

MEDIATING ROLE OF INNOVATION CAPABILITIES BETWEEN MATURITY AND PERFORMANCE OF E-COMMERCE

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Abstract

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This study investigates and clarifies e-commerce maturity as the reason the focal point of Indonesian creative industry business visionaries during the COVID-19 pandemic in the new ordinary time in Indonesia. The COVID-19 pandemic has energized entrepreneurs, particularly in the creative industry, to have the option to build up their dynamic capacities so they can make do in unsure financial circumstances and measure their e-commerce performance through a balanced scorecard approach (Kaplan & Norton, 1992). This research has taken 383 respondents of business visionaries who are occupied with creative enterprises and have applied the idea of e-commerce in their business activities taken as tests and dissected quantitatively utilizing structural equation modelling (SEM). This study finds that e-commerce maturity provides a significant impact on e-commerce performance and innovation capabilities. Furthermore, the indirect impact result is more favourable compared with a direct relationship between e-commerce maturity and e-commerce performance. This paper highlights the importance of e-commerce maturity and innovation capabilities and shows that both variables significantly impact e-commerce performance which may help entrepreneurs in Indonesia's creative businesses to enhance their performance, especially in e-commerce.

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

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1. INTRODUCTION

Indonesia has developed another wonder through creative industries with tremendous potential for household advertising, however simultaneously likewise developing business influence towards global economics. The advancement of creative companies driven by Industry 4.0 has pushed the digitalization of society more rapidly than before, counting the e-commerce utilization as one of the essential networks for offering their work and items. It may be considered a novel transaction method which allows customers to perform online trades (Singh et al., 2021). These sorts of electronic deals channels make a difference for various SMEs to invade the market competently, especially amid the COVID-19 age which limited their direct and individual offering networks or indeed detached towards a few degrees. Appropriately, the entire electronic value chain in a direction attaining the aims of commerce where phases can occur for the most part or completely and can solidify B2B-B2C-C2B exchanges (Wigand, 1997) may be defined as e-commerce. Towards further express standings, online commerce that acts as e-commerce could resolve the internet utilization, in addition, different affiliations designed for obtaining and offering works out, in cooperation transfer or trading information associated toward things in addition of tries, additionally imagine that the largest implication (Turban et al., 2018) is on an awfully fundamental step of e-commerce unclear from the denotation of e-business itself. The utilization may not be constrained to as it were online commercial center, but to the utilization of any use which empowers exchange builds on the cyber strategy.

Digitalization of a firm influence in general commerce preparation. The level of computerized development of a firm brings a constructive impact on company performance (Eremina, Lace, & Bistrova, 2019). This result moreover is inferred as one of the advanced instruments for firm e-commerce aspect. Innovation assets utilization depends heavily on the progress of Industry 4.0, counting e-commerce. Overall benefits (Triandini, Djunaidy, & Siahaan, 2017) may expand depending on the e-commerce development, especially on business benefits and performance in the scale of Indonesian SMEs.

Computerized development state, particularly as soon as it is associated with e-commerce, will be able to be noticed as one of the imperative values in this Industry 4.0 period. Advances in technology have opened alternative channels such as e-commerce which may improve their operation and efficiencies (Ranjan, Siddiqui, Thapar, & Chauhan, 2020). In contrast, the correlation between business value and its performance could be discovered inside the notion of an important concept, which is direct with respect to the theory of resource-based view (RBV) (Zhu & Kraemer, 2005) and its effect on firm performance. In view of current business conditions and the unpredictable flow of the global pandemic, the dynamic capabilities of the organization have become a crucial and vital part of the organization's own assets, making the basic hallmark of this exam be linked to it. Dynamic capabilities, not through

associated assets. Capacity not only affects business performance, but it can also increase business value (Jehangir, Dominic, & Downe, 2011).

A performance evaluation may not be isolated from the official point of view. From an administrative viewpoint, commerce pioneers got to consider market value as a vital objective to guarantee the enhancement of company performance (Ji-fan Ren, Fosso Wamba, Akter, Dubey, & Childe, 2017). In any case, the present circumstance does not appear particular connection and its impact on e-commerce development towards the company's e-commerce performance. Moreover, the instrument of how-to-scale e-commerce maturity and performance for creative businesses still ought to be investigated.

Each line of commerce has been pushed by COVID-19 in the direction of locking in clients across online networks. Nonetheless, each company has a distinctive business value which might affect their correlation between maturity and performance when we touch on the topic of e-commerce. Moreover, under these conditions to be connected to business processes that depend intensely on creative business items' distinctiveness, as well as assets. When we discuss creative business in Indonesia, it could be described as the encapsulation of expanded secured innovation value as well as rights derived from human being creativity that rely on knowledge, philosophy, and advancement. Diverse subdivisions in such a variety of businesses set up momentous properties differentiated and other sorts of commerce. The tremendous lion's share of the industry in this region may be grouped as SME with respect to market scale. These one-of-a-kind characteristics may require diverse treatment with other commerce in unmistakable businesses.

In this manner, this research pointed to investigate the part of e-commerce development and the effect of e-commerce aspect on creative businesses' performance and its commitment associated with innovation capabilities.

The remainder of this paper is structured as follows. Section 2 will review the relevant literature. Section 3 will provide the methodology that has been used to conduct empirical research. Section 4 will provide an analysis of the data. Section 5 will provide an in-depth discussion regarding the relevancies of the data and this research. Section 6 will provide the conclusion of this research.

2. LITERATURE REVIEW

2.1. E-commerce performance

Commerce's natural ecosystem was a realm with heavy competition which depended on particular points of interest with the intention of progressing the competition. Companies with the progressive side of fundamental resources will have enduring preferences in doing trade productively (Barney, 1991; Wernerfelt, 1984) by expanding their reasonability and competence. These essential assets will make, beyond any doubt, that businesses will endure the battle in the event that they can oversee their competitive advantages. One of the basic points is to prioritize e-commerce as a competitive advantage, in addition, to support channels for sales

in order to outlive the dexterous ecosystem. A company's possession of e-commerce (Khan, Ahmaruddin, Mohammed, & Azharuddin, 2016) can correspond to a lead over competitors from domestic and overseas.

Creative firms overhauled the notion of e-commerce when we refer to a peculiar sector of the market. The evaluation tool ought to evaluate completely as it were not including the trades and technology points of view, moreover the angle of general trade activity which managed the e-commerce structure. Certain circumstances create demands for evaluation tools to assess the performance of the nature of e-commerce. Business cannot be estimated only in money-related terms, but undoubtedly from a non-financially perspective, the balanced scorecard can be a method ordinarily utilized by the administration to review the suitability of the company's performance and strategy. This implies that the performance of a balanced scorecard has secured nearly all angles within the current trade systems. Hence, it has commenced the plausibility to perform the concept to evaluate performance, not including the sort of business confinement associated with e-commerce. In conjunction with these distinctive attributes, the requirement to characterize the particular explanation of the balanced scorecard is present. A balanced scorecard for e-commerce can be portrayed as the portion of a tool for assessing performance related to e-commerce.

A balanced scorecard can be established when we refer to four key elements, more particularly, how clients see commerce as a performing artist who shifts focus and questions of the audience when shown above the stage. Whatever points they will be given are based on what the audience observes which ought to surpass client desires in terms of business owners acting as attendees. Commercial performing artists (Kaplan & Norton, 1992) may reflect on the character on stage. These inquiries are well-known as a customer, internal process, learning and growth, and finance which are foundations of a balanced scorecard.

The key dimensions mentioned above were renowned as tools to assess performance used by management and corporation. This instrument does not only applied to big firms but also to SMEs' environments (Vu Thi, Vu, & Van Hoang, 2018). It may also mean that these tools may act as performance measurements with a fair requirement for many aspects whereas one of them being e-commerce. The impact of implementing a balanced scorecard was quite significant when we applied the scope of e-commerce. E-commerce tailored version of the balanced scorecard may predict the success or failure of a company (Mistry & Pathak, 2003). Hence, performance related to e-commerce can be characterized as the performance measured by the balanced scorecard in the aspect of e-commerce.

Key particular indicators of e-commerce (Grigoroudis, Orfanoudaki, & Zopounidis, 2012; Karabay & Kurumer, 2012; Kefe, 2019), which may be utilized in balance scorecard, are four key measurements. Revenue growth, sales growth, and inventory turnover may act as key items when we refer to financial performance. Returned goods, productivity, and employee satisfaction may act as

key items when we refer to internal processes. Customer complaints, new customers, and customer waiting time may act as key items when we discuss customer-related topics. Training of employees, new technology budget, and training expenses may act as key items when the topic is learning and growth.

2.2. Innovation capabilities

Assignment of capability on a firm's performance may well not give a direct impact when we give the context of e-commerce. It as well provides an indirect impact if we consider innovation capabilities' active role in the circumstances. The fractional relationship that happens in past findings can be examined comprehensively. Therefore, we may observe the relationship whether it is directly or indirectly affecting the subject. Influence of the dynamic capabilities (Giniuniene & Jurksiene, 2015; Shafia, Shavvalpour, Hosseini, & Hosseini, 2016; Zhou, Zhou, Feng, & Jiang, 2019) indirectly affecting company performance through innovation from companies. These performances (Vicente, Seabra, Abrantes, & Teixeira, 2015) also may impact the company's competitive advantage (Ferreira, Cardim, & Branco, 2018). Within the extent of innovation of an organization (Soto-Acosta, Popa, & Palacios-Marqués, 2016) it may also impact business performance. On the opposite, culture (Muafi, Siswanti, Diharto, & Salsabil, 2020) does not essentially affect the performance of a business.

The dynamic capabilities of a firm can be observed from its resolution to improve its capacity. Therefore, innovation capabilities (Breznik & Hisrich, 2014) can also be defined as an integral part of dynamic capabilities. At a certain level, absorption capacity (Najafi-Tavani, Najafi-Tavani, Naudé, Oghazi, & Zeynaloo, 2018) can bring an improvement in capacity if it is progressed. A high-level absorptive capacity can be achieved through data obtainment, assimilation, alteration, and control will increase the capabilities in terms of innovation. A company's capacity to make advancement through ceaseless learning, data trade, creative energy, and abuse of interior and exterior resources (Iddris, 2016) can be defined as innovation capabilities. Innovation capabilities can be built through nine imperious items that must be reflected: information and thought administration, organizational culture and learning, the administration itself, collaboration, imagination, and progression methods. In past studies, the most frequent measurement used in the topic are organizational culture and information administration. Moreover, dynamic capabilities (Ferreira et al., 2018; Shafia et al., 2016) through innovation capabilities may lead to a positive effect on competitiveness and performance.

H1: Innovation capabilities deliver a positive and significant direct impact in the direction of company e-commerce performance.

With the above argument, innovation capability can be characterized as the capacity to create innovations in cooperation with terms of items and business developments. From the perspective of this study, the two dimensions that are crucial can be evaluated through science management and organizational culture.

2.3. E-commerce maturity

Careful thought once adopting e-commerce needs an associate degree analysis of the company's level of electronic readiness within the context of readiness and consequently the e-commerce market (Chen, Windasari, & Pai, 2014), mostly at the SME extent. This situation should not be solely reviewed in terms of the provision of knowledge and communication technology and its infrastructure, however, can even be viewed in terms of the legal and security atmosphere (Fathian, Akhavan, & Hoorali, 2008; Hourali, Fathian, & Montazeri, 2008) in addition because the options obtainable among the corporate. E-commerce in developing countries needs an associate degree approach and model that's quite versatile in capturing changes, particularly electronic readiness (Dada, 2006; Molla & Licker, 2005) from the interior facet of the organization and external electronic readiness.

E-commerce within Indonesia, especially on the scale of the SMEs zone, has been recognized through the previous study (Rahayu & Day, 2017) the improvement of adoption and consideration advantages gained from e-commerce illustrates that the organization will improve based on the level of e-commerce reception. Thus, the advantage earned by a firm depends on the level of maturity. In any case, the effect on the performance of the company has yet to be observed, particularly e-commerce performance. These circumstances furthermore are appropriate for a business-to-business premise application of e-commerce (Elbeltagi, Hamad, Moizer, & Abou-Shouk, 2016; Xuhua, Elikem, Akaba, & Brown, 2019) which the reception of e-commerce may drive the level of advantages. A variety of business scales, such as SME organizations in Indonesia, may contribute a few advantages to organizations in addition to receiving benefits (Triandini et al., 2017), including organization performance. Evaluation of whether improvement degree of maturity and its impact on the performance of a firm depends on the finding of this study. In terms of the e-commerce context of the argument, it had better be assumed that maturity influences business performance. We could perhaps sum up as beneath:

H2: E-commerce maturity deliver a positive and significant direct impact in the direction of company e-commerce performance.

H3: E-commerce maturity deliver positive and significant indirect impact in the direction of company e-commerce performance.

Maturity in terms of e-commerce might be derived from barriers and benefits related to e-commerce. Based on a previous study (Morais, Pires, & Gonçalves, 2012), the barrier to e-commerce may be determined from 3 perspectives, which are technology, environment, and organization. E-commerce benefits (Triandini et al., 2017) could be assessed through information speed, product review, and market penetration.

Distinctive circumstances that involved the creative business to sustain and develop, towards a certain degree of monetary and law perspective. These days, a fundamental portion of e-commerce has brought business to foster and

make strides in common trade, which place the firm as the center of business. To achieve essential advancement, creative firms ought to evaluate their maturity levels, especially related to e-commerce. The company's e-commerce management may be subject to its business value and performance.

3. RESEARCH METHODOLOGY

3.1. Data set

Information was accumulated from the distinctive zone and also several sub-industries from the creative economy. Though the random selection of 383 business owners in Indonesia, specifically Java and Bali Island, may address as an agent of the assorted ventures which have been one of a kind portion of creative business in Indonesia. The quantitative methodology was applied as a portion of the analysis method. Self-assertive assessing procedure through online host utilized to capture responses from entrepreneurs via an online survey. Alternatively, in no pandemic situation, surveys may collect directly through face-to-face meetings.

3.2. Method

Accumulated data were inspected by operating the SPSS Statistics computer program to evaluate the Kaiser-Meyer-Olkin (KMO) test that ought to be higher than the threshold of 0.5 which comes from the cross-sectional examination method based on the 6-point Likert scale. Simultaneously, Bartlett's test should be lesser than 0.005, and Cronbach's alpha with regard to more than 0.7 will illustrate the unwavering condition of the respondent's information. Through the phase of applying confirmatory factor analysis through SPSS Amos, while also applying to standardize factor loading to gauge the association for each point of view and their relations. In case there is a slight association with the result below 0.5, those items will be considered as a frail association and will be neglected. As such, we may fulfill an ideal and relevant model to reply to the examination issues.

The result related to descriptive findings will be analyzed in order to have an in-depth insight into the conditions of e-commerce performance (ECP), innovation capability (IC), and e-commerce maturity (ECM) variables, especially in Indonesia's creative industry. Furthermore, analysis for regression will be performed to confirm the result and initial proposition acceptance. When the result shows a p-value lower than the threshold of 0.05 together with the result of regression weight (standardized) showing positive, we may conclude the acceptance of the proposed hypotheses.

4. RESULTS

For the objectives of the preliminary assessment, descriptive statistics were applied to define the overall attributes of the records accumulated. The subsequent demographic information describes the business type, business location, and company age.

Table 1. Variable condition based on the business location

Variable	Business type	Very low	Low	Intermediate	High	Very high	χ^2	<i>p</i>	<i>n</i>
E-commerce performance	3 years and below	1%	17%	32%	38%	12%	6.406	0.171	383
	Above 3 years	1%	21%	36%	37%	4%			
E-commerce maturity	3 years and below	0%	0%	11%	42%	47%	4.388	0.356	383
	Above 3 years	1%	0%	14%	45%	40%			
Innovation capability	3 years and below	0%	8%	23%	41%	28%	4.544	0.337	383
	Above 3 years	1%	12%	29%	35%	23%			

Indonesia's creative business majority are newly developed companies with a company age of around 3 years and below. As shown in Table 1, all

variables were not statistically significantly different in terms of company ages.

Table 2. Summary

Variable summary		E-commerce maturity	Innovation capability	E-commerce performance
\bar{x}		30	30	57
95% confidence	43	30	29	29.30
Gap for \bar{x}	44	30	30	29.90
5% Trimmed \bar{x}		30	30	58
\bar{x}		30	30	58
σ^2		13	9	40
SD		4	3	6
Min.		12	21	39
Max.		36	36	72
R		24	15	33
IQR		6	5	10
Skew[X]		-0.66	-0.22	-0.18
Kurtosis		0.91	-0.34	-0.72

Indonesia's entrepreneurs take into consideration of their e-commerce conditions as a great environment for creative trade to create and hone their trade activity. E-commerce maturity (ECM) was deemed high through the mean of 30 with a max. of 36. Meanwhile, innovation capabilities (IC) were also deemed high through a mean of 30 with a max. of 36. E-commerce performance (ECP) possessed by Indonesia's creative firms was deemed as high through a mean of 57 with a max. of 72. Moreover, based on the above result, we may conclude the condition of normal distribution. In this manner, we may determine whether the respondents involved in this research are adequate to be agents for the populace.

There were a few measurements that have been eliminated from this investigation as a result of the low value of connection in relation to their variable. First of all, two dimensions were removed from ECM which are the innovation barrier and the technology barrier. It may imply that those two items will not or only provide a negligible impact on

the maturity level of e-commerce. Past studies (Morais et al., 2012) provided different results compared with the findings in this study. One of the latent causes is many entrepreneurs in Indonesia, especially in the creative industry, has used e-commerce as one of the main channels for selling their products or services.

There were also two dimensions excluded from ECP which are inventory turnover and product return. It may suggest that by no means noteworthy effect towards stock-related issues considering the importance of those two items in a corporation or industrial scale of business. These two items did not affect much the creative industry due to the scale of commerce which is mostly SMEs. This kind of business scale tends to disregard the conditions of stock level and the reason or occurrence of product return, particularly in Indonesia where financial results and capturing new clients and customers become a top priority rather than the supply chain.

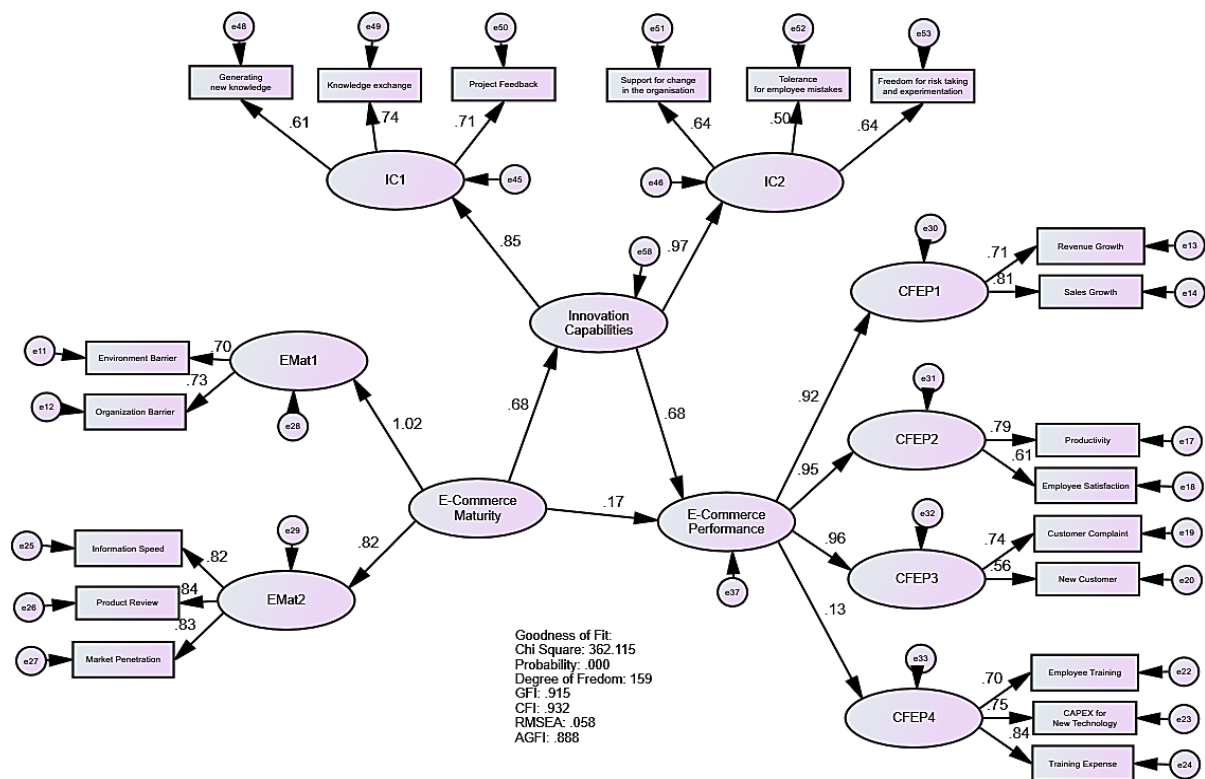
Table 3. Result

Relation	Std regression weight	P-value
ECM → ECP	0.173	0.045
ECM → IC	0.676	***
IC → ECP	0.678	***
ECM → IC → ECP	0.459	

The model has achieved a good fit with a result of 362.115 Chi-square, reaching 0.915 goodness-of-fit (GFI), making 0.932 comparative fit index (CFI), and achieving an acceptable fit of 0.058 root mean

square error of approximation (RMSEA) with a degree of freedom of 159. This indication may suggest that the model is adequate for advanced analysis through statistical regression.

Figure 1. SEM model



5. DISCUSSION

Innovation capabilities deliver a positive and significant impact with regard to e-commerce performance with 0.678 value improvement. It is confirming that *H1* is accepted with innovation capabilities is one of the factors that drive e-commerce performance to a superior level. On the other hand, e-commerce maturity provides a positive and significant impact on innovation capabilities with a 0.676 value improvement.

E-commerce maturity moreover delivers a positive and significant effect in relation to e-commerce performance. This discovery may decipher that each exertion of owners in the direction of maturity level related to e-commerce could come about change in relation to general company performance which has a connection with e-commerce. Maturity of e-commerce is determined by the conditions of creative firms, especially related to e-commerce benefits and barriers. The e-commerce level of a creative firm can be classified as mature as soon as they have outperformed its boundary, in addition, get benefits. Hence, e-commerce maturity produced a positive impact in relation to variable e-commerce performance with an effect of 0.173 enhancement. Consequently, we may determine that *H2* is acknowledged with creative firm e-commerce performance may lead by firm's maturity related to e-commerce. We also conclude that the indirect relationship between e-commerce maturity and e-commerce performance through innovation capabilities provides a higher benefit and improvement with a 0.459 value of an improvement. Therefore, *H3* accepted with the indirect impact of e-commerce maturity providing positive and significant impact on e-commerce performance.

The creative industry has been a one-of-a-kind business that provides vast opportunities with diverse types of business styles in order to collaborate with other industries. The venture will be required to elevate the maturity level of e-commerce considering the worth of business scale and may get to be a competitive advantage that drives the firm into successful performance. Furthermore, extra attention and investment towards the company's capabilities of innovation significantly improve the end result which is e-commerce performance. Innovation has shown a critical role in a company's performance and become one of the key aspects that need to be developed beyond the terms of product innovation, but also as part of integral capabilities of a company's core intangible asset.

Improving state in terms of e-commerce performance has been experienced by creative firms through the expansion of e-commerce maturity. Utilization of e-commerce platforms which are intensively used during the pandemic era become one of the highlights of this research to offer assistance in order to outlive and improve creative firm performance and maturity levels related to e-commerce while simultaneously encouraging the improvement in the level of their innovation capabilities.

6. CONCLUSION

COVID-19 created a new direction of enterprise approach, especially for creative firms in Indonesia. This research concludes that innovation capabilities bring a positive and significant impact on e-commerce performance. This finding has aligned with previous findings (Ferreira et al., 2018; Shafia et al., 2016) in relation to dynamic capabilities. This research also

confirms the positive and significant direct and indirect impact of e-commerce maturity on e-commerce performance which has not yet been explored in previous research. Nevertheless, the findings are aligned with the previous findings related to the development of e-commerce bringing a positive impact on company performance (Rahayu & Day, 2017; Triandini et al., 2017).

Substantial e-commerce contribution, in order to enhance firm performance, has become more important than before. Useful resource investment, especially in creative business, will improve its e-commerce maturity, which may gain from the advantages that have an impact on the direction of its performance for e-commerce, specifically when they additionally invest to advance its innovation capabilities. Innovation capabilities does

act as a mediator between maturity and performance in terms of e-commerce. Creative entrepreneurs might also increase their overall performance via e-commerce maturity and especially if they invest in their innovation capabilities.

This study has journeyed a few impediments. Despite the reality that extensive work all through facts mixture and construct agreement steps have been performed, the possibility for respondents' tendency in insight cannot be omitted. Further examination might be finished on a variety of varieties of organizations and expand the degree for global exposure. This research also was conducted during the COVID-19 pandemic situation with constrained business environment. Therefore, it is advised that post-pandemic research to be conducted.

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