



**THE EFFECT OF CLOUD-BASED POINT OF SALE (POS) TECHNOLOGY
ON THE SPEED AND ACCURACY OF ACCOUNTING INFORMATION
SYSTEMS IN MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMES)****April Lianingsih¹****Universitas Negeri Surabaya, Surabaya, Indonesia**aprillianingsih.22046@mhs.unesa.ac.id**Loggar Bhilawa²****Universitas Negeri Surabaya, Surabaya, Indonesia**loggarbhilawa@unesa.ac.id

Abstract

Indonesian MSMEs face inequality in the adoption of accounting technology, which causes reporting delays and a high risk of recording errors. This study aims to analyze the effect of the ease of use and usability of cloud-based POS on the speed and accuracy of the Accounting Information System (SIA), as well as the role of digital competence as a moderating variable. Data were collected through a Likert scale questionnaire of 1–4 to 100 F&B MSME respondents in Surabaya using purposive sampling, analyzed by multiple linear regression and Moderated Regression Analysis (MRA). The results showed that the ease of use (sig. 0.000) and usability (sig. 0.000) of cloud POS had a positive and significant effect on the speed and accuracy of SIA. Digital competence was proven to strengthen both influences (sig. 0.009 and 0.040), with an Adjusted R Square of 50.1%. MSME actors are advised to increase digital literacy so that the benefits of cloud POS can be optimized.

Keywords: Cloud-Based POS, Accounting Information Systems, Digital Competencies, MSMEs



INTRODUCTION

The Micro, Small, and Medium Enterprises (MSMEs) sector is the backbone of Indonesia's national economy, contributing more than 60% of Gross Domestic Product (GDP) and absorbing nearly 97% of the total labor force (Ministry of Cooperatives and SMEs, 2024; BPS, 2023). Despite having a vital role, attention and technological advances are often focused on large industrial sectors, so MSMEs are in a vulnerable position to face the demands of the digital transformation of the Industrial Revolution 4.0 and Society 5.0 (Hardimanto et al., 2025). This inequality is exacerbated by the fact that the majority of MSMEs are still lagging behind in the implementation of Accounting Information Systems (SIA): BPS data (2023) shows that around 70% of MSMEs still record transactions manually or using simple spreadsheets, around 75% experience financial reporting delays (Bank Indonesia, 2022), and only around 27% have adopted a cloud-based Point of Sale (POS) system for integrated transaction recording. This low adoption of accounting technology is also linked to limited access to formal financing, with only around 19% of MSMEs served by formal financial institutions (LPPI & Bank Indonesia, 2015), partly because weak bookkeeping makes it difficult for MSMEs to demonstrate creditworthiness to lenders. The gap between the high economic role of MSMEs and their low adoption of accounting technology is the basis for the urgency of this research.

The accounting information generated by SIA ideally meets quality standards, especially speed and accuracy: fast information allows management to act responsively, while accuracy guarantees the reliability of data for planning (Puspita & Pramono, 2021). In practice, the manual recording system is an obstacle when MSMEs face a surge in transaction volume, because daily recapitulation is time-consuming and increases the risk of *human error* that damages the accuracy of reports. Cloud-based POS, unlike conventional (*on-premise*) POS, which stores data locally, stores all transaction data on an internet server instead, allowing for *real-time* access, automatic updates, and more affordable subscription fees (Chou & Chiang, 2022), making it more relevant for MSMEs that have limited capital.

Previous research on SIA in MSMEs has focused on cloud accounting in general (Astuti et al., 2022; Seventy & Siahaan, 2025; Puspita & Pramono, 2019) or on the development of POS applications without empirical testing of information quality (Candwian & Septiani, 2025). Studies that specifically position cloud-based POS as a front-end system for transaction input, while also testing digital competence as a moderating factor, remain relatively limited (Tafonao & Sianturi,



2025; Simanjuntak et al., 2025). This study aims to fill that gap by testing the influence of cloud-based POS - as a front-end transaction input system - on the speed (timeliness) and accuracy (reliability) of SIA, taking into account the digital competence of the user as a moderating factor. Digital competence is crucial because the benefits of cloud POS will not be optimal if users are not able to operate and utilize the technology to the maximum (Zahoor et al., 2023; Pan et al., 2024).

Based on this description, this study is limited to MSMEs in the food and beverage (F&B) sector in the city of Surabaya that have actively used cloud-based POS applications for at least 6 months, with independent variables in the form of ease of use and usability of cloud POS, dependent variables on SIA speed and accuracy, and digital competence as moderation variables. The formulation of this research problem is: (1) whether the ease of use of cloud-based POS affects the speed and accuracy of SIA MSMEs; (2) whether the use of cloud-based POS affects the speed and accuracy of SIA MSMEs; (3) whether digital competence moderates the effect of ease of use on the speed and accuracy of SIA MSMEs; and (4) whether digital competence moderates the influence of usability on the speed and accuracy of SIA MSMEs. In line with the formulation of the problem, this study aims to analyze the four influences above using an associative-causal quantitative approach, with primary data from 100 respondents of F&B MSME Surabaya analyzed through multiple linear regression and *Moderated Regression Analysis* (MRA). This research is expected to make a theoretical contribution to the development of SIA science as well as practical benefits for MSME actors in making technology investment decisions, as well as for the government and academics in developing MSME digitalization policies.

LITERATURE REVIEW

Resource-Based View (RBV). RBV, pioneered by Wernerfelt (1984), states that a company's continued competitive advantage comes from its internal resources and capabilities, not from its market position. In order to be a source of competitive advantage, assets must meet the criteria of VRIN: *Valuable*, *Rare*, *Inimitable*, and *Non-substitutable*. In the context of MSMEs, it is not the cloud-based POS technology itself that automatically satisfies the VRIN criteria: being valuable does not necessarily make a resource rare, difficult to imitate, or non-substitutable, and cloud-based POS applications are commercially available to many MSMEs and can be relatively easy to imitate or substitute with other digital system. A more defensible position is that the capabilities MSMEs develop through the effective use of cloud-based POS particularly when combined with



digital competence and supporting organizational routines may constitute the strategic, VRIN consistent resource, rather than the technology itself (Rintalla & Samsudin, 2024; Putra & Sulindawati, 2023).

Technology Acceptance Model (TAM). The TAM developed by Davis (1989) explains that two main constructs, *Perceived Ease of Use* and *Perceived Usefulness*, determine the extent to which technology is accepted and utilized by users. Ease of use is the level of confidence that using the system does not require a lot of effort, is easy to understand, and is free of difficulties; systems that are considered easy will encourage more intensive use, minimize *human error*, and speed up the work process (Sastararuji et al., 2021). Usability is the belief that the system will improve job performance and is the strongest predictor of technology adoption intentions (Chen et al., 2023). In this study, RBV and TAM are treated as complementary rather than parallel frameworks: TAM explains the individual level mechanism through which cloud POS is accepted and used (via perceived ease use and usefulness), while RBV explains why the resulting pattern of use matters at the organizational level, namely that the capability MSMEs build by using the technology effectively not the technology as a static asset is the potential source of competitive advantage, digital competence links the two frameworks: it shapes how fully individual acceptance (TAM) is converted into a valuable organizational capability (RBV).

Cloud-based POS technology. A cloud-based POS is a digital transaction recording system that operates at the point of sale and stores data on an internet server, allowing automated, *real-time*, and integrated recording with inventory and accounting modules (Chou & Chiang, 2022). Unlike *cloud accounting*, which focuses on data processing (*back-end*), cloud POS acts as the *front-end system* of the main source of transaction input, so the quality of the data greatly determines the overall quality of SIA (Damayanti et al., 2020).

Accounting Information Systems and Information Quality. The success of SIA is measured by the quality of the information produced, as emphasized by the *Information Systems Success* model of DeLone and McLean (2003). In this study, the quality of SIA was measured through two dimensions: *timeliness* and *accuracy*, referring to Wang and Strong (1996); Cloud-based POS contributes directly to both as record-keeping is done automatically and *in real-time* at the point of sale.

Digital Competence. Digital competence is the ability of individuals to understand, operate, evaluate, and utilize digital technologies to achieve specific goals, including adapting and solving technical problems on cloud-based



applications (Zahoor et al., 2023). In this study, digital competence plays a role as a moderation variable: high-competent users are able to make maximum use of cloud POS features (dashboard analysis, automated *inventory tracking*) so that the speed and accuracy of SIA are more optimal (Pan et al., 2024), on the other hand, low competence hinders the use of features even though technology is advanced (Rivandi & Pahlevi, 2025).

Previous Research. Studies on SIA in MSMEs highlight many individual/organizational factors such as owner education, business age, and business scale that have a positive effect on the use of accounting information (Listifa & Suyono, 2021; Artaningrum et al., 2023), although several studies have found inconsistencies related to accounting training (Puspita & Pramono, 2021 vs. Candra et al., 2020) and facilitating conditions (Siregar & Lubis, 2020 vs. Feranika & Prasasti, 2022). A study on cloud-based SIA implementation by Saputri et al. (2023) found that the efficiency of the MSME accounting process increased by up to 70% and input errors decreased by 45% after the adoption of technology. However, research that specifically places the POS cloud as a *front-end* system for transaction input — as well as testing the role of digital competence as moderation — is still relatively limited (Tafonao & Sianturi, 2025; Simanjuntak et al., 2025), so this study is here to fill this gap.

Influence Between Variables and Hypotheses. Based on TAM, an easy-to-use system encourages more consistent operation thereby improving the quality of output; the ease of use of cloud POS directly speeds up the input process and improves data validity (Damayanti et al., 2020; Sastararuji et al., 2021), strengthened the RBV perspective that high ease of use optimizes the use of technology as a strategic resource (Barney, 1991). Highly perceived usability encourages users to integrate the system deeply into daily operations so that data becomes more accurate, complete, and readily available (Putra & Sulindawati, 2023; Simanjuntak et al., 2025). Digital competence, as a human resource capability within the framework of RBV, allows the full benefits of cloud POS technology to be truly achieved, competent users can more quickly grasp advanced features and convert convenience/usability into greater data efficiency and accuracy (Zahoor et al., 2023; Rivandi & Pahlevi, 2025). On the basis of these arguments, the hypothesis of this study is:

H1: The ease of use of Cloud-based POS affects the speed and accuracy of the MSME Accounting Information System.

H2: The usability of Cloud-based POS affects the speed and accuracy of the MSME Accounting Information System.

H3: Digital Competency moderates the effect of the ease of use of Cloud-based



POS on the speed and accuracy of the MSME Accounting Information System.

H4: Digital Competence moderates the influence of the use of Cloud-based POS on the speed and accuracy of MSME Accounting Information Systems.

RESEARCH METHOD

This study employs an associative quantitative approach with a causal explanatory orientation (Sugiono, 2019), used to examine the direction and statistical significance of the hypothesized relationships among Ease of Use (X1_ and Usability (X2) of cloud based POS, SIA Speed and Accuracy (Y), and Digital Competence (Z) as a moderating variable. It should be noted that because data were collected through a single cross sectional questionnaire using non-probability purposive sampling, the design can establish statistical associations consistent with the hypothesized model, but it does not by itself provide strong evidence of causality: all variables were measured at a single point in time, the temporal precedence of the independent variables cannot be verified, and alternative explanations (e.g., reverse causality or omitted variables) cannot be ruled out. The term "causal" in this study is therefore used to describe a theoretically hypothesized directional relationship rather than causality demonstrated through longitudinal or experimental evidence. Primary data were obtained through a structured questionnaire using a 1-4 Likert scale (1 = strongly disagree to 4 = strongly agree) administered to MSME owners/managers in Surabaya, supplemented with secondary data from the Surabaya City Cooperatives and Micro Enterprises Office, BPS publications, and supporting scientific literature

The research population comprises all MSMEs in the city of Surabaya that have adopted cloud-based POS technology. According to the Surabaya City Cooperatives and Micro Enterprises Office (2024), 55,509 MSMEs are officially registered in the city; however, neither this agency nor cloud POS vendors (e.g., Moka, Majoo, Pawoon, Olsera) publish data on how many of these MSMEs specifically use a cloud-based POS system.

The exact size of the population is therefore unknown rather than infinite, and it is more accurately described as an unknown (undocumented) population (Sekaran & Bougie, 2016). The sample was determined using non-probability purposive sampling with the following inclusion criteria: (1) MSMEs in the F&B/retail sector operating in Surabaya, and (2) MSMEs that have been actively using a cloud POS application for at least 6 months. The sample size was informed by Roscoe's (1975) general guideline that sample sizes between 30 and 500 are



adequate for most social science research, and by the rule of thumb of at least 10 observations per variable for multivariate analysis (Hair et al., 2019), which suggests a minimum of 40 respondents for the 4 substantive variables in this study. Because the analysis also includes two interaction terms ($X1 \times Z$ and $X2 \times Z$) in the moderated regression model, the effective number of predictors exceeds 4, so this rule of thumb provides only a minimum threshold rather than a statistically optimal sample size; a more rigorous justification would require an a priori power analysis.

The research variables and their indicators are presented in Table 1

Table 1.

Operational Definitions and Variable Indicators

Variables	Definition	Indicator
Ease of Use (X1)	The belief that cloud POS is easy to learn and use (Davis, 1989)	Easy to understand; easy to learn; clear and understandable; Easy to use
Usability (X2)	The belief that cloud POS improves work effectiveness (Davis, 1989)	Work faster; improve performance; increase productivity; Helpful
Speed and Accuracy of SIA (Y)	Cloud POS capabilities generate quality information and process data quickly (DeLone & McLean, 2003)	Speed: <i>response time, timeliness, efficiency, speed of access, currency</i> ; Accuracy: <i>accuracy, objectivity, completeness, validity & reliability</i>
Digital Competence (Z)	Ability to understand, operate, and utilize digital technology in work (Pan et al., 2024)	Technical ability; information management; communication and collaboration; Troubleshooting

Source: Data processed from research instruments, 2026.

Data collection is carried out through a Google Form questionnaire which is distributed directly to the cashier as the main user of the POS system, followed by admins, managers, and owners based on the cashier's recommendation. Before the main survey, a *pilot test* was conducted on 25 respondents and a Cronbach's Alpha value of all variables was obtained above 0.70, so that the instrument was declared reliable. Data analysis techniques include: (1) descriptive statistics (minimum, maximum, average, standard deviation); (2) data quality test in the form of validity test (Pearson correlation, r table = 0.196, sig. < 0.05) and reliability



test (Cronbach's Alpha > 0.70); (3) classical assumption tests include normality (Kolmogorov-Smirnov, sig. > 0.05), multicollinearity (tolerance > 0.10 and VIF < 10), and heteroscedasticity (Glejser test, sig. > 0.05); (4) multiple linear regression analysis with equations $Y = a + b_1X_1 + b_2X_2 + e$, followed by the determination coefficient test (Adjusted R^2), partial t test, and simultaneous F test; and (5) *Moderated Regression Analysis* (MRA) with the equation $Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3Z + \beta_4(X_1 \times Z) + \beta_5(X_2 \times Z) + \varepsilon$, where the role of digital competency moderation is proven when the interaction coefficients $X_1 \times Z$ and $X_2 \times Z$ are statistically significant ($p < 0.05$) (Ghozali, 2021).

RESULTS AND DISCUSSION

Descriptive of Research Object

The respondents of this study are 100 owners/managers of MSMEs in the F&B sector in Surabaya who have been using cloud-based POS for at least 6 months. The age distribution of respondents was dominated by the 25–35 years (32%) group, followed by 36–45 years (28%), under 25 years (24%), and over 45 years (16%), indicating that the majority of managers were at productive age. In terms of gender, respondents were relatively balanced: 51% of women and 49% of men. Based on the length of business, the majority of MSMEs have been operating for 1-3 years (46%), followed by 4-6 years (25%), more than 6 years (18%), and less than 1 year (11%). In terms of position, the most respondents were *owners* (32%), followed by cashiers (27%), manager (21%), admin (11%), and financial admin (9%). The cloud POS applications used vary: Moka (19%), Olsera (18%), Nutapos (13%), as well as Gobiz, Majoo, Pawoon, and Esensi (12%), and Kasir Pintar (2%), respectively, reflecting the diversity of platforms that have been adopted by MSMEs.

Descriptive Statistical Analysis

Table 2.
Descriptive Analysis Results

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Ease of Use	100	4.00	16.00	10.880	3.382
Usability	100	4.00	16.00	10.500	3.307
Digital Competence	100	4.00	16.00	10.810	3.164
Speed and Accuracy	100	11.00	40.00	27.620	6.338

Source: Data Processed (2026)



Ease of use, usability, and digital competence were each measured with four Likert items scored 1-4 and summed, giving a theoretical range of 4-16 per variable. Dividing this range into four equal class intervals of 3 points yields the following interpretation categories: 4.00-7.00 = low; 7.01-10.00 = fairly low; 10.01-13.00 = fairly good; and 13.01-16.00 = very good. On this basis, the mean scores for ease of use (10.880; average per item = 2.72 on the 1-4 scale), usability (10.500; average per item = 2.63), and digital competence (10.810; average per item = 2.70) all fall within the "fairly good" category, indicating that respondents, on average, moderately agreed that cloud POS was easy to use and useful, and that they possessed adequate digital competence - although the per-item averages, being close to the scale midpoint, also suggest room for improvement rather than strong agreement. The relatively small standard deviations (3.164-3.382, against a possible range of 12) indicate limited dispersion around these means. SIA Speed and Accuracy (Y) was measured with ten items (theoretical range 10-40); its mean of 27.620 (average per item = 2.76) likewise falls in the "fairly good" category, indicating that respondents perceived cloud POS-supported SIA as reasonably fast, timely, and accurate, while still leaving room for improvement.

Data Quality Test

The validity test showed that all statement items on the variables of ease of use ($r = 0.734-0.821$), usability ($r = 0.741-0.796$), speed and accuracy ($r = 0.470-0.684$), and digital competence ($r = 0.731-0.784$) had a calculated r value greater than r of the table (0.196) with a significance of < 0.05 , so that all items were declared valid. The reliability test showed Cronbach's Alpha values for ease of use (0.783), usability (0.777), digital competence (0.755), and speed-accuracy (0.798), all above the threshold of 0.70, so the instrument was declared reliable.

Classical Assumption Test

Table 3.
Summary of the Classical Assumption Test

Test	Results	Criteria	Conclusion
Normalitas (Kolmogorov-Smirnov)	Asymp. Sig. = 0,099	Sig. > 0.05	Normally distributed data
Multikolinearitas – X1	Tolerance 0.860; LIVE 1,163	Tolerance > 0.10; VIF < 10	No multicollinearity



Multikolinearitas – X2	Tolerance 0.902; LIVE 1,109	Tolerance > 0.10; VIF < 10	No multicollinearity
Multikolinearitas – Z	Tolerance 0.866; LIVE 1,155	Tolerance > 0.10; VIF < 10	No multicollinearity
Heteroskedastisitas (Glejser) – X1, X2, Z	Sig. 0.201; 0,251; 0,284	Sig. > 0.05	No heteroscedasticity

Source: Data Processed (2026)

All classical assumption tests are met, so the regression model is feasible to use for hypothesis testing.

Multiple Linear Regression Analysis and Hypothesis Testing

The multiple linear regression analysis yields the equation $Y = 7.878 + 0.908X_1 + 0.596X_2 + 0.333Z + e$ (see Table 4). The determination coefficient test showed an Adjusted R Square value of 0.501, meaning that 50.1% of the variation in SIA speed and accuracy can be explained jointly by ease of use, usability, and digital competence, while the remaining 49.9% is explained by other variables outside the model. The F test yielded a calculated F value of 34.116 with a significance of < 0.001, indicating that the regression model is viable and that the three independent variables had a significant effect simultaneously.

Table 4
T Test Results (Multiple Regression)

Variabel	B	t	Sig.	Remarks
Ease of Use (X1)	0,908	6,330	< 0.001	Have a significant positive effect
Usability (X2)	0,596	4,162	< 0.001	Have a significant positive effect
Digital Competence (Z)	0,333	2,178	0,032	Have a significant positive effect

Source: Data Processed, 2026.

The results of the t-test showed that ease of use (sig. < 0.001) and usability (sig. < 0.001) had a positive and significant effect on the speed and accuracy of SIA, so H1 and H2 were accepted. Digital competence (Z) also showed a positive and significant direct effect (B = 0.333; sig. = 0.032), consistent with its inclusion in the regression equation above, although this study did not formulate a separate hypothesis for the direct effect of digital competence; its role as a moderating variable is examined separately through the MRA results below.



The *Moderated Regression Analysis* test yielded an equation $Y = 29.587 - 0.297X_1 - 0.313X_2 - 1.786Z + 0.117(X_1 \times Z) + 0.083(X_2 \times Z) + e$, with an overall significant moderation model (F count 25.855; sig. 0.000; Adjusted R Square 0.557).

Table 5.
MRA Test Results

Variabel	B	t	Sig.	Remarks
$X_1 \times Z$ (ease of use-digital competency interaction)	0,117	2,667	0,009	Proven to moderate (H3 accepted)
$X_2 \times Z$ (digital use-competence interaction)	0,083	2,078	0,040	Proven to moderate (H4 accepted)

Source: Primary data processed, 2026.

The positive and significant interaction coefficients of $X_1 \times Z$ (0.117; sig. 0.009) and $X_2 \times Z$ (0.083; sig. 0.040) showed that digital competence strengthened the influence of ease of use and usability on the speed and accuracy of SIA, so H3 and H4 were accepted.

Discussion

Ease of use over the speed and accuracy of SIA. The positive regression coefficient (0.908) showed that each increase in the perception of ease of use by one unit increased the speed and accuracy of the SIA by 0.908 units. The average value of this variable (10,880) indicates that respondents rated cloud POS applications relatively easy to learn and understand without requiring complex technical skills. These findings support TAM (Davis, 1989): the easier a system is to use, the higher the rate of acceptance and utilization of the technology. Simple transaction input features, automated stock management, and instant reports on cloud POS help reduce record-keeping errors that are common in manual systems, in line with Venkatesh et al. (2020) who stated that the ease of use of technology increases the effectiveness of information systems in organizations.

Usability to speed and accuracy of SIA. The value of a positive coefficient (0.596) and average usability (10,500) showed that the majority of respondents considered cloud POS to provide great benefits for business operations. According to the concept of *perceived usefulness* (Davis, 1989), when users realize the real benefits of a technology, the level of use and effectiveness increases. The POS cloud's capabilities integrate transaction logging, stock management, sales monitoring, and financial reporting automatically reduce manual recording time while minimizing miscalculations, making SIA more reliable.

Digital competence as a moderator of ease of use. The significance of the



X1×Z interaction (0.009) shows that digital competence strengthens the influence of ease of use on the speed and accuracy of SIA. Even if the POS interface is designed to be simple, the benefits are not optimal if the digital competence of the user is low; Conversely, competent users are quicker to understand features, overcome technical constraints, and make the most of all system functions. The average digital competence (10,810) shows that respondents have relatively good digital skills, in line with RBV's perspective that human resource competence is an important internal resource for competitive advantage.

Digital competence as a moderator of usability. The significance of the X2×Z interaction (0.040) showed that digital competence also amplified the influence of usability on the speed and accuracy of SIA. MSMEs with high digital competence tend to be better able to understand system reports, analyze sales data, manage digital inventory, and utilize financial information as a basis for decision-making, while users with low competence only take advantage of a small number of available features. These findings confirm that the success of MSMEs' digital transformation is not solely determined by technology, but also by the capabilities of the human resources who operate it, so that investment in digital literacy is as important as investment in technology itself.

This study has limitations that need to be considered in interpreting the results: the use of *purposive sampling* with respondents limited to F&B MSMEs in Surabaya makes the results not generalize to other regions or sectors; data collection through online questionnaires (Google Form) has the potential to contain the subjectivity of respondents' perceptions; the research model only tests three independent/moderation variables so that other factors that have the potential to influence the speed and accuracy of the SIA have not been covered; as well as quantitative approaches with multiple regressions and MRA have not been able to dig deeply into the contextual factors behind the pattern of cloud POS use in practice.

Synthesis of Subject Matter (Policy Synthesis)

The combined results of the multiple regression test and MRA show a complementary analysis unit: the ease of use and usability of cloud-based POS directly increases the speed and accuracy of the MSME Accounting Information System, but the magnitude of these benefits is highly dependent on the digital competence of its users as a reinforcing factor (*enhancing moderator*). In other words, easy and useful technology alone is not enough — without adequate digital capabilities, the full potential of cloud POS cannot be optimally absorbed, as reflected in the Adjusted R Square increase from 50.1% to 55.7% after the digital



competency interaction variable was incorporated into the model. The aim of this study is to analyze the influence of ease of use, usability, and the role of digital competency moderation on the speed and accuracy of SIA—it has been fully achieved, with all four hypotheses (H1–H4) being statistically accepted.

The policy implications that can be suggested include three goals. First, for MSME actors, this finding confirms that investment in cloud-based POS technology needs to be accompanied by a digital literacy improvement program for owners, cashiers, and managers, so that advanced features such as dashboard analysis and inventory tracking can be utilized to the fullest, not just basic recording functions. Second, for cloud POS service providers, an easy-to-learn interface design needs to be equipped with training modules or usage assistance so that the benefits of the system can be felt by users with varying digital competencies. Third, for the government and related institutions, these results are an empirical basis for designing an intervention program that combines subsidies or incentives for the adoption of accounting technology with digital literacy training simultaneously, because the two elements have proven to strengthen each other in improving the quality of accounting information for MSMEs in the F&B sector.

CONCLUSION

Based on the results of research and discussion on the influence of cloud-based Point of Sale (POS) technology on the speed and accuracy of Accounting Information Systems with digital competence as a moderation variable in F&B MSMEs in Surabaya, it can be concluded that the ease of use and usability of cloud-based POS has a positive and significant effect on the speed and accuracy of the Accounting Information System, which means that the easier it is to understand and the more useful the system is felt by MSME actors, the more efficient and minimal errors the process of processing transaction data and presenting the resulting financial statements. Digital competence has been proven to play a role as a moderating variable that strengthens these two influences, indicating that the benefits of cloud POS technology will be optimally absorbed to increase the reliability of the company's information system only if supported by human resources who have adequate digital skills. The policy implications of these findings are the need for synergy between technology adoption and strengthening digital literacy: MSME actors are advised not only to invest in cloud POS applications, but also to actively improve the digital competence of their human resources through continuous training; Technology providers are advised to include a usage mentoring program as part of the service; and the



government and MSME coaching institutions are advised to design a digitalization program that combines technological assistance with digital capacity building simultaneously, so that the digital transformation of MSMEs in the food and beverage sector can take place in a sustainable manner and have a real impact on the quality of accounting information and business competitiveness.

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