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Association between accounting knowledge, AIS utilization and system quality with business performance

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Abstract

The problem of Small and Medium-Sized Enterprise (SME) business performance (BP) is related to the Accounting Information System Quality (AISQ) concept. Therefore, this study aims to analyze the determinant factors of BP from the AISQ concept in SMEs. Considering the ABC theory-based AISQ framework, several variables complement the model, namely Antecedents (Knowledge of Accounting (KoA) and Accounting Information System Application (AISA)), Behaviors (Accounting Information System (AIS)), and Consequences (BP). The method used is quantitative, with the unit of analysis being SMEs in Cirebon City. This study is based on survey methods using (1) descriptive analysis in measuring responsiveness as well as respondents' perceptions and causal behaviors, and (2) quantitative analysis. The results show that KoA does not significantly influence BP. However, AISA and AISQ significantly influence the extent of SME BP. These variables affect the ability of SMEs to provide the necessary information to achieve the expected performance.

Keywords: Accounting information systems, Business performance, Knowledge of accounting, SMEs, System applications.

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1. Introduction

In the contemporary dynamic business environment, the survival and competitiveness of Small and Medium Enterprises (SMEs) have become contingent upon the adoption and effective use of Accounting Information Systems (AIS) [1]. Recent research has highlighted that the importance of AIS quality (AISQ) for improving SME business performance (BP) is increasing in a timeframe of a rapidly changing digitalization [2]. The wave of digitalization has made SMEs apply accounting technologies and improve the quality system in order to be competitive and sustainable [3, 4]. Research has found that effective AIS systems enhance decision-making and at the same time, provide better business functions and financials

[5, 6]. In addition, the growing sophistication of customer requirements and the instability of the market also apply increasing pressure on accounting information, which is required in order to prepare strategies and allocate resources [7]. This amounts to emphasizing the place of AISQ as a driver towards better BP of SMEs.

Although the importance of AIS has been acknowledged, there are ongoing contemporary concerns in relation to the factors that impact on the quality of AIS and subsequently to the performance of SMEs [8]. Researches show the discrepancies of factors such as Knowledge of Accounting (KoA) and the utilization of Accounting Information Systems Application (AISA) that contribute to AISQ and BP [9]. Moreover, SMEs frequently have resource constraints, lack technical competence, and may have resistance within the organization, which makes the successful adoption and use of AIS difficult [10, 11]. It is important to understand and manage these challenges for SMEs adopting AISQ in order to benefit from such technology [5].

The theoretical base for this research is the theory of RBV and it suggests that firm, unique, and non-imitable resources, such as knowledge and technology application, play a crucial role in achieving superior organizational performance [12, 13]. KoA stands for valuable intangible resources in the framework of RBV, and AISA is strategic technological assets that may strengthen AISQ, hence BP.

Sipon and Hassan [14] Islamic views from the Qur'an, in particular in Surah Al-Mujadila (58:11), focus on the nobility of men of knowledge, shedding light on the theological and practical implications of possessing domain expertise on information systems for business excellence. While there has been rich research on AIS and the performance of the firm, noticeable gaps remain, particularly focusing on SMEs and the combined implications of both KoA and AISA on the effects of AISQ. Previous research frequently concentrated only on knowledge factors or technology adoption, but not holistically integrating the dual impacts of knowledge and technology adoption [15-17]. Furthermore, prior results provide inconsistent answers about the role of these predictors on AISQ and BP, while some studies found strong relationships, some others found no significant effect [18]. This discrepancy indicates a research void, requiring a total study among Knowledge of Accounting (KoA), Accounting Information System Application AISA, Accounting Information System Quality AISQ, and Business Performance BP in SMEs [19-24]. This research thus fills this void and contributes a new understanding of how improved accounting knowledge and system AQ can lead to improved business performance [25].

Therefore, the main purpose of this study is to analyze the determinants of Firm Performance by taking the concept of Accounting Information System Quality (AISQ). The main purpose of the current research is to investigate both the simultaneous and non-simultaneous effects of Knowledge of Accounting (KoA) and Accounting Information System Application (AISA) on Business Performance (BP) via AISQ. The results are anticipated to contribute to strengthening the economy, creating jobs, and promoting sustainable development at a wider social level by providing strategic suggestions to SMEs towards enhancing system quality and performance.

2. Literature Review

2.1. Knowledge of Accounting (KoA) and AISQ

Knowledge of Accounting (KoA) plays a major role in improving the Accounting Information System Quality (AISQ). Sufficient understanding of accounting by the users of the system would guarantee that the data inputted into the system are reliable, accurate and useful for decision-making [6]. Previous studies suggest that KoA has a dramatically positive effect on the performance of AIS in terms of user competence and system use [26]. Strong technical and financial capabilities enable users to conduct data processing, analysis, and system diagnosis, leading to higher REL, TIM, PIT, and INT dimensions of the AISQ [27-29]. Moreover, Shiels et al. [23] added that the more capable the users are, the greater the perceived ease of use, and the success of the IS implementation. Accordingly, those who have higher accounting knowledge tend to have a positive contribution to the general quality of AIS and then, we argue that KoA positively affects AISQ.

2.2. Use of AISA and AISQ

Developing on Nurhayati et al. [19], AISA is the most significant driver of AISQ. A sophisticated AISA can help to reduce costs for business operations, increase the efficiency of information management, and ensure the precision of financial reports. The quality of the UI/UX (user experience) of these apps influences the satisfaction of the users, its perceived usefulness and the Quality of subsequent systems [30-32]. Also argued that system usage effectiveness is critically influenced by the functionality of the application and the ease of use of the application, which allows timely and pertinent information delivery [33]. Accordingly, AISA is also viewed as an important precedent on AISQ in organizations [34-36].

2.3. Quality of AIS (AISQ) and Business Performance (BP)

AISQ has an immediate relationship to Business Performance (BP) by providing information for strategic decision making, which relies on the provision of timely, reliable and accurate information. Organizations with better quality AIS have better cost efficiency, resources are better allocated, and operations are more enhanced [32, 37, 38]. As Monteiro et al. [5] evidence, aspects such as AIS integration, timeliness and accessibility are among the determinants of firm performance. In addition, Dwianto [39] points out that effective use of AIS reinforces financial control, planning and performance measurement that would result in superior organizational performance. Therefore, raising AISQ is one of the strategic levers for increasing BP across industries.

2.4. Hypothesis Development

The foundation of our hypotheses is that Knowledge of Accounting (KoA) is a key element in the pursuit of achieving improved Accounting Information System Quality (AISQ), as higher education accounting professionals can augment data accuracy, system usage, and decision making [40, 41]. Therefore, it is predicted that KoA has a positive influence on AISQ

(H1). Moreover, the use of accounting information systems (AISA) is seen as one of the most important predictors of AISQ, as convenience can lead to more effective and efficient systems Zhang et al. [41] and Dai [42] so the second hypothesis, AISA positively affects AISQ (H2), was supported. Second, high-quality AIS, defined by the attributes of accuracy, timeliness, integration, and accessibility, is assumed to have the capacity to lead to better Business Performance [43, 44]. Which is the third hypothesis stating that AISQ has a positive impact on BP (H3). Taken together, these hypotheses provide a basis for an investigation of the interrelationships among accounting knowledge, system use and information systems quality with firm performance.

2.5. Research Model Framework (RMF)

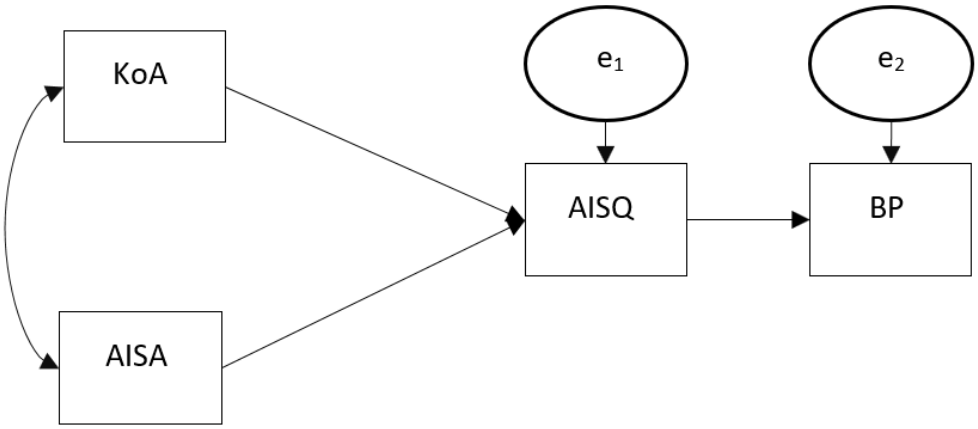

Figure 1.
Basic model structure equation model.

3. Method

3.1. Research Design

Research Design The present investigation is a quantitative study with a descriptive and causal comparative research approach. The purpose of the research is to investigate the relationships between Knowledge of Accounting (KoA), Application of Accounting Information Systems (AISA), Accounting Information Systems Quality (AISQ), and Business Performance (BP) in Small and Medium Enterprises (SMEs). The first aim is to explore what influences AISQ and how AISQ translates into BP via KoA and AISA. Structured questionnaires will guide the data collection to ensure consistency and accuracy of responses.

3.2. Population and sample

The target population of the research is the SMEs in Indonesia, especially those that are included in the sectors using accounting and information systems as their business operations. The respondents of this study will be 200 SME owners, managers and accounting staff employed in selected SMEs through purposive sampling [39]. A purposive sampling method is adopted to assure that the sample has the knowledge and experience in using accounting information systems. The sample size is calculated according to the power analysis to have the power to detect the meaning effect.

3.3. Data Collection

Sociodemographic and sexual behavior data will be obtained through a self-administered questionnaire containing closed-ended questions selected from the literature review. Gavrila and de Lucas Ancillo [45], the SMEs will receive the questionnaire through email and in hardcopy for filling [46]. The questionnaire will include five sections: (1) demographic characteristics, (2) Knowledge of Accounting (KoA), (3) Application of Accounting Information System (AISA), (4) Accounting Information System Quality (AISQ), and (5) Business Performance (BP). The measures of the variables are taken from scales developed in previous research.

4. Result

4.1. Validity and Reliability of Data

Data was collected through a questionnaire survey distributed to 109 respondents to capture the study's main variables: Business Performance (BP), Accounting Information System Quality (AISQ), Knowledge of Accounting (KoA) and Application of Accounting Information System (AISA). After collecting the responses, they were validated and tested for reliability. The validity and reliability results of the questionnaires are presented in Table 1. After a preliminary inspection, two items of the questionnaire were discovered to be invalid: item question 1 of Business Performance (BP) and item question 2 of Accounting Information System Quality (AISQ). These objects were then omitted from the analysis of the data. All other items were valid, with all items having values higher than the minimum validity value of 0.3 [47]. In particular, the factor loadings for the other items were 0.850, 0.886, indicating a strong correlation between the items and constructs. Cronbach's Alpha (Cα) coefficient values for each of the variables were checked, evidently showing that all scales presented good reliability, as all of them scored higher than 0.7 (which is a recommended level of reliability) in social sciences research.

The Cα of BP, AISQ, KoA and AISA were 0.886, 0.853, 0.850 and 0.869, respectively. These findings also validate that the questionnaire is valid and reliable for future studies. In conclusion, the questionnaire survey employed produced high-quality data, including valid and reliable measures for all key variables, with the exception of the two invalid items, which have been excluded from further analysis. This means that the results are valid for further statistical testing or the testing of hypotheses.

Table 1.
Validity and reliability output.

Ques	Var	No Invalid Items*	Coef Cα**
Scale of Business Performance (SBP)	Business Performance (BP)	Question item 1	0.886***
Scale of Accounting Information System Quality (SAISQ)	Accounting Information System Quality (AISQ)	Question item 4	0.853***
Scale of Knowledge of Accounting (SKoA)	Knowledge of Accounting (KoA)	-	0.850***
Scale of Accounting Information System Application (SAISA)	Accounting Information System Application (AISA)	-	0.869***

4.2. Test Results of Statistical Assumptions

As presented in Table 2, the results of the conditions of the statistical assumptions test show that all the data of variables AISA, KoA, AISQ, and BP satisfy the normality assumption. Kurtosis and skewness values from AISA (−0.394 and 0.834), KoA (−0.238 and 0.953), AISQ (0.088 and 0.421), and BP (0.180 and 1.125) are within the allowed values, indicating that these variables approximate a normal distribution. Furthermore, the critical ratios (c.r.) for these variables, AISA (−1.618), KoA (−0.978), AISQ (−0.864), and BP (0.737) are all less than the critical value of 1.960 at the 0.05 level of significance, and there are no significant departures from normality. The multivariate skewness and kurtosis estimates (0.813 and 0.590) also show that the multivariate data follows a normal distribution pattern. Moreover, the condition number of the covariance matrix (123.908) and initial index (1 1.131) indicate no multicollinearity problem among the variables, so the correlations are not too high [39]. In general, the dataset meets the assumptions of its statistical tests, with no sign of multivariate outliers or multicollinearity, indicating that the dataset is fit for analysis.

Table 2.
Summary of Statistical Assumption Evidence Test Results.

Variable	min	max	skew	c.r.	kurtosis	c.r.
AISA	24,000	67,000	-0.394	-10.618	-0.834	-10.710
KoA	7,000	23,000	-0.238	-0.978	-0.953	-10.955
AISQ	13,000	44,000	0.088	0.361	-0.421	-0.864
BP	9,000	39,000	0.180	0.737	-10.125	-20.308
Multivariate					-0.813	-0.590

Note: BP = Business Performance; AISQ = Accounting Information System Quality; KoA = Knowledge of Accounting; AISA = Accounting Information System Application *Critical coefficient value CR at a significance level of 0.05 = 1.960. **Condition number of covariance matrix and sample correlation matrix = 123.908 and 27.097. Condition Index = 11.131 and 5.205.

4.3. Descriptive Analysis

The descriptive statistics for Business Performance (BP), AISQ, KoA, and AISA are shown in Table 3. Average scores of the variables give an idea about the central tendency of the data, BP has the average score of 2.8761, AISQ equals 3.157, KoA is 2.9743 and AISA has the average score of 3.1134. These mean values confirm the overall positive ratings of mid to high that respondents attributed to the various items. The standard error of the mean for BP is 0.0541, for AISQ is 0.0514, for KoA is 0.0558, and for AISA is 0.0636, showing that the mean values are reasonably consistent across the sample. The 95% confidence level intervals are ranges in which it is estimated with 95% confidence that the true population means will fall. The confidence interval for BP is 2.6844--3.0679, for AISQ is 3.0166--3.2973, for KoA is 2.8165--3.1322, and for AISA is 2.9665--3.2603. These intervals indicate that the average scores are reasonably stable and reliable. The variables have quite similar standard deviations, although BP and AISQ have standard deviations of 0.7392, KoA's is 0.8313 and AISA SD is 0.7736, indicating similar distribution from the mean for all the response options for each variable. This breakdown also gives a good overview of how responses travel through the variables.

Table 3.
Mean Scores, Standard Deviations and Confidence of Mean Scores for Variables.

Description		Statistic BP	Statistic AISQ	Statistic KoA	Statistic AISA
Average		2.8761	3.157	2.9743	3.1134
Standard error of the mean		0.0541	0.0514	0.0558	0.0636
Confidence interval of the mean score at a 95% confidence level	Lower bound	2.6844	3.0166	2.8165	2.9665
	Upper bound	3.0679	3.2973	3.1322	3.2603
Standard deviation		0.7392	0.7392	0.8313	0.7736

4.4. Inferential Analysis

The causal relationship is depicted in Figure 4.5, for which the coefficient of the path from KoA to AISQ is 0.014. Meanwhile, the relationship from AISA to AISQ (path coefficients = 0.803) is relatively stronger. Sensitivity of the model for this part of the analysis is 65.2%. Regarding BP, the path coefficients here display that KoA and AISA have a significant effect on B with β values of 0.076 and 0.307, respectively. AISA also has a direct path coefficient of 0.536 with respect to BP. The predictive power of the model of on BP is 69.4 percent, and we know that the relation between all the variables and their overall effect on the performance is reasonably moderate.

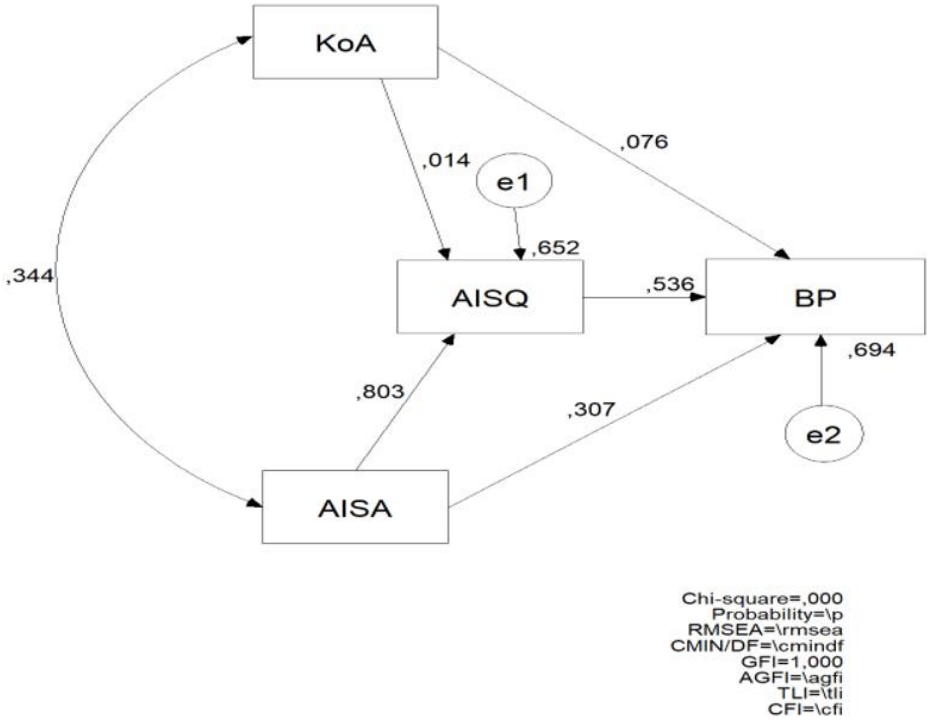

Figure 2.
Proposed path model analysis.

4.5. The Significance Test of the New Model

Table 4 displays the results of the significance test for the proposed model. The test of hypotheses indicates the causal ordering between the variables. The critical ratio (C.R.) for knowledge of accounting (KoA) with AISQ is 0.211 with a P-value of 0.833 > 0.05 and as such the path is not significant at the 0.05 level. Thus, there is no positive effect of KoA on AISQ. On the other hand, the path Accounting Information System Application (AISA) to AISQ has a value of C.R = 12.060, with P-value 0.005, lower than 0.05, meaning that the car value is significant at 5%, then it can be concluded that AISA has very significant effect and positive effect on AISQ. For Business Performance (BP), the relationship of KoA and BP has a C.R. thereof of 1.223 and its P-value=0.221, which means no significant effect. But the impact of AISA on BP is notable, having C.R.: 3.031 and P-value: 0.002, showing the positive effective contribution effect from AISA on BP [48]. Lastly, the impact relationship of AISQ on BP is also very strong and it has a significant relation (C.R. = 5.385, P<0.05). These results indicate that even though KoA has no significant association with AISQ or BP, some relationships, especially AISA's effect on AISQ and BP, are factors that matter.

Results of the validity test for the revised model are reported in Table 5. The route from AISA to AISQ, estimated at 2.182 (S.E. = 0.169, C.R. = 12.916*), is statistically significant. This shows the strong positive impact of AISA on AISQ. The relationship from AISQ to Business Performance (BP) indicates an estimate of 0.345, C.R. 5.369 and P < * (highly significant) and thus it is established that AISQ has a positive association with BP. Last, the coefficient of AISA to BP is: (0.573), (3.304), * *(significant)*, indicating that AISA also has a positive effect on BP. These findings reveal that all relationships in the revised model are robust and attest to the salient effects of AISA on AISQ and BP, as well as the significant role of AISQ in predicting BP.

The findings indicate that the model also satisfies other criteria with respect to fit, such that the sample data conform strongly to the hypothesized model, which can then be generalized to the population. The chi-square is smaller than the cut-off value (i.e., 2.000), showing a satisfactory fit. The probability value of 0.466, which is more than the threshold (0.05), also confirms this and indicates no significant misfit in the model. Root Mean Square Error of Approximation (RMSEA) is 0.000, which is less than 0.08; hence indicating a perfect fit. The CMIN/DF is 0.764, which is much less than the recommended threshold of 2, thus supporting the model fit. It is also found that the values of Goodness of Fit Index (GFI) = 0.992, Adjusted Goodness of Fit Index (AGFI) = 0.958, Tucker-Lewis Index (TLI) = 1.007, and Comparative Fit Index (CFI) = 1.000 are all greater than their corresponding cut-off figures, which further confirms the fitness of the model. Taken together, these findings indicate that the reduced model is a good fit for analysis.

Table 4.
Significance test of the proposed model.

Variable	Estimate	S.E.	C.R.	P	Description
AISQ <--- AISA	2.169	0.180	12.060	***	Highly Significant
AISQ <--- KoA	0.005	0.022	0.211	0.833	Not Significant
BP <--- AISQ	0.343	0.064	5.385	***	Highly Significant
BP <--- AISA	0.532	0.175	3.031	0.002	Significant
BP <--- KoA	0.016	0.013	1.223	.221	Not Significant

Table 5.
Test of the revised model.

Variable	Estimate	S.E.	C.R.	P	Label
AISQ < AISA	2.182	0.169	12.916	***	par_3
BP <AISQ	0.345	0.064	5.369	***	par_1
BP<AISA	0.573	0.174	3.304	***	par_2

Table 6.
GOF after Adjustments.

Goodness of Fit (GOF)	Cut-off Limit	Value	Description
Chi-square	Less than 2	1.528	Good Fit Model
Probability	> 0.05	0.466	Good Fit Model
RMSEA	< 0.08	0.000	Good Fit Model
CMIN/DF	< 2	0.764	Good Fit Model
GFI	> 0.9	0.992	Good Fit Model
AGFI	> 0.9	0.958	Good Fit Model
TLI	> 0.95	1.007	Good Fit Model
CFI	> 0.95	1.000	Good Fit Model

4.6. Discussion

This study provides an important contribution by showing that the relationship between KoA, AISA, AISQ and BP is relevant in the context of SMEs. Notably, results indicate that KoA surprisingly does not affect AISQ or BP. On the contrary, AISA has a remarkable positive influence on both AISQ and BP, and AISQ alone has a powerful positive effect on BP. The implications for prior research will be discussed based on previous findings.

First, the insignificance of KoA effect on AISQ and BP suggests that only having accounting knowledge does not is not adequate for the improvement of the accounting information systems quality and of directly driving the business performance. This is in accordance with Lotfi et al. [49] who argued that knowledge had to be well assimilated in technology and operational order to impact the organizational level. Similarly, Al-Hattami [43] showed that accounting knowledge are essential but not independent to significantly influence the accounting information system quality without technological knowledge and system support.

In addition, the strong positive effect of AISA on AISQ confirms that the effectiveness of accounting information systems is important in SMEs. As reported by Sipon and Hassan [14] use of high-quality and well-integrated information systems (accounting) improved H3: Sophisticatedly integrated accounting information system leads to quality improvement of the system. accuracy, currency, and reliability of financial information, thus increasing general system quality. In addition, Gavrila and de Lucas Ancillo [45] underscored that well-structured accounting systems can enhance the quality of decision-making, internal control, and financial reporting, as they are integral elements of AISQ.

The high positive impact of AISQ on BP further corroborates the hypothesis that any good accounting information system is presumed to be one of the major ingredients for organizational prosperity. Alharasis et al. [50] suggest that high-quality AIS delivers accurate and relevant information on time, and helps in improved strategic decision-making, efficient resource allocation and better operational controls, which leads to superior business outcomes. Similarly, Grande et al. [51] determined that SMEs with better AIS quality present better financial results, innovation capabilities, and market responsiveness than those having lower systems quality.

The path analysis further shows that AISA shows a significant and positive direct influence on BP. This result emphasizes that apart from enhancing system quality, the application of accounting information systems per se can directly drive performance effects. According to Rahahle et al. [52], when smaller business enterprises combine perfectly the AIS system applications, then the operations of such applications not only ease the journaling the accounting space but also customer satisfaction, supply chain management and an enhancement of financial records transparency in addition to business performance investment prospective aggregations.

Furthermore, Goodness of Fit (GOF) supported the fit of the proposed and revised models to the data, which increases the validity of the conclusions. If model fit is good, this means that the proposed model and the relations between the variables measure the data well, what results in strong evidence for the current study's frame.

From a theoretical standpoint, these results complement the resource-based view of the firm Barney et al. [12], which suggests that internal organizational capabilities, such as successful systems usage and high-quality IS, are the true sources

of sustained competitive advantage. The role of AISA as a strategic resource to improve the quality of the system and firm performance is evident. Reciprocally, the absence of direct effect from KoA confirms the embodiment of human capital with technological and process capabilities is needed to derive business outcomes.

For practitioners, the findings provide theoretical implications for SME managers and policymakers. The SME owner should not grow sloppy and rely on employee accounting knowledge, but they should prioritize the accounting information system and deepen its practice and refinement. AIS training, systems enhancement and business process alignment are strategic investment areas. Additionally, those planning SME development policies should develop schemes that improve both technology and system adoption than providing only elementary accounting training.

There are also some limitations to this study, however, that should be noted. The survey data were based on self-reported questionnaires, which can lead to possible biases associated with social desirability or misreporting of symptoms. Future investigations may also include objective performance measures or follow-up studies to confirm and generalize the existing results. In addition, it would be useful to investigate mediating variables, such as system usage intensity or user satisfaction, to gain a deeper insight into how AISA and AISQ impact business performance.

5. Conclusion

It can be inferred from this test that whereas defaults in KoA do not notably account for variation in AISQ and BP, AWS among SMEs can play a major role in improving both AISQ and BP. In addition, the quality of the accounting information system (AISQ) itself shows a significantly positive effect on business performance, revealing that the technological application and the quality of the system are significant determinants of the organization's success. These results support the resource-based view (RBV) of the firm, which suggests that competitive advantage is based on technological and system capabilities more than on human aspects. For accounting professionals, this research emphasizes the need to invest in and consistently improve AIS effectively, as it is an essential key to the sustainability of the business. It is recommended that subsequent research investigate other mediating mechanisms and use a longitudinal design to examine these associations across different business environments.

References

[1] G. C. Reid and J. A. Smith, "A coevolutionary analysis of organisational systems and processes: Quantitative applications to information system dynamics in small entrepreneurial firms," *Critical Perspectives on Accounting*, vol. 20, no. 6, pp. 762-781, 2009. https://doi.org/10.1016/j.cpa.2008.01.009

[2] E. E. Alharasis, "Evaluating AIS implementation to improve accounting information quality: The prospect in Jordanian family SMEs in the post-Covid-19 age," *Journal of Family Business Management*, vol. 15, no. 2, pp. 317–345, 2024. https://doi.org/10.1108/JFBM-08-2024-0194

[3] D. Radicic and S. Petković, "Impact of digitalization on technological innovations in small and medium-sized enterprises (SMEs)," *Technological Forecasting and Social Change*, vol. 191, p. 122474, 2023. https://doi.org/10.1016/j.techfore.2023.122474

[4] W. Bouwman, S. Nikou, and M. de Reuver, "Digitalization, business models, and SMEs," *Telecomm. Policy*, vol. 43, no. 9, p. 101828, 2019. https://doi.org/10.1016/j.telpol.2019.101828

[5] A. P. Monteiro, J. Vale, E. Leite, M. Lis, and J. Kurowska-Pysz, "The impact of information systems and non-financial information on company success," *International Journal of Accounting Information Systems*, vol. 45, p. 100557, 2022. https://doi.org/10.1016/j.accinf.2022.100557

[6] A. Trigo, F. Belfo, and R. P. Estébanez, "Accounting Information Systems: evolving towards a business process oriented accounting," *Procedia Computer Science*, vol. 100, pp. 987-994, 2016. https://doi.org/10.1016/j.procs.2016.09.264

[7] M. Bromwich, "The case for strategic management accounting: The role of accounting information for strategy in competitive markets," *Accounting, Organizations and Society*, vol. 15, no. 1-2, pp. 27-46, 1990. https://doi.org/10.1016/0361-3682(90)90011-I

[8] M. Granlund and J. Taipaleenmäki, "Management control and controllership in new economy firms—a life cycle perspective," *Management accounting research*, vol. 16, no. 1, pp. 21-57, 2005. https://doi.org/10.1016/j.mar.2004.09.003

[9] R. Sultana, M. Z. Alam, and N. Hasan, "Understanding the emerging success factors gap of accounting information systems in developing countries–a systematic literature review," *Journal of Accounting Literature*, 2025. https://doi.org/10.1108/JAL-05-2024-0086

[10] H. M. Al-Hattami, A. A. A. H. Abdullah, J. D. Kabra, M. A. Alsoufi, M. M. Gaber, and A. M. Shuraim, "Effect of AIS on planning process effectiveness: a case of SMEs in a less developed nation," *The Bottom Line*, vol. 35, no. 2/3, pp. 33-52, 2022. https://doi.org/10.1108/BL-01-2022-0001

[11] E. E. Alharasis and A. F. Alkhwaldi, "The implementation of advanced AIS and the accounting data quality: The case of Jordanian SMEs," in *International Conference on Human-computer Interaction*, 2024, pp. 149-173.

[12] J. B. Barney, D. J. Ketchen Jr, and M. Wright, "Resource-based theory and the value creation framework," *Journal of Management*, vol. 47, no. 7, pp. 1936-1955, 2021. https://doi.org/10.1177/01492063211021655

[13] C. Y. Tseng and Y. J. James Goo, "Intellectual capital and corporate value in an emerging economy: empirical study of Taiwanese manufacturers," *R&d Management*, vol. 35, no. 2, pp. 187-201, 2005. https://doi.org/10.1111/j.1467-9310.2005.00382.x

[14] S. Sipon and A. H. Hassan, "Managing spirituality in solving family issues," *Procedia-Social and Behavioral Sciences*, vol. 185, pp. 214-217, 2015. https://doi.org/10.1016/j.sbspro.2015.03.450

[15] M. Janssen, V. Weerakkody, E. Ismagilova, U. Sivarajah, and Z. Irani, "A framework for analysing blockchain technology adoption: Integrating institutional, market and technical factors," *International Journal of Information Management*, vol. 50, pp. 302-309, 2020. https://doi.org/10.1016/j.ijinfomgt.2019.08.012

[16] M. Saad, "The influence of accounting information system adoption on business performance amid COVID-19," *Computers in Human Behavior Reports*, vol. 10, p. 100286, 2023. https://doi.org/10.1016/j.chbr.2023.100286

[17] S. Handoyo, "Evolving paradigms in accounting education: A bibliometric study on the impact of information technology," *The International Journal of Management Education*, vol. 22, no. 3, p. 100998, 2024. https://doi.org/10.1016/j.ijme.2024.100998

[18] V. Giantin *et al.*, "Outcome after acute ischemic stroke (AIS) in older patients: Effects of age, neurological deficit severity and blood pressure (BP) variations," *Archives of Gerontology and Geriatrics*, vol. 52, no. 3, pp. e185-e191, 2011. https://doi.org/10.1016/j.archger.2010.11.002

[19] N. Nurhayati, R. Hartanto, I. Paramita, D. Sofianty, and Q. Ali, "The predictors of the quality of accounting information system: do big data analytics moderate this conventional linkage?," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 9, no. 3, p. 100105, 2023. https://doi.org/10.1016/j.joitmc.2023.100105

[20] P. Ruivo, T. Oliveira, and M. Neto, "Examine ERP post-implementation stages of use and value: Empirical evidence from Portuguese SMEs," *International journal of accounting information systems*, vol. 15, no. 2, pp. 166-184, 2014. https://doi.org/10.1016/j.accinf.2014.01.002

[21] P. Andrikopoulos and A. Khorasgani, "Predicting unlisted SMEs' default: Incorporating market information on accounting-based models for improved accuracy," *The British Accounting Review*, vol. 50, no. 5, pp. 559-573, 2018. https://doi.org/10.1016/j.bar.2018.02.003

[22] A. Mujalli, M. J. G. Wani, A. Almgrashi, T. Khormi, and M. Qahtani, "Investigating the factors affecting the adoption of cloud accounting in Saudi Arabia's small and medium-sized enterprises (SMEs)," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 10, no. 2, p. 100314, 2024. https://doi.org/10.1016/j.joitmc.2024.100314

[23] K. Shiels *et al.*, "Effects of methylphenidate on discounting of delayed rewards in attention deficit/hyperactivity disorder," *Experimental and clinical psychopharmacology*, vol. 17, no. 5, p. 291, 2009.

[24] A. Kanellou and C. Spathis, "Accounting benefits and satisfaction in an ERP environment," *International Journal of Accounting Information Systems*, vol. 14, no. 3, pp. 209-234, 2013. https://doi.org/10.1016/j.accinf.2012.12.002

[25] M. Wouters and C. Wilderom, "Developing performance-measurement systems as enabling formalization: A longitudinal field study of a logistics department," *Accounting, organizations and society*, vol. 33, no. 4-5, pp. 488-516, 2008. https://doi.org/10.1016/j.aos.2007.05.002

[26] S. Darvishpoor, A. Darvishpour, M. Escarcega, and M. Hassanalian, "Nature-inspired algorithms from oceans to space: A comprehensive review of heuristic and meta-heuristic optimization algorithms and their potential applications in drones," *Drones*, vol. 7, no. 7, p. 427, 2023. https://doi.org/10.3390/drones7070427

[27] H. E. Elmaasrawy and O. I. Tawfik, "The impact of using the Internet of Things on the development of the accounting information system in the health sector," Elsevier, 2024, pp. 253-270.

[28] O. I. Tawfik and H. E. Elmaasrawy, "Opportunities and challenges facing the accounting information system in medical institutions when adopting Internet of Things," *Digital Healthcare in Asia and Gulf Region for Healthy Aging and More Inclusive Societies*, pp. 75-89, 2024. https://doi.org/10.1016/B978-0-443-23637-2.00007-2

[29] N. Imjai, W. Promma, N. Visedsun, B. Usman, and S. Aujirapongpan, "Fraud detection skills of Thai Gen Z accountants: The roles of digital competency, data science literacy and diagnostic skills," *International Journal of Information Management Data Insights*, vol. 5, no. 1, p. 100308, 2025. https://doi.org/10.1016/j.jjimei.2024.100308

[30] S. Hajesmaeel-Gohari, F. Khordastan, F. Fatehi, H. Samzadeh, and K. Bahaadinbeigy, "The most used questionnaires for evaluating satisfaction, usability, acceptance, and quality outcomes of mobile health," *BMC Medical Informatics and Decision Making*, vol. 22, no. 1, p. 22, 2022. https://doi.org/10.1186/s12911-022-01764-2

[31] M. Al-Shafei, "Navigating human-chatbot interactions: an investigation into factors influencing user satisfaction and engagement," *International Journal of Human–Computer Interaction*, vol. 41, no. 1, pp. 411-428, 2025. https://doi.org/10.1080/10447318.2023.2301252

[32] M. Al-Okaily, A. F. Alkhwaldi, A. A. Abdulmuhsin, H. Alqudah, and A. Al-Okaily, "Cloud-based accounting information systems usage and its impact on Jordanian SMEs' performance: the post-COVID-19 perspective," *Journal of Financial Reporting and Accounting*, vol. 21, no. 1, pp. 126-155, 2023. https://doi.org/10.1108/JFRA-12-2021-0476

[33] B. Buyannemekh, S. Picazo-Vela, D. E. Luna, and L. F. Luna-Reyes, "Understanding value of digital service delivery by governments in Mexico," *Government Information Quarterly*, vol. 41, no. 2, p. 101936, 2024. https://doi.org/10.1016/j.giq.2024.101936

[34] K. L. Papiorek and M. R. Hiebl, "Information systems quality in management accounting and management control effectiveness," *Journal of Accounting & Organizational Change*, vol. 20, no. 3, pp. 433-458, 2024. https://doi.org/10.1108/JAOC-09-2022-0148

[35] D. Jackson and C. Allen, "Enablers, barriers and strategies for adopting new technology in accounting," *International Journal of Accounting Information Systems*, vol. 52, p. 100666, 2024. https://doi.org/10.1016/j.accinf.2023.100666

[36] W. Tang, S. Yang, and M. Khishe, "Profit prediction optimization using financial accounting information system by optimized DLSTM," *Heliyon*, vol. 9, no. 9, 2023. https://doi.org/10.1016/j.heliyon.2023.e19431

[37] B. Fang, X. Liu, C. Ma, and Y. Zhuo, "Blockchain technology adoption and accounting information quality," *Accounting & Finance*, vol. 63, no. 4, pp. 4125-4156, 2023. https://doi.org/10.1111/acfi.13088

[38] C. Zhang, Z. Li, J. Xu, and Y. Luo, "Accounting information quality, firm ownership and technology innovation: Evidence from China," *International Review of Financial Analysis*, vol. 93, p. 103118, 2024. https://doi.org/10.1016/j.irfa.2024.103118

[39] A. Dwianto, "Sustainability environmental performance future investment for company value," j. ecohumanism," Retrieved: https://www.scopus.com/authid/detail.uri?authorId=57195054771, 2024.

[40] A. A. H. Abdullah and F. A. Almaqtari, "The impact of artificial intelligence and Industry 4.0 on transforming accounting and auditing practices," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 10, no. 1, p. 100218, 2024. https://doi.org/10.1016/j.joitmc.2024.100218

[41] C. Zhang, W. Zhu, J. Dai, Y. Wu, and X. Chen, "Ethical impact of artificial intelligence in managerial accounting," *International Journal of Accounting Information Systems*, vol. 49, p. 100619, 2023. https://doi.org/10.1016/j.accinf.2023.100619

[42] Q. Dai, "Designing an accounting information management system using big data and cloud technology," *Scientific Programming*, vol. 2022, no. 1, p. 7931328, 2022. https://doi.org/10.1155/2022/7931328

[43] H. M. Al-Hattami, "Impact of AIS success on decision-making effectiveness among SMEs in less developed countries," *Information Technology for Development*, vol. 30, no. 3, pp. 472-492, 2024. https://doi.org/10.1080/02681102.2022.2073325

[44] A. Younas, "The role of accounting information systems on business performance–a proposed ais model of improved business performance," in *International Conference on Information Management*, 2024, pp. 465-474.

[45] S. G. Gavrila and A. de Lucas Ancillo, "Spanish SMEs' digitalization enablers: E-Receipt applications to the offline retail market," *Technological Forecasting and Social Change*, vol. 162, p. 120381, 2021. https://doi.org/10.1016/j.techfore.2020.120381

[46] R. Setiawati, M. Firsada, M. Bahrudin, G. Saif, and A. Dwianto, "Islamic community development : Synergy between Indonesia and Yemen in building civilization through da ' wah and Sharia economics,," vol. 8, pp. 3686–3702, 2025. https://doi.org/10.53894/ijirss.v8i2.6099

[47] S. S. Wirawan, M. D. Solikhah, H. Setiapraja, and A. Sugiyono, "Biodiesel implementation in Indonesia: Experiences and future perspectives," *Renewable and Sustainable Energy Reviews*, vol. 189, p. 113911, 2024. https://doi.org/10.1016/j.rser.2023.113911

[48] I. Sabila, R. Rahmawati, D. Djuminah, E. D. Amperawati, and A. Dwianto, "The Interplay between Board Gender Diversity, Earnings Quality, and Return Volatility: Considering the Reputation of Corporate Awards," *Qubahan Academic Journal*, vol. 4, no. 3, pp. 638-650, 2024. https://doi.org/10.48161/qaj.v4n3a1006

[49] I. Lotfi, D. Niyato, S. Sun, D. I. Kim, and X. Shen, "Semantic information marketing in the metaverse: A learning-based contract theory," *framework. arXiv*, 2023. https://doi.org/10.48550/arXiv.2302.11457

[50] E. E. Alharasis, H. Haddad, M. Alhadab, M. Shehadeh, and E. F. Hasan, "Integrating forensic accounting in education and practices to detect and prevent fraud and misstatement: case study of Jordanian public sector," *Journal of Financial Reporting and Accounting*, vol. 23, no. 1, pp. 100-127, 2025.

[51] E. U. Grande, R. P. Estébanez, and C. M. Colomina, "The impact of Accounting Information Systems (AIS) on performance measures: Empirical evidence in Spanish SMEs," *The International Journal of Digital Accounting Research*, vol. 11, no. 1, pp. 25-43, 2011. https://doi.org/10.4192/1577-8517-v11

[52] M. Y. Rahahle *et al.*, "Evaluating the impact of E-accounting systems on firm performance: A structural equation modeling approach," Springer, 2024, pp. 1193-1209.