



ROLE OF ARTIFICIAL INTELLIGENCE AND AUTOMATION IN CLOUD ACCOUNTING IN SELECTED LOGISTICS COMPANIES IN CHENNAI DISTRICT

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Abstract

Management in the logistics industry has undergone a substantial transformation thanks to the integration of automation and artificial intelligence (AI) in cloud accounting. This study examines how AI-driven cloud accounting solutions affect operational effectiveness, financial accuracy, and decision-making in a subset of logistics firms in the Chennai area. The study looks at how AI-powered solutions, like predictive analytics, machine learning algorithms, and robotic process automation (RPA), simplify accounting duties like financial reporting, fraud detection, tax compliance, and invoice processing. Furthermore, real-time access to financial data is provided by cloud-based technologies, which enhance teamwork and lower human error.

Introduction

Technology breakthroughs have significantly changed the accounting landscape in recent years, especially with the incorporation of automation and artificial intelligence (AI)(Kanimozhi Suguna et al. 2021) in cloud accounting platforms. Using online accounting software that stores data on distant servers and makes it accessible from any location with an internet connection is known as cloud accounting. Cloud accounting becomes more precise, efficient, and flexible to meet the evolving needs of businesses when paired with AI and automation(The impact of automation on cost opti...) technology. Large volumes of financial



data may be processed very quickly by AI-powered cloud accounting systems, which can also spot patterns, identify abnormalities, and even forecast future trends. Businesses can save a significant amount of time and money by switching from manual to intelligent automation, which also improves operational efficiency and lowers errors. In order to optimize their financial operations, businesses of all sizes—from startups to multinational corporations—are increasingly implementing AI-driven cloud accounting solutions.

Artificial intelligence plays a more complex role in cloud accounting (The impact of automation on cost opti...; Aiton and Russell 2013) than just automation. By learning from past data, AI algorithms may continuously increase their accuracy in jobs like bank reconciliation, expense classification, and invoice processing. Accountants may concentrate on more strategic duties like financial analysis and decision-making by using these tools, which can automatically match transactions, identify anomalous activity, and even recommend corrective actions. AI-powered automation solutions can monitor cash flow, produce real-time financial reporting, and guarantee regulatory compliance with little assistance from humans. Cloud accounting software (The impact of automation on cost opti...; Aiton and Russell 2013; Salih et al. 2021) can also forecast finances intelligently, suggest budgeting techniques, and anticipate cash flow problems by integrating machine learning algorithms. By enabling companies to make data-driven decisions, these proactive insights enhance their overall financial well-being. Traditional accounting procedures are being quickly redefined as more proactive and data-centric due to the combination of AI, automation, and cloud technologies.

The improvement of accuracy and transparency in financial reporting is one of the biggest advantages of AI and automation in cloud accounting. Human error was a common problem with traditional accounting systems (Morris 2001) particularly when data entry or reconciliation procedures were involved. AI-powered automation (Lehner and Knoll 2022), on the other hand, ensures uniform correctness across all financial records by precisely handling these tedious and error-prone processes. Additionally, real-time data processing enables companies to see their financial performance instantly, facilitating prompt and well-informed decision-making. With AI's ongoing development, its uses in cloud accounting are growing to encompass more complex tasks including tax optimization, fraud detection, and predictive analytics. In addition to changing how companies handle their finances, these

advances are assisting them in remaining flexible and competitive in a market that is becoming more and more dynamic. Essentially, cloud accounting has evolved straightforward bookkeeping tool to a potent financial intelligence platform that can propel long-term success and strategic growth thanks to automation and artificial intelligence.

Keywords *Artificial Intelligence (AI), Automation, Cloud Accounting, Logistics Companies, Digital Transformation, Accounting Software, Cloud ERP Systems, Cyber security in Accounting*

Materials And Methods

This study collects and analyzes data to identify the elements that give companies utilizing cloud-based accounting systems confidence in the accuracy of their financial data and the lower operating expenses brought about by the combination of automation and artificial intelligence (AI). We conducted a study of cloud accounting software users in Chennai to get quantifiable data on accuracy, cost reduction, and user perceptions. In order to investigate contextual and experience-based aspects influencing the uptake and perceived efficacy of AI and automation, we additionally employed qualitative insights from finance professionals, accountants, and technology specialists employed by these organizations. Their responses to a series of online surveys were gathered using Google Forms, and the responses were thoroughly analyzed using IBM SPSS. We divided the population into two groups as mentioned below

Group 01: 52 Sample size

Group 02: 52 Sample size

FIRST USER GROUP: Those that primarily rely on AI-powered automated financial processes in their cloud accounting systems make up the first user group, referred to as AI-enabled cloud accounting users. A wide range of people from different professions, including accountants, financial managers, auditors, and business owners, usually use these systems in their organizations. Each of these professionals uses certain AI and automation features to meet their own operational needs.



SECOND USER GROUP : The second category, on the other hand, is made up of manual accounting users who either utilize conventional, non-cloud accounting software or keep financial records using traditional methods with little to no incorporation of AI-powered automation tools.

Our study aims to shed light on how companies view automation and artificial intelligence's contribution to increased accuracy and lower expenses in Chennai's cloud accounting systems. Future research can examine a wider geographic region and a wider range of industry sectors. This study primarily looks at how students, finance managers, and accounting professionals in Chennai District feel about the accuracy and financial advantages of automation and artificial intelligence in cloud accounting systems. 104 respondents—including people with a range of professional backgrounds and degrees of experience in technology, finance, and accounting—completed the poll.

Statistical Analysis Tools

We built a Google Forms survey specifically for this investigation. It's like answering questions on a survey or quiz. Their responses are then entered into a spreadsheet. This spreadsheet was used to arrange and analyze the data. To improve our understanding of the data, we used techniques including cross-tabulation, pie charts, bar graphs, and percentages. Furthermore, we gathered some basic data on the respondents. This enables us to determine whether the viewpoints of various groups of people differ. We were careful to obtain a comprehensive and unambiguous picture of people's viewpoints by using Google Forms and these techniques. We built a Google Forms survey specifically for this investigation. It's like answering questions on a survey or quiz. Their responses are then entered into a spreadsheet. This spreadsheet was used to arrange and analyze the data. To improve our understanding of the data, we used techniques including cross-tabulation, pie charts, bar graphs, and percentages. Furthermore, we gathered some basic data on the respondents. This enables us to determine whether the viewpoints of various groups of people differ. We were careful to obtain a comprehensive and unambiguous picture of people's viewpoints by using Google Forms and these techniques.

Result

TABLE 1.1: The findings of chi-square tests examining the relationship between two categorical variables are shown in this table. With a value of 29.981 and 12 degrees of freedom, the Pearson Chi-Square test produces a p-value of 0.003, which suggests a statistically significant correlation. The substantial correlation is further supported by the Likelihood Ratio test, which yields a p-value of 0.002 with a value of 31.756 and 12 degrees of freedom.. These findings clearly imply that the two category variables under investigation have a statistically significant association, with 104 valid cases.

FIG 1.2: The bar graph depicts the mean responses regarding the statement "cloud accounting improves efficiency in financial management," using a scale from 0 (Strongly agree) to 4 (Strongly disagree). The graph also includes error bars representing both 95% confidence intervals and +/- 1 standard deviation. The data shows a distinct trend: the mean response rises as the degree of agreement falls (from highly agree to strongly disagree).

TABLE 2.1: The results of an Analysis of Variance (ANOVA) test, which determines if the means of three or more groups differ statistically significantly, are shown in this table. The ANOVA produces an F-statistic of 6.079 with a mean square of 5.360, two degrees of freedom, and a between-groups sum of squares of 16.081. Indicating a statistically significant difference between the means of the groups under comparison, this translates to a p-value of .001. To put it another way, it seems improbable that the observed variations in the group means were the result of pure chance.

TABLE 3.1: Age and agreement with the statement "cloud accounting improves efficiency in financial management" are correlated in this table (represented by the variable "@4_A"). At the 0.01 level (1-tailed), the Pearson correlation coefficient of 0.245 is statistically significant. This suggests that age and agreement with the statement have a weakly positive relationship. This

means that there is a minor tendency for agreement with the statement to rise with age. It's crucial to remember that the link is weak, which means that age only partially accounts for the diversity in agreement with the statement. People's perceptions of the effectiveness of cloud accounting in financial management are probably influenced by other aspects more significantly.

Discussion

FIG 1.1: Age and agreement with the statement "cloud accounting improves efficiency in financial management" are correlated in this table (represented by the variable "@4_A"). At the 0.01 level (1-tailed), the Pearson correlation coefficient of 0.245 is statistically significant. This suggests that age and agreement with the statement have a weakly positive relationship. This means that there is a minor tendency for agreement with the statement to rise with age. People's perceptions of the effectiveness of cloud accounting in financial management are probably influenced by other aspects more significantly.

FIG 2.1: We conducted a study on the deployment of automated financial accounting systems. The ANOVA test produced a significant result with a p-value of 0.01: This table displays the findings of an Analysis of Variance (ANOVA) test, which establishes if there is a statistically significant difference between the means of three or more groups. With a mean square of 5.360, the ANOVA yields an F-statistic of 6.079.

FIG 3.1: Lastly, we explicitly employed a correlation to examine the importance of the primary concerns raised by Chennai logistics companies about the deployment of automation and artificial intelligence in cloud accounting in Chennai logistics companies. A statistically significant p-value of 0.245 was obtained from the test. This implies that there is a weakly positive correlation between age and agreement with the statement. This indicates that there is a slight trend for the statement's level of agreement to increase with age.

Authors Contributions

Author Pranav was the one associated with the collection of data, data analysis, and manuscript writing.

Author Venkatesan was involved in the conceptualization, data validation, and critical review of the manuscript.

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TABLES AND FIGURES:

FIG1.1 (CHI-SQUARE TEST)

Chi-Square Tests

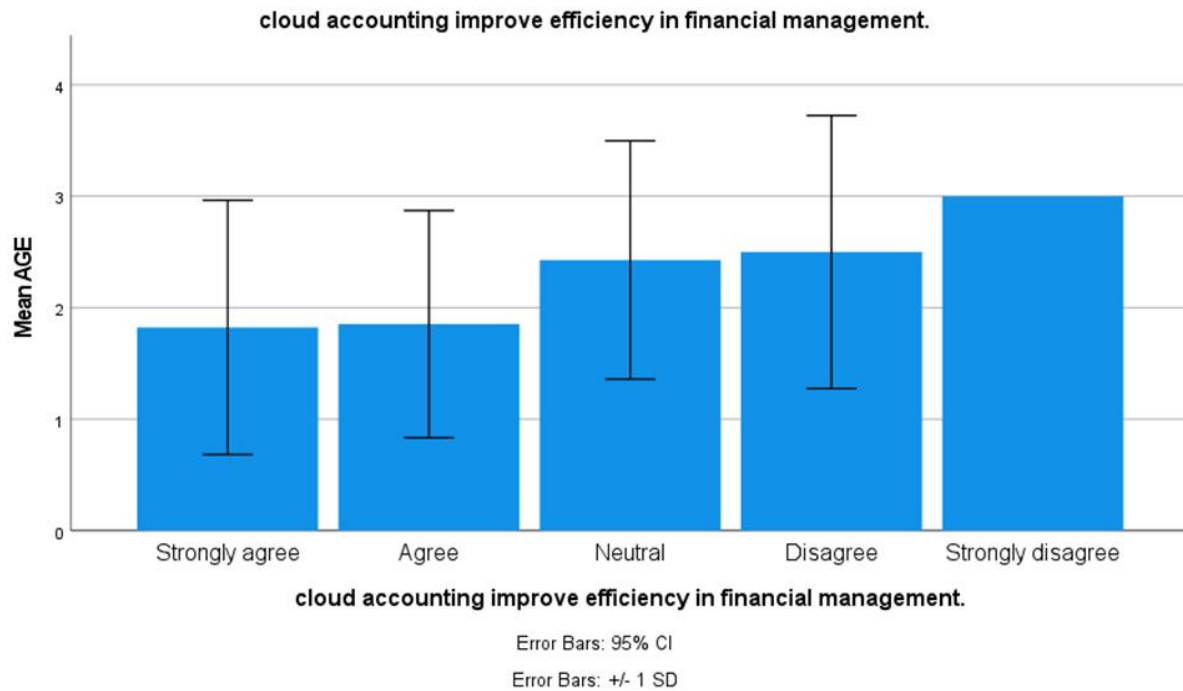
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.891 ^a	12	.003
Likelihood Ratio	31.756	12	.002
Linear-by-Linear Association	11.188	1	.001
N of Valid Cases	103		

a. 12 cells (60.0%) have an expected count of less than 5.
 The minimum expected count is .14.

FIG 1.2



:



TEST 2 : ANOVA

ANOVA

@3_A

	Sum Squares	of df	Mean Square	F	Sig.
Between Groups	16.081	3	5.360	6.079	.001
Within Groups	87.298	99	.882		
Total	103.379	102			

TABLE 03 :

Correlations



		AGE	@4_A
AGE	Pearson Correlation	1	.245**
	Sig. (1-tailed)		.006
	N	103	103
cloud accounting improve efficiency in financial management.	Pearson Correlation	.245**	1
	Sig. (1-tailed)	.006	
	N	103	103

** . Correlation is significant at the 0.01 level (1-tailed).

Conclusion

The study emphasizes how automation and artificial intelligence (AI) are becoming increasingly important in changing cloud accounting procedures in a few logistics firms in the Chennai district. While automation simplifies standard accounting operations like invoice processing, expense management, and reconciliation, AI-powered solutions improve accuracy, efficiency, and real-time financial reporting. In addition to lowering human error, the use of these technologies facilitates quicker decision-making and increased compliance. Automation and artificial intelligence (AI) integration will be essential to improving financial transparency and operational effectiveness in the logistics industry as technology develops further.

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