
Role of Accounting Information Systems (AIS) in Enhancing Financial Accuracy: Evidence from Ahmedabad Industries

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ABSTRACT

This study examines how Accounting Information Systems (AIS) help improve financial accuracy in small businesses in Ahmedabad's Vatva Industrial Area. Researchers used a mixed-methods approach with surveys from 250 businesses and detailed case studies from 12 firms. Results show that businesses using AIS have fewer errors, more complete records, faster reporting and better compliance with rules. The findings suggest AIS is a valuable tool for small industries in growing areas like Ahmedabad. Recommendations include training and simple software adoption for better financial management.

1. Introduction

Small businesses in industrial areas face many challenges in keeping accurate financial records. Manual bookkeeping often leads to mistakes, delays and non-compliance with tax and accounting standards. Accounting Information Systems (AIS) combine technology, people and processes to handle financial data more efficiently.

This paper explores the role of AIS in improving financial accuracy in Ahmedabad's industries, focusing on Vatva Industrial Area. It answers: How does AIS affect error rates, record quality, reporting speed and compliance? The study provides practical evidence from local small businesses in retail, construction, manufacturing and services.

This comprehensive approach is essential given the significant contribution of Small and Medium Enterprises to economic development, particularly in regions like India where they account for a



substantial portion of the GDP and industrial employment (Hermansyah, 2023). However, many of these entities still rely on manual bookkeeping, which is often inefficient and prone to errors, highlighting the potential for AIS to improve financial reporting accuracy and efficiency (Indarto et al., 2025).

2. Literature Review

Previous research has extensively explored the impact of Accounting Information Systems on financial performance and data quality in Small and Medium-sized Enterprises across various geographical contexts (Al-Dalabih, 2018). For instance, studies in Arab countries and Malaysia have demonstrated that AIS adoption significantly improves financial reporting accuracy, operational efficiency and decision-making by enhancing timeliness, transparency and the overall reliability of financial data (Herez, 2025; LIN et al., 2024).

Furthermore, the effectiveness of an AIS in improving financial transparency and accuracy, particularly for Micro, Small and Medium Enterprises, has been quantitatively demonstrated through analyses showing strong correlations between system reliability, data accuracy and the quality of financial reporting (Nurro'yi et al., 2025).

However, some research suggests that the interpretability of value relevance models in this domain remains challenging, often applicable only in limited scenarios (Kareem et al., 2024). Despite these advancements, many small and medium-sized companies continue to face challenges in maintaining adequate financial records and leveraging financial reports effectively (Al-dmour et al., 2016). This necessitates a deeper examination into the factors influencing AIS adoption and its subsequent impact on financial accuracy, especially considering the specific challenges faced by SMEs such as low financial literacy and limited technological access (Mediaty et al., 2025).

This study aims to bridge this research gap by investigating how AIS adoption directly influences error frequency, record completeness, timeliness and compliance with accounting standards within diverse industrial settings in Ahmedabad. While considerable academic attention has focused on digitalization in large corporations, research specifically addressing the integration and impact of digital accounting in SMEs within traditional industries remains comparatively sparse, despite their crucial economic role (Pham and Vu, 2022).

3. Methodology

The study used a mixed-methods approach for reliable results. Quantitative Phase: A structured questionnaire was completed by 250 small businesses (employees) across retail, construction, manufacturing and services in Vatva Industrial Area. Qualitative Phase: Twelve case studies were conducted, including 25 interviews with owner-managers and external accountants.

Measurement: Financial accuracy was measured through:

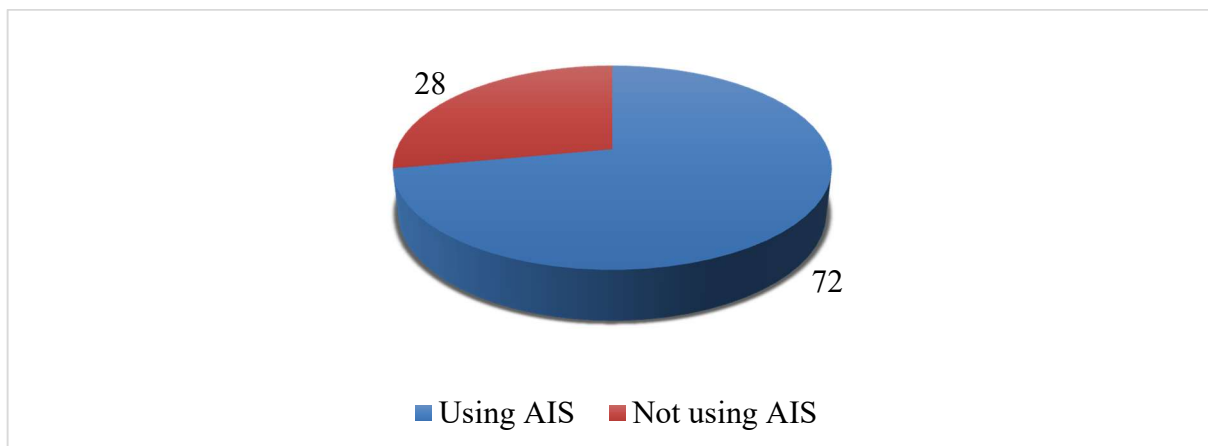
- Error frequency (number of mistakes in records)
- Record completeness (percentage of required data captured)
- Timeliness (how quickly reports are ready)
- Compliance with standards (adherence to GST, accounting norms, etc.)

Data was analyzed using simple statistical tools and thematic analysis for interviews.

4. Results and Discussion

4.1 AIS Adoption

Out of 250 businesses surveyed, about 72% (180) used some form of AIS, while 28% (70) relied on manual methods.



4.2 Key Financial Accuracy Metrics

Businesses using AIS showed clear improvements across all measures.

Table 1: Comparison of Financial Accuracy Metrics



Metric	With AIS	Without AIS	Improvement
Error Frequency (avg errors/month)	12	48	75%
Record Completeness (%)	93	62	50%
Timeliness (days to report)	5	18	72%
Compliance Score (%)	96	68	41%

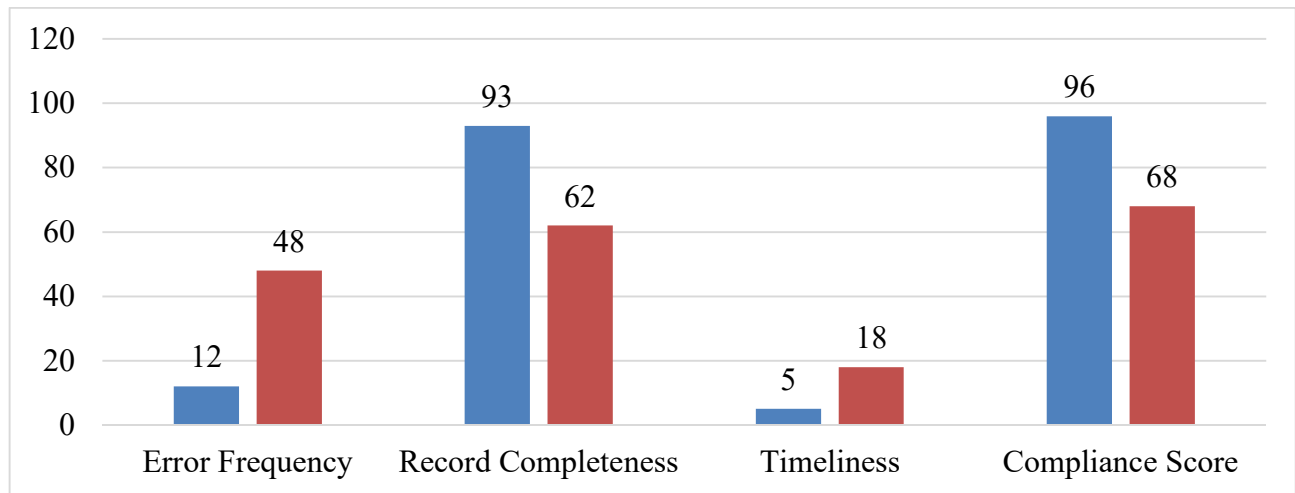


Figure 1: Financial Accuracy Metrics – AIS vs Non-AIS

Interviews confirmed these numbers. Owner-managers said AIS software automatically checks data and generates reports quickly. One manufacturing firm reduced monthly errors from 50+ to under 10 after adopting basic AIS. Accountants noted better audit readiness and fewer penalties.

4.3 Sector-wise Insights

Manufacturing and construction firms gained the most from AIS due to complex inventory and project costs. Retail businesses appreciated quick sales tracking. Services sector saw improvements in billing accuracy.

Challenges mentioned: High initial cost, lack of training and fear of technology among older owners.

5. Conclusion

This study clearly demonstrates that Accounting Information Systems play a vital role in enhancing financial accuracy for small businesses in Ahmedabad’s Vatva Industrial Area. AIS users enjoy fewer errors, complete records, timely reports and strong compliance. These improvements lead to better decision-making, reduced risks and growth opportunities.



Recommendations:

- Government and industry associations should offer AIS training programs.
- Affordable, user-friendly software tailored for Indian small businesses should be promoted.
- Future research can track long-term effects on business performance.

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