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# User Capability and Top Management Support as Drivers of SME AIS Usage

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**Abstract:**

**Research aims:** This study aims to analyze how user capability reflected in personal technical capability, educational background, and training and top management support drive the usage of accounting information systems (AIS) among SMEs in Pekanbaru City, Indonesia.

**Design/Methodology/Approach:** This study employed a quantitative research design using a survey method. Primary data were collected from 317 SME owners and managers through structured questionnaires. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to test the effects of personal technical ability, educational background, training, and top management support on the use of computer-based AIS.

**Research findings:** The results indicate that personal technical ability, educational background, training, and top management support have a positive and significant effect on the use of computer-based accounting information systems. However, the model explains a relatively low proportion of variance in AIS usage, suggesting that other factors beyond the proposed model may influence system adoption among SMEs.

**Theoretical contribution/Originality:** This study contributes to the accounting information systems literature by extending the Technology Acceptance Model (TAM) in the SME context, highlighting the role of individual and organizational factors as external determinants of AIS usage.

**Practitioner/Policy implication:** The findings suggest that SME owners and policymakers should focus on improving technical skills, providing relevant training programs, and strengthening managerial support to enhance the effective use of accounting information systems.

**Research limitation/Implication:** This study relies on perceptual data and is limited to SMEs in a single city, which may restrict the generalizability of the findings.

**Keywords:** Personal Technical Ability, Educational Background, Training, Top Management Support, Accounting Information System, SMEs

## Introduction

The sustainability and performance of Small and Medium-sized Enterprises (SMEs) are highly dependent on the quality of internal management, particularly in financial management and information-based decision-making (Al-Hattami & Kabra, 2024). In practice, many SMEs continue to face limitations in producing financial information that is reliable, timely, and relevant for managerial decision-making (Sinaga, 2025). This condition positions computer-based Accounting Information Systems (AIS) as a critical instrument for enhancing the professionalism of business management and strengthening financial accountability among SMEs (Kareem et al., 2021).

Computer-based AIS enable financial recording, processing, and reporting to be conducted in a systematic and integrated manner, thereby improving the quality of accounting information used for planning, control, and performance evaluation (Sari et al., 2025). Nevertheless, the level of adoption and utilization of computer-based AIS among SMEs remains relatively low. Evidence from the Business Fitness Index indicates that the majority of SMEs in Indonesia still rely on manual financial record-keeping, which leads to weak financial control, limited access to formal financing, and low compliance with taxation regulations.

The low level of AIS usage among SMEs suggests that information system adoption is not determined solely by technological availability, but is also shaped by individual and organizational factors (Renaldo & Putri, 2021). From the perspective of information system adoption and the contingency perspective, successful system utilization depends on the alignment between user characteristics, organizational capabilities, and the surrounding business environment (Cahyaningsih & Siregar, 2022). Accordingly, factors such as personal technical capability, educational background, training, and top management support emerge as critical determinants in explaining variations in the use of computer-based AIS among SMEs.

A growing body of research has examined the influence of personal technical capability on AIS usage; however, the findings remain inconsistent. Several studies report a positive effect of personal technical capability on the use of accounting information systems (Anjani et al., 2021; Arantio et al., 2021; Cahyaningsih & Siregar, 2022), while others find no significant relationship (Safitri & Widhiyani, 2025). Similar inconsistencies are evident with respect to educational background and training. Some studies document a positive influence (Anjani et al., 2021; Arantio et al., 2021; Krisnawati et al., 2023; Wijaya et al., 2024), whereas other empirical evidence reports non-significant effects (Harris, 2021; Sari et al., 2024). These divergent findings indicate that the effects of individual factors on AIS usage are highly contextual and remain insufficiently explained.

In contrast, top management support has been consistently identified as a key organizational factor influencing the successful implementation of information systems (Qatawneh, 2023). Such support encompasses the provision of resources, policy commitment, and continuous encouragement for system usage (Al-Hattami, 2024). Nevertheless, much of the existing empirical evidence has been derived from large organizations or SMEs operating in regions with relatively high levels of technological literacy. Consequently, the generalizability of these findings to SMEs operating under resource-constrained conditions remains limited and requires further empirical validation (Thuan et al., 2022).

Based on this review of the literature, the primary research gap lies in the absence of consistent empirical conclusions regarding the roles of individual and organizational factors in influencing the use of computer-based AIS among SMEs, particularly within contexts characterized by limited resources. Moreover, studies that integrate individual and organizational factors within a unified theoretical framework remain relatively scarce in the context of local SME research.

This study seeks to address these gaps by empirically examining the effects of personal technical capability, educational background, training, and top management support on the use of computer-based Accounting Information Systems among SMEs in Pekanbaru City. Theoretically, this study contributes to the information systems adoption literature by

strengthening the application of adoption perspectives within the SME context through the integration of individual and organizational factors into a single analytical framework. Empirically, the findings are expected to provide context-specific evidence that can inform policy formulation and strategic initiatives aimed at enhancing the use of computer-based AIS among SMEs, particularly in regions with limited levels of accounting and technological literacy.

## Literature Review and Hypotheses Development

### *Technology Acceptance Model (TAM)*

The Technology Acceptance Model (TAM) is employed as the primary theoretical foundation to explain the mechanisms underlying the acceptance and use of computer-based Accounting Information Systems (AIS) among SMEs (Sasadeeong, 2023). The model was originally developed by Davis (1989) as an extension of the Theory of Reasoned Action (TRA), which posits that individual behavior is driven by behavioral intentions, while intentions are shaped by beliefs and attitudes toward a given behavior (Sugiharti et al., 2024).

Unlike a purely descriptive approach, this study applies TAM as an analytical mechanism in which system use is conceptualized as the outcome of a cognitive process mediated by two core constructs: perceived usefulness and perceived ease of use. Perceived usefulness refers to an individual's belief that using a system will enhance job performance, whereas perceived ease of use reflects the extent to which a system is perceived as easy to understand and operate without excessive effort (Qader et al., 2022). Systems perceived as both useful and easy to use are more likely to be accepted and used on a sustained basis (Radzi et al., 2024).

In the SME context, the acceptance of computer-based AIS is not determined solely by the technological characteristics of the system, but is strongly influenced by user-related and organizational conditions. Accordingly, this study explicitly adopts an extended Technology Acceptance Model by incorporating personal technical capability, educational background, training, and top management support as external factors that influence the use of computer-based AIS through the core TAM constructs.

Within the extended TAM framework, individual and organizational factors function as external determinants that shape users' perceptions of system ease and usefulness. Personal technical capability, educational background, and training are positioned as individual-level factors that directly influence perceived ease of use, as individuals with adequate technical competence and learning experience tend to find systems easier to understand and operate. These factors also contribute indirectly to perceived usefulness, as greater ease of use enhances users' perceptions of the system's benefits in supporting business activities (Wicaksono et al., 2023).

Meanwhile, top management support is positioned as an organizational factor that strengthens both perceived usefulness and perceived ease of use through the provision of resources, supportive policies, and sustained commitment to system utilization (Sylvania, 2023). Accordingly, the use of computer-based AIS in this study is conceptualized as the result of the

interaction between individual factors, organizational factors, and user perceptions, as articulated within the TAM framework.

### ***Computer-Based Accounting Information Systems***

Computer-based Accounting Information Systems (AIS) are systems that integrate people, procedures, data, and information technology to process financial transactions into accounting information that is relevant for decision-making (Mohamed & Ramli, 2022). Pathirana, Chandima, and Kumara (2025) emphasize that AIS function to collect, record, store, and process financial data, while also highlighting their role in providing information to both internal and external users. For SMEs, the use of computer-based technologies enables the automation of accounting processes and enhances the reliability of financial information (Handayani et al., 2023; Sinaga et al., 2025).

In this study, the use of computer-based AIS is defined as the extent to which SMEs utilize such systems for transaction recording, financial data processing, and the preparation of financial reports. The focus of the analysis is not on the technical features of the system itself, but rather on the level of system usage in the day-to-day operational practices of SMEs.

### ***Hypothesis Development***

#### **Personal Technical Capability and the Use of Accounting Information Systems**

Personal technical capability reflects an individual's mastery of the technical knowledge and skills required to operate information systems effectively (Harianto et al., 2025). In the context of computer-based Accounting Information Systems (AIS), this capability encompasses an understanding of basic accounting principles, proficiency in using computer hardware and accounting software, as well as the ability to input and process financial data accurately (Mapalo, 2025).

From the perspective of the extended Technology Acceptance Model (TAM), personal technical capability functions as an external factor that directly enhances perceived ease of use. Individuals with adequate technical competence tend to better understand system workflows, feel more confident in utilizing system features, and minimize operational errors (Rengganis et al., 2025). This perceived ease of use subsequently strengthens perceptions of system usefulness and encourages actual system usage.

Empirically, the relationship between personal technical capability and AIS usage remains inconclusive. Several studies report a positive effect (Anjani et al., 2021; Arantio et al., 2021; Cahyaningsih & Siregar, 2022), whereas other studies document contrasting findings (Safitri & Widhiyani, 2025). These inconsistencies suggest that the influence of personal technical capability is highly contextual, particularly within SMEs operating under resource constraints. Based on this reasoning, the following hypothesis is proposed:

**H<sub>1</sub>: Personal technical capability has a significant effect on the use of computer-based Accounting Information Systems.**

### **Educational Background and the Use of Accounting Information Systems**

Educational background represents the level of formal knowledge and cognitive frameworks that shape individuals' understanding of accounting information and information systems (Christanty et al., 2023). Within the TAM framework, education is positioned as an external factor that shapes both perceived usefulness and perceived ease of use, as individuals with relevant educational backgrounds are more likely to possess a stronger conceptual understanding of data structures and financial reporting processes (Halasa, 2024).

However, empirical evidence in the literature remains mixed. Prior studies have found that education positively influences AIS usage (Arantio et al., 2021; Harris, 2021; Wijaya et al., 2024), while other studies report no significant effect (E. P. Sari et al., 2024). These divergent findings indicate that formal education does not necessarily translate directly into system usage unless supported by complementary factors. Consequently, re-examining this relationship within the SME context remains relevant. Based on the above arguments, the following hypothesis is formulated:

**H<sub>2</sub>: Educational background has a significant effect on the use of computer-based Accounting Information Systems.**

### **Training and the Use of Accounting Information Systems**

Training represents an organizational mechanism aimed at enhancing users' competence and readiness to operate information systems (Hermansyah, 2023). Within the extended TAM framework, training is positioned as an external factor that strengthens both perceived ease of use and perceived usefulness by improving users' technical understanding and awareness of system benefits. Training also helps reduce resistance to technology and increases user confidence (Ruliana et al., 2024).

Empirical studies by Cahyaningsih and Siregar (2022), Anjani, Arizona, and Ernawatiningsih (2021), and Krisnawati et al. (2023) demonstrate that training has a significant effect on AIS usage. However, other studies report different results (Harris, 2021), highlighting the need for further empirical investigation, particularly within SMEs. Accordingly, the following hypothesis is proposed:

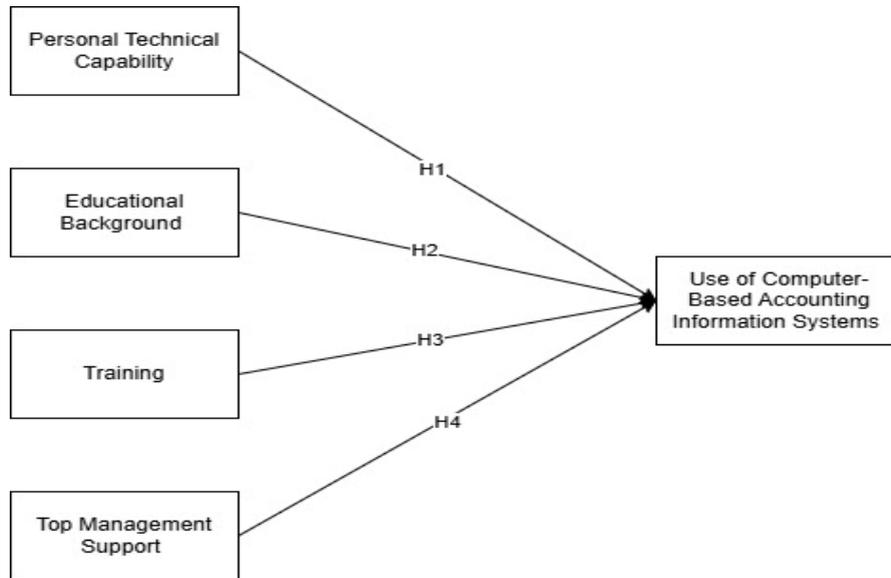
**H<sub>3</sub>: Training has a significant effect on the use of computer-based Accounting Information Systems.**

### **Top Management Support and the Use of Accounting Information Systems**

Top management support reflects an organization's strategic commitment to encouraging the use of information systems (Kurniawan et al., 2024). Within the TAM framework, top management support is positioned as an external factor that strengthens perceived usefulness and perceived ease of use through the provision of resources, supportive policies, and the legitimization of system usage (Alharasis & Alkhwaldi, 2024).

A substantial body of empirical research indicates that top management support positively influences AIS usage (Arantio et al., 2021; D. P. Sari et al., 2025; Syafaat et al., 2022). Such support enhances users' perceptions of the strategic value of the system, thereby encouraging actual usage. Based on this reasoning, the following hypothesis is proposed:

**H<sub>4</sub>: Top management support has a significant effect on the use of computer-based Accounting Information Systems.**



**Figure 1.** Research Model  
Source: Author’s own work

## Research Method

### *Research Design*

This study adopts a quantitative approach using a survey method to examine the relationships among variables within the framework of the extended Technology Acceptance Model. The research object comprises Small and Medium-sized Enterprises (SMEs) operating in Pekanbaru City. The study population consists of 1,525 SMEs registered with the Pekanbaru City Office of Cooperatives and SMEs.

### *Sample*

The sample was selected using a simple random sampling technique. A total of 317 SMEs were included in the study, which is considered methodologically adequate and robust for Structural Equation Modeling–Partial Least Squares (SEM-PLS) analysis. Although the initial sample size was calculated using Slovin’s formula with a 5 percent margin of error, the adequacy of the sample was further strengthened based on SEM-PLS criteria. According to Hair et al. (2019), the minimum sample size in SEM-PLS is determined by the maximum number of structural paths directed at a single construct. In this study, the dependent construct—use of computer-based Accounting Information Systems—receives four structural paths, resulting in a recommended minimum sample size of ten times the number of paths, or 40 respondents. Accordingly, the final sample size of 317 substantially exceeds this minimum threshold and satisfies the statistical power requirements for structural model testing.

**Data Analysis Technic**

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4 software. The selection of SEM-PLS was based on several methodological considerations. First, SEM-PLS is well suited for research with a predictive orientation and theory development objectives, particularly for testing an extended TAM framework in the relatively underexplored SME context. Second, SEM-PLS is capable of simultaneously estimating complex structural models involving multiple latent constructs and indicators. Third, this method is more tolerant of non-normal data distributions and moderate sample sizes, which are commonly encountered in SME research. Therefore, SEM-PLS was deemed the most appropriate analytical approach for the purposes of this study (Hair et al., 2019).

Given that the data were collected using a single instrument and from the same source of respondents, the potential for common method bias (CMB) was considered a methodological concern. To mitigate this potential bias, the study employed a full collinearity assessment by examining Variance Inflation Factor (VIF) values. VIF values below the threshold of 5 indicate that common method bias does not pose a serious concern in the research model (Hair et al., 2019).

Hypothesis testing was performed using the bootstrapping procedure with a 5 percent significance level. Structural relationships were considered statistically significant when the t-statistic exceeded 1.96 and the p-value was below 0.05 (Hair et al., 2019; Yamin, 2023).

**Measurement of Variable**

To ensure conceptual clarity and measurement consistency, each construct in this study was operationalized based on established theoretical frameworks and prior empirical research. The variables were defined and measured using validated indicators adapted to the SME context. A detailed description of the operational definitions and measurement scales is presented in Table 1.

**Table 1. Operational Definitions and Measurement of Variables**

No.	Variable	Definition	Indicators	Scale
1.	Use of Computer-Based Accounting Information Systems (Y)	Computer-Based Accounting Information Systems (AIS) refer to accounting information systems that utilize computer technology to execute some or all accounting-related tasks provided by the system (Satria & Putra, 2019).	a. Relevance b. Completeness c. Timeliness d. Reliability e. Understandability f. Accessibility g. Verifiability (Satria & Putra, 2019)	Likert
2.	Personal Technical Capability (X1)	Personal technical capability refers to an individual’s ability to perform various tasks within a job or work context (Agustina et al., 2020).	a. Knowledge b. Abilities c. Skills (Agustina et al., 2020)	Likert
3.	Educational Background (X2)	Educational background represents a factor that	a. Level of education	Likert

4. Training (X3)	<p>influences an individual's creativity and cognitive capacity in decision-making (Siregar, 2020).</p> <p>Training refers to systematic efforts aimed at improving job performance in specific tasks that have become the responsibility of employees or organizational members (Cahyaningsih &amp; Siregar, 2022).</p>	<p>b. Field of study alignment</p> <p>c. Competence (Siregar, 2020)</p> <p>a. Training objectives</p> <p>b. Training materials</p> <p>c. Training methods</p> <p>d. Training participants</p> <p>e. Trainer qualifications (Cahyaningsih &amp; Siregar, 2022)</p>	Likert
5. Top Management Support (X4)	<p>Top management support refers to the extent to which managers provide clear communication, assistance, and support to their subordinates in carrying out their duties (Syafaat et al., 2022).</p>	<p>a. Provision of resources</p> <p>b. Structural arrangements</p> <p>c. Communication</p> <p>d. Power (Syafaat et al., 2022)</p>	Likert

## Results

This study involved 317 SME owners or managers in Pekanbaru City. As shown in Table 2, most respondents were female (63.09%) and aged 25–35 years (62.14%). The majority had a high school education (59.61%), and most businesses employed fewer than five workers (57.73%) with annual revenues between IDR 50,000,000 and IDR 250,000,000 (70.66%). These characteristics indicate that financial management is largely owner-managed, underscoring the relevance of computer-based AIS adoption in SMEs.

**Table 2. Respondent Demographics**

Respondent Characteristics	Number of Respondents	Persentase (%)
Gender		
a. Male	117	36,91%
b. Female	200	63,09%
Total	317	100%
Age		
a. < 25 years	68	21,46%
b. 25 - 35 years	197	62,14%
c. 35 - 45 years	42	13,25%
d. > 45 years	10	3,15%
Total	317	100%
Education Level		
a. Elementary School	0	0%
b. Junior High School	37	11,67%
c. Senior High School or Equivalent	189	59,61%

d. Bachelor's Degree	78	24,61%
e. Master's Degree	13	4,11%
Total	317	100%
Number of Employees		
a. < 5 employees	183	57,73%
b. 6-10 employees	61	19,24%
c. 11-20 employees	46	14,51%
d. > 20 employees	27	8,52%
Total	317	100%
Annual Revenue		
a. IDR 50,000,000 – IDR 250,000,000	224	70,66%
b. IDR 250,000,000 – IDR 2,500,000,000	93	29,34%
Total	317	100%

### Descriptive Statistics

The results of the descriptive statistical analysis in Table 3 indicate that all independent variables exhibit relatively higher mean values compared to the dependent variable (Hair et al., 2019). Educational background shows the highest mean score, suggesting that respondents perceive education as an important factor in supporting the understanding and use of computer-based AIS. Personal technical capability and training also demonstrate high mean values, reflecting adequate technical readiness and learning experience in the use of computer-based systems.

In contrast, top management support records a slightly lower mean value, although it remains within the moderately high category. This finding indicates that managerial support is present but has not yet reached an optimal level. The use of computer-based AIS exhibits the lowest mean score among all variables, suggesting that despite relatively adequate individual and organizational conditions, AIS utilization has not yet been fully maximized in SME operational practices.

**Table 3. Descriptive Statistics**

Variable	Mean	Median	Min	Max	Standard deviation
Personal Technical Capability (X1)	3.78	4.00	1.00	5.00	0.72
Educational Background (X2)	3.91	4.00	2.00	5.00	0.72
Training (X3)	3.71	4.00	2.00	5.00	0.72
Top Management Support (X4)	3.56	4.00	1.00	5.00	0.74
Use of Computer-Based Accounting Information Systems (Y)	3.38	3.00	1.00	5.00	0.74

Source: Processed using PLS-SEM analysis.

The descriptive statistics indicate that all independent variables have relatively high mean scores, ranging from 3.56 to 3.91 on a five-point scale, suggesting generally positive perceptions among respondents. Educational background (X2) shows the highest mean (3.91), followed by personal technical capability (X1) (3.78) and training (X3) (3.71). Top management support (X4) records a slightly lower mean (3.56), though still above the scale midpoint.

The dependent variable, use of computer-based AIS (Y), has a mean of 3.38, indicating moderate system utilization among SMEs. Median values of 4.00 for most independent variables reflect a tendency toward agreement, while the median of 3.00 for AIS usage suggests more varied adoption levels. Standard deviations ranging from 0.72 to 0.74 indicate relatively consistent responses with moderate dispersion. Overall, the findings suggest favorable capability and support conditions, although actual AIS usage remains comparatively moderate.

**Measurement Model Evaluation (Outer Model)**

The evaluation of the measurement model indicates that all constructs meet the required criteria for validity and reliability. All indicators display outer loading values of at least 0.70, and Average Variance Extracted (AVE) values exceed the threshold of 0.50, thereby confirming convergent validity (Table 4). Discriminant validity is also established, as all Heterotrait–Monotrait Ratio (HTMT) values are below 0.90 for all construct pairs (Table 5). Furthermore, Cronbach’s Alpha and Composite Reliability (CR) values for all constructs exceed 0.70, indicating satisfactory internal consistency (Table 6).

**Table 4. Convergent Validity**

Variabel	Measurement Item	Indicator	Outer Loading	Average Variance Extracted (AVE)	Result
Personal Technical Capability (X1)	PTC1	I possess sufficient knowledge of accounting information systems.	0.839	0.702	Valid
	PTC2	As a user of accounting information systems, I understand my assigned responsibilities.	0.814		Valid
	PTC3	I am capable of operating accounting information systems used in my work.	0.881		Valid
	PTC4	I always follow the established standard operating procedures (SOPs) when preparing financial reports using the system.	0.839		Valid
	PTC5	As a user of accounting information systems, I am able to execute system operations appropriately.	0.795		Valid
	PTC6	I am able to use advanced features (not only basic ones) of the accounting information system applied in my workplace.	0.846		Valid
	PTC7	I can quickly identify irregularities or unreasonable figures in financial reports generated by the system.	0.849		Valid
Educational Background (X2)	EB1	As a user of accounting information systems, my formal education enables me to	0.833	0.709	Valid

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Training (X3)	EB2	produce reliable financial information and reports. With a higher level of education, the financial information produced becomes more accurate.	0.850	0.729	Valid		
	EB3	Educational attainment adds value to the quality of financial reports.	0.859		Valid		
	EB4	Employee placement is aligned with the educational background possessed	0.836		Valid		
	EB5	The higher the education achieved, the more applicable it is in my work.	0.844		Valid		
	EB6	Educational background influences my work performance.	0.831		Valid		
	T1	I have attended accounting information system training organized by government institutions.	0.847		Valid		
	T2	The training I attended was aligned with my job responsibilities.	0.830		Valid		
	T3	The training materials provided in accounting information system training met my needs.	0.891		Valid		
	T4	Accounting information system training was delivered by qualified experts.	0.845		Valid		
	T5	The training I attended enhanced my knowledge and skills at work.	0.839		Valid		
	T6	The training enabled me to apply the knowledge gained in my work.	0.856		Valid		
	T7	The training helped minimize errors in my work.	0.868		Valid		
	Top Management Support (X4)	TMS1	As a business owner, I consistently provide support related to operational needs, including raw materials and facilities.		0.832	0.717	Valid
		TMS2	As a business owner, I provide competent employees to support accounting and financial reporting activities.		0.837		Valid
TMS3		As a business owner, I consistently establish appropriate SOPs to achieve business objectives.	0.857	Valid			
TMS4		As a business owner, I ensure that business operations run smoothly.	0.849	Valid			
TMS5		As a business owner, I provide employees with opportunities	0.838	Valid			

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		to communicate issues related to the accounting information system used.			
	TMS6	As a business owner, I do not restrict employees from providing feedback related to business operations.	0.858		Valid
	TMS7	As a business owner, I am able to identify appropriate solutions to business problems, such as raw material costs and market prices.	0.880		Valid
	TMS8	As a business owner, I make accurate decisions to ensure business sustainability.	0.823		Valid
	UCBAIS1	The accounting information system I use can be accessed quickly.	0.867		Valid
	UCBAIS2	The accounting information system I use can process data into information rapidly.	0.841		Valid
	UCBAIS3	The accounting information system I use provides information aligned with user needs.	0.850		Valid
Use of Computer-Based Accounting Information Systems (Y)	UCBAIS4	Since using the accounting information system, I rarely rely on manual bookkeeping.	0.835		Valid
	UCBAIS5	Since using the accounting information system, the risk of calculation errors in financial reporting has decreased.	0.872	0.731	Valid
	UCBAIS6	The accounting information system I use functions in accordance with the operational objectives of my business activities.	0.834		Valid
	UCBAIS7	The use of accounting information systems accelerates business processes.	0.879		Valid
	UCBAIS8	The accounting information system I use generates accurate and reliable financial information.	0.860		Valid

**Table 5. HTMT**

Variable	Top Management Support	Personal Technical Capability	Educational Background	Training	Use of Computer-Based Accounting Information Systems
Top Management Support					
Personal Technical Capability	0.050				
Educational Background	0.044	0.068			
Training	0.063	0.045	0.061		
Use of Computer-Based Accounting Information Systems	0.148	0.123	0.281	0.192	

Source: Processed using PLS-SEM analysis

**Table 6. Reliability**

Variable	Cronbach's Alpha	Reliability	Result
Personal Technical Capability	0.932	0.943	Reliable
Educational Background	0.918	0.936	Reliable
Training	0.938	0.950	Reliable
Top Management Support	0.944	0.953	Reliable
Use of Computer-Based Accounting Information Systems	0.947	0.956	Reliable

Source: Processed using PLS-SEM analysis

These results confirm that the measurement instruments are valid and reliable, supporting their suitability for subsequent structural model analysis and ensuring that the relationships among variables can be interpreted with confidence.

**Structural Model Evaluation (Inner Model)**

The structural model evaluation focuses on the predictive capability of the model and the strength of the relationships among constructs. The multicollinearity assessment indicates that all Variance Inflation Factor (VIF) values are below the recommended threshold (VIF < 5), suggesting that multicollinearity is not a concern in the model (Table 7).

**Table 7. Collinearity**

Variable	VIF
Personal Technical Capability → Use of Computer-Based Accounting Information Systems	1.004
Educational Background → Use of Computer-Based Accounting Information Systems	1.007
Training → Use of Computer-Based Accounting Information Systems	1.005
Top Management Support → Use of Computer-Based Accounting Information Systems	1.003

Source: Processed using PLS-SEM analysis

The coefficient of determination ( $R^2$ ) for the use of computer-based Accounting Information Systems is 0.146, indicating that personal technical capability, educational background, training, and top management support collectively explain only 14.6% of the variance in AIS usage. According to PLS-SEM criteria, this  $R^2$  value is considered weak. This finding suggests that the majority of the variance in AIS usage is influenced by factors outside the research model, such as technological characteristics, environmental and regulatory pressures, organizational conditions, as well as individual motivation and attitudes among SME actors.

The predictive relevance value ( $Q^2$ ) of 0.110 indicates that the model possesses predictive capability, albeit at a low level. Nevertheless, the Standardized Root Mean Square Residual (SRMR) value of 0.039—below the recommended threshold of 0.08 (Hair et al., 2021)—demonstrates that the overall structural model exhibits a good fit with the empirical data.

The effect size ( $f^2$ ) values reveal that all independent variables exert low individual contributions to the use of computer-based AIS (Table 8) . This finding indicates that each variable provides only a limited incremental explanatory power for the dependent variable once the other variables are accounted for in the model. This condition is consistent with the low  $R^2$  value, implying that although the relationships among variables are statistically significant, the practical magnitude of each effect remains relatively small.

**Table 8. F-Square**

Hypothesis	F-Square ( $F^2$ )	Result
X1 → Y	0.026	Small effect
X2 → Y	0.086	Small effect
X3 → Y	0.032	Small effect
X4 → Y	0.026	Small effect

*Note : Personal Technical Capability (X1); Educational Background (X2); Training (X3); Top Management Support (X4); Use of Computer-Based Accounting Information Systems (Y).*

### Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure, with statistical significance determined by t-statistics greater than 1.96 and p-values below 0.05 (Hair et al., 2019). The results indicate that personal technical capability, educational background, training, and top management support all have significant effects on the use of computer-based Accounting Information Systems. Accordingly, all proposed research hypotheses are supported (Table9).

**Table 9. Pengujian Hipotesis**

Hypothesis	Path Coefficient (Original Sample)	T Statistics ( O/STDEV )	P-Value	Results
X1 → Y	0.148	2.711	0.007	Accepted
X2 → Y	0.272	5.856	0.000	Accepted
X3 → Y	0.166	3.380	0.001	Accepted
X4 → Y	0.149	3.414	0.001	Accepted

*Note : Personal Technical Capability (X1); Educational Background (X2); Training (X3); Top Management Support (X4); Use of Computer-Based Accounting Information Systems (Y).*

The results show that all proposed hypotheses are supported. Personal technical capability ( $\beta = 0.148$ ;  $p = 0.007$ ) has a positive and significant effect on AIS usage, indicating that stronger technical skills enhance system utilization. Thus, H1 is accepted. Educational background demonstrates the strongest influence ( $\beta = 0.272$ ;  $p < 0.001$ ), suggesting that formal education substantially improves AIS usage. Therefore, H2 is accepted. Training also has a positive and significant effect ( $\beta = 0.166$ ;  $p = 0.001$ ), confirming that practical learning enhances users' readiness and system adoption. Hence, H3 is accepted. Similarly, top management support positively affects AIS usage ( $\beta = 0.149$ ;  $p = 0.001$ ), highlighting the importance of managerial commitment in encouraging technology use. Accordingly, H4 is accepted.

Overall, both individual and organizational factors significantly drive AIS usage, with educational background emerging as the most influential predictor.

## Discussion

### *The Effect of Personal Technical Capability on the Use of Computer-Based Accounting Information Systems*

The results indicate that personal technical capability has a significant effect on the use of computer-based Accounting Information Systems (AIS). However, this finding should not be interpreted merely as a direct relationship, but rather as a cognitive mechanism as explained by the Technology Acceptance Model (TAM). In the SME context, personal technical capability primarily influences perceived ease of use, as users with adequate technical skills are better able to understand system workflows, operate basic features, and minimize errors in financial recording. This perception of ease subsequently encourages more consistent system usage.

Despite its statistical significance, the effect of personal technical capability in this study remains relatively limited, as reflected in the low effect size values. This condition can be attributed to the informal nature of SMEs, where AIS usage is often confined to basic record-keeping functions and has not been fully leveraged for analytical or strategic decision-making purposes. In other words, adequate technical capability does not necessarily translate into high usage intensity when the system is not perceived as critical to day-to-day business sustainability.

This finding is consistent with the studies of Anjani et al. (2021), Arantio et al. (2021), and Cahyaningsih & Siregar (2022), but contrasts with evidence from large firms in developed economies, where technical capability tends to exert a stronger influence on system usage due to higher levels of formalization and operational complexity. In the context of SMEs in Pekanbaru City, resource constraints and short-term business orientation render personal technical capability significant but not dominant.

### *The Effect of Educational Background on the Use of Computer-Based Accounting Information Systems*

Educational background is found to have a significant effect on the use of computer-based AIS. Within the TAM framework, education contributes to shaping perceived usefulness, as individuals with higher educational attainment are more capable of understanding the benefits

of AIS in enhancing financial reporting accuracy, operational efficiency, and decision-making quality. Such conceptual understanding forms the foundation for technology acceptance in the accounting context.

Nevertheless, the influence of education in this study remains relatively modest. This suggests that formal education does not automatically guarantee more intensive system usage, particularly among SMEs that continue to rely on simple record-keeping practices and experience-based decision-making. This condition explains why, although the findings support those of Arantio et al. (2021), Harris (2021), dan Wijaya et al. (2024), the magnitude of the educational effect is smaller than that typically observed in large organizations or formal business sectors.

These findings are also consistent with the SME literature in developing countries, which indicates that education functions as an enabling factor but is often constrained by organizational contexts that are not fully supportive of digitalization. Accordingly, education plays a greater role in increasing awareness of system benefits rather than driving comprehensive system usage.

### ***The Effect of Training on the Use of Computer-Based Accounting Information Systems***

Training is shown to have a significant effect on the use of computer-based AIS, underscoring the importance of practical learning processes in the context of technology adoption. Within TAM, training plays a central role in enhancing perceived ease of use by improving users' operational understanding and reducing uncertainty associated with system usage. Training also contributes indirectly to perceived usefulness, as users become more aware of system benefits once they are able to operate it effectively.

However, the low effect size values indicate that training alone has not been sufficient to promote intensive system usage. This can be explained by the nature of training programs in SMEs, which tend to be sporadic, focused on basic technical aspects, and rarely followed by continuous assistance. This finding aligns with Anjani et al. (2021), Arantio et al. (2021), and Krisnawati et al. (2023), while emphasizing that, in the SME context, training serves primarily as an initial trigger rather than a decisive factor for sustained system use.

Compared with SMEs in other developing countries—where training is often integrated into long-term business mentoring programs—training initiatives for local SMEs tend to be ad hoc. This condition explains why the effect of training is statistically significant yet relatively limited.

### ***The Effect of Top Management Support on the Use of Computer-Based Accounting Information Systems***

Top management support has a significant effect on the use of computer-based AIS, highlighting the critical role of SME owners or leaders in the technology adoption process. Within the TAM framework, top management support strengthens perceived usefulness by reinforcing the strategic value of the system for business management. In addition, such support

contributes to perceived ease of use through the provision of resources and clear guidance for system utilization

Nonetheless, the effect of top management support in this study remains relatively low. This finding suggests that managerial support in SMEs is often symbolic or limited to initial financial provision, without sustained commitment to long-term system development and human resource enhancement. These results are consistent with the findings of Arantio et al. (2021), D. P. Sari et al. (2025), and Syafaat et al. (2022), while simultaneously underscoring the contextual differences between SMEs and large firms, where managerial support tends to be more structured and continuous.

In the context of SMEs in Pekanbaru City, the predominance of family-owned businesses and centralized ownership structures means that system usage decisions are heavily dependent on the owner's perceptions. When AIS is not perceived as delivering immediate revenue-related benefits, managerial support for its use tends to remain minimal.

## Conclusion

Based on the results of the Structural Equation Modeling–Partial Least Squares (SEM-PLS) analysis, this study concludes that personal technical capability, educational background, training, and top management support have significant effects on the use of computer-based Accounting Information Systems (AIS) among Small and Medium-sized Enterprises (SMEs) in Pekanbaru City. These findings underscore that AIS usage in SMEs is not determined solely by the availability of technology, but also by individual readiness and organizational support.

From a theoretical perspective, this study reinforces the Technology Acceptance Model (TAM) by demonstrating that individual and organizational factors function as external determinants influencing the use of accounting information systems. The findings extend the application of TAM in the SME context by confirming that the mechanisms of perceived ease of use and perceived usefulness are shaped by user characteristics and organizational environments, particularly in businesses characterized by limited formalization and resource constraints.

From a practical standpoint, the results indicate that the implementation of computer-based AIS in SMEs requires an integrated approach. Efforts to promote system adoption should not focus solely on technological provision, but must be complemented by continuous user training to enhance technical capability, appropriate utilization of educational backgrounds in operational roles, and strengthened commitment from top management to encourage consistent system usage. Such a strategic approach is expected to improve the effectiveness of AIS utilization in supporting financial management and business decision-making.

This study also has several limitations that should be considered when interpreting the findings. First, the data were collected using perception-based questionnaires, which may introduce subjective bias. Second, the relatively low coefficient of determination ( $R^2$ ) suggests that the variables included in the research model do not fully explain the variation in computer-based AIS usage, indicating the potential influence of other unexamined factors. Third, the scope of the study is limited to SMEs operating in Pekanbaru City; therefore, caution should be exercised when generalizing the findings to other regions or business sectors.

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### Conflicts Of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.



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