



THE IMPACT OF QUALITIES OF ACCOUNTING INFORMATION SYSTEMS ON ORGANIZATIONAL PERFORMANCE OF SMES IN RATNAPURA DISTRICT

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ABSTRACT

The Purpose of this paper is to examine the impact of Qualities of Accounting Information System dimensions – System Quality, Information Quality and Service Quality on Organizational Performance of Small and Medium Enterprises in Ratnapura District. SMEs play a crucial role in economic development, and effective AIS can enhance operational efficiency, decision-making, and overall performance. A quantitative research design was adopted and data were collected from 101 SMEs respondents using a structured questionnaire which was distributed in Ratnapura District. Data were analyzed using, reliability analysis, descriptive statistics, correlation analysis and multiple regression analysis. The results of the study revealed that the overall usage rate of the qualities of AIS is high. Respondents perceived a high level of AIS effectiveness and organizational performance. The system quality and service quality had a positive impact on the organizational performance of SMEs in the Ratnapura district, while information quality was found to have a positive but insignificant effect. The findings highlight that robust system functionality and responsive service support are key drivers of SME performance, emphasizing the strategic importance of technological infrastructure and user support in AIS. It is recommended that SMEs invest in reliable AIS, provide user training, and enhance technical support to maximize performance outcomes. Future studies could explore additional factors such as organizational culture, user competence, and cross-sector comparisons to further understand AIS effectiveness.

Keywords: Accounting Information System, System Quality, Service Quality, Information Quality, Organizational Performance

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1. Introduction

In today's global economy, which is marked by instability, competition, and rapid technological change, SMEs are widely acknowledged as essential drivers of economic growth, job creation, and innovation. This is especially true in Sri Lanka, where SMEs make up more than 75% of all businesses, make a big difference to the national Gross Domestic Production, and are important for regional growth and reducing poverty (Department of Census and Statistics, Sri Lanka, 2019). So, the performance and long-term success of these businesses are directly linked to the country's overall economic and social success.

The Ratnapura District, known as the “City of Gems,” has a unique and important economy in Sri Lanka. SMEs that mine and trade gems, farm (especially tea, rubber, and rice), and a growing tourism industry based on the country's natural and cultural heritage are the main drivers of its economy. Even though there is a lot of economic potential in Ratnapura, SMEs there, like SMEs everywhere else, face a lot of problems. These include limited access to finance, fierce competition in the market, rising operational costs, and trouble accessing new technologies. To get through these problems, you need to make smart, well-informed decisions, which depends a lot on having accurate, timely, and useful financial information.

In this situation, an AIS is an important strategic tool. An AIS is not just a digital version of manual bookkeeping; it is a formal, computer-based system that collects, stores, processes, and shares both financial and non-financial information to help an organization make decisions, coordinate, and control its activities (Romney & Steinbart, 2020). If an AIS is set up and used correctly, it can turn raw data into useful information that lets SME managers keep an eye on cash flow, keep costs down, manage inventory, figure out how profitable a business is, and improve overall operational efficiency. Research conducted by Grande et al., (2011) and Soudani, (2012) has empirically established a positive correlation between the effective utilization of robust AIS and enhanced organizational performance, underscoring its significance in elevating decision-making quality and fortifying internal controls.

However, the adoption and effective utilization of AIS among SMEs, particularly in developing regions like Ratnapura, are often inconsistent. Many SMEs continue to rely on traditional, manual accounting methods, which are prone to error, delay, and inefficiency, thereby limiting their strategic potential. Understanding the specific impact that a modern AIS has on the performance of SMEs in the distinct socio-economic context of Ratnapura District is crucial. This research seeks to fill this contextual gap by providing empirical evidence on how AIS influences the organizational performance of these vital local enterprises, thereby contributing to both academic discourse and practical business development in the region.

Research Problem

The pivotal role of SMEs in the economy of Ratnapura District is undisputed. However, due to internal inefficiencies and inadequate strategic management, these businesses continuously struggle with high failure rates and sub-par performance (Tharmini & Lakshan, 2021). The use of subpar accounting techniques is frequently a major contributing factor to these problems. According to Madurapperuma, et al., (2016), SMEs do not keep complete accounting records because of lack of accounting knowledge and the cost of hiring professional accountants. In the district, a large number of SMEs continue to use manual, paper-based accounting systems or make insufficient use of simple digital spreadsheets (Darshi, et al., 2020). Lack of integration, a high risk of human error, delayed financial reporting, and an inability to deliver thorough data for strategic analysis are the characteristics that define these approaches (Somathilake & Ranathunga, 2021). This lack of knowledge makes it difficult to manage cash flow effectively, hides actual cost structures, makes it difficult to accurately budget and forecast, and eventually results in strategic choices that are based more on gut feeling than on factual data (Somathilake & Ranathunga, 2021).

There is a substantial research gap concerning the particular circumstances of the Ratnapura District, despite the fact that previous literature, such as that of Ismail & King, (2006) and Hendrawathi et al., (2020), has demonstrated a generally positive relationship between AIS and SME performance in a variety of national and international contexts. An AIS's adoption and performance impact may be influenced by the district's unique economic structure, which is dominated by the gem industry and agriculture. This structure creates unique operational cycles, inventory management requirements (for gemstones, for example), and market dynamics. It's possible that generic results from other areas won't apply directly.

Furthermore, prior research has often focused narrowly on financial performance metrics. The broader, multidimensional impact of AIS on non-financial aspects of performance - such as operational efficiency, decision-making satisfaction, customer relations, and competitive agility - within Ratnapur's SME sector remains underexplored. It is unclear whether the AIS used by these SMEs are of sufficient quality (in terms of system, information, and service) to generate tangible benefits. Therefore, a clear and targeted investigation is necessary.

In this context research problem is identified as **“How do Qualities of Accounting Information Systems influence on Organizational Performance of SMEs in Ratnapura District?”**

Research Objectives

- To identify the level of Qualities of Accounting Information Systems and Organizational Performance of SMEs in Ratnapura District.
- To identify the relationship between the Qualities of Accounting Information Systems and Organizational Performance of SMEs in Ratnapura District.
- To identify the impact of Qualities of Accounting Information Systems on Organizational Performance of SMEs in Ratnapura District.

Research Questions

- What is the level of Qualities of Accounting Information Systems and Organizational Performance of SMEs in Ratnapura District?
- What is the relationship between the Qualities of Accounting Information Systems and Organizational Performance of SMEs in Ratnapura District?
- What is the impact of Qualities of Accounting Information Systems on Organizational Performance of SMEs in Ratnapura District?

2. Literature review

Accounting Information System in the Sri Lankan Context

AIS is a cornerstone of modern business management, defined as a system that collects, records, stores, and processes financial and accounting data to be used by decision-makers (Romney & Steinbart, 2020). In the Sri Lankan context, the adoption and effectiveness of AIS among SMEs have become a critical area of study due to the sector's significant contribution to the national economy. The Sri Lankan government and financial institutions have increasingly emphasized the digitalization of business processes, recognizing that robust AIS can enhance transparency, facilitate access to credit, and improve overall business viability.

However, the landscape of AIS adoption in Sri Lankan SMEs is characterized by notable challenges. Research indicates that while larger corporations have integrated sophisticated Enterprise Resource Planning systems, many SMEs still rely on manual record-keeping or basic computerized spreadsheets like Microsoft Excel (Wickramasinghe, 2018). The barriers to adoption are multifaceted, including high perceived costs, a lack of technical expertise, and limited awareness of the long-term benefits of a formal AIS. Studies specific to Sri Lanka, such as those by Perera & Dissanayaka, (2020), found that SME owners often view accounting software as a compliance tool rather than a strategic asset for decision-making. This perception limits the depth of its implementation and utilization. Furthermore, the effectiveness of an AIS in the Sri Lankan SME sector is often influenced by the quality of the system itself and the entrepreneurial orientation of the owner-manager. In regions like Ratnapura, where the economy is dominated by gem-based and agricultural businesses with unique inventory and cash-flow

cycles, the need for a tailored AIS that addresses these specific operational characteristics is paramount. Understanding the Sri Lankan, and more specifically the Ratnapura, context is therefore essential for evaluating the true impact of AIS on organizational performance.

Theoretical Review

DeLone and McLean Information Systems Success Model

The DeLone and McLean Information System Success Model (2003) is one of the most influential frameworks for evaluating the effectiveness of information systems. The model posits that system success is a multidimensional and interdependent construct. It begins with System Quality and Information Quality, which together influence Intention to Use and User Satisfaction. These, in turn, lead to Net Benefits—the ultimate impact on individual and organizational performance. This model is highly applicable to AIS research because it moves beyond mere technical implementation to focus on the usage and perceived benefits. For SMEs, the “net benefits” can be directly translated into improved financial performance, better decision-making, and enhanced operational efficiency. This study adapts this model by using the core independent variables of System Quality, Information Quality, and Service Quality to predict the dependent variable, Organizational Performance (Net Benefits).

Resource-Based View Theory

The Resource-Based View theory contends that firms achieve sustainable competitive advantage by possessing valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991). In the context of this study, a well-implemented and effectively used AIS can be considered such a strategic resource. For an SME, the AIS is not just a tool for recording transactions; it is a capability that enables the firm to generate timely and accurate information. This information advantage allows SME managers to identify opportunities, optimize resources, and respond to threats more effectively than competitors who lack such a system. The RBV theory thus provides a theoretical explanation for why AIS leads to superior performance: it enhances the firm's internal capabilities, making it more efficient and agile, thereby constituting a source of competitive advantage in the crowded SME landscape of Ratnapura District.

Technology-Organization-Environment Framework

The Technology-Organization-Environment framework, developed by Tornatzky & Fleischer, (1990), explains technology adoption at the firm level through three contexts. The Technological context refers to the relevant internal and external technologies, including the available AIS solutions. The Organizational context encompasses the firm's size, scope, and managerial structure, which in SMEs is often shaped by the owner-manager's knowledge and attitudes. The Environmental context includes the industry structure, competitors, and regulatory environment. This framework is crucial for this study as it moves beyond a simplistic cause-and-effect relationship. It acknowledges that the impact of AIS on an SME's performance in Ratnapura is not determined solely by the software's quality but is also influenced by organizational factors (e.g., owner's tech-savviness) and environmental factors (e.g., the competitive gem trading market, government support policies).

System Quality of AIS

System Quality refers to the desirable characteristics of the AIS software itself. It measures the performance of the information system in terms of its reliability, ease of use, flexibility, and data processing speed (DeLone & Mclean, 2003). In essence, it answers the question: "Is the system well-designed and technically sound?" For SMEs, which often lack dedicated IT support, high system quality is paramount. Key attributes include ease of use, which reduces training time and encourages user adoption; reliability, ensuring the system is available and functions without frequent crashes; response time, providing information quickly for timely decision-making; and integration, allowing different modules (e.g., sales, inventory, purchasing) to work together seamlessly. A system with high quality

reduces user frustration, increases efficiency in daily accounting tasks, and ensures that the technological infrastructure supports rather than hinders business operations. If the system is cumbersome or unreliable, users are likely to abandon it, negating any potential benefits (Petter, et al., 2008).

Information Quality of AIS

Information Quality pertains to the desirable characteristics of the output produced by the AIS. It is not about the system itself, but about the information it delivers to its users. High-quality information is a prerequisite for effective decision-making. According to DeLone and McLean (2003), the key dimensions of information quality include accuracy (freedom from error), timeliness (availability when needed), relevance (applicability to the decision at hand), completeness (inclusion of all necessary data), and understandability (clarity of presentation). For an SME manager in Ratnapura, this translates into receiving a sales report that is accurate, available by the first of the month (timely), broken down by product line (relevant), includes all expenses (complete), and is presented in a clear chart or statement (understandable). Poor information quality, such as outdated inventory reports or inaccurate cost calculations, can lead to misguided strategies, poor inventory management, and incorrect pricing, ultimately harming the business's profitability and sustainability. Soudani, (2012) emphasized that the usefulness of an AIS is directly dependent on the quality of the information it generates, making this a critical variable for assessing AIS impact.

Services Quality of AIS

Service Quality measures the quality of support services the organization receives, whether from an external vendor or an internal IT team. Even the best AIS software can fail to deliver benefits if the support structure is inadequate. For SMEs, which typically lack in-house IT expertise, the role of the external vendor becomes critically important. Petter et al., (2008) identify key aspects of service quality, including responsiveness (promptness in handling requests), reliability (ability to perform the promised service dependably), assurance (knowledge and courtesy of support staff), and empathy (the provision of individualized attention). For instance, when an SME in Ratnapura encounters a bug or needs to generate a new report, the vendor's ability to provide quick, effective, and courteous support directly affects the continuity of business operations and the user's confidence in the system. High service quality ensures that any technical issues are resolved swiftly, minimizing downtime and ensuring that the AIS continues to be a reliable tool for the business.

Organizational Performance

Organizational Performance is the dependent variable in this study, representing the ultimate "net benefit" of AIS implementation. Traditionally, performance was measured using narrow financial metrics such as profitability, return on investment (ROI), and sales growth. However, contemporary research advocates for a multidimensional approach that includes both financial and non-financial indicators (Venkatraman & Ramanujam, 1986). Financial performance remains crucial and includes metrics like increased profitability, revenue growth, and cost reduction. Non-financial performance, however, captures the operational and strategic benefits that often precede financial gains. This includes improved decision-making quality due to better information, enhanced operational efficiency through process automation, higher customer satisfaction from better service delivery, and increased competitive advantage through more agile and informed strategic moves. For SMEs, which are often more agile but resource-constrained, these non-financial indicators can be leading indicators of long-term financial success and sustainability (Kubuye, et al., 2019).

The relationship between AIS and Organizational Performance

A substantial body of literature provides strong theoretical and empirical support for a positive relationship between AIS and organizational performance. Theoretically, as posited by the DeLone and

McLean Information Systems Success Model, high-quality AIS—reflected through system quality, information quality, and service quality—enhances user satisfaction and system use, which subsequently generates net organizational benefits (Delone & Mclean, 2003). The Resource-Based View (RBV) further strengthens this argument by conceptualizing AIS as a strategic organizational capability that improves the effective utilization of firm resources and contributes to sustainable competitive advantage (Berny, 1991; Ismail & King, 2006).

Empirically, this relationship has been validated across various contexts. Studies focusing on small and medium-sized enterprises consistently demonstrate that effective AIS implementation streamlines operational processes, reduces clerical errors, and saves managerial time, thereby enabling greater focus on strategic decision-making (Grande, et al., 2011; Romney & Steinbart, 2020). For instance, the automation of invoicing and inventory tracking through AIS has been shown to improve cash flow management and minimize stock-outs and overstocking situations (Soudani, 2012).

The quality of information generated by AIS is widely regarded as the most critical link to performance outcomes. Accurate and timely cost information supports more effective pricing decisions, while real-time sales data assists managers in identifying emerging market trends and shifts in customer preferences (Hall, 2011; Hunton, et al., 2003). Such improvements in decision quality directly contribute to enhanced profitability and market share (Nicolaou, 2000).

Furthermore, the integrated nature of a well-designed AIS reduces information silos within organizations, thereby improving coordination among departments such as sales, production, and finance, which in turn enhances overall operational efficiency (Gelinass, et al., 2018). The service quality dimension of AIS ensures system reliability, continuous support, and adaptability to evolving business requirements, helping organizations sustain performance improvements over time (Delone & Mclean, 2003).

In the context of developing economies, empirical evidence suggests that SMEs investing in robust AIS are better equipped to manage economic volatility, ensure regulatory compliance, and attract external financing, particularly from financial institutions that value transparency and reliability in financial reporting (Ismail & King, 2006). Therefore, the cumulative theoretical and empirical evidence strongly indicates that AIS—when implemented with a strong emphasis on quality and adequate organizational support—serves as a critical driver of both financial performance and operational effectiveness in SMEs.

3. Methodology

Research Design, Population and Sample

This study is grounded in a positivist research philosophy. This paradigm is appropriate as it operates on the assumption that the reality of the impact of AIS on performance is objective and can be measured quantitatively through observable and empirical evidence (Saunders, et al., 2019). Aligned with this philosophy, the research adopts a deductive approach. This approach involves developing a theoretical framework based on existing literature—specifically, the DeLone & McLean Information System Success Model and the Resource-Based View—and then testing hypotheses derived from this theory within the specific context of SMEs in the Ratnapura District.

Consistent with the positivist and deductive stance, a quantitative research design is employed. This design was selected because it allows for the systematic collection of numerical data from a sizable sample, facilitating statistical analysis to objectively examine the relationships between the defined variables (e.g., AIS quality and organizational performance). While qualitative methods can provide depth, the quantitative approach was chosen for its ability to generalize findings across the population, test specific hypotheses, and provide measurable evidence of the proposed relationships. The data

were collected using a structured questionnaire and used stratified random sampling method as the sampling technique.

Data Collection Method

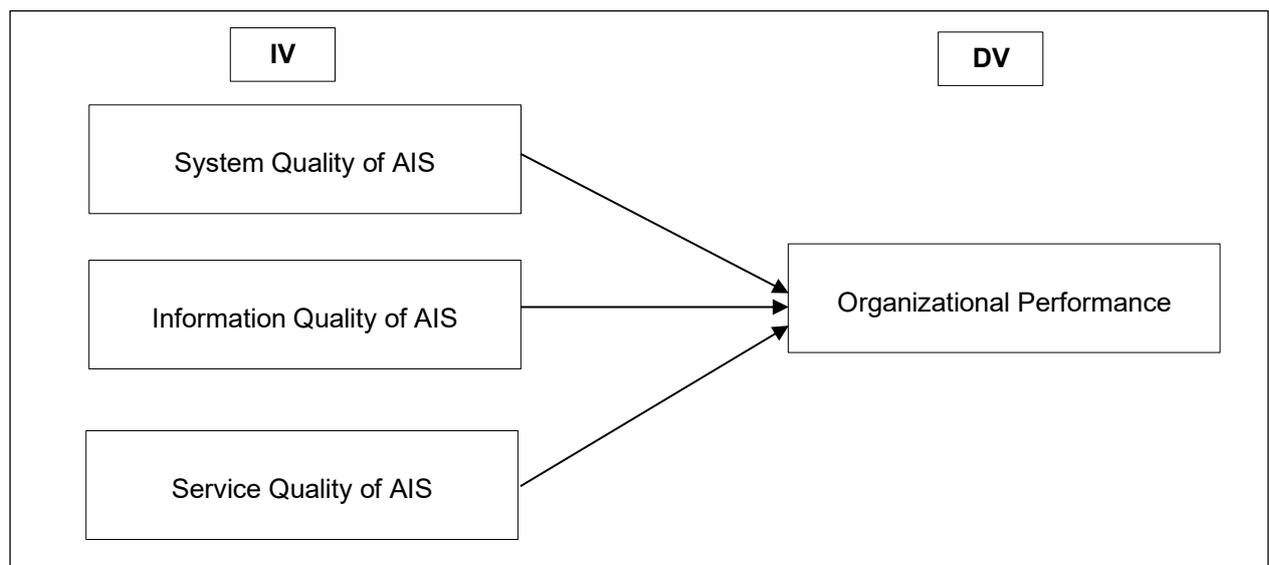
Primary data was collected using a structured questionnaire administered to owners or managers of SMEs in the Ratnapura District. The questionnaire was designed with multiple sections to capture demographic profiles and the core constructs of the study. To ensure the precise measurement of attitudes and perceptions, the questionnaire was utilized a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scaling technique is a standard and reliable method in survey-based quantitative research for quantifying subjective perceptions, such as the perceived quality of an AIS or the perceived improvement in organizational performance.

Questionnaire Design

The primary focus of this study was on SMEs that were well-organized and had superior finance, accounting, and administrative departments. To get their thoughts on this study, the researcher reached out to each of the chosen SMEs. A meeting was arranged at the company's premises for those who consented to take part and complete the research questionnaire. In the end, 100 questionnaires were gathered in nine weeks. The primary method of data collection is incorporated into the study. There were three parts to the questionnaire. Nominal ordinal scales were used to collect respondents' demographic data in the first section. Information about SMEs followed, and the third section contained research data, including 24 closed-ended questions.

Data Analysis Techniques

The quantitative data collected was analyzed using the SPSS 26th version. Reliability analysis was conducted to assess the internal consistency of the research questionnaire through Cronbach's Alpha Coefficient. Descriptive statistic was used to assess the usage rate of AIS and OP by indicating frequencies, mean and standard deviation of each dimension of AIS. After that, correlation analysis was selected to examine the relationship between AIS and OP of SMEs in Ratnapura District. Finally, the main hypotheses were tested using the multiple regression analysis to evaluate the impact of AIS on OP of SMEs in Ratnapura District. The Statistical significance was determined based on a p-value less than 0.05.



Source(s): Authors' own work

Hypotheses Development

Based on the above literature review and conceptual framework, the following hypotheses were formulated.

H₁: System Quality of AIS positively and significantly impacts the Organizational Performance of SMEs in Ratnapura District.

H₂: Information Quality of AIS positively and significantly impacts on the Organizational Performance of SMEs in Ratnapura District.

H₃: Service Quality of AIS positively and significantly impacts on the Organizational Performance of SMEs in Ratnapura District.

Operationalization

Table 1 Operationalization of variables

Variable/Dimensions	Indicators	Definitions	Measurement
Independent Variable – AIS			
System Quality	Ease of Use, Reliability, Response Time, Integration	The degree to which an AIS is easy to use, reliable, and efficient.	5-point Likert Scale
Information Quality	Accuracy, Timeliness, Relevance, Completeness, Understandability	The quality of the output produced by the AIS, including its relevance and clarity.	5-point Likert Scale
Service Quality	Responsiveness, Reliability, Assurance, Empathy	The quality of support services received from the AIS vendor or IT team.	5-point Likert Scale
Dependent Variable – Organizational Performance			
Financial Performance	Profitability, Sales Growth, Cost Control	The financial outcomes and economic health of the SME.	5-point Likert Scale
Non-Financial Performance	Operational Efficiency, Decision-Making Quality, Customer Satisfaction	The non-monetary indicators of business success and operational effectiveness.	5-point Likert Scale

Source(s): Delone & Mclean, (2003), Grande et al., (2011), Kubuye et al., (2019), Petter et al., (2008), Saunders et al., (2019) Soudani, (2012), Venkatraman & Ramanujam, (1986)

4. Findings

Reliability analysis

The reliability of the research instrument was assessed using Cronbach’s alpha coefficient, which measures the internal consistency of the questionnaire items. As shown in Table 2, all variables

recorded Cronbach's alpha values greater than 0.700. According to Nunnally (1978), a Cronbach's alpha value of 0.700 or higher indicates an acceptable level of reliability for social science research instruments. This result confirms that the questionnaire items used in this study are reliable and internally consistent, meaning that the items within each variable measure the same underlying construct consistently. Therefore, the collected data can be considered statistically sound and suitable for further analysis, such as correlation or regression tests.

Table 2 Reliability Analysis

Instruments	No.: of items	Cronbach's Alpha Coefficients
System Quality of AIS	04	0.912
Information Quality of AIS	05	0.771
Service Quality of AIS	04	0.809
Organization Performance	08	0.736

Source(s): Authors' own work

Table 3 Frequency Distribution of Personal Information of Respondents'

Demographic Profile		Frequencies	Percentages (%)
Gender	Male	54	53.50%
	Female	47	46.50%
Age Level	20 – 30	16	15.80%
	31 – 40	41	40.60%
	41 – 50	15	14.90%
	Above 50	29	28.70%
Education Level	Diploma	20	19.80%
	Bachelor's Degree	51	50.50%
	Master's Degree	23	22.80%
	Postgraduate Degree	03	3.00%
	Other	04	4.00%
Business Sector	Gem and Jewellery	16	28.70%
	Agriculture	45	44.60%
	Retail and Trading	13	12.90%
	Tourism and Hospitality	09	8.90%
	Manufacturing	13	12.90%
	Other	05	5.00%
Number of Employees	Less than 10	29	28.70%
	10 – 49	58	57.40%
	49 – 249	14	13.90%
Years in Business	Less than 3	26	25.70%
	3 – 5	38	37.60%
	6 – 10	29	28.70%
	More than 10	08	7.90%
Primary Accounting System currently using	Manual Bookkeeping	12	11.90%
	Spreadsheets (Excel)	45	44.60%
	Simple Accounting Systems	14	13.90%
	Advanced Software (ERP)	17	16.80%
	Other	13	12.90%

Source(s): Authors' own work

The survey comprised 101 respondents, with males (53.5%) slightly outnumbering females (46.5%). The majority were aged 31–40 years (40.6%), followed by those aged above 50 (28.7%). Regarding education, most respondents held a Bachelor's degree (50.5%), indicating a well-educated sample. In terms of business sector, agriculture (44.6%) was the most represented, followed by gem and jewellery (28.7%). Over half of the businesses (57.4%) employed 10–49 employees, and 37.6% had been operating for 3–5 years, showing moderate business maturity. Concerning accounting practices, the majority (44.6%) used spreadsheets (Excel), while 16.8% used advanced software, reflecting a gradual shift from manual to computerized accounting systems.

Objective one: Level of AIS and OP of SMEs in Ratnapura District.

Table 4 Usage Level of the variables

Variable	Mean	Std. Deviation	Decision Attribute
System Quality of AIS	3.60	1.054	High Level
Information Quality of AIS	3.87	0.735	High Level
Service Quality of AIS	3.81	0.830	High Level
Overall, AIS	3.76	0.594	High Level
Organizational Performance	3.64	0.631	High Level

Source(s): Authors' own work

According to the descriptive analysis, all variables had high mean values, which indicates that respondents had an overall favourable opinion. The highest mean score of AIS was for Information Quality (M = 3.87, SD = 0.735), which was followed by System Quality (M = 3.60) and Service Quality (M = 3.81). A high degree of effectiveness is also shown by the overall AIS mean (M = 3.76, SD = 0.594). Furthermore, the high mean score for Organizational Performance (M = 3.64, SD = 0.631) indicates that respondents believe AIS implementation is associated with strong performance outcomes.

Objective Two: Relationship between AIS and Organizational Performance

Table 5 Correlations Analysis

		OP	IQ	SQ	SEQ
Organizational Performance	Pearson Correlation	1	.132	.608**	.495**
	Sig. (2-tailed)	1.11	.188	.000	.000
	N	101	101	101	101

*Correlation is significant at the 0.05 level (2-tailed).

Source(s): Authors' own work

The Pearson correlation analysis examined the relationship between Accounting Information System (AIS) dimensions and organizational performance. The results indicate a strong positive and significant correlation between System Quality of AIS and organizational performance ($r = 0.608$, $p < 0.01$), and a moderate positive and significant correlation between Service Quality of AIS and organizational performance ($r = 0.495$, $p < 0.01$). However, Information Quality of AIS shows a weak and insignificant correlation ($r = 0.132$, $p > 0.05$). These findings suggest that improvements in system and service quality of AIS are strongly associated with enhanced organizational performance.

Objective Three: Impact of AIS on Organizational Performance of SMEs in Ratnapura District**Table 06 Multicollinearity diagnostic using VIF**

Variable	Tolerance value	VIF
System Quality of AIS	0.952	1.050
Information Quality of AIS	0.886	1.129
Service Quality of AIS	0.929	1.077

Source(s): Authors' own work

The collinearity diagnostics indicate that all independent variables have Tolerance values above 0.80 and VIF values close to 1.00, which are well within the acceptable range (Tolerance > 0.20 and VIF < 5). Specifically, System Quality of AIS (VIF = 1.050), Information Quality of AIS (VIF = 1.129), and Service Quality of AIS (VIF = 1.077) show very low multicollinearity. These results confirm that the independent variables are not highly correlated with each other, ensuring the stability and reliability of the regression model.

Table 07: Summary of the main research hypothesis testing results

Hypothesis	Statements	Variable/Dimensions	b	t	Sig.	Results
H1	SQ positively and significantly impacts on OP	STQ	0.306	6.613	0.000	Accepted
H2	IQ positively and significantly impacts on OP.	IQ	0.009	0.139	0.890	Rejected
H3	SQ positively and significantly impacts on OP.	SQ	0.273	4.765	0.000	Accepted

Notes(s): R-sq = 0.489; adjusted R-sq = 0.473; Durbin Watson: 2.127 significant level: *p < 0.01; **p < 0.05
Source(s): Authors' own work

According to the Table 07, R Square value of 0.489, indicating that approximately 48.9% of the variation in organizational performance can be explained by the three AIS dimensions. The Adjusted R Square 0.473 confirms the model's good explanatory power after adjusting for the number of predictors. The Durbin-Watson statistic 2.127 indicates no autocorrelation, confirming that the model's residuals are independent.

According to the Table 07, the results show that System Quality of AIS ($\beta = 0.510$, $p = 0.000$) and Service Quality of AIS ($\beta = 0.359$, $p = 0.000$) have positive and statistically significant impacts on organizational performance, indicating that improvements in these factors enhance performance levels. However, Information Quality of AIS ($\beta = 0.010$, $p = 0.890$) has an insignificant effect, suggesting it does not contribute meaningfully to OP in this model. The regression equation implies that, holding other factors constant, a one-unit increase in System or Service Quality will lead to a corresponding increase in organizational performance.

Hypothesis Testing

H₁: System Quality of AIS positively and significantly impacts on Organizational Performance of SMEs in Ratnapura District.

H1: Supported. The results indicate that System Quality of AIS has a positive and significant impact on organizational performance ($\beta = 0.510$, $p = 0.000$). This confirms that improving system quality enhances the performance of SMEs in Ratnapura District.

H2: Information Quality of AIS positively and significantly impacts on Organizational Performance of SMEs in Ratnapura District.

H2: Not supported. Information Quality of AIS shows an insignificant effect on organizational performance ($\beta = 0.010$, $p = 0.890$), suggesting that information quality alone does not significantly influence SME performance in this context.

H3: Service Quality of AIS positively and significantly impacts on Organizational Performance of SMEs in Ratnapura District.

H3: Supported. Service Quality of AIS has a positive and significant impact on organizational performance ($\beta = 0.359$, $p = 0.000$), indicating that better service quality contributes to higher SME performance.

5. Discussion

The primary objective of this study was to examine the impact of AIS dimensions - System Quality, Information Quality, and Service Quality - on the Organizational Performance of SMEs in Ratnapura District. The descriptive analysis revealed that respondents perceive a high level of AIS effectiveness, with Information Quality scoring the highest mean ($M = 3.87$). This finding aligns with previous studies highlighting that well-structured AIS enhances organizational efficiency and decision-making capabilities (Romney & Steinbart, 2020; O'Brien & Marakas, 2011). Similarly, the overall perception of organizational performance was high ($M = 3.64$), suggesting that SMEs recognize the strategic value of AIS in improving operational outcomes.

The correlation analysis indicated a strong positive relationship between System Quality ($r = 0.608$, $p < 0.01$) and Service Quality ($r = 0.495$, $p < 0.01$) with organizational performance. However, Information Quality showed a weak and insignificant correlation ($r = 0.132$, $p > 0.05$). This suggests that while the technical and service aspects of AIS significantly enhance performance, the quality of information alone may not suffice to drive substantial improvements, consistent with the findings of Al-Fawzan, (2020), who emphasized the combined effect of system reliability and user support in achieving performance outcomes.

Regression analysis further confirmed that System Quality ($\beta = 0.510$, $p < 0.01$) and Service Quality ($\beta = 0.359$, $p < 0.01$) significantly influence organizational performance, supporting H1 and H3. In contrast, Information Quality ($\beta = 0.010$, $p > 0.05$) had no significant effect, leading to the rejection of H2. These results highlight that SMEs benefit more from a robust and reliable AIS system with strong service support than from information quality alone. This aligns with prior studies indicating that system functionality and service responsiveness are critical determinants of AIS effectiveness in SMEs (Delone & Mclean, 2003; Wang, et al., 2019).

The collinearity diagnostics showed Tolerance values above 0.80 and VIF values close to 1, confirming that multicollinearity among AIS dimensions was not a concern. Additionally, the model summary indicated that 48.9% of organizational performance variance can be explained by AIS dimensions, with the ANOVA results confirming the model's overall significance ($F = 30.927$, $p < 0.01$). These findings demonstrate that AIS, particularly its system and service quality aspects, plays a strategic role in enhancing SME performance, consistent with literature emphasizing AIS as a driver of operational efficiency and competitive advantage (Romney & Steinbart, 2020; O'Brien & Marakas, 2011).

6. Conclusion and recommendation

This study examined the AIS dimensions, (Musimenta, et al., 2017) (Musimenta, et al., 2017) System Quality, Information Quality, and Service Quality - on the Organizational Performance of SMEs in Ratnapura District. The findings reveal that AIS plays a significant role in enhancing organizational performance, particularly through its system reliability and service support. System Quality and Service Quality were found to have a strong positive and significant impact on performance, whereas Information Quality did not show a significant effect. These results indicate that SMEs benefit more from robust system functionality and responsive service than from information quality alone, highlighting the importance of focusing on technological infrastructure and user support. Based on these findings, it is recommended that SMEs in Ratnapura District invest in upgrading their AIS systems, ensuring that software is reliable, user-friendly, and supported with timely technical assistance. Organizations should also provide training programs for staff to maximize the effective use of AIS, improving decision-making and operational efficiency. Additionally, enhancing service quality through prompt support and maintenance can further strengthen performance outcomes. Although information quality alone was not significant, SMEs should ensure accurate and timely data processing to complement system and service improvements.

For future research, studies could explore additional factors affecting AIS effectiveness, such as user competence, organizational culture, or technological infrastructure, which may influence the relationship between AIS and performance. Comparative studies across different districts or sectors could also provide broader insights into the generalizability of these findings. Longitudinal research could examine the long-term impact of AIS improvements on SME growth and competitiveness, providing more comprehensive evidence for strategic decision-making.

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