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-RESEARCH ARTICLE-

ROLE OF E-COMMERCE MATURITY AND E-COMMERCE ADOPTION TOWARDS E-COMMERCE PERFORMANCE: AN EVIDENCE FROM CREATIVE INDUSTRY OF INDONESIA

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─Abstract─

In the recent decade, practitioners and researchers have paid close attention to e-commerce. In this regard, most studies have focused on the effect of e-commerce adoption on an organisation's e-commerce performance. However, this line of research falls short in explaining how e-commerce maturity affects e-commerce performance. As such, this study examines and clarifies E-Commerce Maturity and E-commerce adoption as the cause for the focus of Indonesian Creative Industry business visionaries at COVID-19 in Indonesia. Previous research has not established which variable has the most impact on improving company performance. This study gathered data from 383 respondents who owned resourceful creative businesses and utilised the concept of E-Commerce using a cluster random sampling technique. The data were quantitatively evaluated using the AMOS programme utilising the structural equation modelling (SEM) technique. This study discovered a positive and significant direct effect of e-commerce adoption on e-commerce performance. Additionally, e-commerce maturity considerably impacts e-commerce success, exerting a more substantial influence than e-commerce adoption. Further, the study discusses numerous implications for theory and practice.

Keywords: Creative Industry, E-Commerce, E-Commerce Maturity, E-Commerce Performance, Entrepreneurship

JEL Classification Code: L25, L26, M13

1. INTRODUCTION

Creative Industries have been another marvel, having enormous potential for the home market while also increasing their impact on the export market. Industry 4.0 has accelerated the adoption of computerised culture by creative enterprises, including E-Commerce as a primary channel for selling their labour and products. It is a revolutionary exchange method that enables shoppers to conduct online transactions (Singh, 2021). These electronic sales channels assist several SMEs in effectively infiltrating the market, notably during the COVID-19 epidemic time, when their direct and personal selling channels were restricted or even blocked to some extent. Accordingly, E-Commerce may refer to any electronic value chain used to accomplish a business's objectives, where cycles can occur sporadically or continuously and consolidate B2B-B2C-C2B exchanges (Lin et al., 2019). In more explicit terms, E-Commerce as an online business may refer to the use of the web and various associations to purchase and sell goods and services, as well as sending and exchanging data about products and endeavours, where they similarly envision that the broadest meaning of E-Commerce is indistinguishable from the definition of E-Business itself on a very fundamental level (Turban et al., 2015). The usage may not be restricted to online marketplaces but may also include any programme that enables the online transaction.

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The digital status of a business may affect its overall business processes. The degree to which a company is digitally mature has a beneficial effect on its performance (Eremina et al., 2019). This may also be said of e-commerce, which might be regarded as one of a company's digital tools. Industry 4.0 depends on a company's ability to employ its digital resources, mainly e-commerce effectively. Along with the public benefits, the maturation of e-commerce in Indonesian SMEs may provide commercial uses, such as improved performance (Triandini, 2017).

Innovative businesses can restructure their operations to incorporate e-commerce capabilities. The transformation of a creative industry, such as a change into an e-commerce business, cannot be divorced from the adoption of E-Business, such as an approach framework based on the Technology-Organization-Environment (TOE) axis, more commonly referred to as the TOE Framework, which requires both implicit and explicit knowledge, as well as a practical process across corporate boundaries (Shin et al., 2019). Numerous variables drive small and medium-sized businesses in Indonesia to adopt e-commerce: technology, organisation, environment, and individuals (Hasan et al., 2021). Performance appraisal cannot be divorced from the organisational perspective. From a management viewpoint, business executives must view business value as a strategic objective to improve corporate performance (Ji-fan Ren et al., 2017).

Previous research has demonstrated that e-commerce maturity and adoption can affect a company's performance. Nonetheless, past research has failed to establish a close relationship and its effect on e-commerce performance between e-commerce maturity and e-commerce adoption. Additionally, they could not demonstrate which variable has the most impact on improving business performance. These circumstances may result in inefficiencies in the way the company spends its resources to attain optimal e-commerce success (Shin et al., 2019).

The COVID-19 pandemic has compelled businesses of all sizes to contact clients via online channels. Nonetheless, each organisation has a unique company value associated with E-Commerce, affecting their maturity-performance relationship. These requirements also apply to creative industries that rely substantially on the originality and resourcefulness of their products (Singh, 2021).

Indonesia's creative economy exemplifies the rising significance of protected innovation rights resulting from human ingenuity based on science, culture, and innovation. Different subsectors within this type of industry provide distinguishing characteristics compared to other kinds of business. The vast majority of firms in this area can be classed as SMEs. These specific characteristics may necessitate a different approach when dealing with other companies in diverse industries. Prior study has concentrated on broadly defined businesses, whereas creative firms have the unique qualities that set them apart from other companies on the Small-Medium Enterprises business scale. As a result, there is a need for research to examine the impact of E-Commerce Maturity and

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Adoption on the e-commerce success of creative enterprises. These insights may assist entrepreneurs in innovative enterprises to focus their resources to maximise their e-commerce performance.

2. LITERATURE REVIEW

2.1 Diffusion of Innovation Theory

According to the Diffusion Theory of Innovation, individuals choose whether or not to adopt or reject an innovation based on their beliefs. The essential premise of the diffusion theory of creation is that deciding whether or not to embrace an innovation involves five stages: knowing about it, convincing others to adopt it, making the decision, implementing it, and confirming the decision (Singh, 2021; Yuen et al., 2021). According to previous research, the attributes or characteristics of innovation are related to its acceptance and decision-making processes and can be quantified in five ways: relative advantage, compatibility, complexity, experimental, and observability, among others. Innovation is one of the hypothesised theories of change. When it comes to studying changes, diffusion theory takes a whole new approach. Change is primarily concerned with the evolution or "reinvention" of products and behaviours to make them more compatible with the needs of individuals and communities rather than with persuading individuals to change. Not persons, but innovations themselves change due to invention spread (Talebian et al., 2018).

On the other hand, diffusion is the process through which an innovation spreads over time among the members of a social system via specific paths (Nieuwenhuijsen et al., 2018; Singh, 2021). defines diffusion as the process through which a technology spreads among a population of enterprises. A commonly used definition of innovation diffusion is the spread of ideas from one society or institution within a community to other regions of that society, as opposed to the spread of ideas from one culture or institution within a society to another culture or institution within a society (Yuen et al., 2021).

2.2 E-Commerce Performance

Historically, the business climate has been competitive, relying on distinct advantages to progress competitors. Organisations with a favourable view of critical assets will benefit in the long run by enhancing their viability and competence (Barney et al., 2021; Miller, 2019). These critical resources will ensure that a business survives the competition if it manages its competitive advantages effectively. E-commerce has been a vital element that supplements traditional sales channels and contributes to the critical competitive advantages necessary to compete in an agile environment. Acquiring e-commerce businesses can provide an edge over domestic and international competitors (Imran Khan, 2016).

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Innovative businesses have modernised the concept of e-commerce in an exciting area of commerce. E-commerce appraisal tools must be comprehensive, not only in terms of sales and technology but also in terms of the broader business processes that drive the e-commerce system. These circumstances need appraisal tools to assess how they conduct e-commerce. While a corporation cannot be valued solely in monetary terms, but certainly not exclusively in non-financial terms, the balanced scorecard may be a tool frequently used by management to assess the appropriateness of the company's execution and methods. This means that the balanced scorecard has been implemented in practically every facet of modern company procedures. As a result, it has enabled the concept of evaluating corporate performance to be enforced without regard for industry constraints associated with e-commerce. Due to this distinguishing feature, a particular definition of a balanced scorecard is required. In terms of e-commerce, a balanced scorecard is a tool for analysing a business's e-commerce performance.

Achieving an appropriate scorecard is contingent upon answering four critical questions, more precisely, how customers perceive business as an actor who modifies their on-screen interface. Their performance will be determined by the items exhibited on screen that should meet consumer expectations, the ability of commercial actors to advance, and the way characters are shown on screen that may reflect the actors' preferences (Hegazy et al., 2020). These questions are referred to as the Balanced Scorecard's four critical elements: Customer, Internal Process, Learning and Growth, and Finance.

These four critical factors were hailed as one of the most effective management tools for evaluating a company's success. These tools apply to large corporations and small and medium-sized businesses (Vu Thi, 2018). This could also indicate that this tool can measure performance against a reasonable standard for any business element, including e-commerce. In terms of e-commerce, the impact of implementing a balanced scorecard was pretty considerable. A balanced scorecard emphasising e-commerce may be used to forecast a business's success or failure (Haryanti et al., 2019). Thus, e-commerce performance can be defined as the performance of the company's e-commerce operations as measured by the balanced scorecard.

Balance scorecards for e-commerce may employ the exact four critical dimensions to track essential performance indicators. The financial dimension can be quantified in revenue growth, sales growth, and inventory turnover (Gao et al., 2018; Goworek et al., 2020). Internal Processes can be quantified in terms of Returned Goods, Productivity, and Employee Satisfaction (Gao et al., 2018; Goworek et al., 2020; Kefe, 2019). Customer dimension can be quantified through Customer Complaints, New Customer Acquisition, and Customer Waiting Time. The extent of learning and growth can be quantified by employee training, new technology budgets, and training expenses (Gao et al., 2018; Goworek et al., 2020; Kefe, 2019).

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2.3 E-Commerce Adoption

The relationship between technological, organisational, and environmental factors affecting the acceptance and implementation of innovations is commonly referred to as the Technology-Organization-Environment (TOE) Framework (Tornatzky & Fleischer, 1990). The technology element refers to all technology significant to the business, the Organization element to the company's characteristics and resources, the Environment element to the industry structure, technology service providers' influence, and environmental regulators' influence.

This framework is consistent with the Diffusion Theory of Innovation (Singh, 2021) regarding adoption predictors such as individual leader characteristics and internal organisational structure characteristics, which correspond to Organisational elements. In contrast, external features correspond to Environmental factors (Alshaikh et al., 2021). E-commerce necessitates that businesses change legacy systems that rely on physical processes into systems that rely heavily on digital assets and information flow. The TOE framework is equally applicable to the digital transformation of businesses in emerging countries that are already at a more mature stagem (Rawash, 2020). Numerous studies, including those on SMEs in Indonesia (Hasan et al., 2021), indicate that some of these enterprises also contribute directly to the Creative Economy. According to this notion, E-Commerce Adoption in this study may be defined as the process by which a creative firm changes its business model to engage in the purchasing and selling of goods and services electronically. Three aspects are used in this research: technology, organisation, and environment.

Although the adoption of e-commerce in Indonesian SME businesses is still modest, it has several benefits: increased corporate performance (Rahayu et al., 2017; Ramdansyah, 2017). Businesses in the creative industry can also be categorised as SMEs. Enhancing business performance is not always synonymous with the concept of e-commerce in general. The use of E-Commerce may have a negligible direct effect on a business's performance (Popa et al., 2018). According to these premises, e-commerce adoption will positively affect a company's performance. As a result, one may claim that e-commerce adoption may affect e-commerce performance.

H1: E-Commerce Adoption provides a positive and significant direct impact on company E-Commerce Performance.

Numerous components of the TOE architecture have been found to impact the use and adoption of E-Business substantially. Technological competence falls under the Technology element, Business Size, International Scope, and Financial Commitment fall under the Organization element, and Competitive Pressure and Regulatory Support fall under the Environmental factor (Rawash, 2020; Zhu et al., 2020). These three dimensions can be monitored concerning the following: technology availability, company size, international scope, financial commitment, competitive pressure,

regulatory support, e-commerce compliance, perceived profitability, and external IT support (D. Y. Govinnage, 2019; Rawash, 2020).

2.4 E-Commerce Maturity

Careful consideration before implementing e-commerce requires a review of the company's level of electronic readiness concerning preparedness for electronic business operations and, consequently, the e-commerce market, particularly at the SME scale (Salazar et al., 2021). The level of electronic preparedness is not only evaluated in terms of the provision of information and communication technology and its infrastructure, but also terms of the legal and security environment, as well as the options available to businesses (Hanafizadeh et al., 2020; Pal, 2020). E-commerce in developing countries requires an approach and model that is highly adaptable in capturing changes, mainly internal and external electronic preparedness (Hassen et al., 2019; Susanti, 2021).

Previous research has established that in the Indonesian SMEs sector, the development level of E-Commerce adoption and the benefits of the E-Commerce field are related. This also demonstrates that the higher the organisation's development level of E-Commerce reception, the greater the benefits to the organization (Rahayu et al., 2017). As a result, the higher the maturity level, the more pronounced the obtained advantages. Nonetheless, we have not observed any effect on corporate performance, particularly concerning e-commerce. Additionally, this condition applies to the degree of E-Commerce appropriation on a business to business basis, which provides an advantage based on the degree of receipt (Elbeltagi et al., 2016; Xuhua, 2019). Apart from providing benefits in general, the level of development of E-Commerce at a particular business scale, such as SME firms in Indonesia, may provide numerous benefits to organisations, including improved performance (Triandini, 2017). This research may serve as a bridge for determining whether the development stage of maturity affects the performance of firms involved in e-commerce. On this premise, it is reasonable to predict that E-Commerce Maturity has an effect on business performance, which can be described as follows:

H2: E-Commerce Maturity provides a positive and significant direct impact on company E-Commerce Performance.

E-commerce maturity can be measured in two ways: an e-commerce barrier or an e-commerce advantage. E-commerce barriers can be quantified in three ways: technological, environmental, and organizational (Cataldo et al., 2020). The benefits of e-commerce can be quantified in terms of information speed, product review, and market penetration (Triandini, 2017).

In light of the hypotheses mentioned above, this study intends to investigate and compare the influence of e-commerce maturity and adoption on e-commerce success for creative businesses in Indonesia using the research model depicted in Figure 1.

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The creative industries are in a state that necessitates assistance and direction to nourish and expand fully, to the degree of financial and regulatory constraints. Nowadays, E-Commerce has been a critical component of fostering business and enhancing overall business performance, including firm characteristics as the company's heart. To establish the fundamentals of E-Commerce, creative enterprises must also examine their maturity levels. The administration of an organisation's E-Commerce operations may be contingent upon its performance and corporate values. As a result, entrepreneurs who handle their industry creatively can concentrate their resources for maximum performance.

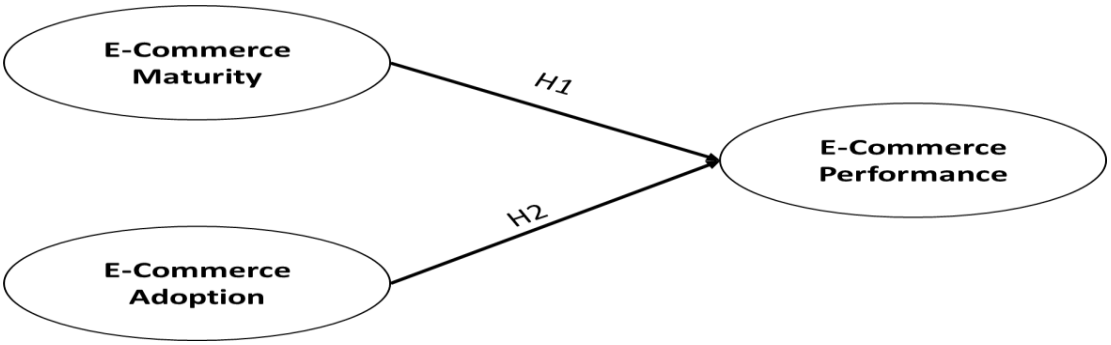

Figure 1. Research Framework

3. RESEARCH METHOD

3.1 Data Set

The quantitative approach was chosen and utilised as a component of the evaluation strategy based on the descriptive study. Data were gathered from various sub-industries on Java and Bali Island that may represent the diverse enterprises that have been an integral part of Indonesia's Creative Industry. According to a survey (Bekraf, 2016) of 319,542 Creative Economy entrepreneurs in Indonesia, 162,557 businesses have implemented e-commerce and were included in this study's population. As a result, respondents chosen as primary data via the Cluster Random Sampling technique will reflect Indonesia's Creative Economy, specifically from DKI Jakarta, Bali, West Java, and Central Java. We can refer to the formula for obtaining the sample size (Krejcie et al., 1970), and the number 0.5 is assumed to represent 383 as the maximum sample size. These entrepreneurs have been categorised based on various arbitrary inspecting techniques via Google Forms as their online host platform.

3.2 Measurement

The questionnaire used in the research has three scales. The construct of e-commerce adoption was measured using ten dimensions: International Scope, Financial Commitment, Local Competitive Pressure, National, Competitive Pressure, Technology

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Availability, Company Size, Regulatory Support, E-Commerce Compliance, Perceived Profitability, and External IT Support (Lestari, 2019). Similarly, e-commerce maturity was measured by adopting six dimensions: Environmental Barrier, Organization Barrier, Information Speed, Product Review, Market Penetration, and Technology Barrier (Rayed AlGhamdi, 2014). Likewise, the construct of e-commerce performance was measured using eleven dimensions, i.e., Revenue Growth, Sales Growth, Productivity, Employee Satisfaction, Customer Complaint, New Customer, Inventory Turnover, Product Return, Employee Training, CAPEX for New Technology, and Training Expense (Lestari, 2019).

3.3 Method

The data collected were analysed using a six-point Likert scale cross-sectional. The result will be converted to a range of Strongly Disagree equal to 1 to Strongly Agree equal to 6, and each response will be summarised to the variable level. SPSS software was used to analyse the gathered data to quantify the passing value of KMO, which must be more than 0.5. Simultaneously, the Bartlett Test must be less than 0.005, and Cronbach's Alpha must be greater than 0.7 to verify the data's unwavering quality. Standardise Factor Loading was used to measure the relationship between each point of view and their relationships via Confirmatory Factor Analysis via SPSS AMOS. If there is a fragile association with a result less than 0.5, the items or points of view are judged to be powerless and will be ignored. As a result, we may develop an optimal and applicable model to address the examination concerns.

The descriptive results will be further studied to understand better the variables' conditions in Indonesia's Creative Business environment. The regression result will be analysed to determine whether the hypothesis is valid or invalid. The hypothesis is accepted if the P-value is less than 0.05 and the standardised regression weight is positive.

4. RESULTS AND DISCUSSION

Indonesia's e-commerce level may be considered a favourable atmosphere for creative businesses to build and practice e-commerce-related business processes. As demonstrated in Table I, the E-Commerce Performance (ECP), E-Commerce Maturity (ECM), and E-Commerce Adoption (ECA) variables possessed by Indonesian Creative Firms are regularly distributed. As a result, we can assume that these responses are typical of the population.

Numerous dimensions were omitted from this study due to their low correlation coefficient with their variable. First, we eliminated the technical barrier, a component of the E-Commerce Maturity variable. Technology Barriers were omitted, implying that there were no or few technology-related challenges impeding the maturation of e-commerce. This finding may contrast with earlier research (Cataldo et al., 2020), as each

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respondent in this study used e-commerce as one of their primary sales channels, implying that there was no technological barrier to integrating e-commerce into their business processes. These findings may mean no technological barriers in the Indonesian creative business environment and no discernible impact on inventory management as a component of e-commerce performance.

Table I. Variable Summary

Variable	ECM	ECP	ECA
Mean	29.96	57.44	44.46
Median	30.00	58.00	44.00
Variance	13.043	39.786	36.029
Std. Deviation	3.611	6.308	6.002
Range	24	33	27
Interquartile Range	6	10	9
Skewness	-0.663	-0.183	0.105
Kurtosis	0.906	-0.724	-0.692

Due to their low relationship value, the Inventory Turnover, Product Return, Employee Training, CAPEX for New Technology, and Training Expense dimensions were deleted from E-Commerce Performance. These findings may show that the creative business environment in Indonesia does not view learning and growth as critical components of E-Commerce performance. Additionally, inventory turnover and product return may become irrelevant in terms of creative business in Indonesia due to the scale of business, with a portion of SMEs placing a lower premium on returned goods or stock level details, particularly in the e-commerce environment in Indonesia, which places a higher premium on customer acquisition and financial performance over inventory management processes.

Due to their low relationship value, the dimensions of Technology Availability, Company Size, Regulatory Support, E-Commerce Compliance, Perceived Profitability, and External IT Support were deleted from E-Commerce Adoption. These findings may show that the creative business environment in Indonesia does not view technology as a critical component of E-Commerce adoption. This finding was consistent with the E-Commerce Maturity variable, indicating that technology was not a barrier to entry for this type of company sector. Additionally, regulatory support was deemed unimportant due to its low benefit to entrepreneurs; hence, E-Commerce Compliance was insignificant.

As mentioned previously in Table II, construct reliability was determined using Cronbach's Alpha and Composite Reliability (CR). Each construct has a Cronbach's Alpha of greater than 0.7 and a Composite Reliability of greater than 0.7. As a result, the

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construct's reliability has been established. Convergent validity was estimated using Average Variance Extracted (AVE) values greater than 0.5 for all variables except ECP. However, Composite Reliability is significantly more than the needed value (Fornell et al., 1981), we can conclude that the scales meet the convergent validity requirement (See Figure 2).

Table II. Measurement Model

Items	Loadings	Alpha	CR	AVE
ECP		**0.822**	**0.829**	**0.452**
ECP1	0.677			
ECP2	0.761			
ECP5	0.751			
ECP6	0.581			
ECP7	0.706			
ECP8	0.522			
ECA		**0.820**	**0.821**	**0.550**
ECA1	0.695			
ECA2	0.421			
ECA3	0.863			
ECA4	0.893			
ECM		**0.862**	**0.864**	**0.563**
ECM1	0.597			
ECM2	0.654			
ECM3	0.806			
ECM4	0.842			
ECM5	0.819			

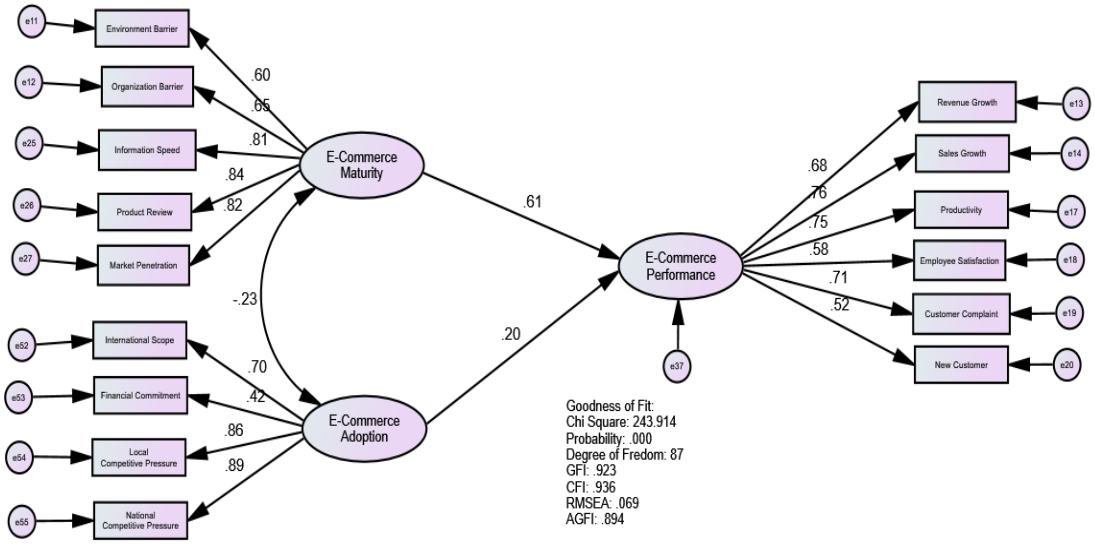

Figure 2. SEM Model

The model produced a good fit with a chi-square of 243.914, a GFI of 0.923 (over the needed 0.9 thresholds), a CFI of 0.936, a CMIN of 243.914, a TLI of.923, and an RMR of 0.55 and an acceptable fit with an RMSEA of 0.069 with 87 degrees of freedom. This indicator may indicate that the model is sufficient for further statistical regression analysis.

Table III. Regression Summary

Relation	Std Regression Weight	P-Value	Hypothesis Result
ECM→ECP	0.606	<0.01	Supported
ECA→ECP	0.198	<0.01	Supported

As seen in Table III above, E-Commerce Adoption has a positive and substantial effect on E-Commerce Performance, increasing by 0.198. It demonstrates that H1 is widely recognised in E-Commerce, which is one of the reasons that contribute to the improved performance of E-Commerce.

E-Commerce maturity has a direct and beneficial effect on e-commerce performance. These findings suggest that entrepreneurs' efforts to improve their creative firm's e-commerce maturity level may enhance overall company performance related to e-commerce. Additionally, it demonstrated that e-commerce maturity might be used to determine whether or not innovative businesses have overcome their barrier and reaped

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the benefits of e-commerce. A company is considered mature in e-commerce when it has overcome its initial hurdle and is reaping the benefits of e-commerce. As a result, we may say that H2 is well-accepted by the creative community. A firm's e-commerce maturity may influence e-Commerce Performance.

5. DISCUSSION AND CONCLUSION

This study aimed to determine the association between e-commerce maturity and adoption and e-commerce performance. The study's findings indicated that E-Commerce Maturity and E-Commerce Adoption had a favourable and significant effect on E-Commerce Performance. This finding may imply that both variables improve e-commerce performance in creative businesses. It is consistent with prior research indicating that e-commerce adoption can increase company performance (Rahayu et al., 2017; Ramdansyah, 2017), including e-commerce performance. It is also consistent with the discovery that a firm's maturity level might affect its business performance (Triandini, 2017), which is also related to the maturity level of e-commerce and its implementation.

Furthermore, Haryanti et al. (2019) demonstrated in a recent study that E-commerce adoption has a more substantial impact on E-commerce performance. In contrast, the current study's findings indicate that E-Commerce Maturity has a more significant effect than E-Commerce Adoption. It may close a previously identified theoretical gap regarding variable comparison, significantly improving e-commerce performance. This conclusion indicates that, while both criteria contribute to improved e-commerce performance, entrepreneurs should prioritise increasing their e-commerce maturity above increasing their degree of e-commerce adoption to improve their e-commerce performance. The pandemic associated with COVID-19 has created significant disruptions in the way businesses operate, particularly in Indonesia's creative sector. E-commerce has evolved into a critical component of enhancing an association's performance. Innovative businesses who have invested additional resources to advance their E-Commerce adoption and maturity may benefit from the beneficial effect on their E-Commerce performance, mainly when they invest in growing their e-commerce maturity.

6. RESEARCH IMPLICATIONS

The current study has several implications for both theory and practice. First, this research adds to the existing body of knowledge by giving empirical evidence that both e-commerce maturity and adoption are significant factors in improving e-commerce performance. Additionally, this research indicates that creative firms should focus on increasing their e-commerce maturity to strengthen their company's performance connected to e-commerce, rather than investing additional resources in embracing e-commerce. Additionally, this research suggests various implications for managers in

Malaysia's creative business, including the need to focus more on characteristics that promote e-commerce acceptance and maturity among their target market to improve the performance of their e-commerce activities.

7. RESEARCH LIMITATIONS AND FUTURE DIRECTIONS

This research encountered a few roadblocks. The current study is cross-sectional, which means that the data were gathered at a single point in time. This impairs research's capacity to make causal inferences. Second, this study examined the population of Indonesia's creative industry. This may limit the study's findings' generalizability to other sectors in Indonesia. Finally, even though substantial work has been done throughout the facts collection and constructs approval stages, the possibility of respondents' predisposition in insight cannot be ruled out. Additional examinations could be conducted on various types of businesses to increase the degree of global exposure using a longitudinal study approach.

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REFERENCES

Alshaikh, K., Maasher, S., Bayazed, A., Saleem, F., Badri, S., & Fakieh, B. (2021). Impact of COVID-19 on the Educational Process in Saudi Arabia: A Technology–Organization–Environment Framework. *Sustainability, 13*(13), 7103.

Barney, J. B., Ketchen, D. J., & Wright, M. (2021). Bold Voices and New Opportunities: An Expanded Research Agenda for the Resource-Based View. *Journal of Management, 47*(7), 1677-1683. doi:https://doi.org/10.1177%2F01492063211014276

Cataldo, A., Astudillo, C. A., Gutiérrez-Bahamondes, J. H., González-Martínez, L., & McQueen, R. (2020). Towards an Integrated Maturity Model of System and E-Business Applications in an Emerging Economy. *Journal of Theoretical and Applied Electronic Commerce Research, 15*(2), 1-14.

D. Y. Govinnage, K. M. V. S. (2019). Factors affecting e-commerce adoption of small and medium enterprises in Sri Lanka: Evidence from retail sector. *Asian Journal of Advanced Research and Reports, 6*(2), 1-10. Retrieved from https://sdiarticle4.com/review-history/515111

Elbeltagi, I., Hamad, H., Moizer, J., & Abou-Shouk, M. A. (2016). Levels of Business to Business E-Commerce Adoption and Competitive Advantage in Small and Medium-Sized Enterprises: A Comparison Study Between Egypt and the United

States. *Journal of Global Information Technology Management, 19*(1), 6-25. doi:https://doi.org/10.1080/1097198X.2016.1134169

Eremina, Y., Lace, N., & Bistrova, J. (2019). Digital Maturity and Corporate Performance: The Case of the Baltic States. *Journal of Open Innovation: Technology, Market, and Complexity, 5*(3), 54. doi:https://doi.org/10.3390/joitmc5030054

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50. doi:https://doi.org/10.1177%2F002224378101800104

Gao, H., Chen, H., Feng, J., et al. (2018). Balanced scorecard-based performance evaluation of Chinese county hospitals in underdeveloped areas. *Journal of International Medical Research, 46*(5), 1947-1962. doi:https://doi.org/10.1177%2F0300060518757606

Goworek, H., Oxborrow, L., Claxton, S., McLaren, A., Cooper, T., & Hill, H. (2020). Managing sustainability in the fashion business: Challenges in product development for clothing longevity in the UK. *Journal of Business Research, 117*, 629-641. doi:https://doi.org/10.1016/j.jbusres.2018.07.021

Hanafizadeh, P., Nabavi, A., & Hanafizadeh, M. R. (2020). Designing An E-readiness Assessment Model For Iranian Informatics Small And Medium Size Companies. *Commercial Strategies, 8*(44), 251-272. Retrieved from http://cs.shahed.ac.ir/article_2065_f15d5b735fe9d2c7e9d0b76de28ddee3.pdf

Haryanti, T., & Pribadi, A. (2019). E-Commerce Service Design Readiness using ITIL framework with IT Balanced Scorecard Objective (Case Study: University E-Commerce). *Procedia Computer Science, 161*, 283-290. doi:https://doi.org/10.1016/j.procs.2019.11.125

Hasan, A., Amrusi, Musfiana, & Mardhani, M. (2021). An overview of e-commerce adoption in Indonesian SMEs. *Journal of Physics: Conference Series, 1811*(1), 012104. doi:http://dx.doi.org/10.1088/1742-6596/1811/1/012104

Hassen, H., Abd Rahim, N. H., & Shah, A. (2019). Analysis of models for e-commerce adoption factors in developing countries. *International Journal on Perceptive and Cognitive Computing, 5*(2), 72-80. doi:https://doi.org/10.31436/ijpcc.v5i2.100

Hegazy, M., Hegazy, K., & Eldeeb, M. (2020). The Balanced Scorecard: Measures That Drive Performance Evaluation in Auditing Firms. *Journal of Accounting, Auditing & Finance, 0*(0), 0148558X20962915. doi:https://doi.org/10.1177%2F0148558X20962915

Imran Khan, M., Mohammed Ahmar Uddin, Shariq Mohammed, and Syed Azharuddin. (2016). Ecommerce for entrepreneurs: Boon or bane. *International Journal of Applied Business and Economic, 14*(1), 173-180. Retrieved from https://ssrn.com/abstract=2962834

Ji-fan Ren, S., Fosso Wamba, S., Akter, S., Dubey, R., & Childe, S. J. (2017). Modelling quality dynamics, business value and firm performance in a big data analytics

environment. *International Journal of Production Research, 55*(17), 5011-5026. doi:https://doi.org/10.1080/00207543.2016.1154209

Kefe, I. (2019). The determination of performance measures by using a balanced scorecard framework. *Foundations of Management, 11*(1), 43-56. doi:https://doi.org/10.2478/fman-2019-0004

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement, 30*(3), 607-610. doi:https://doi.org/10.1177%2F001316447003000308

Lestari, D. (2019). Measuring e-commerce adoption behaviour among gen-Z in Jakarta, Indonesia. *Economic Analysis and Policy, 64*, 103-115. doi:https://doi.org/10.1016/j.eap.2019.08.004

Lin, X., Wang, X., & Hajli, N. (2019). Building E-Commerce Satisfaction and Boosting Sales: The Role of Social Commerce Trust and Its Antecedents. *International Journal of Electronic Commerce, 23*(3), 328-363. doi:https://doi.org/10.1080/10864415.2019.1619907

Miller, D. (2019). The Resource-Based View of the Firm. *Oxford Research Encyclopedia of Business and Management*. doi:https://doi.org/10.1093/acrefore/9780190224851.013.4

Nieuwenhuijsen, J., Correia, G. H. d. A., Milakis, D., van Arem, B., & van Daalen, E. (2018). Towards a quantitative method to analyze the long-term innovation diffusion of automated vehicles technology using system dynamics. *Transportation Research Part C: Emerging Technologies, 86*, 300-327. doi:https://doi.org/10.1016/j.trc.2017.11.016

Pal, A., Dharminder Singh, and R. K. Dhaliwal. (2020). Identification and relevance of e-readiness assessment tools for ICT use in agriculture. *Current Journal of Applied Science and Technology, 39*(16), 93-102. Retrieved from https://www.researchgate.net/profile/Ayushi-Pal-2/publication/342533958

Popa, S., Soto-Acosta, P., & Perez-Gonzalez, D. (2018). An investigation of the effect of electronic business on financial performance of Spanish manufacturing SMEs. *Technological Forecasting and Social Change, 136*, 355-362. doi:https://doi.org/10.1016/j.techfore.2016.08.012

Rahayu, R., & Day, J. (2017). E-commerce adoption by SMEs in developing countries: evidence from Indonesia. *Eurasian Business Review, 7*(1), 25-41. doi:https://doi.org/10.1007/s40821-016-0044-6

Ramdansyah, A. D., and H. E. R. Taufik. (2017). Adoption model of e-commerce from smes perspective in developing country evidence–case study for Indonesia. *In European Research Studies Journal, 20* (4B), 227-243. doi:https://doi.org/10.35808/ersj/887

Rawash, H. N., and Raad Meshall Al-Tall. (2020). E-Business successful adoption across hotel industry in Jordan. *International Journal of Advanced Science and Technology, 29*(8), 1638-1649. Retrieved from https://www.researchgate.net/profile/Hassan-Rawash/publication/341135477

Rayed AlGhamdi, O. A. A., Adel A. Bahaddad. (2014). How Retailers at different Stages of E-Commerce Maturity Evaluate Their Entry to E-Commerce Activities? *Journal of Computer Science, 2*(2), 37-71. doi:https://doi.org/10.48550/arXiv.1503.05172

Salazar, M. B., & Marín-Raventós, G. (2021, 25-29 Oct. 2021). *Diagnosis for the adoption of e-commerce platforms in micro and small enterprises in rural areas: Case study of the region of Río Cuarto, Alajuela.* Paper presented at the 2021 XLVII Latin American Computing Conference (CLEI) doi:https://doi.org/10.1109/CLEI53233.2021.9640057

Shin, H., Perdue, R. R., & Kang, J. (2019). Front desk technology innovation in hotels: A managerial perspective. *Tourism Management, 74*, 310-318. doi:https://doi.org/10.1016/j.tourman.2019.04.004

Singh, P., Goh Kai Wen, Daisy Mui Hung Kee, Go Sin Yee, Lee Chiew Ying, Fong Kai Ling, Mohammed Shammas, Gerald Reynaldo Tandra, and Liem Gai Sin. (2021). The impact of AirAsia's e-commerce websites on its consumer buying behavior. *International journal of Tourism and hospitality in Asia Pasific (IJTHAP), 4*(1), 34-42. doi:https://doi.org/10.32535/ijthap.v4i1.1019

Susanti, E., Harta, R., Diana, B. A., & Utami, S. B. (2021). E-Readiness and The Effectiveness of E-Participation in Indonesia. *MIMBAR: Jurnal Sosial dan Pembangunan, 37*(1), 138-149. Retrieved from https://ejournal.unisba.ac.id/index.php/mimbar/article/view/6931

Talebian, A., & Mishra, S. (2018). Predicting the adoption of connected autonomous vehicles: A new approach based on the theory of diffusion of innovations. *Transportation Research Part C: Emerging Technologies, 95*, 363-380. doi:https://doi.org/10.1016/j.trc.2018.06.005

Triandini, E., Djunaidy, A., & Siahaan, D. (2017). A maturity model for e-commerce adoption by small and medium enterprises in Indonesia. *Journal of Electronic Commerce in Organizations, 15*(1), 44–58. doi:https://doi.org/10.4018/JECO.2017010103

Turban, E., King, D., Lee, J. K., Liang, T.-P., & Turban, D. C. (2015). Social Commerce: Foundations, Social Marketing, and Advertising. In *Electronic Commerce: A Managerial and Social Networks Perspective* (pp. 309-364). Cham: Springer International Publishing, 309-364. doi:https://doi.org/10.1007/978-3-319-10091-3_7.

Vu Thi, K. A., Vu, T. D., & Hoang, K. Van. (2018). Using the Balanced Scorecard to Measure the Performance of Small and Medium- Sized Garment Enterprises in Vietnam. *Accounting and Finance Research, 7*(3), 251. doi:https://doi.org/10.5430/afr.v7n3p251

Xuhua, H., Elikem, O. C., Akaba, S., & Brown, D. W. (2019). Effects of business-to-business e-commerce adoption on competitive advantage of small and medium-sized manufacturing enterprises. *Economics and Sociology, 12*(1), 1-22. doi:https://doi.org/10.14254/2071-789X.2019/12-1/4

Yuen, K. F., Cai, L., Qi, G., & Wang, X. (2021). Factors influencing autonomous vehicle adoption: an application of the technology acceptance model and innovation diffusion theory. *Technology Analysis & Strategic Management, 33*(5), 505-519. doi:https://doi.org/10.1080/09537325.2020.1826423

Zhu, Z., Zhao, J., & Bush, A. A. (2020). The effects of e-business processes in supply chain operations: Process component and value creation mechanisms. *International Journal of Information Management, 50*, 273-285. doi:https://doi.org/10.1016/j.ijinfomgt.2019.07.001