

INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT

AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact

Factor: 7.001

ENHANCING FINANCIAL ACCURACY THROUGH CLOUD BASED ACCOUNTING SYSTEM

Bhuvaneswaran R¹, Dr. Padhmavathy N²

¹MBA Student, School of Arts, Humanities and Management, Jeppiaar University, Chennai, India. ²Professor and Dean, School of Arts, Humanities and Management, Jeppiaar University, Chennai, India. ¹bhuvaneshwarn59@gmail.com, ²dean_ahm@jeppiaaruniversity.ac.in,

DOI: https://www.doi.org/10.58257/IJPREMS39467

ABSTRACT

The revolutionary potential of sophisticated accounting software and tools in small business finance practices is examined in this study. It evaluates user happiness, adaptability to new technologies, and adoption issues through a thorough survey. Important insights are revealed by examining efficiency benefits, such as time savings and the influence on strategic decision-making. This study fills a significant vacuum in the literature by highlighting the impact of the tools on financial accuracy, resource allocation, and regulatory compliance. With a focus on practical application, it bridges the gap between theory and practice and offers helpful recommendations for tool development and use. Its ultimate goal is to improve knowledge of how these technologies are used, which will help small business finance practices become more efficient and make better decisions.

Keywords: cloud accounting, small finance, advanced accounting tools, software, accuracy, compliance, and decision-making

1. INTRODUCTION

Cloud-based accounting solutions have become more and more popular among small firms in recent years as a way to simplify their financial management procedures. Small firms have historically faced difficulties like scarce resources, time restraints, and a lack of financial management experience. But the advent of cloud computing has provided a revolutionary way to overcome these obstacles. Small businesses may effectively manage their accounts from any location with an internet connection because to cloud accounting systems' affordability, scalability, and accessibility. Even if cloud accounting is becoming more and more popular, more thorough research is still required to fully comprehend its effects on small business finance. By investigating how cloud accounting systems might improve financial management procedures in the context of small firms, this study seeks to close this gap. A number of factors have contributed to the growth of cloud accounting systems. First off, in today's hectic business world, cloud-based software provides unmatched accessibility, enabling small business owners to handle their money from any device, at any time, and from any location. Without being restricted to a certain place or gadget, business owners can access their financial data, create reports, and make well-informed decisions in real time whether they are at the office, home, or on the go. Second, because cloud accounting systems are so scalable, companies of all sizes may use them. Cloudbased solutions may easily grow with a company, unlike traditional accounting software, which frequently needs expensive hardware upgrades and software updates to meet expanding business needs. Without having to deal with the trouble of buying and installing new software, small businesses may quickly update their subscription plans or add new features to meet changing needs as they grow, hire more staff, or enter new markets.

The affordability of cloud accounting systems is yet another strong benefit. For small firms with limited funding, traditional accounting software sometimes necessitates an upfront investment in software licenses, hardware infrastructure, and IT maintenance, all of which might be unaffordable. Cloud-based accounting software, on the other hand, has a subscription-based pricing structure that lets companies pay just for the tools and services they require, usually on a monthly or yearly basis. In addition to lowering the entry barrier for small enterprises, this pay-as-you-go pricing model helps them better forecast and control their spending so they are not caught off guard by unforeseen charges.

In addition, cloud accounting solutions provide better data protection and security than conventional on-premises systems. Cloud service providers make significant investments in cutting-edge security features like firewalls, multifactor authentication, and encryption to protect private financial information from online attacks and illegal access. Small businesses can reduce the risk of data loss from theft, natural catastrophes, and hardware failure by putting financial data in the cloud, where it is automatically backed up and replicated across numerous servers in geographically separated data centers.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

2583-1062

e-ISSN:

Impact

Factor : 7.001

Theory Basis

According to the theory of technological determinism, the intrinsic characteristics and affordances of the technology itself are what mostly drive the uptake and influence of cloud accounting solutions in small business finance. This idea holds that small firms' financial management is naturally shaped and dictated by the cost-effectiveness, accessibility, and efficiency provided by cloud accounting systems, which frequently results in standardized procedures and streamlined processes. On the other hand, Social Constructiveness argues that social, cultural, and economic aspects have a significant impact on the function of cloud accounting solutions in small business finance, rather than only technological capabilities.

According to this viewpoint, the interactions, opinions, and interpretations of different stakeholders within the small business ecosystem—such as owners, staff, industry standards, and regulatory frameworks—shape the acceptance and use of cloud accounting systems. Together, these theories shed light on the intricate interactions between society and technology that shape the financial landscape of small businesses using cloud accounting products.

Agency Theory and Asymmetry in Information:

According to agency theory, the principal-agent relationship that underlies business operations shapes the function of cloud accounting solutions in small business finance. As principals, business owners use cloud accounting systems to keep an eye on and manage the behavior of agents tasked with handling financial responsibilities, such as staff members or outside stakeholders. These solutions reduce agency conflicts and align incentives with organizational objectives by facilitating openness, accountability, and effective communication between principals and agents. The notion of information asymmetry also highlights how cloud accounting solutions lessen information asymmetry by giving users instant access to reliable financial data. By lowering uncertainty and raising the caliber of information accessible to all parties involved, this greater transparency improves small business decision-making processes and promotes efficiency and trust in financial management procedures.

Resource Dependency Theory:

According to Resource Dependency Theory, an organization's need to access and manage vital resources has an impact on the acceptance and use of cloud accounting solutions in small business finance. These resources, as they relate to small enterprises, include precise financial data, effective processing methods, and reasonably priced financial information management tools. Small businesses benefit greatly from cloud accounting solutions because they give them access to sophisticated financial management tools without requiring large infrastructure or specialist staff commitments.

Small firms can lessen their reliance on conventional, resource-intensive accounting techniques and increase their flexibility in responding to shifting market conditions by utilizing cloud-based solutions. As a result, incorporating cloud accounting solutions improves small firms' competitive edge, resilience, and agility in efficiently managing their financial resources.

Institutional Theory:

According to institutional theory, the current institutional norms, rules, and practices in the business environment have an impact on the acceptance and use of cloud accounting solutions in small business finance in addition to its inherent value. Cloud accounting solutions are frequently used by small firms because to their cost-effectiveness and efficiency as well as the fact that they support the institutional standards that are already in place, which encourage financial management that is transparent and digital. The use of cloud accounting systems in small business finance is also influenced by industry norms, governmental restrictions, and the behavior of significant stakeholders like investors and clients. Small firms must embrace these technologies as they grow more and more ingrained in the corporate environment in order to meet institutional requirements and maintain their competitiveness in their individual markets.

Decision-Making and Cognitive Theory:

The adoption of cloud accounting systems in small business finance has an impact on stakeholders' and business owners' cognitive processes and decision-making abilities, according to cognitive theory. Cloud accounting solutions improve the cognitive ability of small business decision-makers by giving them real-time access to financial data, analytics, and forecasting tools. This empowers them to make more educated and data-driven financial decisions.

These tools improve the precision and efficacy of small business decision-making processes by enabling a greater understanding of financial performance, trends, and risks. The incorporation of cloud accounting systems simplifies decision-making by lowering cognitive biases, boosting information processing, and increasing resource allocation efficiency, as further highlighted by decision-making theory.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact

Factor: 7.001

2. LITERATURE REVIEW

How Canadian businesses view the impact and uptake of developing technology in accounting

The results of this study demonstrate that an organization's inclination to adopt new technology is not largely determined by its features. The choice regarding the adoption of emerging technologies is also influenced by additional internal organizational variables. Furthermore, by include the element of vendor support, which has gotten little attention in previous information technology (IT)/information system (IS) adoption studies, this study closes a gap in the literature even if it found little evidence for the influence of environmental factors. Furthermore, this study delves deeper into the experiences and perspectives of accounting professionals in examining the organizational adoption and utilization of emerging technologies, which sets it apart from the majority of previous adoption studies.

Factors impacting cloud accounting adoption: data from Omani small and medium-sized businesses

According to this study, managers in SMEs ought to be more proactive in identifying the organizational, technological, and environmental elements that influence the effectiveness of implementing CA in a comprehensive model. With limited financial resources and worries regarding cloud service usage, this study provides a management approach that aids businesses in choosing the best course of action when implementing CA.

Impact of external auditor-cloud specialist engagement on cloud auditing challenges

According to the findings, initiatives to encourage cloud auditing in businesses may be successful if the emphasis is on resolving auditing issues and emphasizing the interaction between external auditors and cloud specialists to improve work performance. This study, which takes a quantitative approach from the viewpoint of auditors from the Iraqi Association of Certified Public Accountants, is one of the few that examines the effect of external auditor—cloud specialist engagement on cloud auditing difficulties.

Digital transformation and accountants as advisors

In terms of offering a clearer and more comprehensive view of the future of the accounting profession and the pertinent knowledge and skills needed, the findings have wider ramifications for both the accounting profession and the education sector. The results should also be helpful to PSF managers and recruiters. PSF data sheds light on the accounting profession's evolutionary trajectory as well as the knowledge and abilities required of accountants to operate in that fiercely competitive field as a result of digital transformation.

Cloud computing and ERP assimilation in the public sector: institutional perspectives

The public sector benefits from explanatory case study research since it may lead to the discovery of novel phenomena during the analysis of the case.

One of the best ways to integrate technology with the organizational, technical, economic, social, cultural, and other environmental areas of the public sector is to deploy cloud ERP.

Missing cloud security awareness: investigating risk exposure in shadow IT

The report offers suggestions for how to deal with an organization's inappropriate use of cloud computing services, such as establishing a cloud security policy for the entire organization and conducting an anonymous staff survey to determine the current situation. This study addresses a recognized requirement to investigate cloud computing service use in the context of shadow IT.

Implementation of cloud ERP in the SME: evidence from UAE

One of the relatively few case studies that addresses the deployment of cloud ERP in UAE enterprises, especially SMEs, is this one. Additionally, it lists three categories of variables—technological, managerial, and environmental—that are impacted by the deployment of Cloud ERP.

The role of digital transformation in enabling continuous accounting and the effects on intellectual capital: the case of Oracle

The results demonstrate how DT applied to accounting offers a very transparent method of gathering, managing, and analyzing financial data, freeing up time for high-value tasks, streamlining decision-making procedures, and raising IC. This has practical ramifications. Digital and DT technologies have given businesses all across the world new ways to explain and disseminate accounting data. This study's novelty stems from its link between DT and the relatively novel subject of CA.

Investigating preconditions for a financially advantageous cloud usage

This study effectively illustrates the significance of the four parameters listed and how they affect the choice between OP and cloud services. Here, a cash-flow-based comparison methodology is developed for the first time and to the best of our knowledge to compare cloud services with OP solutions.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact Factor:

7.001

Using cloud computing to explain how artificial intelligence affects the media industry's technological adoption model

The speed at which technology is developing has made it extremely difficult for organizations, particularly the media, to adapt. The media landscape has altered how people access and use goods and services as a result of Industry 4.0 technologies, particularly cloud computing technology.

ERP in clouds or still below

This document provides decision makers with a valuable overview of the benefits and drawbacks of cloud computing as a foundation for IT reform. Furthermore, AHP results offer some insights into how the market views cloud computing and ERP, and vendor remarks regarding ERP-Cloud solutions offer a fascinating look at the ERP market going forward. Businesses must adjust more quickly than ever before due to the market's ongoing expectations for cost effectiveness and flexibility. As a result, first adopters who choose to use a subpar solution run a serious risk to their company. This study shows how the AHP decision support technique may be used to evaluate an organization's preparedness to use the Cloud-ERP system. It also provides a high-level overview of the market knowledge and willingness of SMEs to embrace the ERP in the Cloud concept.

3. RESEARCH DESIGN AND RESEARCH METHODOLOGY

Statement of problem

The problem statement highlights important knowledge gaps about how sophisticated accounting software affects small business finance accounting practices. Although the literature now in publication frequently explores the technical features of these instruments, little is known about their usefulness and applicability in actual situations. For a thorough understanding, it is crucial to investigate how these technologies affect the distribution of organizational resources, strategic decision-making, and the general caliber of financial data. Furthermore, studies investigating the actual effectiveness, adaptability, and user satisfaction resulting from the use of advanced accounting systems are conspicuously lacking. Determining the level of education and experience required to use these technologies effectively is also crucial.

Objectives of Study

- To look into how cloud accounting solutions affect the efficiency, decision-making, and financial management procedures of small businesses.
- To evaluate the rates of adoption, difficulties, and advantages of cloud accounting solutions in enhancing small firms' access to and financial transparency

Scope of The Study

The study's scope includes an analysis of a number of factors pertaining to the adoption, deployment, and use of cloud accounting solutions in the context of small business finance, such as: the technological features and functionalities of cloud accounting platforms; the effect on financial data management and reporting; the influence on strategic planning and decision-making processes; the obstacles and challenges to adoption; the effects on organizational efficiency and resource allocation; and the overall implications for small business financial management practices.

4. LIMITATIONS OF THE STUDY

- If the sample size is too small or not typical of the population, the study's conclusions cannot be applied to all accounting procedures in small business finance.
- Some research findings may become outdated by the time the study is published due to the quick speed at which
 accounting software and tools are developing technologically.
- the significance of acknowledging the variations in accounting standards and procedures among different
 industries, suggesting that results may not be generally applicable but rather sector-specific. It also highlights the
 necessity for cautious data interpretation by highlighting the potential diversity brought about by varying degrees
 of technological adoption and tools among accounting companies.

Method of Data Collection:

a) Primary Data Collection: Surveys, which provide a systematic approach to gathering quantitative data from a large sample, will be the main technique used.

The surveys will cover usage trends, satisfaction levels, perceived impacts, advantages, challenges, and recommendations with regard to advanced accounting software. By describing the precise tools they use, how frequently they use them, and their key features, the participants will offer insights into how their tools are



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact

Factor : 7.001

incorporated into accounting procedures. Participants' overall happiness with reliability, usability, and support services will also be assessed through inquiries.

b) Secondary Data Collection: A comprehensive analysis of the corpus of research on sophisticated accounting methods will be carried out in order to supplement the main data. This will include case studies, industry reports, and scholarly publications to provide context for software trends, adoption patterns, and technical breakthroughs. Knowledge gaps will be addressed and the impact of these tools on accounting practices will be validated with the aid of this secondary data. Combining the two data sources will ensure reliable, insightful, and practical outcomes.

Instrument for data collection:

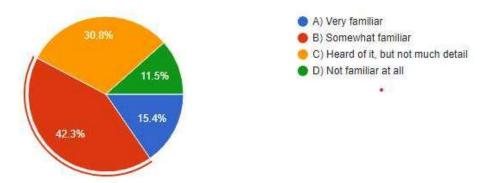
A structured questionnaire will serve as the primary data collecting tool, and it will be intended to collect data regarding the kinds of accounting software and tools that are utilized, their effects on accounting procedures, and the advantages and difficulties of using them.

Drafting of questionnaire:

Both open-ended and closed-ended questions are included in the questionnaire, which is written with the study goals in mind. The questions are intended to be objective, straightforward, and succinct.

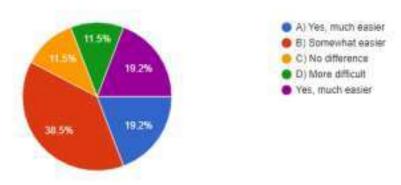
Data Analysis and Interpretation

How much do you know about small company cloud accounting solutions?



Interpretation: According to survey results, 42.3% of respondents are somewhat familiar with cloud accounting solutions, 15.4% are very familiar, 11.5% are not familiar at all, and 30.8% have heard of it but not in great detail; however, none of the respondents use it, suggesting that it may not have the features, usability, or awareness that this group wants. Understanding user requirements, market trends, and possible areas for tool improvement can all be aided by these insights.

Do you believe that cloud accounting systems help small firms manage their accounts more easily?



Interpretation: The purpose of the survey was to learn about respondents' familiarity with sophisticated accounting software and tools. With less than a year of experience using these technologies, a sizable majority of respondents—38.5%—said it was somewhat simpler.

This can point to a recent shift or acceptance of these cutting-edge tools. The second largest group, 19.2%, reported feeling significantly more at ease, indicating that while they may have some expertise, they might not be as skilled as frequent users. Remarkably, 11.5% of people reported feeling worse and no change. As a result, most consumers thought it was more user-friendly and easier to implement.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

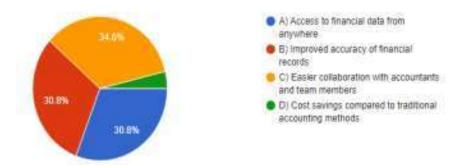
Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact Factor:

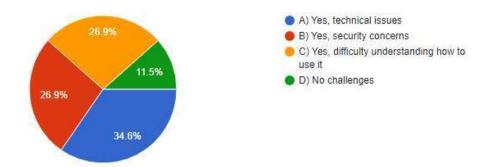
7.001

What do you think the main advantage of cloud accounting for small firms is?



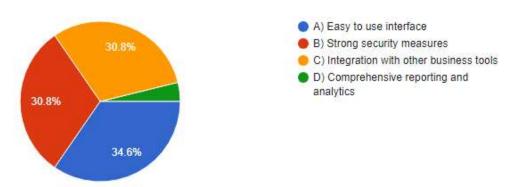
Interpretation: The purpose of the survey was to determine which firms benefited most from sophisticated accounting software and tools. The vast majority of respondents (34.6%) attested to the fact that their companies had increased the accuracy of their financial records, suggesting that these technologies are widely used. There are still some organizations that rely on conventional methods or other alternatives for their accounting needs, though, as 30.8% of the respondents claimed that their organizations have easier collaboration with accountants and team members and access to financial data from anywhere. Remarkably, 3.8% of the participants believed that using these technologies in their firms was less expensive than using standard accounting techniques. This may suggest that they are not directly involved in the areas where these technologies are used, or it may reflect a lack of knowledge or comprehension about the tools being used in their organization.

Have there been any difficulties adopting cloud accounting software for you or your company?



Interpretation: According to the survey results, a sizable majority of participants—34.6%—have technical difficulties. Additionally, a high degree of digital transformation in their accounting operations is indicated by the fact that 26.9% of them have security worries and trouble understanding, which could be caused by a number of factors such a lack of resources, resistance to change, or satisfaction with present procedures. 11.5% of people report having no difficulties, which could be for a number of reasons, including easy use and quick technological uptake.

What do you consider to be the most crucial component that small businesses should have in a cloud accounting solution?



Interpretation: Based on survey data, users' perceptions of key features: 34.6% said the UI was simple to use. Strong security features and integration with other business tools were perceived by 30.8% of respondents. 3.8% of customers, however, believed that the reporting and analytics were thorough.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

2583-1062 **Impact**

e-ISSN:

Factor: 7.001

Sample Size Justification

Target Breakdown for Representativeness:

2. Small Businesses: 40 responses 3. Medium Enterprises: 30 responses 4. Accounting Firms: 20 responses Large Corporations: 10 responses

Aligns with global SME adoption trends (e.g., 60–70% of cloud accounting users are SMEs).

Ensures sector-specific insights (e.g., security concerns in accounting firms vs. cost barriers in small businesses).

Different Advanced Accounting software used:

Small company organizations frequently use a number of cloud accounting systems. These are a few of the more wellknown ones:

- QuickBooks Online is a leading cloud-based accounting software solution for small businesses. It provides services including invoicing, spending management, bank reconciliation, and financial reporting. QuickBooks Online interfaces with other third-party programs to enhance its capabilities.
- Xero: Xero is another popular cloud accounting software designed for small businesses. It offers invoicing, bank reconciliation, cost management, and configurable financial reports. Xero also provides interfaces with a variety of corporate software to boost functionality.
- FreshBooks is well-known for its user-friendly interface, making it popular among freelancers and small business owners. It provides invoicing, time tracking, expenditure management, and basic accounting functions. FreshBooks is well-suited for service-based organizations.
- Wave: Wave is a free cloud accounting solution for small enterprises, freelancers, and sole proprietors. It offers invoicing, bookkeeping, payroll (paid service), and receipt scanning. Wave's simplicity and price appeal to many small enterprises.
- Sage Business Cloud Accounting provides cloud accounting solutions for small businesses, including invoicing, expense management, bank reconciliation, and reporting. Sage Business Cloud Accounting seeks to streamline financial procedures and increase efficiency.

5. FINDING

Several important findings have been uncovered by the investigation on the effects and integration of advanced accounting technologies into small business financial procedures. First of all, there seems to be a lack of thorough understanding regarding the presence and particular applications of these cutting-edge instruments within the industry, and their integration seems to be diverse and fragmented. Although there is a good correlation between the influence on traditional accounting procedures and improved efficiency and precision, there are worries about the potentially drawn-out process of switching from traditional to advanced methodologies.

6. RECOMMENDATION

Several suggestions are made in light of these findings to enhance the smooth integration and application of cuttingedge accounting tools in small business operations. First, a systematic methodology for thoroughly assessing the suitability and effectiveness of these instruments is being called for. Criteria for evaluating their effects on accuracy, efficiency, adherence to legal requirements, and possible implementation time should all be included in this framework. Industry-wide discussions and rules are required to resolve confidentiality concerns and guarantee that these technologies handle sensitive financial data securely. Additionally, focused training programs ought to be created to give accounting professionals the abilities they need to seamlessly switch from traditional to cutting-edge techniques.

7. CONCLUSION

In conclusion, a landscape marked by both opportunities and challenges in the continuous evolution of financial management procedures is shown by the evaluation of advanced accounting tools inside small business finance practices. Positive results, especially the increased accuracy and efficiency linked to these instruments, are encouraging and point to a viable path toward a more technologically advanced and efficient accounting environment. The global trend of using technology to improve corporate operations is consistent with the found favorable association between the adoption of modern tools and increased efficiency.



INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)

(Int Peer Reviewed Journal)

Vol. 05, Issue 03, March 2025, pp: 2524-2531

e-ISSN: 2583-1062

Impact

Factor: 7.001

8. REFERENCES

- [1] Liakhovych, G., Pavlykivska, O., Shveda, N., Marushchak, L., & Vakun, O. (2021). Accounting Software in Today's Organization. Journal of Scientific, Technological, and Engineering Systems Advances, 6(1).
- [2] (2014) Boulianne, E. An Important Development in Accounting Education: The Effect of Accounting Software Use on Students' Knowledge Acquisition. Accounting & Organizational Change Journal, 10(1).
- [3] Al-Lahham, M. I. O., and J. R. A. Q. Al Natour (2021). Information Technology's Effect on Accounting Information Quality. Computer and Mathematics Education in Turkey, 12(13).
- [4] Xu, L. E., and Elwell, M. (2020). Recognizing the Value and Effects of Technology in an Accounting Environment: Work Results and Client Relationships. Honors Capstones and Theses.
- [5] (2010) Boulianne, E. Effects of Accounting Software Use on Student Achievement. Proceedings of INTED2010
- [6] Penttinen, E., Rönkkö, M., Apte, U., Asatiani, A., & Saarinen, T. (2019). Comparison of cloud-based accounting information system users and non-users reveals how accounting process features affect accounting outsourcing. Journal of Accounting Information Systems International, 34.
- [7] Festus, A. F., Adekunle, A. M., and Olufemi, O. O. (2021). The quality of corporate reporting and accounting software in a computerized business environment. Accounting and Finance Journal, 9(3).
- [8] R. W. McGee (1986). Software accounting in small business finance. published in a number of periodicals. The first of three volumes.
- [9] Festus, A. F., and Olubunmi, A. (2020). Accounting Software and Corporate Reporting Quality in Profit-Driven Organizations. Information, Computing, and Applied Sciences Journal, 1(2).
- [10] McLain, M. P., and S. K. Maheshwari (2006). Analytical Hierarchy Process Approach for Small Business Accounting Software Tool Selection. International Conference of Allied Academies. Proceedings, 11(2), Academy of Accounting and Financial Studies.
- [11] A. Pratama (2024). Accounting Knowledge Quality and Its Effect on the Profession. Access la Success: Calitatea; Bucharest, 25(198).