

Artificial Intelligence based Accounting Information Systems for Enhancing SME Financial Performance

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Abstract

Small and Medium Enterprises (SMEs) operate in an increasingly competitive and data-driven business environment where timely, accurate, and strategic financial information is critical for survival and growth. Traditional accounting information systems often lack the analytical depth and automation required to support dynamic decision-making. In this context, Artificial Intelligence (AI)-based Accounting Information Systems are emerging as transformative tools capable of improving financial accuracy, operational efficiency, and overall SME financial performance.

The research was aimed to study the role of AI based accounting information system in enhancing financial performance of SMEs. Although Rajasthan has more than 5 lakhs working SMEs but still only 2% of them have started using AI based accounting information system so by using the purposive sampling method a sample of 159 SMEs was included in the study. The key professionals of SMEs like owners, managers and financial executives were contacted and requested to provide data in questionnaire. For hypothesis testing one sample t-test and ANOVA were applied. The results revealed that majority of SMEs have adopted AI based accounting information systems for cost reduction and accuracy improvement. Respondents were using AI based tools for bookkeeping, financial reporting and decision support, generally on monthly basis. SMEs indicated the significant positive impact of AI based accounting information systems on accounting efficiency and financial performance. Around 4/5th of the respondents were satisfied with AI based accounting information system but they faced few barriers in adoption of AI based accounting information system like dependency on software vendor, inadequate IT infrastructure and lack of trained staff.

Key Words: AI based accounting information system, financial performance, accounting efficiency

Introduction:

Small and Medium Enterprises play a role in economic development. They help create jobs bring ideas and increase the country's GDP.

However, these businesses often struggle with things like not having money, limited resources, poor record-keeping and slow decision-making. Traditional Accounting Information Systems are helpful for tasks, like processing transactions and making reports. They may not offer the advanced analysis needed for strategic financial planning and improving performance in a fast-changing business world.

The rapid advancement of Artificial Intelligence technologies has changed management and accounting practices. AI-based Accounting Information Systems use machine learning, data analytics, automation and predictive modeling. These systems make financial information more accurate, faster and reliable. Small and Medium Enterprises can benefit from AI-based Accounting Information Systems. They can help these businesses make financial decisions and improve their performance. AI-based Accounting Information Systems can also help Medium Enterprises with their financial planning. They can provide modeling and data analytics. This can help Small and Medium Enterprises stay competitive in a business environment.

These systems let us watch what is happening in time they do the bookkeeping for us they can detect fraud they can assess risks and they can even forecast what will happen with our finances. This helps the people in charge make decisions. By cutting down on mistakes that people make and by reducing the costs of running the business systems that use Artificial Intelligence can make things more transparent. They can make the controls inside the company stronger for Small and Medium Enterprises. Nowadays everything is going digital and there is a lot of competition so using Artificial Intelligence in Accounting Information Systems is a chance for Small and Medium Enterprises to become more efficient with money to make more profit and to last longer.

Even though Artificial Intelligence is becoming more and more important, in systems we do not know for sure how it affects the financial performance of Small and Medium Enterprises especially in countries that are still developing. So it is a time to look at how Accounting Information Systems that use Artificial Intelligence can help improve the financial results of Small and Medium Enterprises and it is also very important to do this.

Review of Literature:

With a particular focus on SMEs, Vo Van, Abu Afifa, and Saleh (2026) investigate the connection between accounting information systems (AIS) and organisational performance in the context of cloud computing. The study demonstrates how cloud-based AIS strengthens internal controls, facilitates managerial decision-making, and improves real-time access to financial data. The authors show that digitalized AIS greatly increases operational efficiency, cost reduction, and strategic flexibility through an empirical analysis of SME data. According to the research, cloud adoption improves a company's overall competitiveness and sustainability in fast-paced business environments in addition to modernising accounting operations (Vo Van et al., 2026).

In order to improve microenterprise performance in the direction of sustainable development, Darmayadi, Dharmayanti, and Bahri (2025) investigate the integration of AI-based AIS and digital business strategies. The study highlights how predictive financial analysis, better budgeting accuracy, and automation of routine accounting tasks are made possible by artificial intelligence. AI-driven AIS promotes long-term growth and improves responsiveness to market changes when paired with digital business strategies. According to the study's findings, microenterprises looking to integrate AI for long-term growth must be prepared technologically and strategically (Darmayadi et al., 2025).

Thongprim, Tulacharatkul, and Sincharoonsak (2025) look into how AI-based accounting systems affect Thai SMEs' ability to make effective decisions and produce high-quality financial reports. According to their findings, integrating AI improves data processing speed, lowers human error, and increases the transparency and dependability of financial statements. Additionally, the study shows that AI-enabled AIS improves managerial decision-making effectiveness as timely and accurate reports facilitate better strategic choices. The research underscores the transformative role of AI in strengthening governance and performance within SMEs (Thongprim et al., 2025).

In order to evaluate the contribution of artificial intelligence to enhancing the accuracy of financial reporting for SMEs, Widyaningsih and Fadli (2024)

perform a comparative study across emerging markets. According to the study, artificial intelligence (AI) tools greatly reduce human error, identify irregularities, and guarantee adherence to accounting standards. Adoption of AI has a greater impact in markets with weaker traditional accounting infrastructures, according to cross-country comparisons. The authors come to the conclusion that AI-driven AIS improves credibility and transparency, which raises stakeholder trust and financial dependability in emerging economies (Widyaningsih & Fadli, 2024).

A framework for incorporating OpenAI-style chatbots into accounting information systems for SMEs is put forth by Mpofu, Zhou, and Sibanda (2024). The study presents a novel approach to AI interaction in which conversational AI facilitates financial queries, report generation, and decision support. System integration, data governance, and user training are among the phases of implementation that are described in the framework. According to the authors, chatbot-enabled AIS can improve accessibility, speed up response times, and democratise financial knowledge in businesses, all of which will increase SME productivity and creativity (Mpofu et al., 2024).

The impact of AIS on the financial performance of SMEs in Kangar, Perlis, is examined by Lin, Shabri, and Yeap (2024). Effective AIS usage and financial performance metrics like profitability and revenue growth are significantly positively correlated, according to the study. The authors stress that the effectiveness of AIS is largely determined by system quality, information accuracy, and user competency. According to their findings, SMEs are more likely to attain financial stability and a competitive edge if they invest in strong accounting systems (Lin et al., 2024).

Hermansyah (2023) evaluates how communicative AI-based AIS affects the performance of SMEs. AI systems with interactive communication and adaptive learning capabilities are the main focus of the study. The findings show that these systems increase managerial responsiveness, lower operating costs, and improve reporting efficiency. According to the study, communicative AI improves departmental collaboration and enables real-time financial insights, both of which have a positive impact on overall business performance (Hermansyah, 2023).

Nwankwo (2023) investigates how AI can be incorporated into AIS as a means of improving manufacturing companies' non-financial performance. According to the study, AI-driven systems enhance customer satisfaction, operational transparency, and innovation potential. AI supports organisational and strategic development in addition to financial metrics by automating procedures and enabling predictive analytics. The author comes to the conclusion that by enhancing stakeholder relationships and efficiency, AI integration in AIS promotes long-term competitiveness (Nwankwo, 2023).

Zhao, Zhang, and Zhao (2022) look into how AI-enabled cloud computing can be used to inform accounting systems in SMEs. The study highlights how cloud platforms help with intelligent data processing, scalability, and data storage. SMEs are able to make evidence-based decisions thanks to AI algorithms that improve data analysis capabilities. The results indicate that AI-cloud integration is a feasible option for SME modernisation since it lowers infrastructure costs while enhancing data security and operational agility (Zhao et al., 2022).

Ionescu (2022) talks about how big data algorithms and artificial intelligence technologies are used in cloud-based Accounting Information Systems. This study shows that advanced analytics makes forecasting more accurate and helps with risk management and financial monitoring. It says that when you combine data and artificial intelligence it changes the traditional accounting systems into tools that help with making strategic decisions. The paper says that using cloud-based intelligence enabled Accounting Information Systems makes things more transparent and efficient and helps businesses adapt to changes in the business world according to Ionescu (2022).

Sabri, Rapani and Almaliki (2022) came up with a concept to look at how accounting information systems work and how they affect the performance of small and medium sized businesses. The paper looks at what other people have written and says that for accounting information systems to be effective they need to have good system quality and good information quality and good service quality and users need to be satisfied, with them. The authors think that a good Accounting Information System really helps people make decisions. It also helps keep things in order and makes sure everything runs smoothly. This means that the company

does better financially and in ways too. This study is more about ideas. It gives us a basis for understanding how Accounting Information Systems can help small and medium sized businesses compete and stay around for a long time. The authors propose that a good Accounting Information System enhances decision making accuracy, internal control systems and operational coordination which's important, for Accounting Information Systems thereby improving both financial and non-financial performance of Accounting Information Systems. (Sabri et al., 2022).

Hashem and Alqatamin (2021) look at how artificial intelligence helps make Accounting Information Systems better and how it affects manufacturing companies. They find out that artificial intelligence helps to quickly and accurately do lots of paperwork. It also helps to find fraud and make reports faster. Artificial intelligence in Accounting Information Systems also helps companies work better make customers happy and come up with ideas. Hashem and Alqatamin say that using intelligence in accounting helps companies make good choices and do well in the long run.

Kareem et al. (2021) study how Accounting Information Systems and knowledge management help medium-sized businesses, in Iraq. They see that Accounting Information Systems give financial information. Knowledge management systems help share information and learn things. When these systems work together they help businesses make choices work efficiently and stay ahead. The researchers say that good technology and the right company culture are important for businesses to do well. (Kareem et al., 2021).

Asmuni (2020) study looks at how Accounting Information Systems (AIS) work and how they affect the financial performance of small and medium-sized enterprises (SMEs). She says that for AIS to work well the system must be reliable the data must be accurate and there must be internal controls. When AIS are reliable they help SMEs with budgeting controlling costs and making profit. Asmuni also thinks that it is crucial to provide training and technological support to ensure the effectiveness of AIS.

Ali and AlSondos (2020) review how AIS are used in the banking sector and how they affect operational efficiency. They find that banks adopt AIS because they are ready for

the technology need to comply with regulations and face pressures. The use of AIS helps banks process transactions faster make mistakes and manage risks better. According to Ali and AlSondos when banks use AIS to improve efficiency they can provide better services and perform better overall. The study by Ali and AlSondos shows that AIS have an impact, on banking operations. They highlight that AIS are important for banks to work efficiently and effectively. (Ali & AlSondos, 2020).

Budiarto and Prabowo (2019) did a study about how Accounting Information Systems or AIS for short affects businesses, especially those owned by people from different ethnic groups. They found out that when small businesses use AIS effectively it has an impact on their reputation, customer satisfaction and how well the company works together. The people who did the study think that the culture and ethnicity of the business owners can influence how they use technology. So the study shows that AIS is not just good for things but it also helps the company grow and develop in other ways as Budiarto and Prabowo said in 2019.

Jakšič and Marinč (2019) also did a study about how relationship banking, information technology and artificial intelligence work in the FinTech industry. They talked about how artificial intelligence makes customer relationship management, credit risk assessment and personalized financial services. The authors believe that using intelligence makes relationship banking stronger, by helping banks analyze data and understand their customers better. The study shows that using technology is very important for financial institutions to succeed in modern times. (Jakšič & Marinč, 2019).

Odoh et al. (2018) Odoh and other people who worked with him in 2018 looked at how artificial intelligence affects the work of accounting departments in companies in South East Nigeria. They found out that using intelligence makes accounting tasks more accurate it takes less time to do them and there are fewer mistakes made by people. Artificial intelligence also makes auditing easier and financial reports more reliable. The people who did the study think that artificial intelligence makes accounting companies work better and raises the standards of the people who work there.

Jabłońska and Pólkowski in 2017 studied how small and medium sized companies use intelligence and how it affects these companies. They talked about how artificial intelligence can automate tasks help people make decisions and make processes better. The authors believe that using intelligence helps companies come up with new ideas work more efficiently and make good decisions quickly. However they also say that it can be expensive to start using intelligence and that people may not have the skills they need. Overall the study shows that artificial intelligence is very important for medium sized companies that want to be competitive in the digital economy. Artificial intelligence is a change, for these companies. (Jabłońska & Pólkowski, 2017).

Research Gap:

The existing literature talks a lot about the benefits of AI-based Accounting Information Systems. These systems can really help with multiple things highlighting their positive influence on financial reporting quality, decision-making efficiency, operational performance, and organizational competitiveness (e.g., Vo Van et al., 2026; Thongprim et al., 2025; Kareem et al., 2021). Several studies focus either on conceptual frameworks (Sabri et al., 2022), comparative analyses (Widyaningsih & Fadli, 2024), sector-specific reviews (Ali & AlSondos, 2020), or the technical integration of AI and cloud computing (Zhao et al., 2022; Ionescu, 2022). However, limited empirical research comprehensively examines the actual level of awareness and adoption of AI-based AIS among SMEs, particularly from a user-centric perspective. However not many studies have looked at how medium sized businesses or SMEs actually use these systems.

We need to know more about how SMEs use AI-based Accounting Information Systems. We need to know if they are using these systems and how they are using them. We also need to know if these systems are really helping SMEs. Are they making accounting easier and more accurate? Are they helping SMEs make money? We also need to know if the people using these systems are happy, with them. There are also some problems that SMEs might face when they start using these systems. We do not know much about these problems. So we need to do research to find out about the good and the bad of AI-based Accounting Information

Systems. We need to look at how SMEs are using these systems how they are working and what problems SMEs are facing. This is what we are trying to do in this study. We want to get a picture of how AI-based Accounting Information Systems are working for SMEs.

Objectives

1. To assess the level of awareness and adoption of AI-based accounting information systems among SMEs.
2. To analyze the extent and nature of usage of AI functionalities in accounting processes within SMEs.
3. To evaluate the impact of AI-based accounting systems on accounting efficiency and accuracy in SMEs.
4. To examine the impact of AI-based accounting systems on SMEs financial performance
5. To measure the level of user satisfaction with AI-based accounting information systems.
6. To identify the major challenges and barriers faced by SMEs in adopting and implementing AI-based accounting information systems.

Hypotheses

1. There is no significant impact of AI-based accounting systems on accounting efficiency and accuracy in SMEs.
2. There is no significant impact of AI-based accounting systems on SMEs financial performance.
3. Employees' satisfaction with AI-based accounting information systems is indifferent with respect to the type of enterprise and nature of business.

Research Methodology

- **Research Design:** The research was intended to collect the respondents' opinion about AI based accounting information system so descriptive research design was used.
- **Sampling:** Although Rajasthan has more than 5 lakhs working SMEs but still only 2% of them have started using AI based accounting information system so by using the purposive sampling method a sample of 159 SMEs was included in the study.
- **Data Collection Tool :** The key professionals of SMEs like owners, managers and financial executives were

contacted and requested to provide data in questionnaire. The questionnaire was divided into following sub-sections:-

- Firm profile of respondents
- Awareness and Adoption of AI-Based Accounting Information Systems
- Usage of AI Features in Accounting Systems
- Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy
- Impact of AI-Based Accounting Systems on SME Financial Performance
- Respondents' satisfaction with AI based accounting information systems
- Challenges faced by respondents in adoption of AI based accounting information system
- **Data Analysis Tool:** The data has been analyzed in SPSS 25.0. For interpretation percentage analysis, mean, one sample t-test and ANOVA test has been used.

Analysis of Data

Firm Profile of Respondents

The firm profile of selected SMEs is shown in table 1

- ❖ **Type of Enterprise:** The sample consisted of 28.93% micro enterprises, 38.99% small enterprises and 32.08% medium enterprises.
- ❖ **Nature of Business:** As per data 30.82% SMEs were engaged in manufacturing, 32.70% SMEs were doing trading, 24.53% SMEs were offering services and 11.95% SMEs were engaged in some other business.
- ❖ **Years of Operation:** Results showed that 38.99% SMEs were having more than 15 years of experience of operations followed by 32.08% SMEs which were operating from last 10 to 15 years.
- ❖ **Number of Employees:** Majority of SMEs (45.28%) were having 51 to 100 employees in their organizations followed by 34.59% respondents who were having more than 100 employees in their firm.
- ❖ **Respondent's Designation:** As per results 25.79% respondents were the owners, 24.59% respondents were managers, 22.01% respondents were accountants and 27.67% respondents were finance executives of the SMEs.

Table 1: Firm Profile of Respondents

Type of Enterprise	N	Percentage
Micro	46	28.93
Small	62	38.99
Medium	51	32.08
Total	159	100
Nature of Business	N	Percentage
Manufacturing	49	30.82
Trading	52	32.70
Service	39	24.53
Other	19	11.95
Total	159	100
Years of Operation	N	Percentage
Less than 5 Years	17	10.69
5 to 10 Years	29	18.24
10 to 15 Years	51	32.08
More than 15 Years	62	38.99
Total	159	100
Number of Employees	N	Percentage
Less than 10	8	5.03
10 to 50	24	15.09
51 to 100	72	45.28
Above 100	55	34.59
Total	159	100
Respondent's Designation	N	Percentage
Owner	41	25.79
Manager	39	24.53
Accountant	35	22.01
Finance Executive	44	27.67
Total	159	100

Awareness and Adoption of AI-Based Accounting Information Systems

Table 2 is depicting the respondents' Awareness and Adoption of AI-Based Accounting Information Systems.

- ❖ **Awareness of AI-Based Accounting Information Systems:** It was observed that 10.69% respondents were having very high awareness towards AI-Based Accounting Information Systems while 32.70% respondents were highly aware. Majority of respondents (40.88%) were moderately aware about AI-Based Accounting Information Systems.
- ❖ **Adoption level of AI-Based Accounting Information Systems:** Out of the total SMEs selected in sample, 40.25% SMEs have fully adopted AI-Based Accounting Information Systems, 42.14% SMEs have partially adopted AI-Based Accounting Information

Systems and 17.61% SMEs were at the pilot stage of AI-Based Accounting Information Systems.

- ❖ **Reason of adoption of AI-Based Accounting Information Systems:** Respondents were asked to indicate the primary reason behind adoption of AI-Based Accounting Information Systems. The major two reasons identified were cost reduction (42.14%) and accuracy improvement (25.79%). The other reasons were faster reporting (16.98%), competitive advantage (10.69%) and compliance needs (4.40%).
- ❖ **Duration of AI-based accounting system usage:** It was found that 46.54% SMEs were using AI-Based Accounting Information Systems for last more than 5 years while 36.48% respondents have been using AI-Based Accounting Information Systems from last 3 to 5 years.

Table 2: Awareness and Adoption of AI-Based Accounting Information Systems

Level of awareness about AI-based accounting information systems		
Response	N	Percentage
Very High	17	10.69
High	52	32.70
Moderate	65	40.88
Low	25	15.72
Total	159	100
Current adoption status of AI-based accounting systems in your organization		
Response	N	Percentage
Fully adopted	64	40.25
Partially adopted	67	42.14
Pilot stage	28	17.61
Total	159	100
Primary reason for adopting AI-based accounting systems		
Response	N	Percentage
Cost reduction	67	42.14
Accuracy improvement	41	25.79
Faster reporting	27	16.98
Compliance needs	7	4.40
Competitive advantage	17	10.69
Total	159	100
Duration of AI-based accounting system usage		
Response	N	Percentage
Less than 1 Year	9	5.66
1 to 3 Years	18	11.32
3 to 5 Years	58	36.48
More than 5 Years	74	46.54
Total	159	100

Usage of AI Features in Accounting Systems

Table 3 is showing the SMEs Usage of AI Features in Accounting Systems.

- ❖ **Extent of AI usage in accounting operations:** It was observed that 36.48% SMEs were highly using AI in accounting operations while 25.79% were using AI features moderately in accounting systems.
- ❖ **AI functionalities currently used in organization:** Respondents were asked to indicate the major AI functionalities currently used in organization and it was found that automated data entry (61.01%) and

error detection and reconciliation (51.57%) are the features used by majority of the SMEs.

- ❖ **Frequency of AI system usage for accounting tasks:** It was found that 44.65% SMEs use AI system in accounting on monthly basis and 32.70% SMEs use it on weekly basis.
- ❖ **Main accounting function where AI provides maximum benefit:** According to respondents the main functions where AI provides maximum benefit are bookkeeping (40.25%), financial reporting (32.08%) and cost control (15.72%)

Table 3: Usage of AI Features in Accounting Systems

Extent of AI usage in accounting operations		
Response	N	Percentage
Very High	34	21.38
High	58	36.48
Moderate	41	25.79
Low	26	16.35
Total	159	100
AI functionalities currently used in your organization		
Response	N	Percentage
Automated data entry	97	61.01
Error detection and reconciliation	82	51.57
Financial forecasting and budgeting	59	37.11
Tax computation and compliance	42	26.42
Fraud detection and risk analysis	61	38.36
Frequency of AI system usage for accounting tasks		
Response	N	Percentage
Daily	17	10.69
Weekly	52	32.70
Monthly	71	44.65
Occasionally	19	11.95
Total	159	100
Main accounting function where AI provides maximum benefit		
Response	N	Percentage
Bookkeeping	64	40.25
Financial reporting	51	32.08
Audit and compliance	11	6.92
Cost control	25	15.72
Decision support	8	5.03
Total	159	100

Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy

Table 4 is showing the respondents' perception regarding impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy. According to respondents the AI has improved transaction processing speed (Mean=4.28) as it has reduced manual data entry (Mean=4.12) and dependency on human intervention (Mean=3.92). It was

found that financial reports are generated more accurately using AI systems (Mean=3.87) because AI-based systems has enhanced consistency in accounting records (Mean=3.74) and it has also improved error detection and correction (Mean=3.61). Further it was observed that quality of internal financial controls has improved due to AI (Mean=3.45) and Real-time access to financial information has improved accounting efficiency (Mean=3.41).

Table 4: Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy

Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy	Mean	S.D.	C.V.	Agreement Level
AI-based accounting systems significantly reduce manual data entry.	4.12	1.09	0.26	Agree
Error detection and correction have improved after AI adoption.	3.61	0.87	0.24	Agree
AI improves the speed of transaction processing	4.28	0.92	0.21	Strongly Agree
The quality of internal financial controls has improved due to AI.	3.45	0.74	0.21	Agree
Real-time access to financial information has improved accounting efficiency.	3.41	0.85	0.25	Agree
AI-based systems enhance consistency in accounting records.	3.74	1.12	0.30	Agree
Financial reports are generated more accurately using AI systems.	3.87	0.83	0.21	Agree
AI-based accounting systems reduce dependency on human intervention.	3.92	1.05	0.27	Agree

Overall it was observed that 88.05% SMEs indicated the positive impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy.

Table 5: Overall Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy

Overall Impact	N	Percentage
Low	19	11.95
High	140	88.05
Total	159	100

To check the significance of impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy following hypothesis has been taken:-

H⁰: There is no significant impact of AI-based accounting systems on accounting efficiency and accuracy in SMEs.

H_a1: There is a significant impact of AI-based accounting systems on accounting efficiency and accuracy in SMEs.

The one sample t-test was applied against the theoretical mean 24, for testing of above hypothesis. The computed mean (30.08) is higher than theoretical mean along with the significant value of t-statistic so it can be concluded that there is a significant impact of AI-based accounting systems on accounting efficiency and accuracy in SMEs.

Table 6: One Sample t-test result to measure significance of Impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy

Variable	Observed Mean	Test Value = 24			Result
		t-value	degree of freedom	p-value	
Impact of AI -Based Accounting Systems on Accounting Efficiency and Accuracy	30.08	10.26	158	0.000	Significant

Level of Significance=5%

Impact of AI-Based Accounting Systems on SME Financial Performance

Table 8 is highlighting the respondents' agreement with the statements related Impact of AI-Based Accounting Systems on SME Financial Performance. Employees said that timely financial reporting has enhanced strategic decision-making (Mean=4.05), financial stability of the firm has improved after AI adoption (Mean=3.82) and AI-based

accounting systems have reduced overall accounting and administrative costs (Mean=3.75). It was found that AI tools have helped in identifying cost-saving opportunities (Mean=3.62) which have increased profit margin (Mean=3.53) and also improved compliance with financial regulations (Mean=3.48). At last it was observed that cash flow planning and monitoring have improved with AI adoption (Mean=3.41) and AI-based financial insights support better investment decisions (Mean=3.32).

Table 7: Impact of AI-Based Accounting Systems on SME Financial Performance

Impact of AI-Based Accounting Systems on SME Financial Performance	Mean	S.D.	C.V.	Agreement Level
AI-based accounting systems have reduced overall accounting and administrative costs.	3.75	0.87	0.23	Agree
Cash flow planning and monitoring have improved with AI adoption.	3.41	0.92	0.27	Agree
Profit margins have increased due to improved financial control.	3.53	1.25	0.35	Agree
AI-based financial insights support better investment decisions.	3.32	0.67	0.20	Neutral
AI tools help in identifying cost-saving opportunities.	3.62	1.19	0.33	Agree
Timely financial reporting has enhanced strategic decision-making.	4.05	0.82	0.20	Agree
AI-based systems improve compliance with financial regulations.	3.48	0.96	0.28	Agree
Financial stability of the firm has improved after AI adoption.	3.82	0.52	0.14	Agree

More than 80% of the respondents (80.50%) indicated the positive impact of AI-Based Accounting Systems on SME Financial Performance.

Table 8: Overall Impact of AI-Based Accounting Systems on SME Financial Performance

Overall Impact	N	Percentage
Low	31	19.50
High	128	80.50
Total	159	100

To check the significance of impact of AI-Based Accounting Systems on SME Financial Performance following hypothesis has been taken:-

H⁰2: There is no significant impact of AI-based accounting systems on SMEs financial performance.

H^a2: There is a significant impact of AI-based accounting systems on SMEs financial performance.

The one sample t-test was applied against the theoretical

mean 24, for testing of above hypothesis. The computed mean (28.88) is higher than theoretical mean along with the significant value of t-statistic so it can be concluded that there is a significant impact of AI-based accounting systems on SMEs financial performance.

Table 9: One sample t-test result to measure Impact of AI-Based Accounting Systems on SME Financial Performance

Variable	Observed Mean	Test Value = 24			Result
		t-value	degree of freedom	p-value	
Impact of AI-Based Accounting Systems on SME Financial Performance	28.88	8.54	158	0.000	Significant

Level of Significance=5%

Respondents' satisfaction with AI based accounting information systems

Table 10 is depicting the respondents' satisfaction with AI-based accounting information systems. It can be seen that respondents were highly satisfied with Speed of processing and reporting (Mean=4.15, Rank=1), Accuracy and reliability of financial data (Mean=4.02, Rank=2), Reduction in workload and effort (Mean=3.87, Rank=3)

and Value for money (Mean=3.72, Rank=4). Respondents were satisfied with Ease of use and user-friendliness (Mean=3.69, Rank=5), Data security and privacy assurance (Mean=3.61, Rank=6) and System flexibility and customization (Mean=3.53, Rank=7), however they were comparatively less satisfied with Integration with existing accounting processes (Mean=3.28, Rank=8) and Technical support and vendor responsiveness (Mean=3.28, Rank=9).

Table 10: Respondents' satisfaction with AI based accounting information systems

Factors	Mean	S.D.	C.V.	Rank
Accuracy and reliability of financial data	4.02	1.02	0.25	2
Data security and privacy assurance	3.61	0.95	0.26	6
Ease of use and user-friendliness	3.69	0.88	0.24	5
Integration with existing accounting processes	3.38	0.99	0.29	8
Reduction in workload and effort	3.87	1.07	0.28	3
Speed of processing and reporting	4.15	1.19	0.29	1
System flexibility and customization	3.53	0.62	0.18	7
Technical support and vendor responsiveness	3.28	1.08	0.33	9
Value for money	3.72	0.74	0.20	4

Overall 81.76% respondents indicated satisfaction with AI-based accounting information systems but 18.24% respondents were dissatisfied with AI-based accounting information systems.

Table 11: Respondents' overall satisfaction with AI based accounting information systems

Overall Satisfaction	N	Percentage
Low	29	18.24
High	130	81.76
Total	159	100

To check the significance of difference in employees' satisfaction towards AI based accounting information systems with respect to type of enterprise and nature of business following hypothesis has been taken:-

H₀3: Employees' satisfaction with AI-based accounting information systems is indifferent with respect to the type of enterprise and nature of business.

H_a3: Employees' satisfaction with AI-based accounting

information systems is significantly different with respect to the type of enterprise and nature of business.

To test this hypothesis the ANOVA test was applied as shown in table 12 and 13. In both the cases the computed value of F-ratio is significant so it can be concluded that employees' satisfaction with AI-based accounting information systems is significantly different with respect to the type of enterprise and nature of business.

Table 12: ANOVA test result to measure difference in Respondents' satisfaction with AI-based accounting information systems with respect to their type of enterprise

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares	F-Ratio	p-value	Result
Between Samples	66125.36	2	33062.680	58.153	0.000	Significant
Within Samples	88693.52	156	568.548			
Total	154818.88	158				

Level of Significance=5%

Table 13: ANOVA test result to measure difference in Respondents' satisfaction with AI-based accounting information systems with respect to their nature of business

Source of Variation	Sum of Squares	Degree of Freedom	Mean Sum of Squares	F-Ratio	p-value	Result
Between Samples	71459.64	3	23819.880	34.932	0.000	Significant
Within Samples	105693.25	155	681.892			
Total	177152.89	158				

Level of Significance=5%

Challenges faced by respondents in adoption of AI based accounting information system

Table 11 is depicting Challenges faced by respondents in adoption of AI based accounting information system. It can be seen that major challenges faced by the respondents

were dependence on software vendors (Mean=4.25, Rank=1), inadequate IT infrastructure (Mean=4.12, Rank=2), lack of awareness and understanding of AI benefits (Mean=3.93, Rank=3) and technical complexity of

AI-based systems (Mean=3.81, Rank=4). The challenges moderately affected the SMEs were resistance to change among employees (Mean=3.74, Rank=5), lack of trained and skilled accounting personnel (Mean=3.62, Rank=6), uncertainty about return on investment (Mean=3.52, Rank=7), and high implementation and maintenance costs

(Mean=3.48, Rank=8) however few of the SMEs faced problems of data security and confidentiality concerns (Mean=3.22, Rank=9) and integration issues with existing software (Mean=3.11, Rank=10).

Table 14: Challenges faced by respondents in adoption of AI based accounting information system

Challenges and Barriers	Mean	S.D.	C.V.	Rank
Data security and confidentiality concerns	3.22	0.88	0.27	9
Dependence on software vendors	4.25	0.94	0.22	1
High implementation and maintenance costs	3.48	1.05	0.30	8
Inadequate IT infrastructure	4.12	0.87	0.21	2
Integration issues with existing software	3.11	0.69	0.22	10
Lack of awareness and understanding of AI benefits	3.93	0.75	0.19	3
Lack of trained and skilled accounting personnel	3.62	1.05	0.29	6
Resistance to change among employees	3.74	0.68	0.18	5
Technical complexity of AI-based systems	3.81	0.84	0.22	4
Uncertainty about return on investment	3.52	0.64	0.18	7

Conclusion

1. The results revealed that majority of SMEs have adopted AI based accounting information systems for cost reduction and accuracy improvement. Respondents were using AI based tools for bookkeeping, financial reporting and decision support, generally on monthly basis.
2. According to respondents the AI has improved transaction processing speed as it has reduced manual data entry and dependency on human intervention. It was found that financial reports are generated more accurately using AI systems because AI-based systems has enhanced consistency in accounting records and it has also improved error detection and correction. Overall it was observed that 88.05% SMEs indicated the positive impact of AI-Based Accounting Systems on Accounting Efficiency and Accuracy.
3. Employees said that timely financial reporting has enhanced strategic decision-making, financial stability of the firm has improved after AI adoption and AI-based accounting systems have reduced overall accounting and administrative costs. More than 80% of

the respondents (80.50%) indicated the positive impact of AI-Based Accounting Systems on SME Financial Performance.

4. Respondents were highly satisfied with Speed of processing and reporting, Accuracy and reliability of financial data, Reduction in workload and effort and Value for money. Respondents were satisfied with Ease of use and user-friendliness, Data security and privacy assurance and System flexibility and customization, however they were comparatively less satisfied with Integration with existing accounting processes and Technical support and vendor responsiveness.
5. Overall 81.76% respondents indicated satisfaction with AI-based accounting information systems but 18.24% respondents were dissatisfied with AI-based accounting information systems. The ANOVA results indicated that employees' satisfaction with AI-based accounting information systems is significantly different with respect to the type of enterprise and nature of business.
6. The major challenges faced by the respondents were dependence on software vendors, inadequate IT

infrastructure, lack of awareness and understanding of AI benefits and technical complexity of AI-based systems.

Implications of the study:

The results show that Artificial Intelligence based Accounting Information Systems are really helping medium sized businesses. They are making things work better and faster and also helping with money matters. A lot of companies are saying that these systems are making a difference in how quickly they can do things how accurate their reports are and how much money they can save. This means that Artificial Intelligence is really good at making accounting easier and more efficient. Most of the companies that used these systems said they were happy with the results and that it helped them make decisions about money. This means that Artificial Intelligence based Accounting Information Systems are very useful for medium sized businesses. The people in charge should help these businesses by giving them money, training and the tools they need to use these systems.

The people who did the study also found out that the companies need to do more than just get the system. They need to make sure it works well with what they have and that they can get help when they need it. Some companies were not as happy with how the system worked with their processes and how much help they got from the people who sold it to them. This means that the companies need to get systems that are tailored to their needs and that they need to work with the people who sell the system. The study also found out that different types of businesses have needs so they need to get systems that are right for them. There are some problems that the companies are facing, like not having the technology and not knowing enough about the systems. This means that they need to learn more about the technology and how to use it. If they can do this they will be able to get the most out of Artificial Intelligence based Accounting Information Systems and make their businesses better. Artificial Intelligence based Accounting Information Systems are very important, for medium sized businesses and can really help them with their money matters.

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