

THE IMPACT OF ACCOUNTING AUTOMATION ON INFORMATION QUALITY AND CORPORATE SOCIAL RESPONSIBILITY

O IMPACTO DA AUTOMATIZAÇÃO CONTABILÍSTICA NA QUALIDADE DA INFORMAÇÃO E NA RESPONSABILIDADE SOCIAL CORPORATIVA

10.29073/e3.v11i1.1001

Receção: 27/05/2025. Aprovação: 01/06/2025. Publicação: 29/06/2025

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ABSTRACT

This study evaluates the adoption of Accounting Automation Tools, identifying the factors that influence their use and examining their impact on the quality of Accounting Information and Information Systems. It also investigates how corporate social responsibility engagement affects both the intention to adopt such tools and the quality of accounting information. A set of conceptual models was developed to structure the research questions, highlighting the role of four major accounting automation technologies: Robotic Process Automation (RPA), Artificial Intelligence, Big Data, and Blockchain. Data were collected through a guestionnaire survey of Portuguese certified accountants and analysed using the structural equation modelling technique. Grounded in the Technology Acceptance Model, the findings indicate that both perceived ease of use and perceived usefulness positively influence the intention to use all the automation tools under study. Within the framework of the Theory of Planned Behaviour, the results further show that intention to use plays a decisive role in the adoption of Robotic Process Automation (RPA). In turn, RPA adoption has a positive effect on the quality of Accounting Information and Information Systems. Moreover, social responsibility emerges as a significant driver of intention to use Blockchain, while also contributing to improved Accounting Information quality across all tools examined. Overall, RPA stands out as the most relevant tool for the accounting field, according to the conceptual model and theoretical frameworks applied. The research delivers actionable insights for organizations seeking to harness automation in accounting. By clarifying how Accounting Automation Tools shape the quality of information and systems, it supports more informed strategic decisions, smarter investment in resources, and smoother technology integration across accounting practices.

Keywords: Accounting Information System Quality, Internal Control System Quality, Decision-Making Success, Corporate Success

RESUMO

Este estudo avalia a adoção de Ferramentas de Automatização Contabilística e identifica os fatores que a influenciam e o seu impacto na qualidade da Informação Contabilística e dos Sistemas de Informação. Adicionalmente, este estudo analisa o efeito do envolvimento da empresa em responsabilidade social na intenção de utilização de ferramentas de automatização contabilística e na qualidade da informação contabilística. Um modelo concetual orienta a investigação, sustentando as questões de investigação e as hipóteses relativas à utilização das seguintes ferramentas de automatização contabilística: Robotic Process Automation (RPA): Inteligência Artificial: Big Data: e Blockchain. Os dados foram recolhidos através de um inquérito por questionário aos contabilistas certificados portugueses e analisados com recurso à técnica do modelo de equações estruturais. De acordo com o Modelo de Aceitação de Tecnologia, os resultados mostram que a facilidade de uso percebida e a utilidade percebida impactam positivamente a intenção de uso de todas as ferramentas de automação contábil analisadas. No âmbito da Teoria do Comportamento Planeado, esta investigação revela que a intenção de utilização é decisiva para a adoção da tecnologia Robotic Process Automation (RPA). Consequentemente, a utilização de RPA tem um impacto positivo na qualidade dos sistemas de informação contabilística e da informação contabilística. A responsabilidade social surge como um notável impulsionador da intenção de utilização de Blockchain e do reforço da qualidade da informação contabilística para todas as ferramentas de automatização contabilística. A RPA mostra-se como a ferramenta mais importante para a área contábil, considerando o modelo e a teoria utilizados nesta pesquisa. Esta investigação é crucial para as organizações que estão a aproveitar o potencial da automação na área da contabilidade. Ao desvendar a intrincada relação entre as Ferramentas de Automatização Contabilística e a qualidade da Informação





Contabilística e dos Sistemas de Informação, este estudo orienta as decisões estratégicas, a afetação de recursos e a integração tecnológica na contabilidade.

Palavras-Chave: Qualidade do Sistema de Informação Contabilística, Qualidade do Sistema de Controlo Interno, Sucesso na Tomada de Decisão, Sucesso Corporativo

1. INTRODUCTION

The relentless march of technological advancement has ushered in an era of profound transformation in accounting practices. As businesses navigate the complex interplay of digital innovation and financial management, the adoption of Accounting Automation Tools has emerged as a critical facet of their strategies.

In recent years, Accounting Automation Tools have gained traction, reshaping financial management profoundly (Abad-Segura and González-Zamar, 2020; Gonçalves, 2022; Joseph et al., 2023; Mahraz et al., 2019; Mihu et al., 2023). As these tools permeate industries, understanding their impact on business performance becomes pivotal. It's not just about data processing; these tools signify a shift toward efficiency and informed decision-making (Abad-Segura and González-Zamar, 2020; Mahraz et al., 2019; Mihu et al., 2023). While promising, Accounting Automation Tools bring complexities, requiring a reevaluation of processes and cybersecurity (Davenport & Dyché, 2013; Mahraz et al., 2019; Wongsim & Gao, 2011).

In the literature refers several Accounting Automation Tools, such as Robotic Process Automation (RPA), Artificial Intelligence (AI), Big Data and Blockchain. Automating processes will contribute to workplace efficiency by enabling more tasks to be carried out in a programmed way (Harrast, 2020; Jedrzejka 2019). In the same vein, Gotthardt et al. (2020) refer that systems with human intervention are more relevant to facing a transformation required by RPA. This tool "is rapidly transforming the world of work for accounting and other information professionals" (Harrast, 2020, p. 209). According to Gotthardt et al. (2020, p. 90) "the intelligent automation of work has been a topic of discussion for over 20 years, however the implementation of RPA and AI systems in companies is still in its infancy". Al, for authors, "covers a number of interlinked technologies including data mining, machine learning, speech and image recognition, and semantic analysis". All and RPA complement each other, meaning that large amounts of data can be transformed into useful information, allowing processes to be fully automated. Both tools bring significant challenges and opportunities for companies and the accounting and auditing industry, requiring professionals to have business and technology skills (Gotthardt et al., 2020; Harrast, 2020). According to Jedrzejka (2019), the accounting and finance areas are taking advantage of the potential of Al tools and techniques to automate tasks whose improvements are recognised in terms of analysis capacity, compared to previous techniques that are rapidly becoming outdated.

Big Data is also an important tool to accounting and finance areas (Ibrahim et al., 2021; Warrenet al. 2015). Big Data, as a technology, has the potential to reshape accounting by auditing information and producing high-quality financial reports at the right time for decision-making (Ibrahim et al., 2021). For Warren et al. (2015, p. 398), "Big Data consists of datasets so voluminous they cannot be reasonably analyzed using database management systems or traditional software programs".

According to Spanò et al. (2022), Blockchain technology has multiple implications for accounting and auditing and the accounting professions, but also in governance. Blockchain, for Dai and





Vasarhelyi (2017)) "is considered a new type of database that has the potential to either play the role of the accounting module in an ERP or be used in conjunction with the existing accounting information system".

Although the literature has suggested potential applications of Accounting Automation Tools, research examining the utilization of these technologies within accounting and auditing practice is scarce (Spanò et al., 2022). Regarding the use of accounting automation tools, prior research reveals that the intention to use is decisive for use of a particular technology (Davis, 1989), which is based on Theory of Planned Behavior (Ajzen,1991). In turn, both variables are directly influenced by the perceived ease of use and usefulness of Accounting Automation Tools, according to Technology Acceptance Model (TAM) (Venkatesh et al., 2003; Venkatesh and Bala, 2008; Lee et al., 2003; Moon and Kim, 2001; Lin and Lu, 2000; Taylor and Todd, 1995).

Literature suggests also that social responsibility promotes a culture of ethical behavior and the responsible use of technology (Kim and Kim, 2017; Deng et al., 2019). Moreover, Monteiro et al. (2022) find that social responsibility initiatives/performance have a positive impact on Corporate Social Responsibility (CSR) reporting. Cui et al. (2018) study shows that companies engaged in CSR have a negative effect on the measures of information asymmetry. However, we have not identified any empirical studies that analyze the relationship between the company's involvement of social responsibility in the intention to use modern technologies and the quality of accounting information.

On the other hand, the use of Accounting Automation Tools can have an influence on quality of the accounting information system Chen et al., 2010; Luftman et al., 1999) and quality of the accounting information (Chen and Wang, 2009; Jiang et al., 2018).

The literature review allowed us to identify gaps in the study of the relationship between modern Accounting Automation Tools and accounting. Thus, exploring the dynamic relationship between technology and accounting in the domain of business and finance, this research assesses the extent of Accounting Automation Tools' adoption and identifies the factors that influence it and its impact on the quality of Accounting Information and Accounting Information Systems.

The following specific research questions have been defined:

- Do Accounting Automation Tools use impact on the quality of accounting information and quality of Accounting Information Systems?
- Do ease of use and usefulness impact the intention of use and the adoption of Accounting Automation Tools?
- Does intention of use have an impact on the adoption of Accounting Automation Tools?
- Does Social Responsibility play a role in the intention to use Accounting Automation Tools? A conceptual model guides the investigation, underpinning research questions and hypotheses regarding Robotic Process Automation, Artificial Intelligence, Big Data, and Blockchain. Data was collected employing a questionnaire survey to Portuguese certified accountants. The data will be analyzed using the structural equations model (SEM).

Drawing upon theoretical frameworks such as the Technology Acceptance Model (TAM) and insights from prior research in the fields of technology adoption, organizational behavior, and corporate social responsibility, we aim to elucidate the complex interplay between individual perceptions, organizational practices, and technological advancements in shaping the utilization





and outcomes of accounting automation tools. Through this exploration, we aim to contribute to the advancement of knowledge in the field of accounting technology adoption and inform strategies for enhancing organizational efficiency.

The following section addresses the emergent accounting automation tools. In section three we present and justify the research hypotheses. The results presentation and discussion appear in section 4. Finally, the study concludes by drawing the main findings, discussing their implications, acknowledging the study's limitations, and proposing potential avenues for future research.

2. ACCOUNTING AUTOMATION TOOLS

In the accounting realm, a digital revolution is reshaping financial processes (Mahraz et al., 2019). This exploration of Accounting Automation Tools reveals pivotal advancements (Jędrzejka, 2019), crucial in modern business strategies (Gölzer & Fritzsche, 2017). Since 2000, digital transformation has reshaped innovation and competitive edges (Fors & Stolterman, 2004), integrating technologies like Big Data for enhanced productivity (Abad-Segura & González-Zamar, 2020). COVID-19 accelerated digital adoption (OECD, 2021), propelling e-commerce and supply chain resilience (Mihu et al., 2023). Companies must adapt, innovate, and comprehend inefficiencies for sustained success in this digital age (Slavinskaitė, 2022). Embracing emerging technologies aids efficiency and better decision-making (Mihu et al., 2023), pivotal across all business operations (Westerman et al., 2014).

The accounting landscape is undergoing a profound transformation driven by Robotic Process Automation (RPA), Artificial Intelligence (AI), Big Data, and Blockchain (Slavinskaitė, 2022). Once considered optional, these technologies have become indispensable, streamlining processes, enabling real-time analytics, strengthening security, and redefining the very foundations of accounting. This chapter examines their impact, highlighting the potential for greater efficiency, enhanced accuracy, and deeper strategic insight.

This digital revolution blends Information and Communications Technologies (ICT) with emerging technologies, spurring varied opinions. ICT brings speed but lacks critical thinking, demanding digital skills for professionals navigating these tools (Ferreira et al., 2021). Tech proficiency becomes vital for task automation and purpose-driven roles. This automation signifies a move toward standardized, integrated, and digitally processed data, enhancing accounting practices for global competitiveness (Slavinskaitė, 2022).

Al, machine learning, and RPA disrupt the accounting industry, but they promise the error reduction, fraud mitigation, and empower accountants as value creators (Davenport and Dyché, 2013; Ferreira et al., 2021). This digital transformation presents opportunities, urging a shift in perspective toward tech embracement for organizational prosperity.

In an era defined by rapid tech advancements, businesses relentlessly seek innovative solutions for processes optimization. RPA emerges as transformative, streamlining tasks via software bots (Accenture, 2016; Cooper et al., 2019; Deloitte, 2015; Jędrzejka, 2019; Zhang et al., 2023). For Gotthardt 2020, p. 91), RPA is a technology that automates standardized and rule-based activities using scripts. RPA interprets applications, enhancing transaction efficiency and data manipulation





(Deloitte, 2015; Fernandez & Aman, 2018), democratizing automation for non-tech users (Jedrzejka, 2019).

Deloitte's 2015 survey highlighted RPA as a priority, signaling a shift to future automation (Deloitte, 2015). Accounting firms embrace RPA for cost-effectiveness and competitiveness (Cooper et al., 2019). Yet, concerns arise about job displacement and evolving skills (Cooper et al., 2019). RPA converges with AI, offering intelligent automation but posing cost challenges (Jędrzejka, 2019).

Anticipating automation's impact on jobs, firms strategize to prevent full automation (Cooper et al., 2019). RPA's user-friendly interface reshapes roles positively (Cooper et al., 2019). Bots enhance efficiency, reduce errors, and free human resources for decision-making, leading to cost cuts and better data quality (Jedrzeika, 2019).

RPA democratizes automation, enhancing scalability and affordability (Fernandez & Aman, 2018; Jędrzejka, 2019). Its 24/7 availability and organizational impact drive efficiency (Cooper et al., 2019; Deloitte, 2015; Fernandez & Aman, 2018). RPA reshapes industries, offering opportunities in the evolving tech landscape.

In the vast landscape of business tech, RPA stands as a transformative force, while Al ushers in cognitive computing and autonomous decision-making. RPA streamlines rule-based tasks, while Al adds intelligence to machines, enabling learning and human-like decision-making (Accenture, 2016; Deloitte, 2015; Fernandez & Aman, 2018; Hasan, 2021; Jędrzejka, 2019; Luo et al., 2018; Zhang et al., 2023).

According to Gotthardt (2020, p. 91), RPA and AI "are two closely knit terms that both have had and will continue to have a big impact on accounting and auditing practices". Al's origins trace back to the Dartmouth Conference in 1955, with authors defining it diversely. Martinez (2019) proposed a broad, adaptable AI definition. Zhang et al. (2020) linked AI to Big Data and machine learning, while Hasan (2021) linked it to a hardware-software blend imitating human brains. Unlike RPA's structured tasks, AI excels in handling unstructured tasks, giving rise to Intelligent Process Automation (IPA), a framework merging RPA and AI to automate diverse system functions (Zhang, 2019).

By mid-2017, non-assurance organizations merged RPA and AI, using RPA for unstructured data input and AI for conversion, boosting audit efficiency (Cooper et al., 2019). IPA transformed auditing by reducing routine task time, focusing auditors on high-risk areas (Zhang, 2019). Yet, excessive reliance on automation might erode human judgement (Zhang, 2019).

Al's adoption in accounting marks a transformative shift, enhancing efficiency and productivity. Its integration frees accountants from repetitive tasks, shifting their focus to advisory roles (Greenman, 2017; Hasan, 2021; Li & Zheng, 2018). Al integration demands updated skill sets, with firms seeking Al-proficient individuals (Damerji & Salimi, 2021; Kroon et al., 2021). This integration signifies a profound shift in accounting, adapting to evolving business landscapes, reshaping roles, and augmenting efficiency (Li & Zheng, 2018; Hasan, 2021).

The digital surge introduces the Big Data era, characterized by vast, dynamic datasets surpassing traditional processing tools' capabilities (Mahraz et al., 2019; McKinsey Global Institute, 2011). It evolves without a fixed size, sourced from diverse origins - transactions, videos, emails - posing format challenges (Zikopoulos et al., 2011). The 3 V's - Volume, Variety, Velocity - define its core





hurdles: immense scale, diverse formats, rapid generation (Zikopoulos et al., 2011). Big Data tailors' offerings, yet demands transformation for actionable insights (Kubina et al., 2015). It accelerates marketing and sales, but poses constraints - budget, security, talent scarcity (Sagiroglu and Sinanc, 2013; McKinsey Global Institute, 2011). In accounting, it offers real-time data for risk evaluation, demanding integration and resolution of talent and security challenges (Ibrahim et al., 2021).

Blockchain, known for disrupting business with its transparency and immutability, promises an accounting revolution (Mahraz et al., 2019). Its attributes reshape trust and efficiency, streamlining processes while reducing errors and costs (Hasan, 2021). By certifying asset origin and ownership, Blockchain enhances accounting security and transparency (Gonçalves, 2022). Its phases - 1.0, 2.0, 3.0 - advance accounting with triple-entry systems and cryptographic foundations (Secinaro et al., 2021; Joseph et al., 2023). Challenges like confidentiality, retroactive manipulation, and verification limit its integration (Coyne and McMickele, 2017). Despite benefits in decentralization and auditability, adoption hurdles exist, demanding accuracy, legal compliance, and bridging the knowledge gap (Joseph et al., 2023; Cai, 2021). Overcoming these will define Blockchain's transformative impact on traditional accounting.

3. RESEARCH HYPOTHESES

In this section, we delve into the development and substantiation of key hypotheses that underpin an examination of the adoption and impact of accounting automation tools within organizational settings. performance and efficiency in an increasingly digitized business environment. By systematically analyzing and grounding each hypothesis in relevant literature, this section provides a comprehensive understanding of the factors influencing the intention to use these tools, their actual utilization, and their broader implications for accounting information quality and organizational systems.

The TAM posits that users' behavioral intention significantly influences their actual usage behavior regarding new technologies (Davis, 1989). This theory suggests that when individuals have a strong intention to adopt a technology, they are more likely to engage in behaviors that lead to its actual use. Ajzen (1991) further supports this notion through the Theory of Planned Behavior, which asserts that behavioral intentions are strong predictors of actual behavior. According to this theory, one of the best-known theories in the attitude-behavior relationship, behavioral intentions can be predicted, with high precision, based on attitudes towards behavior, subjective norms and perceived behavioral, being these attitudes responsible for a variation in actual behavior (Duan and Jiang 2008). Specifically, within the context of accounting automation tools, prior research by Venkatesh et al. (2003) provides empirical evidence supporting the link between intention and actual use. Moreover, accounting automation tools offer numerous benefits, including increased efficiency, accuracy, and timeliness in financial reporting processes (Chen et al., 2010). Thus, understanding the factors that drive the actual usage of these tools is crucial for organizations seeking to maximize the return on their technology investments. Therefore, based on one Theory of Planned Behavior, H1 proposes that the intention to use Accounting Automation Tools positively influences their actual use.





Perceived ease of use, as a critical determinant of users' attitudes toward technology adoption, significantly influences their intention to use new systems (Davis, 1989). According to the TAM, individuals are more likely to adopt technologies that they perceive as easy to use, as it reduces perceived complexity and effort associated with system usage (Davis, 1989; Compeau and Higgins, 1995; Venkatesh and Davis, 2000). Specifically, within the domain of accounting automation tools, Lee et al. (2003) demonstrated that perceived ease of use significantly influences users' intentions to adopt new technologies. By understanding the role of perceived ease of use in shaping users' intentions, organizations can focus on enhancing the usability of these tools through user-friendly interfaces, clear instructions, and adequate training programs (Venkatesh and Bala, 2008). Moreover, given the potential resistance to change often associated with new technologies, emphasizing the ease of use can help alleviate users' concerns and facilitate smoother adoption processes (Lee et al., 2003). Therefore, **H2** posits that **perceived ease of use of Accounting Automation Tools positively influences the intention to use these tools**.

While the TAM traditionally suggests that perceived ease of use influences users' intention to adopt technology, Moon and Kim (2001) found empirical evidence suggesting that perceived ease of use can also have a direct impact on actual system use. In the context of accounting automation tools, where user-friendly interfaces and intuitive functionalities are paramount, perceived ease of use may directly influence users' decisions to utilize these tools in their daily tasks. By understanding the direct impact of perceived ease of use on system use, organizations can prioritize the development of user-friendly interfaces and streamline processes to enhance usability (Venkatesh et al., 2003). Moreover, by reducing perceived barriers to system use, such as complexity or lack of training, organizations can increase user adoption rates and maximize the return on investment in accounting automation tools (Moon and Kim, 2001). Therefore, H3 proposes that perceived ease of use directly impacts the use of Accounting Automation Tools.

Taylor and Todd (1995) demonstrate that perceived usefulness is a key determinant of users' attitudes and intentions toward adoption, highlighting that the practical benefits and value-added features of accounting automation tools may enhance users' intentions to adopt them in their work. Specifically, within the context of accounting automation tools, Lin and Lu (2000) found that perceived usefulness positively influences users' intentions to adopt new technologies. By emphasizing the perceived usefulness of accounting automation tools through training programs, demonstrations of functionality, and clear communication of benefits, organizations can increase user buy-in and support for technology adoption initiatives (Lin and Lu, 2000). Moreover, by aligning system features with users' perceived needs and preferences, organizations can enhance user satisfaction and facilitate smoother adoption processes (Taylor and Todd, 1995). Therefore, H4 proposes that perceived usefulness positively influences the intention to use of Accounting Automation Tools.

Prior research demonstrated a direct link between perceived usefulness and actual system use (Venkatesh et al., 2003; Venkatesh and Bala, 2008). Specifically, within the context of technology adoption, Venkatesh et al. (2003) found empirical evidence supporting the notion that perceived usefulness significantly influences users' actual usage behavior. By focusing on enhancing the perceived usefulness of accounting automation tools through targeted training, support, and customization efforts, organizations can increase user engagement and adoption rates (Venkatesh





and Bala, 2008). Moreover, by aligning system functionalities with users' perceived needs and goals, organizations can enhance the value proposition of these tools and maximize their impact on organizational performance (Venkatesh et al., 2003). Extending from H4, H5 proposes that individuals who perceive accounting automation tools as useful are more likely to actively utilize them in their daily tasks and workflows.

Research indicates that employees are more likely to support and engage with organizational initiatives that align with their values and ethical beliefs (Kim and Kim, 2017; Deng et al., 2019). Specifically, within the context of technology adoption, Kim and Kim (2017) found that corporate social responsibility (CSR) initiatives positively influence employees' attitudes and intentions toward using enterprise technologies. By integrating social responsibility initiatives into technology adoption strategies, organizations can enhance employee buy-in and support for new technologies (Kim and Kim, 2017). Moreover, by emphasizing the societal benefits and ethical implications of accounting automation tools, organizations can enhance their perceived value and relevance to employees (Deng et al., 2019). Thus, confirming the positive influence of social responsibility on intention provides actionable insights for organizations seeking to promote the adoption of accounting automation tools and cultivate a culture of ethical and responsible technology use. Therefore, H6 posits that organizations that prioritize social responsibility may foster a more supportive and conducive environment for the adoption of accounting automation tools among their employees.

Prior literature suggests that organizations that prioritize social responsibility tend to exhibit greater transparency, accountability, and integrity in their financial reporting processes (Clarkson et al., 2008; Dhaliwal et al., 2012). By recognizing the link between social responsibility and accounting information quality, organizations can strengthen their commitment to transparency and accountability (Dhaliwal et al., 2012). Moreover, by leveraging CSR initiatives to enhance financial reporting processes and internal controls, organizations can mitigate risks associated with financial misstatements and improve investor confidence (Clarkson et al., 2008). Thus, confirming the positive influence of social responsibility on accounting information quality provides valuable insights for organizations seeking to enhance their financial reporting practices and stakeholder trust. Therefore, H7 posits that organizations that integrate social responsibility into their business practices are also more likely to produce accurate, reliable, and timely accounting information.

Drawing upon prior research, we advocate that automation tools improve the accuracy, timeliness, and reliability of financial reporting processes (Chen et al., 2010; Luftman et al., 1999). Extending from the individual and organizational-level factors explored in previous hypotheses, **H8** examines the **impact of technology adoption on the quality of accounting information**. Therefore, it proposes that organizations that utilize accounting automation tools are more likely to produce high-quality accounting information.

Prior research indicates that the adoption of information technology, including automation tools, enhances the efficiency, effectiveness, and reliability of accounting information systems (Chen and Wang, 2009; Jiang et al., 2018). Specifically, automation tools streamline data entry, processing, and analysis tasks, reducing the likelihood of errors and improving the timeliness of financial information (Chen and Wang, 2009). By incorporating automation tools into the Accounting Information Systems, organizations can enhance data accuracy, facilitate real-time



reporting, and streamline financial management processes (Jiang et al., 2018). Moreover, by reducing manual intervention and automating routine tasks, organizations can free up resources and personnel to focus on strategic activities and value-added analysis (Chen and Wang, 2009). Therefore, **H9** posits that **organizations that leverage accounting automation tools have accounting information systems**.

Table 1 summarizes the nine-research hypothesis described previously.

Table 1: Summary of research hypotheses

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Нур	otheses
H1	The intention to use Accounting Automation Tools positively influences the use of Accounting
	Automation Tools
H2	Perceived ease of use positively influences the intention to use Accounting Automation Tools
Н3	Perceived ease of use positively influences the use of Accounting Automation Tools
H4	Perceived usefulness positively influences the intention to use Accounting Automation Tools
H5	Perceived usefulness positively influences the use of Accounting Automation Tools
Н6	Social Responsibility positively influences the intention to use Accounting Automation Tools
H7	Social Responsibility positively influences the quality of the Accounting Information
Н8	The use of Accounting Automation Tools positively influences the quality of the Accounting
	Information
Н9	The use of Accounting Automation Tools positively influences the quality of the Accounting
	Information System

Source: Own elaboration

4. METHODOLOGY

Our research is grounded in a comprehensive conceptual model that integrates established theories to dynamically explore the impact of technology on accounting within business and finance. As illustrated in Figure 1, the model incorporates key components that shape the relationship between technological innovation and the quality of accounting practices. Furthermore, it accounts for the influence of social responsibility, adding an important dimension to the analysis.

Figure 1- Conceptual Model Quality of the Accounting Perceived usefulness Н9 **H4** Information System Intention to use Accounting HI Use of Accounting **Automation Tools** H8 Quality of the Accounting Н3 Perceived ease of use Information Н6 H7Social Responsibility

Source: Own elaboration

Interconnected within the model, perceived usefulness, and ease of use influence intention of use (Davis, 1989; Venkatesh et al., 2003), which drives actual use (Davis, 1989). Automation Tool usage impacts accounting information quality and (Abdelraheem et al., 2021) and quality of the accounting information system (Chen and Wang, 2009; Jiang et al., 2018). Moreover, intention to use accounting automation tools and accounting information quality are variables influenced by





Corporate Social Responsibility (CSR) (Patten, 2002; Kim and Kim, 2017). These linkages reveal the intricate relationships our study aims to elucidate.

In the data collection process, robust measures were adopted to ensure questionnaire validity and reliability, as shown in Table 2.

Table 2 – Constructs

	Table 2 – Constructs	
Construct	Items	Source
Perceived ease of use	Learning to operate would be easy for me	Davis (1989)
	It is easy to perform tasks using	
	It would be easy to become skillful using	
	I would find it easy to get to do what I want it to do	
	My interaction with would be clear and understandable	
Use of accounting	Robotic Process Automation	Davis (1989)
automation tools	Artificial Intelligence	
	Big Data	
	Blockchain	
Intention to use	Assuming that would be available on my job, I predict that I would	Davis (1989)
	I would prefer using to my current way of working	
Perceived usefulness	Using in my job would enable me to accomplish tasks more	Davis (1989)
	Using would improve my job performance	
	Using in my job would increase my productivity	
	Using would enhance my effectiveness on the job	
	Using would make it easier to do my job	
	I would find useful in my job	
Quality of the AIS	AIS is flexible in data processing	Algrari and
	AIS help to achieve goals accurately and quickly	Ahmed (2019)
	Data are processed through AIS consistent with accounting polices	
	The cost of AIS in the company is consistent with the nature and	
	size of the accounting information provided by the system	
	AIS in the company is easily updated data	
	The AIS provides comparable accounting information	
	The AIS provides integrated accounting information that will affect	
	the effectiveness of the company	
	AIS is characterized by the case ease and high quality	
	The inputs of AIS are presented in an easy and clear manner	
	Input and output of AIS are maintained in a secure manner	
Quality of the accounting	The company is distinguished by its accounting information quality	Algrari and
information	Accurate accounting information helps companies make better	Ahmed (2019)
	financial decisions	
	Accounting information is prepared to ensure its quality, accuracy,	
	and correctness.	
	The provided accounting information is consistent with user's needs	
	in different financial periods	
	The company's accounting information is flexible in its use in various	
	aspects	
	The company's accounting information is clear and uncomplicated	
	The company's accounting information is easily understood among	
	its various users	
	The company's accounting information is inclusive for all the	
	financial aspects that users need in the decision-making process	
	The accounting information is provided in appropriate time	
	Accounting information are easily saved, are retrieved at any time	
Social responsibility	I work for a socially responsible organization that services the	Id Bouichou et al.
	greater community.	(2022)
	My organization gives time, money, and other resources to socially	
	responsible causes	

Source: Own elaboration





The study was conducted through a structured questionnaire survey, using closed-ended questions and established measurement scales such as TAM, Likert (5- and 7-point), and numeric scales. A pilot test ensured clarity before launch. Data were collected via Google Forms between August 25 and October 18, 2022, and broad outreach strategies were applied to secure strong participation from the target audience.

Sampling involved rigorous random selection among certified accountants and financial employees, using diverse channels like emails and social media. Ethical considerations prioritized respondent privacy and consent.

A total of 263 participants formed the study's sample. Among them, approximately 77.2% were under the age of 45. Notably, the most frequently occurring age group fell within the range of 25 to 35 years, comprising 35.0% of the participants. Most of the sample belonged to companies with a minimum volume of €1 million. Specifically, 26.2% of the participants represented businesses with a volume of €1 million to €2 million, while 39.2% were associated with companies with a business volume exceeding €2 million.

The data analysis employed Partial Least Squares Structural Equation Modeling (PLS-SEM), chosen for its suitability with non-normal data dimensions (Silva et al., 2017) and following Hair et al.'s (2017) recommendations. The two-step process began with evaluating the measurement model's reliability, convergent, and discriminant validity.

Reliability checked outer loadings, considering items between 0.4-0.7 for potential removal (Hair et al., 2017). Cronbach's alpha and composite reliability (CR) gauged construct reliability, both surpassing > 0.7 as suggested by Nunnally (1978). Convergent validity was supported with average variance extracted (AVE) > 0.50 (Hair et al., 2017). Discriminant validity was confirmed through $\sqrt{\text{AVE}}$ higher than inter-construct correlations and HTMT < 0.90 between reflective constructs.

The structural model's explanatory power was measured by R-squared (R^2) for each endogenous variable (Hair et al., 2017). Model fit was assessed using Standardized Root Mean Square Residual (SRMR) and rms Theta under 0.10 and 0.12 respectively (Henseler et al., 2014). Normed Fit Index (NFI) > 0.90 indicated good fit. Effect size (f^2) categorized contributions as small, medium, or large (Hair et al., 2017). Predictive relevance, evaluated via Stone-Geiser's $Q^2 > 0$, confirmed robustness.

Hypotheses underwent 5000-sample bootstrap analysis, with significant non-standardized coefficients (β) and t-test statistics (p < 0.05) rejecting null hypotheses. This rigorous methodology ensures robustness in evaluating both measurement and structural models (Hair et al., 2017; Henseler et al., 2014).

5. RESULTS

5.1. RESULTS PRESENTATION

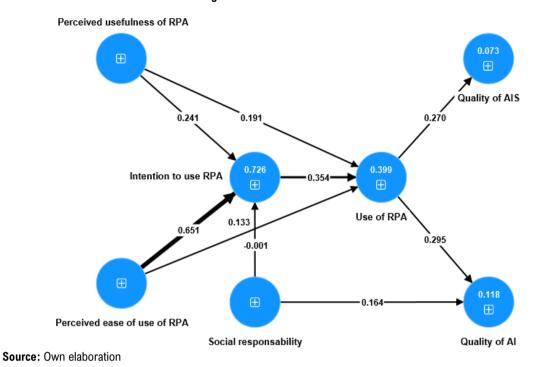
We run our conceptual model for each of the Accounting Automation Tools: Robotic Process Automation (RPA), Artificial Intelligence (AI), Big Data (BD), and Blockchain (BC).

The following figures, from Figure 2 to Figure 5, reveal standardized path coefficients and R-squared values, unveiling each accounting automation tool's distinct impact on study variables.





Figure 1 - Research model for RPA



Perceived usefulness of AI

O.012

Quality of AIS

O.096

Use of AI

O.094

Perceived ease of use of AI

Social responsability

Quality of AI

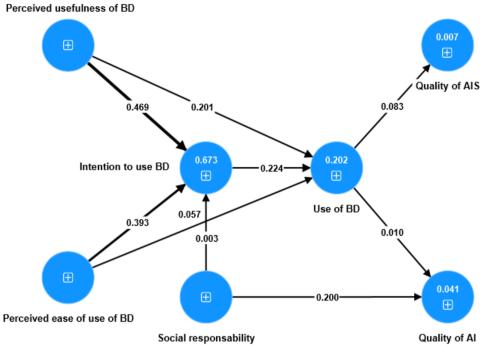
Figure 2 - Research model for Al

Source: Own elaboration



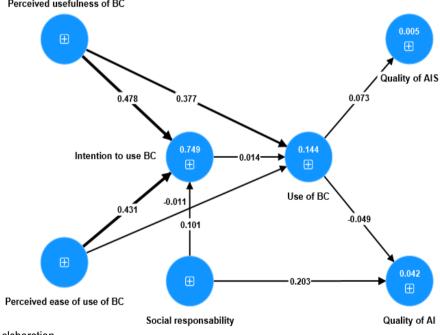


Figure 3 - Research model for Big Data



Source: Own elaboration

Figure 4 - Research model for Blockchain Perceived usefulness of BC



Source: Own elaboration

In our thorough assessment, we upheld stringent criteria:

- Outer loadings within 0.4-0.7 range for indicators ensured measurement balance.
- Cronbach's Alpha and CR surpassed 0.7, ensuring model reliability.
- AVE exceeding 0.5 for each construct confirmed good convergent validity.
- Comparison of \sqrt{AVE} and inter-construct correlations established discriminant validity.
- HTMT values under 0.90 ensured construct distinctiveness.





Due to consistently low outer loadings, QAIS was removed from all models. Table 3 summarizes the reliability and convergent validity results. Constructs exhibited Cronbach's alpha and CR above 0.7, signifying high reliability, with AVE values exceeding 0.5, affirming good convergent validity.

Table 3 - Reliability and convergent validity assessment for all models

		RPA			ΑI			BD				
	α	CR	AVE									
1 Intention to use AAT	0.956	0.979	0.958	0.934	0.968	0.938	0.948	0.975	0.951	0.959	0.980	0.961
2 Perceived ease of use	0.959	0.968	0.860	0.957	0.967	0.853	0.965	0.973	0.878	0.965	0.973	0.879
3 Perceived usefulness	0.984	0.987	0.925	0.978	0.982	0.901	0.982	0.985	0.919	0.983	0.986	0.921
4 QAI	0.938	0.947	0.620	0.938	0.945	0.612	0.938	0.945	0.609	0.938	0.945	0.609
5 QAIS	0.956	0.962	0.739	0.956	0.961	0.733	0.956	0.946	0.662	0.956	0.958	0.720
6 Social responsibility	0.907	0.955	0.915	0.907	0.955	0.915	0.907	0.955	0.914	0.907	0.955	0.915
7 Use of AAT	-	-	-	-	-	-	-	-	-	-	-	-

RPA, Robotic Process Automation; AI, Artificial Intelligence; BD, Big Data; BC, Blockchain; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information.

Source: Own elaboration

Fornell and Larcker (1981) and HTMT. Following Fornell and Larcker's (1981) criterion, we found that the square root of AVE ($\sqrt{\text{AVE}}$) for each construct exceeded the respective construct's correlations with other constructs. This outcome established a clear distinction between the constructs, underscoring their discriminant validity. Furthermore, when examining the HTMT values, we observed that all associations remained below the 0.90 threshold. This observation signifies that the constructs in these associations are indeed distinct from one another, reaffirming the models' strong discriminant validity. In sum, the results from these analyses provide robust evidence of the models' discriminant validity.

Table 4 summarizes model fit, evaluating SRMR, NFI, and R-squared (R2). The RPA model explains 72.6% of RPA use intention, 11.8% of accounting information quality, 7.3% of system quality, and 39.9% of RPA use. Al, Big Data, and Blockchain models explain 74.1%, 67.3%, and 74.9% of their respective tool use intentions. Notably, NFI values exceeded 0.80 but fell below 0.90, with the RPA model reaching 0.851, indicating acceptable fits. However, SRMR values surpassed the 0.10 threshold, with the RPA model showing the best fit at 0.210.

Table 4 - Model fit and explained variances for all models

	RPA		Al		BD		ВС	
	R^2	Model fit						
Intention to use AAT	0.726		0.741		0.673		0.749	_
QAI	0.118	SRMR=0.210	0.042	SRMR=0.296	0.041	SRMR=0.247	0.042	SRMR=0.268
QAIS	0.073	NFI=0.851	0.012	NFI=0.834	0.007	NFI=0.829	0.005	NFI=0.845
Use of AAT	0.399		0.153		0.202		0.144	

RPA, Robotic Process Automation; Al, Artificial Intelligence; BD, Big Data; Blockchain, BC; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration





Effect size (f2) was computed to assess the magnitude of the contribution of an exogenous construct to the R² of a specific endogenous latent variable. The effect size information for all research models is presented in Table 5. Notably, high effect sizes were observed in several key associations, including:

- The perceived ease of use of RPA in relation to the intention to use RPA (f2=0.618), which exhibited the second-highest effect size among all relationships.
- The perceived usefulness of Al and its association with the intention to use Al (f2=0.750), representing the highest effect size observed in the study.
- The perceived usefulness of Big Data in connection with the intention to use Big Data (f2=0.232).
- The perceived ease of use of Big Data is associated with the intention to use Big Data (f2=0.162).
- The perceived usefulness of Blockchain and its impact on the intention to use Blockchain (f2=0.338).
- The perceived ease of use of Blockchain and its influence on the intention to use Blockchain (f2=0.275).

In contrast, the effect sizes for all other relationships were relatively low.

Table 5 - Effect size (f2) for all models

	RPA	Al	BD	ВС
Intention to use AAT → Use of AAT	0.057	0.003	0.021	0.000
Perceived ease of use of AAT → Intention to use AAT	0.618	0.069	0.162	0.275
Perceived ease of use of AAT → Use of AAT	0.007	0.018	0.001	0.000
Perceived usefulness of AAT → Intention to use AAT	0.085	0.750	0.232	0.338
Perceived usefulness of AAT → Use of AAT	0.022	0.005	0.014	0.047
Social responsibility → Intention to use AAT	0.000	0.008	0.000	0.040
Social responsibility → QAI	0.030	0.039	0.041	0.043
Use of AAT → QAI	0.098	0.003	0.000	0.003
Use of AAT → QAIS	0.078	0.012	0.007	0.005

RPA, Robotic Process Automation; AI, Artificial Intelligence; BD, Big Data; BC, Blockchain; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information; Results presented as f², following Hair et al. (2017) recommendation we considered values of 0.02, 0.15 and 0.35 as cutoffs for small, medium, and large effects, respectively.

Source: Own elaboration

Table 6 presents the assessment of predictive validity relevance, as determined by Stone-Geiser's Q2. Notably, all the models exhibited substantial predictive relevance. Specifically, the models yielded the following Stone-Geiser's Q2 results:

- Intention to use Robotic Process Automation (Q2=0.705).
- Intention to use Artificial Intelligence (Q2=0.734).
- Intention to use Big Data (Q2=0.661).
- Intention to use Blockchain (Q2=0.741).

Additionally, relevant predictive relevance was identified for the following constructs:

- Use of Robotic Process Automation (Q2=0.341).
- Use of Artificial Intelligence (Q2=0.137).
- Use of Big Data (Q2=0.171).
- Use of Blockchain (Q2=0.131).





Moreover, a notable level of predictive relevance was observed in the prediction of the quality of accounting information (Q2=0.149).

Table 6 - Predictive relevance assessment with Stone-Geiser's Q2

	RPA	Al	BD	ВС
Intention to use AAT	0.705	0.734	0.661	0.741
QAI	0.149	0.046	0.027	0.006
QAIS	0.121	0.040	0.011	0.024
Use of AAT	0.341	0.137	0.171	0.131

RPA, Robotic Process Automation; AI, Artificial Intelligence; BD, Big Data; Blockchain, BC; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information; Results presented as Stone-Geiser's Q²

Source: Own elaboration

We now turn our attention to the results for the set of hypotheses outlined before. Table 7 presents estimated coefficients for structural model and hypothesis results obtained with bootstrapping. Concerning robotic process automation model, the validated hypothesis were H1, β =0.344 (p=0.004), H2, β =0.636 (p=0.004), H4, β =0.257 (p=0.045), H7, β =0.166 (p=0.007), H8, β =0.300 (p<0.001) and H9, β =0.276 (p<0.001). Regarding artificial intelligence model, validated hypothesis were H2, β =0.211 (p=0.001), H3, β =0.200 (p=0.022), H4, β =0.257 (p=0.045) and H7, β =0.210 (p=0.001). For big data model, validated hypothesis were H2, β =0.391 (p<0.001), H4, β =0.471 (p<0.001) and H7, β =0.216 (p=0.001). Finally, for blockchain validated hypothesis were H2, β =0.433 (p<0.001), H4, β =0.476 (p<0.001), H5, β =0.374 (p<0.001), H6, β =0.100 (p=0.003) and H7, β =0.218 (p<0.001).

Table 7 - Estimated coefficients for structural model and hypothesis results obtained with bootstrapping

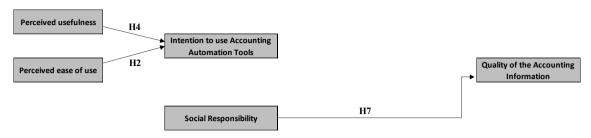
	RPA			Al			BD			ВС		
	β	р	R*	β	р	R*	β	р	R*	β	р	R*
H1: IU of AAT \rightarrow Use of AAT	0.344	0.004	✓	0.094	0.386	×	0.226	0.007	×	0.016	0.891	×
H2: PEU of AAT \rightarrow IU of AAT	0.636	<0.001	✓	0.211	0.001	✓	0.391	<0.001	✓	0.433	<0.001	✓
H3: PEU of AAT → Use of AAT	0.132	0.310	×	0.200	0.022	✓	0.056	0.609	×	-0.011	0.921	×
H4: PU of AAT \rightarrow IU AAT	0.257	0.045	✓	0.689	<0.001	✓	0.471	<0.001	✓	0.476	<0.001	✓
H5: PU of AAT \rightarrow Use of AAT	0.202	0.078	×	0.128	0.258	×	0.199	0.035	×	0.374	<0.001	✓
H6: SR → IU of AAT	0.000	0.970	×	0.048	0.191	×	0.004	0.936	×	0.100	0.003	✓
H7: SR → QAI	0.166	0.007	✓	0.210	0.001	✓	0.216	0.001	✓	0.218	<0.001	✓
H8: Use of AAT \rightarrow QAI	0.300	<0.001	✓	0.055	0.421	×	0.010	0.886	×	-0.053	0.497	×
H9: Use of AAT → QAIS	0.276	<0.001	✓	0.122	0.243	×	0.044	0.533	×	0.069	0.530	×

IU, intention to use; PEU, perceived ease of use; PU, perceived usefulness; SR, social responsibility; RPA, Robotic Process Automation; AI, Artificial Intelligence; BD, Big Data; BC, Blockchain; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information; Results presented as unstandardized coefficients (β), p-value (p) and hypothesis result; R*, Hypothesis result

Source: Own elaboration

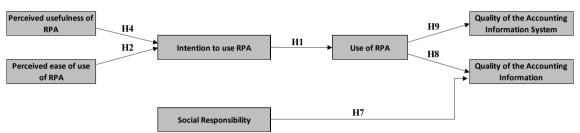
Hypotheses H2, H4 and H7 were supported for all the automation accounting tools as shown in figure 6. This means that perceived ease of use positively influences the intention to use RPA, AI, BD and BC, perceived usefulness positively influences the intention to use RPA, AI, BD and BC, and finally, social responsibility positively influences the quality of Accounting Information.

Figure 5 - Research Hypotheses confirmed for all Accounting Automation Tools: RPA, AI, BC and BC Model



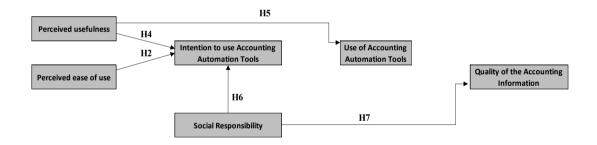
Surprisingly, as shown in figure 7, only RPA use (influenced by perceived usefulness of RPA and Perceived ease of use of RPA) positively influences the quality of the Accounting Information System. Social Responsibility positively impacts on the quality of the Accounting Information System. RPA model

Figure 6 - Research Hypotheses confirmed for RPA



However, the positive association of Social Responsibility and Intention to use Accounting Information Tools is only supported for BC.

Figure 7 - Research Hypotheses confirmed for BC



The RPA model is the one that best explains the effect of the independent variables on the dependent variables. The remaining models do not explain an effect on the dependent variables, except in the case of social responsibility, which has a positive impact on the quality of accounting information.

5.2. RESULTS DISCUSSION

In this study, we analyzed four accounting automation technologies. The results reveal that all technology explains TAM. RPA use explains the TAM and Theory of Planned Behavior is RPA. RPA use also proves to be a predictive variable of the quality of the accounting information system and the quality of accounting information. Furthermore, the quality of accounting information is also improved if the company is socially responsible. In this way, we concluded that RPA is a technology that has the greatest impact on accounting practices.





Arsenie-Samoil (2010, p. 1695) emphasizes the importance of technologies for accounting. The author points out that "accounting has turned into the art of warranting the success of an organization only to the extent in which it uses information technologies with a view to obtain and manipulate information".

In this study, we emphasize the importance of using accounting automation tools in the quality of the accounting information system and accounting information. We analyze the use of accounting automation tools, based on Theory of Planned Behavior and TAM, model widely used in research aimed at analyzing a user's intention to use technology and its determinants - perceived ease of use and Perceived usefulness (Pilai et al., 2020; Davis 1989). In addition, we assess whether companies involved in social responsibility practices reporting accounting information with quality to stakeholders.

Firstly, we assessed whether the intention to use accounting automation tools positively influences the adoption of these tools, within the framework of the Theory of Planned Behavior (Ajzen,1991). This relationship was only found to be significant for the RPA tool, which means that H1 is partially validated. For RPA tool, results show, according to TAM, that intention and actual use of this tool are statistically correlated variables (Chen et al., 2010; Davis, 1989).

Regarding the effect of perceived ease of use and perceived usefulness on intention of use of Accounting Automation Tools, empirical evidence shows that both variables have a users' behavioral impact on the intention to use all tools analyzed in this research, supporting H2 and H4, which shows that our results are in line with the foundations of some authors (e.g, Pilai et al., 2020; Lee et al., 2003; Lin and Lu, 2000). In this respect, Pilai et al. (2020) find that perceived ease of use, perceived usefulness, among other, are predictors variables of users' purchase intent in automated shops powered by Al. Sciarelli et al. (2021), for example, finds that perceived usefulness impacts the intention to use Blockchain technology. Liu and Ye's (2021) study finds that constructs such as trust perceived ease of use and perceived usefulness have positive effects on the intentions of use of Blockchain. Also, regarding the variable intention to use technology, our study reveals that the practice of corporate social responsibility has an influence on the intention to use of Blockchain tool. Thus, the H6 is partially supported. Results are aligned with studies by Kim and Kim, 2017and Deng et al., 2019, who suggests that Social responsibility promotes a culture of ethical behavior and the responsible use of technology.

On the other hand, the perceived ease of use and perceived usefulness influence the use of Accounting Automation Tools, but results are different for each type of tool. Perceived ease of use only influences the use of AI and the perceived usefulness of BC technology, which only partially supports the H3 and H5. This empirical evidence shows that companies must reduce the obstacles to using the system, such as complexity or lack of training, and consequently increase user adoption rates and maximize the return on investment in accounting automation tools (Moon and Kim, 2001).

In turn, the use of accounting automation tools proved to be a predictive variable in the quality of accounting information and the accounting information system, but only for RPA technology, partially supporting H8 and H9. Our results indicate that RPA use improves financial reporting processes and the accounting information systems as argued by (Jiang et al., 2018; Chen et al.,





2010; Chen and Wang, 2009; Luftman et al., 1999). The same evidence was not found for the other technologies analyzed.

In our view, RPA emerges as the most impactful accounting automation tool because it efficiently automates repetitive, rule-based tasks, enhancing accuracy while reducing errors. Its straightforward implementation and seamless integration with existing systems enable organizations to achieve rapid and measurable returns on investment. By relieving accountants of routine tasks, RPA allows them to focus on higher-value activities, such as analysis and strategic decision-making. Moreover, RPA functions as a foundational technology that complements AI, Big Data, and Blockchain, providing a platform upon which more advanced solutions can be layered and reinforcing its central role in modern accounting practices.

Finally, our study shows that social responsibility has a positive impact on the quality of the accounting information, which allows us to accept the H7. Results reveal that companies engaged in CSR have a negative effect on the measures of information asymmetry (Monteiro et al., 2022), since they tend to report quality accounting information (Clarkson et al., 2008; Dhaliwal et al., 2012).

6. CONCLUSION

Recent advances in information technologies have significantly enhanced organizational capabilities, particularly in managing large volumes of data and integrating processes and controls (Harrast, 2020). These developments have also had a profound impact on accounting and auditing over the past decades (Gotthardt et al., 2020).

This investigation validated the relationship between perceived ease of use, perceived usefulness, and the intention to use all the analyzed tools, reinforcing the findings of Davis (1985) and Venkatesh and Davis (2000) and supporting the assumptions of the Technology Acceptance Model (TAM). The results further demonstrate that corporate social responsibility positively influences the quality of accounting information across all tools.

Importantly, the study confirmed the decisive role of intention in the actual adoption of RPA, thereby reinforcing the foundations of the Theory of Planned Behavior within the social sciences. Furthermore, it corroborated previous hypotheses regarding the positive impact of Accounting Automation Tools—particularly RPA—on the quality of accounting systems and information, aligning with the works of Jiang et al. (2018), Chen et al. (2010), Chen and Wang (2009), and Luftman et al. (1999). The findings also highlight the contribution of corporate social responsibility to enhancing the quality of Accounting Information Systems when RPA is applied.

Unexpectedly, RPA emerged as the most significant tool for the accounting profession, further reinforcing the theoretical foundations of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior. By examining the relationship between intention and actual use, this study deepens understanding of the dynamics underlying the adoption and implementation of accounting automation tools. These insights are highly relevant for organizations aiming to promote adoption, maximize benefits, and





enhance operational efficiency and effectiveness. RPA proves to be the most impactful tool, efficiently automating repetitive tasks, improving accuracy, and reducing errors. Its straightforward implementation delivers rapid returns, liberates accountants for strategic activities, and serves as a foundation for integrating advanced technologies such as Al, Big Data, and Blockchain. Moreover, the findings highlight the role of corporate social responsibility in facilitating technology adoption, offering both theoretical contributions and practical implications for businesses.

Nevertheless, limitations related to sample diversity and reliance on specific fit indices should be acknowledged. Future research would benefit from broader datasets, alternative fit assessment methods, cross-cultural comparisons, longitudinal analyses, exploration of less-studied tools, and in-depth case studies. Such directions would further enrich our understanding of the complex dynamics surrounding Accounting Automation Tools. Overall, this study not only broadens current knowledge but also paves the way for continued exploration in this rapidly evolving domain.

The findings offer practical guidance for organizations aiming to implement automation effectively, optimize operational efficiency, and strengthen decision-making. Moreover, integrating social responsibility initiatives can further support technology adoption and improve accounting outcomes. While future research could expand on sample diversity, cross-cultural insights, and less-studied tools, these results provide a clear roadmap for leveraging accounting automation strategically.

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APPENDIX A

Table 1 - Evaluation of Discriminant Validity Based on Fornell and Larcker's Criterion for RPA Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT	0.979						
2 Perceived ease of use	0.838	0.927					
3 Perceived usefulness	0.745	0.774	0.962				
4 QAI	0.496	0.442	0.473	0.787			
5 QAIS	0.427	0.415	0.459	0.676	0.860		
6 Social responsibility	0.109	0.128	0.112	0.177	0.032	0.956	
7 Use of AAT	0.608	0.578	0.558	0.302	0.270	0.046	1.000

AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 2 - Evaluation of Discriminant Validity Based on HTMT Criterion for RPA Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT							
2 Perceived ease of use	0.875						
3 Perceived usefulness	0.768	0.796					
4 QAI	0.516	0.460	0.485				
5 QAIS	0.435	0.423	0.462	0.707			
6 Social responsibility	0.117	0.138	0.119	0.188	0.051		
7 Use of AAT	0.622	0.590	0.562	0.305	0.264	0.048	

HTMT, heterotrait-monotrait ratio of correlations; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 3 - Evaluation of Discriminant Validity Based on Fornell and Larcker's Criterion for Al Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT	0.969						
2 Perceived ease of use	0.739	0.924					
3 Perceived usefulness	0.847	0.757	0.949				
4 QAI	0.561	0.465	0.583	0.782			
5 QAIS	0.504	0.387	0.555	0.657	0.856		
6 Social responsibility	0.066	0.146	-0.018	0.198	0.037	0.956	
7 Use of AAT	0.352	0.367	0.360	0.065	0.108	0.055	1.000

AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 4 - Evaluation of Discriminant Validity Based on HTMT Criterion for Al Model

Table 1 Evaluation of Bloommant Valid	Table 1 Evaluation of Biodiminiant Valuety Based on 1111111 Street of 111 Misses												
Construct	1	2	3	4	5	6	7						
1 Intention to use AAT													
2 Perceived ease of use	0.779												
3 Perceived usefulness	0.885	0.780											
4 QAI	0.607	0.489	0.624										
5 QAIS	0.521	0.396	0.555	0.707									
6 Social responsibility	0.074	0.157	0.042	0.188	0.051								





Construct	1	2	3	4	5	6	7
7 Use of AAT	0.364	0.374	0.364	0.067	0.092	0.058	

HTMT, heterotrait-monotrait ratio of correlations; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 5 - Evaluation of Discriminant Validity Based on Fornell and Larcker's Criterion for BD Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT	0.975						
2 Perceived ease of use	0.773	0.937					
3 Perceived usefulness	0.787	0.810	0.959				
4 QAI	0.392	0.342	0.439	0.781			
5 QAIS	0.296	0.242	0.335	0.591	0.813		
6 Social responsibility	0.058	0.076	0.054	0.201	0.070	0.956	
7 Use of AAT	0.426	0.392	0.423	0.039	0.083	0.148	1.000

AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 6 - Evaluation of Discriminant Validity Based on HTMT Criterion for BD Model

Table 6 - Evaluation of Discriminant validity Based on Third of Cherion for BB Wood								
Construct	1	2	3	4	5	6	7	
1 Intention to use AAT								
2 Perceived ease of use	0.807							
3 Perceived usefulness	0.815	0.831						
4 QAI	0.423	0.363	0.473					
5 QAIS	0.305	0.252	0.355	0.707				
6 Social responsibility	0.064	0.082	0.059	0.188	0.051			
7 Use of AAT	0.437	0.398	0.427	0.059	0.040	0.157		

HTMT, heterotrait-monotrait ratio of correlations; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

Table 7 - Evaluation of Discriminant Validity Based on Fornell and Larcker's Criterion for BC Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT							
2 Perceived ease of use	0.842						
3 Perceived usefulness	0.842	0.814					
4 QAI	0.440	0.360	0.451				
5 QAIS	0.403	0.341	0.477	0.707			
6 Social responsibility	0.091	0.030	0.040	0.188	0.051		
7 Use of AAT	0.320	0.305	0.383	0.050	0.050	0.075	

AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration





Table 8 - Evaluation of Discriminant Validity Based on HTMT Criterion for BC Model

Construct	1	2	3	4	5	6	7
1 Intention to use AAT							
2 Perceived ease of use	0.807						
3 Perceived usefulness	0.815	0.831					
4 QAI	0.423	0.363	0.473				
5 QAIS	0.305	0.252	0.355	0.707			
6 Social responsibility	0.064	0.082	0.059	0.188	0.051		
7 Use of AAT	0.437	0.398	0.427	0.059	0.040	0.157	

HTMT, heterotrait-monotrait ratio of correlations; AAT, Accounting Automation Tools; QAIS, Quality of the accounting information system; QAI, Quality of the accounting information

Source: Own elaboration

ETHICAL PROCEDURES

Conflict of interest: nothing to declare. **Funding**: nothing to declare. **Peer review**: Double anonymous peer review.



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