

Does E-Commerce Impact on Accounting Information System and Organizations Performance? An Empirical Finding of SMEs in Indonesia

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ABSTRACT

This research examines the impact of e-commerce adoption on accounting information systems and SMEs' organizational performance. Data were collected from 102 SMEs in Central Java, Indonesia, that have adopted e-commerce in their business process. The structural equational model analysis was employed to examine the effect of e-commerce, accounting information systems, and SMEs' performance. The results showed that management characteristics and organizational readiness as e-commerce characteristics mainly determined the accounting information systems. The second SMEs' organization performance was directly impacted by accounting information systems, management performance, and financial performance; third, the accounting information system has mediated e-commerce toward financial and management performance. Future research is intended to improve the determinants of accounting information systems on SMEs who have used e-commerce intensively.

Keywords: *accounting information system, e-commerce, financial performance, management performance, SMEs' performance*

1. INTRODUCTION

The emergence of e-commerce has grown to the point where it has become necessary for established business processes [1]. Across several developed and developing countries, both large and small companies consider taking on e-commerce adoption [2]. This e-commerce acceptance is ironic because of the different countries' contexts and the company size. [3]. The impact of e-commerce adoption is clear to developed countries, but it has less of a consequence of various obstacles to the adoption process in developing countries. [5].

Small businesses, such as SMEs, frequently lack an effective business competition strategy because their asset value is low and their business period is relatively short [4]. SMEs are widely recognized as an essential economic structure for developing countries, such as Indonesia. [5]. It is not only because of the large number of firms that reached 98.9% at the end of 2019 but also because of the critical role of providing job opportunities [6].

It is interesting to observe the involvement of SMEs as e-commerce partners, given their important role as a priority to improve the current digital economy [7]. Several early studies focused on the origins of e-commerce intention and attitude [8], internal resistance [5,6], and organizational change [9]. Different studies of SMEs on accounting information systems as the impact of e-commerce adoption have not contributed significantly to the nation's economy [10,11]. It is interesting to examine further increases in the adoption of e-commerce by SMEs due to the extreme condition of the Covid-19 pandemic that makes it more effective.

This study examines the effects of e-commerce adoption on accounting information systems and SMEs' organizational performance in Indonesia in the context of a pandemic. Contributions focused on the development and organizational performance of accounting information systems under the baseline e-commerce adoption of SMEs. This development is essential both academically and practically when developing accounting information systems and can enhance SMEs' organizational performance, particularly under pandemic Covid-19.

One point on Indonesia's e-commerce development roadmap focuses on accelerating SMEs' participation in e-commerce through online marketing as a new digital economy power [12]. This SME involvement dominates the e-commerce value at 89.6% instead of online selling in various social media. [13]. The e-commerce adoption by SMEs must advance an accounting information system (AI) to submit financial, tax, and organizational performance reports [14]. The appropriate AI can encourage strategy and improve organizational performance [15,16]. Another study found a significant relationship between AI and business strategies, but not enough evidence of the finance aspect on AI interactions and organizational performance [17].

Entity manager design and development AI to evaluate the historical performance of the entity and the future business improvement plan [15]. AI is related to financial and organizational performance, and therefore, AI determinants can positively influence organizational performance. Several studies suggest a little more profound connection between AI and performance management, even though it is recognized as an essential organizational framework for organizational surveillance efficiency [18]. AI is designed to provide financial information quickly and accurately at each management level to influence operational management performance and start deciding following organizational strategic goals [19]. Accounting information systems are often affected by several factors that are a substantial information resource in organizations in context and technology [20]. Business entities' performance is one of the most important constructs in accounting management research. [21]. The formulation of the hypothesis is stated as follows:

- H1: accounting information system has a significant effect on financial performance;*
- H2: accounting information system has a significant effect on operational management performance;*
- H3: accounting information system has a significant effect on organizational performance;*
- H4: financial performance significantly influence organizational performance;*
- H5: operational management performance has a significant effect on organizational performance;*
- H6: accounting information systems mediate e-commerce on organizational performance.*

2. METHOD

The research populations are SME e-commerce partners in Central Java, Indonesia, which achieved 147,233 units as the highest growth area for SMEs in 2019. No more than 0,3% of SMEs recognize e-

commerce adoption, with the sample to be 441 units. AI instruments adopted from Sam, Romney et. al.[21,22]. The financial performance instrument (FP) was adopted from Hayes [24]. The operational management performance instrument (MP) was adopted from Barnett et al. [24], and the organizational performance instrument (OP) was adopted from Kwarteng [25]. The instrument was sent through an online questionnaire to respondents through the Central Java SME center from June-October 2020.

The structural equational model testing follows the steps, i.e., evaluation of the measurement model (outer model), taking into account reliability and composite reliability indicators and average extracted variance (AVE) and discrimination toward validity. The second assessment of the structural model (inner model) appears to take the percentage of model variance (R²). The third assessment is concerned with fitness criteria (GoF) through average fitness coefficient (APC) and average R-square measures (ARS). The fourth evaluation by testing the hypothesis by observing the path coefficient value $\alpha = 5\%$.

Conditions of mediating variable examinations by AI: direct relationship with endogenous exogenous construction is significant; constructing a direct relationship with the mediator is an essential endogenous and exogenous structure of an indirect relationship between endogenous and endogenous. If the three requirements are valid, the role of mediation in the equation relationship is evident. The Sobel testing is also performed to complete it.

3. RESULT AND DISSCUSION

Data collected approximately 102 (23.13%) of the samples and were considered acceptable for a response rate of more than 20%. The most significant number of respondents from Semarang came from 58 (56.86%), then from Pekalongan to 13 (12.74%), and the least from Surakarta and Kedu came with three people (2.94 %).

Outer evaluation models show a loading factor value more than 0.6 and more than 0.5 AVE for each indicator construct and then produce the research declared valid. The value of Cronbach's alpha and composite reliability is over 0,7 so that the building is classified as reliable. The evaluation of the internal model shows the R² and adjusted R² values higher than 0.33 - 0.67 that are moderate to endogenous variables: SIA, FP, MP, whereas the OP is more than 0.7. The evaluation shows that the APC and ARS values are significant at 5% alpha so that

the equation model can be concluded to be suitable for use. The testing of hypotheses could be seen in the figure above, as shown in Table 1. Table 1 results in Panel A

show the tests of the hypotheses H1, H2, H3, H4, and H5 that cannot be rejected at alpha 5%.

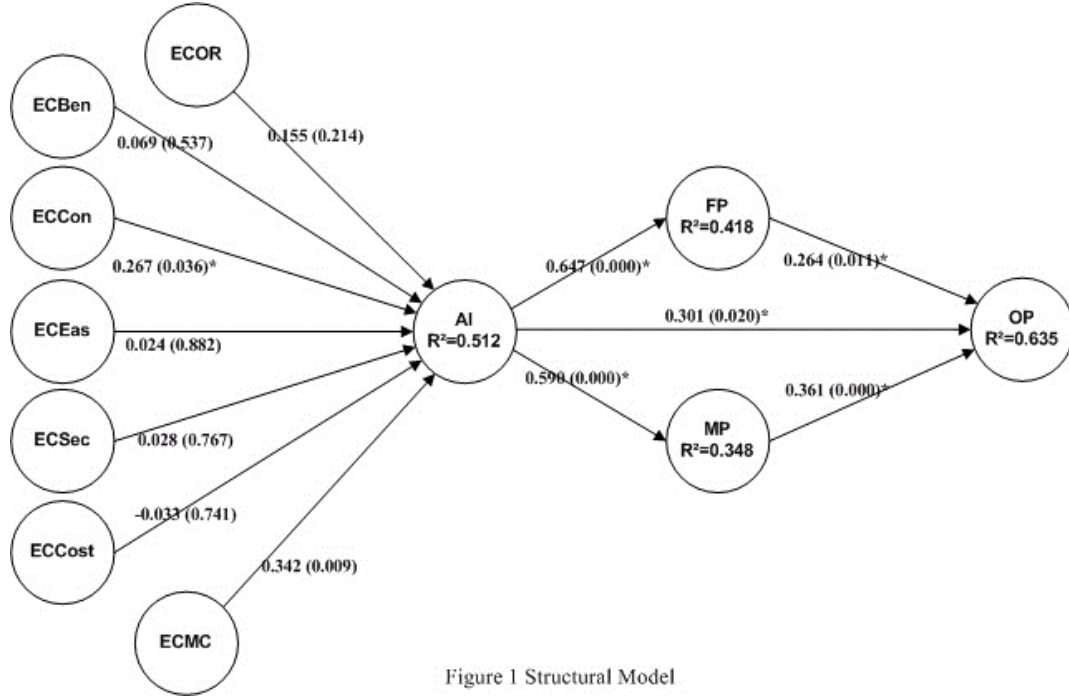


Figure 1 Structural Model

Table 1 The Result

	Loading Factor	P		Loading Factor	P	Sobel Value	P
<i>Panel A</i>			<i>Panel B</i>				
ECCost-> SIA	-0.033	0.741	SIA-> MP-> OP	0.213	0.004*	3.323	0.000*
ECMC -> SIA	0.342	0.009*	SIA-> FP-> OP	0.171	0.018*	2.493	0.012*
ECSec-> SIA	0.028	0.767	ECCCon -> SIA-> MP	0.157	0.043*	2.016	0.043*
ECEasy-> SIA	0.224	0.882	ECCCon -> SIA-> FP	0.272	0.041*	2.063	0.039*
ECCCon -> SIA	0.267	0.036*	ECCCon -> SIA-> OP	0.180	0.047*	2.102	0.035*
ECOR-> SIA	0.155	0.214	ECMC -> SIA-> MP	0.202	0.017*	2.467	0.013*
ECBen -> SIA	0.069	0.537	ECMC-> SIA-> FP	0.221	0.014*	2.555	0.010*
FP-> OP	0.264	0.011 (H4)	ECMC-> SIA-> OP	0.103	0.146	1.738	0.082
MP -> OP	0.361	0.000 (H5)					
SIA-> OP	0.301	0.020 (H3)					
SIA-> FP	0.647	0.000 (H1)					
SIA-> MP	0.590	0.000 (H2)					

Hypothesis 6 was tested following the mediation test, demonstrating that only the e-commerce character management (ECMC) and conformity (ECCCon) dimensions significantly impacted AI. Tests at Panel B illustrate the AI's mediating role in good financial performance (FP), business management (MP), and business performance (OP). AI mediates findings related to the dimensions of e-commerce suitability to finance,

management, and operating performance, but AI only mediates the character of financial and management significantly. Thus, financial performance and management also intervene AI on corporate performance. This finding supports the importance of the Sobel Test Score for this relationship.

The description above shows that the performance of SMEs greatly influences financial performance,

operational governance, and accounting information systems in an organization. Operational management's performance reflects resource management directly reflected in SME performance, directly impacting the overall financial performance. This result is according to the finding that SMEs have a limited control span, not separated between owners and managers, and the direct operation directly impacts their performance [15,16,26,27]. Changes in the SME's condition will affect SMEs' overall performance [28].

AI has been empirically demonstrated to support SMEs' organizational performance [18,29] reflected in financial performance and operational management performance. The accounting information system is a mechanism that leads to operational processes and supports the efficiency of an organization's decisions [31,32]. SME actors directly obtain quality and reliable financial and operational information so that management decisions are environmental impacts of e-commerce in both financial and operational aspects [32,33].

AI in this study significantly determines the dimensions of suitability and management characteristics. This evidence is an internal factor in e-commerce adoption that affects the AI model. Interestingly, the costs, convenience, security, and advantages of e-commerce do not determine SIA design, suggesting that even with e-commerce, the SIA model understood by small and medium-sized enterprises has not changed [17]. This condition supports that e-commerce is based on the suitability and character of the management. Furthermore, this fact supports the finding that many aspects of e-commerce have no significant effect on both the design of accounting systems, except in line with the character and business management model of small and medium-sized enterprises [33,34].

The analysis of the mediation relationship in the equation model illustrates that AI mediates the adequacy of e-commerce and management properties on financial performance and operational management performance. These results support research findings that SME management characteristics and e-commerce suitability will impact the AI design, creating small and medium-sized businesses [35]. It also revealed that financial and operational management performance mediates AI design concerning corporate performance. It shows an essential role in determining the system design and financial performance management related to the reliable and timely processing of financial transactions. AI defines aspects of creating a financial performance in

shaping organizational small and medium-sized enterprises' performance [8], [36]. These results confirm the role of AI in determining the performance of SMEs and the impact of financial and operational performance on the overall performance of small and medium-sized enterprises. AI mediates the dimensions of suitability and character of SME management regarding organizational performance. Therefore, it has to analyze the practicality of the problems and issues between e-commerce, AI, operational and organizational performance in decision-making and internal control processes [21].

4. CONCLUSION

This study revealed results: firstly, SMEs' performance is directly determined by AI design, business performance, and financial performance. Secondly, in the form of management and adequacy, the design of AI for SMEs is significantly determined by the aspects of e-commerce. AI also mediates the financial performance and management dimensions of e-commerce. Third, financial and operational performance mediates the relationship between AI and organizational performance, reflecting the importance of financial information and management in SME decision-making.

These findings practically advise small and medium-sized businesses to concentrate on the AI determinants to improve SMEs' financial performance and overall performance. Academic advice would be used to identify the determinants of AI for SMEs that have intensively used e-commerce to determine the effects.

AUTHORS' CONTRIBUTIONS

M. Noor Ardiansah conceived of the presented idea, developed the theory, and performed the computations. Anis Chariri and Surya Raharja verified the analytical methods and encouraged M. Noor Ardiansah to investigate the accounting information system's mediating role and supervised this work's findings. All authors discussed the results and contributed to the final manuscript.

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