations can result in cost savings and increased efficiency.
- **Relatively High Output:** Digital Workers consistently complete tasks in the same manner because there is no space for human mistake or even willful data falsification, the output data is more consistent and of higher quality. (David Simpson 2020, RPA & Auditing venturiq.com)



### A Revolutionized Future with RPA

RPA has the potential to change the way businesses operate in the future. It allows for relatively quick deployment times and low maintenance expenses. RPA also expands the capabilities of existing legacy systems. It can reduce the disadvantages of such systems' inefficient and labor-intensive interfaces (<https://www.accelirate.com>). As a result, more study is needed to look at the detrimental impact of RPA adoption on professional accounting personnel' behavior, firm organizational culture, and benefits and costs in the short and medium term (Fernandez and Aman, 2018). RPA deployment presents various challenges at the corporate level that should be investigated further in the future, including the efficiency and efficacy of RPA implementation, as well as security issues of a bot in the work of accounting and auditing. (Zhang, 2019)

### Conclusion

Due to the large volume of data that needs to be processed, as well as the cost savings, time savings, and errors that RPA generates, RPA is becoming more and more prevalent in the financial accounting tasks of huge companies and companies that specialize in helping accounting and auditing services. Organizations that have begun using RPA now benefit from the automated processes of specific accounting and audit activities and procedures, particularly those that are organised, repeatable, procedural, and clear. Those interested in using RPA in their auditing and accounting operations should begin by categorising jobs according to their complexity, then standardising and optimising procedures,

as well as adjusting frameworks in the business and processes. Furthermore, the addition of "digital personnel" and the automating of some functions via RPA would need a rethinking of internal controls. RPA sets the door for a more favourable and productive environment in the accounting and auditing fields. RPA advancements can undoubtedly be of considerable assistance to human efforts. RPA implementation should be embraced in an area where the burden is huge and contains an ocean of data, and attempts to enhance its potential can perform miracles.

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