

Sustainable Growth for Creative Industry MSMEs through Digital Transformation Entrepreneurship

Adhi Widyakto^{1*}, Sugeng Wahyudi², Irene Rini Demi Pangestuti³

¹Doctoral of Management, Diponegoro University, Indonesia

¹Department of Management, University Semarang, Indonesia

^{2,3}Department of Management, Diponegoro University, Indonesia

¹adhiwidyakto92@gmail.com, ²sug_w@yahoo.com, ³irenerinidp1960@gmail.com

*Corresponding Author

Article Info

Article history:

Submission March 10, 2025

Revised May 20, 2025

Accepted July 28, 2026

Published August 12, 2026

Keywords:

Readiness to Change

Cloud Service

Workforce Transformation

IT for E-commerce

Performance Sustainability



ABSTRACT

This study aims to examine the effects of readiness to change, cloud services, workforce transformation, and IT for e-commerce on performance sustainability, with perceived strategic value serving as a moderating variable. This study tested eight hypotheses **using a sample of 200 Indonesian SMEs**. Additionally, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed in the data analysis approach with the assistance of the SmartPLS version 3.0 program. SmartPLS 3.0 was used for its stability, dataset compatibility, and the team's prior experience, despite SmartPLS 4 offering advanced predictive techniques. **The outcome demonstrates** that readiness to change, cloud service, workforce transformation, and IT for e-commerce have a significant positive effect on sustainability performance. Moreover, perceived strategic value has not been able to moderate the relationship between readiness to change, cloud service and sustainability performance while perceived strategic value is able to moderate the relationship between workforce transformation and IT for e-commerce on performance sustainability. **This study's technology** acceptance model hypothesis helps to understand how digital transformation is occurring in MSMEs. As for TAM, it comes from a psychological perspective that explains people who use digital products. It talks about attitudes, actions, dreams, and connections to technology usage.

This is an open access article under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license.



DOI: <https://doi.org/10.34306/att.v8i3.654>

This is an open-access article under the CC-BY license (<https://creativecommons.org/licenses/by/4.0/>)

©Authors retain all copyrights

1. INTRODUCTION

MSMEs are the backbone of the economy which accounts for most of the gross domestic product, besides, they can help reduce the unemployment rate. This study focuses on creative MSMEs, including fashion, cultural, design, and digital media, highlighting their unique challenges such as specialized skills, innovation-driven models, and trend-sensitive markets. Compared to MSMEs in other emerging markets, Indonesian MSMEs face unique challenges including limited access to formal financing, uneven digital infrastructure across regions, and varying levels of managerial and technological skills. While countries like Malaysia and Vietnam have implemented structured digital adoption programs, many Indonesian MSMEs still rely on informal networks and face barriers in scaling digital initiatives. These differences underline the importance of understanding local conditions when assessing the impact of digital transformation on MSME performance and sustainability, ensuring that findings are relevant not only domestically but also to an international audience

looking to compare MSME development in similar economic contexts [1]. MSMEs face obstacles since they do not have the human or financial resources to systematically investigate the potential and risks to introduce industry 4.0. Therefore, the challenges and opportunities of Industry 4.0 should be observed specifically for MSMEs so that lead the way to digital transformation from traditional businesses to digital-based businesses [2, 3].

Small businesses are now in a competitive position to embrace digitization to increase revenue, enhance customer experience, and reduce inefficiencies. Indonesian MSMEs face local challenges such as uneven infrastructure, limited financing, varying digital literacy, and cultural factors affecting technology adoption. Addressing these factors supports SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure). Digital transformation uses capabilities like big data to develop innovative business models, disrupts internal processes, and influences strategy, structure, and value creation.

Digital transformation involves organizational change and the social construction of digital technology to update the company's processes, it may also be uncertain for the company [4]. It is because of the tension between the use of established and new technologies in terms of employee ownership, learning, performance, and organization [5]. The Study contend that rather than thinking that new product creation and digital transformation can automatically support one another, these two technical construction processes might instead exacerbate one another. To overcome its own technical uncertainty, each process may compete for managerial attention and resources; this is especially true when resources are limited [6].

Previous studies have revealed that digital transformation can be a very effective tool for creating sustainability [7, 8]. It's still uncertain if sustainable development objectives and the digital revolution of the economy can coexist. Meanwhile, [9] said that while digitization opens up new possibilities, it is yet unknown how digitalization may lead to the sustainability of human economic and social institutions.

During the early COVID-19 outbreak, many Indonesian MSMEs experienced significant turnover declines due to limited presence in marketplaces and government stay-at-home restrictions. Subsequently, entrepreneurs adopted digital channels, improving sales and performance. Digital transformation encompasses not only moving sales online but also readiness to change, cloud services, workforce transformation, and IT for e-commerce. Based on these phenomena and identified research gaps, this study investigates From Challenge to Creativity: A New Era of Digital Transformation and Sustainable Creative Industry MSMEs.

2. LITERATURE REVIEW

2.1. Technology Acceptance Model Theory (TAM)

The Technology Acceptance Model (TAM) explains the use of novel technologies or IT systems to support company operations. Developed from TRA, TAM predicts technology adoption based on perceived usability and ease of use [10]. It originated from a psychological approach to clarify the relationships between users' beliefs, behaviors, intentions, and attitudes toward technology adoption. Understanding these relationships is crucial for applying TAM in practical contexts beyond mere user attitudes [11].

In this study, TAM is applied to examine how MSME owners adopt digital technologies to enhance business processes and performance sustainability. Prior research shows that perceived usefulness and ease of use directly influence the adoption of digital tools, impacting readiness to change, cloud service adoption, workforce transformation, and IT for e-commerce. By focusing on these application aspects, TAM provides a practical framework for understanding digital transformation behavior in Indonesian MSMEs without detailing the full theoretical development [12, 13].

2.2. Performance Sustainability

MSMEs strive to implement corporate sustainability in order to comply with applicable policies and regulations. MSMEs also use lean manufacturing, green manufacturing, and other sustainability strategies in their quest for sustainability [14]. MSMEs should incorporate stakeholders in their thorough analysis by taking into account all feasible sustainability practices and performance standards [15]. Sustainability practice is any practice which aims to achieve or support sustainable value [16]. [17] define performance sustainability as a company's performance across all dimensions and for all drivers of corporate sustainability.

2.3. Readiness to Change

A person is said to be ready for change if they have a good outlook on it, support organizational change, and have the self-assurance to deal with it [18]. Moreover, it is measured by 5 indicators according

to [15] that are: the desire to improve going forward, a mindset that welcomes new methods of operation, a readiness to adopt new information and technology, a readiness to perform better when utilizing new work practices, and self-assurance in the face of change.

2.4. Cloud Service

Cloud services are often used in logistics activities within companies; especially, for inventory turnover, safety stock, order processing, labor costs and other [19]. Many activities within the company which allow it to require the help of cloud services. Cloud service is almost the same as information communication and technology or ICT, which allows it to facilitate the flow of information, the flow of materials, the flow of funds and the flow of information requests [16].

2.5. Workforce Transformation

A portion of the issue facing cyber experts and the organizations seeking to employ them is the dearth of knowledge among non-technical people about the intricacies of the cyberspace. Furthermore, because of the complexity of the cyber realm, human resources might not be familiar with the terminology required to accurately market the knowledge, abilities, and attitudes they want [20]. Finally, many businesses may choose to hire a single professional rather than a team in an era of ever-tighter budgets in order to control expenses or they might try to contract out tasks before fully realizing what they require [21, 22].

2.6. IT for E-commerce

E-commerce is essentially the purchasing and selling of products and services on the internet, in addition it includes making financial transactions and offering goods and services for sale [23]. It is easier for producers to achieve market share which is not possible through traditional means. Information technology describes how e-commerce activities as a system in the application of e-business related to commercial transactions, the application of e-commerce will make it easier for companies to make sales so that they will improve their performance.

2.7. Perceived Strategic Value

The primary responsibility for productivity determines whether technology has facilitated the generation of a wider range of “outputs” for the volume of “inputs” provided [24]. In order to explain the relationship linking digital transformation to performance sustainability, it is better to reflect on how value thinking is handled in economics. In addition, [25] stated that the perceived value reflects the benefits of the costs which have been incurred and this value is an indicator of intention to use (intention to conduct digital transformation).

PSV refers to the SME owner’s perception of the benefits that technology adoption and digital transformation bring to their business, such as competitive advantage, efficiency, and market responsiveness. In this study, PSV is measured using several indicators that assess how SMEs perceive these benefits in supporting sustainable performance. By clearly defining PSV in conceptual and measurable terms, the study ensures that its moderating role on the relationships between digital transformation factors and sustainability performance is both empirically valid and theoretically grounded in the SME context [26–28].

3. FRAMEWORK OF THOUGHT

3.1. Readiness to Change and Performance Sustainability

In order to prepare companies to be confident enough to change, it is necessary to understand the ways that can be used to cultivate readiness to change [29]. It is in line with research which had conducted by [30, 31] that readiness to change has a positive effect on performance.

H1: Readiness to change has a positive effect on performance sustainability.

3.2. Cloud Service and Performance Sustainability

The benefit of cloud adoption is that it can flow to the company and its business partners [32, 33]. The perceived benefits of suppliers regards to purchase orders and inventory status, perceived benefits for customers in the form of sales orders and inventory status, then the benefits felt by the company internally, namely data accuracy for sales and operations planning. These benefits tend to affect the intention to adopt cloud services.

H2: Cloud service has a positive effect on performance sustainability.

3.3. Workforce Transformation and Performance Sustainability

For any business to succeed and survive, it must have access to a staff with a high level of education. Businesses that draw in top talent are able to generate steady earnings for themselves. In the meanwhile, the company's capacity to stay competitive is harmed by inability to do so. Entering the digital era business, the skills and quality of the workforce in the company should continue to be improved. In addition, an educated workforce can improve company performance by increasing productivity, reducing costs, and increasing decision-making efficiency [34, 35].

H3: Workforce transformation has a positive effect on performance sustainability.

3.4. IT for E-commerce and Performance Sustainability

A lot of people are making purchases online instead of from brick-and-mortar stores. As a result of dwindling consumer protection, many SMEs that are unable to adopt digital transformation end up insolvent. It is consistent with studies carried out by [36] which stated that e-commerce has a positive effect on company performance.

H4: IT for E-commerce has a positive effect on performance sustainability.

3.5. Perceived Strategic Value Moderates The Relationship Between Readiness to Change, Cloud Service, Workforce Transformation and It For E-Commerce on Performance Sustainability

Businesses can enhance income and gain a competitive edge by strategically utilizing technology. Understanding the strategic value of information technology is crucial, as it guides the adoption of tools that improve operational efficiency and overall business performance [37]. In the context of MSMEs, which often have limited resources, perceived strategic value helps owners prioritize technology investments that strengthen adaptation, foster innovation, and increase business attractiveness [38, 39]. This approach ensures that digital transformation initiatives deliver meaningful benefits, balancing resource constraints with the need to remain competitive and sustainable compared to larger firms. In addition, perceived strategic value is expected to moderate the relationship between digital transformation and sustainability performance so that the proposed hypothesis is as follows:

H5: Perceived strategic value moderate the relationship between readiness to change and performance sustainability.

H6: Perceived strategic value moderate the relationship between cloud service and performance sustainability.

H7: Perceived strategic value moderate the relationship between workforce transformation and performance sustainability.

H8: Perceived strategic value moderate the relationship between IT for e-commerce and performance sustainability.

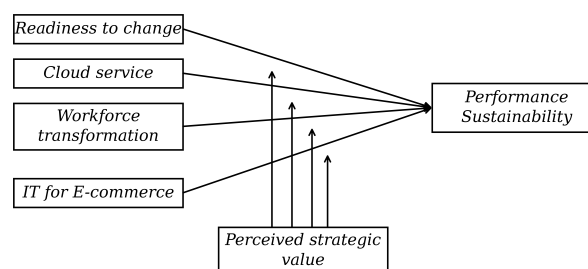


Figure 1. Theoretical Framework

Figure 1 presents the theoretical framework of this study, which explains the relationship between digital transformation factors and performance sustainability in creative industry MSMEs. Readiness to change, cloud service, workforce transformation, and IT for e-commerce are positioned as independent variables that directly influence performance sustainability. Meanwhile, perceived strategic value is placed as a moderating variable that can strengthen or weaken the relationship between each digital transformation factor and performance sustainability. This framework emphasizes that sustainable MSME performance is not only shaped by

technology adoption, but also by organizational readiness, workforce capability, digital infrastructure, and the strategic value gained from technology use.

4. METHODOLOGY

With the use of the SmartPLS program, hypothesis testing was done as part of the quantitative approach in this study. A google form questionnaire was distributed to MSMEs in Indonesia in order to collect research data [40–42]. Furthermore, the population and sample in this study were MSME owners/managers in Indonesia. The method used was simple random sampling, where the sampling was conducted randomly. The numbers of indicators in this study were 32. While the study used simple random sampling and collected data from 200 Indonesian MSME owners/managers, several limitations should be noted. First, the sample may not fully represent all MSMEs in Indonesia, as those more digitally active were more likely to respond, potentially introducing selection bias. Second, the use of self-reported Likert-scale questionnaires could lead to response bias, as participants might overestimate their readiness to change or the strategic value perceived in their business. Third, external factors such as regional market differences or prior experience with digital tools were not controlled, which could influence responses. Acknowledging these limitations enhances transparency and indicates that the results should be interpreted with consideration of these potential biases. This study included 32 indicators. Following [43], the minimum sample size required was 192 respondents (6 times the number of indicators). The data collected from 200 respondents were processed accordingly.

5. RESULTS AND DISCUSSION

The classical assumption test is conducted before hypothesis testing. It has the aim of testing the quality of research data so that research data should be searched for truth first so as to minimize errors in the regression model.

Table 1. Reliability Test Table

Variabel	Composite Reliability	Cronbach's Alpha
Readiness to change	0.945	0.927
Cloud service	0.936	0.914
Workforce transformation	0.922	0.893
IT for E-commerce	0.955	0.941
Perceived strategic value	0.942	0.923
Performance Sustainability	0.951	0.938

Source: Processed data in 2022

Utilizing AVE and the outer loadings parameters, convergent validity is computed. The research model is considered fit if both the AVE and loading factor values are more than 0.7 and 0.5, respectively. The study may infer that the research data is appropriate.

Table 2. Convergent Validity Table

Variabel	Indikator	Outer Loading	AVE
Readiness to change	RC.1	0.831	0.775
	RC.2	0.855	
	RC.3	0.929	
	RC.4	0.853	
	RC.5	0.931	
Cloud service	CS.1	0.795	0.747
	CS.2	0.906	
	CS.3	0.796	
	CS.4	0.910	
	CS.5	0.905	

Workforce transformation	WT.1	0.756	0.705
	WT.2	0.920	
	WT.3	0.741	
	WT.4	0.897	
	WT.5	0.869	
IT for E-commerce	ITE.1	0.872	0.809
	ITE.2	0.907	
	ITE.3	0.876	
	ITE.4	0.932	
	ITE.5	0.911	
Perceived strategic value	PSV1	0.813	0.765
	PSV2	0.880	
	PSV3	0.903	
	PSV4	0.871	
	PSV5	0.902	
Performance Sustainability	PS1	0.845	0.737
	PS2	0.746	
	PS3	0.863	
	PS4	0.944	
	PS5	0.943	
	PS6	0.925	
	PS7	0.711	

Source: Processed data in 2022

Table 2 presents the convergent validity results for all variables used in this study. The outer loading values for each indicator are above 0.70, indicating that all indicators are valid in measuring their respective constructs. In addition, the AVE values for readiness to change, cloud service, workforce transformation, IT for e-commerce, perceived strategic value, and performance sustainability are all above 0.50. These results confirm that each construct has met the criteria for convergent validity, meaning that the indicators are able to explain the variables properly and can be used for further analysis.

Table 3. Result Fornell-Larcker Matrix

	Readiness to change	Cloud Service	Workforce Transformation	IT for E-commerce	Perceived Strategic Value	Performance Sustainability
Readiness to change	0.881	-	-	-	-	-
Cloud service	0.756	0.864	-	-	-	-
Workforce transformation	0.676	0.715	0.839	-	-	-
IT for E-commerce	0.654	0.719	0.675	0.900	-	-
Perceived strategic value	0.613	0.675	0.681	0.759	0.875	-
Performance Sustainability	0.774	0.797	0.753	0.780	0.803	0.858

Source: Processed data in 2022

Table 3 presents the Fornell-Larcker matrix results to assess discriminant validity among the research constructs. The diagonal values for readiness to change, cloud service, workforce transformation, IT for e-commerce, perceived strategic value, and performance sustainability are higher than their correlations with other constructs. This indicates that each construct has a stronger relationship with its own indicators than with other variables. Therefore, all constructs have met the discriminant validity criteria and can be considered distinct for further structural model analysis.

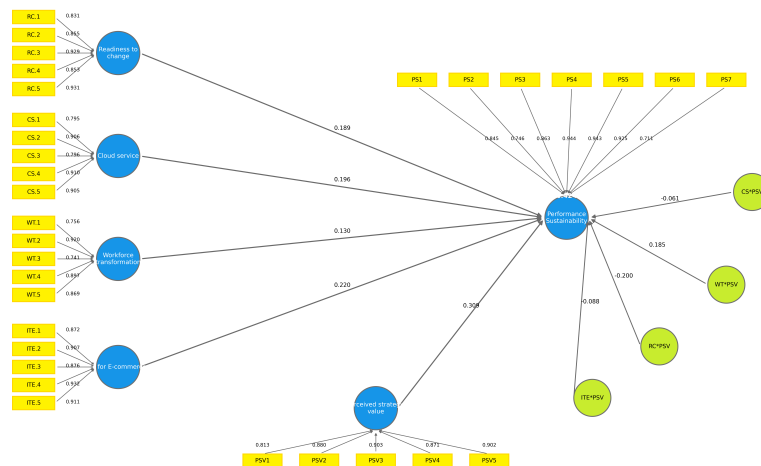


Figure 2. Model evaluation

Figure 2 presents the model evaluation results generated through the SmartPLS algorithm. The results show that all indicators have outer loading values above 0.70, indicating that each indicator is valid in measuring its respective construct. In addition, the HTMT values are below 1, confirming that the variables in the model have met the discriminant validity criteria. These results indicate that readiness to change, cloud service, workforce transformation, IT for e-commerce, perceived strategic value, and performance sustainability have reliable and valid measurement indicators. Therefore, the model is appropriate to proceed to the structural model testing stage.

Table 4. R-Square Test Results

	R Square	R Square Adjusted
Performance Sustainability	0.842	0.835

Source: Processed data in 2022

The results in Table 4 show that the R-square value of the sustainability performance variable is 0.842. It shows a high ability to predict the model. It can be said that the effect of readiness to change, cloud service, workforce transformation, IT for e-commerce and perceived strategic value on sustainability performance gives a value of 0.842. Therefore, it can be interpreted that the sustainability performance can be influenced by the readiness to change construct variable, cloud service, workforce transformation, IT for e-commerce and perceived strategic value is 84.2% while the rest cannot be explained by the variables used in this research.

Table 5. F-Square Test Results

	Readiness to change	Cloud Service	Workforce Transformation	IT for E-commerce	Perceived Strategic Value	Performance Sustainability
Readiness to Change	-	-	-	-	-	0.070
Cloud Service	-	-	-	-	-	0.060
Workforce Transformation	-	-	-	-	-	0.035
IT for E-commerce	-	-	-	-	-	0.083
Perceived Strategic Value	-	-	-	-	-	0.205
Performance Sustainability	-	-	-	-	-	-

Source: Processed data in 2022

Table 5 presents the F-square test results showing the effect size of each variable on performance sustainability. Perceived strategic value has the strongest effect at 0.205, followed by IT for e-commerce, readiness to change, cloud service, and workforce transformation. These results indicate that strategic value gives the most important practical contribution to sustainable MSME performance.

Table 6. Q-Square Test Results

Variabel	CV Communalitiy	CV Redundancy
Readiness to Change	0.656	-
Cloud Service	0.615	-
Workforce Transformation	0.557	-
IT for E-commerce	0.703	-
Perceived Strategic Value	0.639	-
Performance Sustainability	0.653	0.613

Source: Processed data in 2022

All variables have Q-square values greater than 0. indicating predictive importance for the model. Given that all of the research's variables have positive cross-validation redundancy and cross-validation communality values that are more than 0. the study offers the same and acceptable validity for the prediction model.

Table 7. Hypothesis Test Results

Hypothesis Path	Original Sample (O)	Sample Mean (M)	Std Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Readiness to Change → Performance Sustainability	0.183	0.184	0.055	3.339	0.001
Cloud Service → Performance Sustainability	0.196	0.192	0.065	3.018	0.003
Workforce Transformation → Performance Sustainability	0.130	0.137	0.056	2.293	0.022
IT for E-commerce → Performance Sustainability	0.209	0.205	0.064	3.236	0.001
Readiness to Change × Perceived Strategic Value → Performance Sustainability	-0.200	-0.197	0.054	3.727	0.000
Cloud Service × Perceived Strategic Value → Performance Sustainability	-0.091	-0.090	0.046	1.972	0.049
Workforce Transformation × Perceived Strategic Value → Performance Sustainability	0.093	0.095	0.045	2.068	0.039
IT for E-commerce × Perceived Strategic Value → Performance Sustainability	0.186	0.186	0.048	3.847	0.000

Source: Processed data in 2022

5.1. Hypothesis Test Result 1

The path coefficient value shows the number 0.196, t values $3.339 > 1.96$ and p values $0.001 < 0.05$. Therefore, it can be concluded that hypothesis is accepted. The results of this study are in line with research which had conducted by [15] that readiness to change has a positive and significant effect on sustainability performance. Thus, it can be concluded that if MSMEs have a culture which is always ready to face change and have adequate resources, commitments and infrastructure to cope with change so that MSMEs' readiness in highly competitive business changes will improve the sustainability of their performance.

5.2. Hypothesis Test Result 2

The path coefficient value shows the number 0.196, t values $3.018 > 1.96$ and p values $0.003 < 0.05$, so it can be concluded that hypothesis is accepted. The results of this study are in line with [44] that cloud services have a positive and significant effect on sustainability performance. In conclusion, if MSMEs provide

accessibility to be connected to the internet and have made cost and energy efficiency in their operational activities, the sustainability of performance will always increase.

5.3. Hypothesis Test Result 3

The path coefficient value shows the number 0.130, t values $2.293 > 1.96$ and p values $0.022 < 0.05$ so that it can be concluded that hypothesis is accepted. The results of this study are in line with research which had conducted by [11] that workforce transformation has a positive and significant effect on sustainability performance. Thus, it can be concluded that if MSMEs are very concerned about the skills and quality needed from the workforce to meet company needs and are faster and more adaptive in responding to digital transformation so that performance sustainability increases.

5.4. Hypothesis Test Result 4

The path coefficient value shows the number 0.209, t values $3.236 > 1.96$ and p values $0.001 < 0.05$. Therefore, it can be concluded that hypothesis is accepted. The results of this study are in line with research which had conducted by [18] which stated that IT for e-commerce has a positive and significant effect on sustainability performance. Thus, the study can conclude that if the use of e-commerce in MSMEs can help increase the exchange of information with suppliers and customers so that a wider range of business can be in line with the increasing sustainability of MSME performance.

5.5. Hypothesis Test Result 5

The path coefficient value shows the number -0.064, t values $2.040 > 1.96$ and p values $0.042 < 0.05$. Therefore, it can be concluded that hypothesis is rejected. It means that SMEs who feel strategic values in their business do not need readiness to change in improving the sustainability of their performance. The company must have a change goal so that it will accept the same changes that occur in the future [25]. Research [45] demonstrates how an individual will influence organizational studies if they are prepared for organizational change in terms of their aggressive, passive attitude and behavior while coordinating changes.

5.6. Hypothesis Test Result 6

The path coefficient value shows the number -0.091, t values $1.972 > 1.96$ and p values $0.049 < 0.05$. Therefore, it can be concluded that hypothesis is rejected. MSMEs who feel strategic values in their business do not require access to the internet in order to improve the sustainability of their performance. However, in direct testing cloud services have a high influence on performance sustainability. The company is expected to be able to adjust its old capabilities with new threats and opportunities and create new capabilities. According to research [46] it is not only the human tendency to make changes, but also the organizational infrastructure that can support or hinder change initiatives. Meanwhile, MSMEs still lack ownership of resources.

5.7. Hypothesis Test Result 7

The path coefficient value shows the number 0.093, t values $2.068 > 1.96$ and p values $0.039 < 0.05$, it is concluded that hypothesis is accepted. MSMEs who feel strategic values in their business tend to be faster and more adaptive in responding to digital transformation every day so that it will affect the improvement of the sustainability of their performance. In order to have employee change, SMEs are able to describe the human resources needed to advertise the knowledge, skills, and attitudes they are looking for precisely because of the complexity of the cyber domain.

5.8. Hypothesis Test Result 8

The path coefficient value shows the number 0.186, t values $3.847 > 1.96$ and p values $0.000 < 0.05$. Therefore, it can be concluded that hypothesis is accepted. In addition, MSMEs who feel strategic values in their business will adopt e-commerce in order to help the sales process and save costs so that sustainable performance will always increase. MSMEs that are able to adapt to the pandemic and thrive include those that can grow their alternative sales and marketing channels by leveraging digital media [10, 24].

6. MANAGERIAL IMPLICATIONS

This study provides practical implications for MSME managers in the creative industry to strengthen sustainable performance through strategic digital transformation. MSME owners should not only adopt digital tools, but also build organizational readiness, improve cloud-based operational systems, transform workforce capabilities, and optimize IT for e-commerce activities. The findings show that readiness to change, cloud

service, workforce transformation, and IT for e-commerce significantly improve performance sustainability, while perceived strategic value strengthens the role of workforce transformation and IT for e-commerce in supporting sustainable business performance. Therefore, managers need to prioritize digital skill development, employee adaptability, online market expansion, and technology investment that provides clear strategic value. By aligning human resource transformation with e-commerce utilization, creative industry MSMEs can improve efficiency, expand market reach, respond faster to business changes, and maintain long-term competitive sustainability in the digital economy.

7. CONCLUSION

The findings of this study are consistent with the Technology Acceptance Model (TAM), which explains how information systems and technology are accepted and utilized by users in supporting business activities. In the context of creative industry MSMEs, TAM provides a relevant theoretical basis for understanding how digital transformation contributes to sustainable performance. The results show that readiness to change, cloud service, workforce transformation, and IT for e-commerce have a significant positive effect on performance sustainability. This indicates that MSMEs with stronger adaptability, better digital infrastructure, improved workforce capability, and effective e-commerce utilization are more likely to achieve sustainable business performance in the digital era.

Furthermore, perceived strategic value was found to have different moderating effects in the proposed model. The results indicate that perceived strategic value does not strengthen the relationship between readiness to change and performance sustainability, nor between cloud service and performance sustainability. However, perceived strategic value successfully moderates the relationship between workforce transformation and performance sustainability, as well as the relationship between IT for e-commerce and performance sustainability. These findings suggest that strategic value becomes more important when digital transformation is directly related to human resource capability and market-oriented technology adoption. Overall, readiness to change, cloud service, workforce transformation, IT for e-commerce, and perceived strategic value are able to explain performance sustainability by 84.2%, showing that the model has strong explanatory power for creative industry MSMEs. MSMEs in the creative industry should actively adopt digital transformation to enhance sustainability by fostering readiness to change, leveraging cloud services, investing in workforce skills, and strategically using IT for e-commerce. Regularly assessing the perceived strategic value of these initiatives helps prioritize impactful investments, enabling SMEs to improve performance sustainability and remain competitive in the digital economy.

Future research is expected to expand this model by including variables outside technological constructs, such as innovation capability, entrepreneurial orientation, digital leadership, organizational culture, and religiosity values, especially considering the social and cultural context of Indonesia. Further studies may also compare MSMEs across different creative industry sectors or regions to obtain broader generalization. In addition, future researchers can apply longitudinal methods to examine how digital transformation affects MSME sustainability over time. This would provide deeper insight into whether readiness to change, cloud service, workforce transformation, IT for e-commerce, and perceived strategic value remain consistent drivers of sustainable performance in the long term.

8. DECLARATIONS

8.1. About Authors

Adhi Widyakto (AW)  <https://orcid.org/0009-0005-6929-5382>

Sugeng Wahyudi (SW)  <http://orcid.org/0000-0003-2889-7123>

Irene Rini Demi Pangestuti (IR)  <https://orcid.org/0000-0003-3008-0972>

8.2. Author Contributions

Conceptualization: AW; Methodology: AW; Software: AW; Validation: SW and IR; Formal Analysis: AW; Investigation: AW; Resources: AW; Data Curation: SW; Writing Original Draft Preparation: AW, SW, and IR; Writing Review and Editing: AW and SW; Visualization: AW; All authors, AW, SW, IR, have read and agreed to the published version of the manuscript.

8.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

8.4. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

8.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

REFERENCES

- [1] M. O. H. K. Alzaabi, R. B. Omar *et al.*, “Organizational factors and e-commerce adoption in smes of united arab emirates: mediating role of perceived strategic value,” *International Journal of Entrepreneurship*, vol. 25, pp. 1–18, 2021.
- [2] B. Mardisentosa, U. Rahardja, K. Zelina, F. P. Oganda, and M. Hardini, “Sustainable learning micro-credential using blockchain for student achievement records,” in *2021 Sixth International Conference on Informatics and Computing (ICIC)*. IEEE, 2021, pp. 1–6.
- [3] M. F. Djamaly, D. Djumarno, R. Astini, and D. Asih, “Entrepreneurial perspective on customer decisions to watch indonesian movies,” *Aptisi Transactions on Technopreneurship (ATT)*, vol. 7, no. 3, pp. 848–862, 2025, <https://doi.org/10.34306/att.v7i3.681>.
- [4] A. Anwar, N. Thongpapanl, and A. R. Ashraf, “Strategic imperatives of mobile commerce in developing countries: the influence of consumer innovativeness, ubiquity, perceived value, risk, and cost on usage,” *Journal of Strategic Marketing*, vol. 29, no. 8, pp. 722–742, 2021.
- [5] F. P. Appio, F. Frattini, A. M. Petruzzelli, and P. Neirotti, “Digital transformation and innovation management: A synthesis of existing research and an agenda for future studies,” *Journal of Product Innovation Management*, vol. 38, no. 1, pp. 4–20, 2021.
- [6] A. Purwanto, “Managing employee performance: From leadership to readiness for change,” *International Journal of Social and Management Studies (IJOSMAS)*, 2021.
- [7] D. Juliastuti, R. Royani, I. Farida, I. N. Hikam, and A. Garcia, “Empowerment through information: How ai-driven education impacts decision-making autonomy in fertility treatment,” *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 6, no. 2, pp. 196–204, 2025.
- [8] T. Suhara, C. S. Bangun *et al.*, “Human resource competence and innovation of small and medium micro enterprises (umkm) tangerang regency,” *APTISI Transactions on Management*, vol. 6, no. 2, pp. 181–190, 2022.
- [9] B. Brenner and B. Hartl, “The perceived relationship between digitalization and ecological, economic, and social sustainability,” *Journal of Cleaner Production*, vol. 315, p. 128128, 2021.
- [10] F. Cassia and F. Magno, “Cross-border e-commerce as a foreign market entry mode among smes: the relationship between export capabilities and performance,” *Review of International Business and Strategy*, vol. 32, no. 2, pp. 267–283, 2022.
- [11] O. Farooq and M. Bakhadirov, “Access to an educated workforce and the performance of private firms during the covid-19 pandemic,” *Borsa Istanbul Review*, vol. 22, no. 6, pp. 1209–1220, 2022.
- [12] N. P. L. Santoso, Q. Aini, R. G. Rahmadani, and S. M. Wahid, “Laser personalization and digital marketing on gen z souvenir purchase intention,” *ADI Journal on Recent Innovation*, vol. 7, no. 1, pp. 1–12, 2025.
- [13] F. Sutisna, T. Nurhaeni, N. P. L. Santoso, G. P. Cesna, N. Rangi, and E. D. Astuti, “Building consumer loyalty through digital marketing strategies in anime clothing brands,” *ADI Bisnis Digital Interdisiplin Jurnal*, vol. 6, no. 2, pp. 108–119, 2025.
- [14] T. Rochefort and Z. Ndlovu, “Digital marketing strategies in building brand awareness and loyalty in the online era,” *Startuppreneur Business Digital (SABDA Journal)*, vol. 3, no. 2, pp. 107–114, 2024.
- [15] C. Malesios, D. De, A. Moursellas, P. K. Dey, and K. Evangelinos, “Sustainability performance analysis of small and medium sized enterprises: Criteria, methods and framework,” *Socio-Economic Planning Sciences*, vol. 75, p. 100993, 2021.

- [16] M. Gopala and G. Sriram, "Green cloud computing: An approach towards sustainability," *Int. Res. J. Mod. Eng. Technol. Sci*, vol. 4, 2022.
- [17] D. Indriastuti and O. Fachrunnisa, "Achieving organizational change: Preparing individuals to change and their impact on performance," *Public Organization Review*, vol. 21, no. 3, pp. 377–391, 2021.
- [18] D. Lestari, M. Siti, W. Wardhani, and R. Yudaruddin, "The impact of covid-19 pandemic on performance of small enterprises that are e-commerce adopters and non-adopters," *Problems and Perspectives in Management*, vol. 19, no. 3, p. 467, 2021.
- [19] T. Hongsuchon, U. Rahardja, A. Khan, T.-H. Wu, C.-W. Hung, R.-H. Chang, C.-H. Hsu, and S.-C. Chen, "Brand experience on brand attachment: The role of interpersonal interaction, feedback, and advocacy," *Emerging Science Journal*, vol. 7, no. 4, pp. 1232–1246, 2023.
- [20] D. Wuisan, J. W. Manurung, C. Wantah, and M. E. Yuliana, "Entrepreneurial self-employment and work engagement in msme through autonomy and rewards," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 7, no. 1, pp. 264–281, 2025, <https://doi.org/10.34306/att.v7i1.448>.
- [21] M. F. Nur and A. Siregar, "Exploring the use of cluster analysis in market segmentation for targeted advertising," *IAIC Transactions on Sustainable Digital Innovation (ITSIDI)*, vol. 5, no. 2, pp. 158–168, 2024.
- [22] R. G. Munthe, Q. Aini, N. Lutfiani, I. Van Persie, and A. Ramadhan, "Transforming scientific publication management in the era of disruption: Smartpls approach in innovation and efficiency analysis," *APTISI Transactions on Management*, vol. 8, no. 2, pp. 123–130, 2024.
- [23] M. D. T. P. Nasution, A. Rafiki, A. Lubis, and Y. Rossanty, "Entrepreneurial orientation, knowledge management, dynamic capabilities towards e-commerce adoption of smes in indonesia," *Journal of Science and Technology Policy Management*, vol. 12, no. 2, pp. 256–282, 2021.
- [24] M. I. Purba, D. C. Y. Simanjutak, Y. N. Malau, W. Sholihat, and E. A. Ahmadi, "The effect of digital marketing and e-commerce on financial performance and business sustainability of msme during covid-19 pandemic in indonesia," *International Journal of Data and Network Science*, vol. 5, no. 3, pp. 275–282, 2021.
- [25] I. Taufikin, S. Zamroni, and A. Muthohar, "Readiness to change during the covid-19 pandemic: Study of self-efficacy and perceived organizational support on lectures performance," *Academy of Strategic Management Journal*, vol. 20, no. 45, pp. 1–10, 2021.
- [26] H. Wimelius, L. Mathiassen, J. Holmström, and M. Keil, "A paradoxical perspective on technology renewal in digital transformation," *Information systems journal*, vol. 31, no. 1, pp. 198–225, 2021.
- [27] M. R. Aulia, Z. Lubis, I. Effendi *et al.*, "Leveraging quality management and partnership programs for technopreneurial success: Exploring their impact on msme performance," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 2, pp. 157–168, 2023, <https://doi.org/10.34306/att.v5i2.303>.
- [28] N. Wiwin, P. A. Sunarya, N. Azizah, D. A. Saka *et al.*, "A model for determine upgrades for msme using analitical hyrarcy process," *ADI Journal on Recent Innovation*, vol. 5, no. 1Sp, pp. 20–32, 2023.
- [29] D. S. Wuisan and T. Handra, "Maximizing online marketing strategy with digital advertising," *Startupreneur Business Digital (SABDA Journal)*, vol. 2, no. 1, pp. 22–30, 2023.
- [30] J. van der Merwe, S. M. Wahid, G. P. Cesna, D. A. Prabowo *et al.*, "Improving natural resource management through ai: Quantitative analysis using smartpls," *International Transactions on Artificial Intelligence*, vol. 2, no. 2, pp. 135–142, 2024.
- [31] J. Williams, A. G. Prawiyogi, M. Rodriguez, and I. Kovac, "Enhancing circular economy with digital technologies: A pls-sem approach," *International Transactions on Education Technology (ITEE)*, vol. 2, no. 2, pp. 140–151, 2024.
- [32] Y. Syarkani, "Digital business model innovation for msme in indonesia's creative economy era: A strategic management approach," *Lex Localis*, vol. 23, no. 10, pp. 1305–1324, 2025.
- [33] A. Luthfia, E. Herwati, A. Bismo *et al.*, "Digital transformation and sustainable growth: Empowering women entrepreneurs in msme through enhanced digital literacy," in *2025 19th International Conference on Ubiquitous Information Management and Communication (IMCOM)*. IEEE, 2025, pp. 1–7.
- [34] R. Lesmana, I. Wijaya, E. A. Nabila, H. Agustian, S. Audiah, and A. Faturahman, "Enhancing market trend analysis through ai forecasting models," *International Journal of Cyber and IT Service Management*, vol. 4, no. 2, pp. 105–113, 2024.
- [35] B. Hermansah, H. Setywati, N. Nasuka, E. Setiawaty *et al.*, "Enhancing digital competencies through technology integration in vocational education," *Jurnal MENTARI: Manajemen, Pendidikan dan*

- Teknologi Informasi*, vol. 4, no. 1, pp. 40–51, 2025.
- [36] H. Bahtiar, L. R. Rabbany, Y. F. Bele, M. Husna, and G. S. Matulesy, “Digital transformation towards sustainability: Challenges and opportunities for Indonesian msme,” *Jurnal Ekonomi Dan Bisnis*, vol. 28, no. 1, pp. 131–150, 2025.
- [37] C. Sriasta, D. S. S. Wuisan, and T. Mariyanti, “Functions of artificial intelligence, income investment instrument, and crypto money in era of the fourth revolution,” *International Transactions on Artificial Intelligence*, vol. 1, no. 1, pp. 117–128, 2022.
- [38] A. C. Jurnalita, “The impact of digital transformation on msme competitiveness and economic growth,” *Arthatama: Journal of Business Management and Accounting*, vol. 8, no. 2, pp. 95–106, 2024.
- [39] S. Maharani *et al.*, “A study of msme business sustainability strategies: transforming towards industry 4.0,” in *2024 International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS)*. IEEE, 2024, pp. 449–453.
- [40] L. Nirmalasari, A. Alwiyah, P. A. Sunarya, and A. S. Panjaitan, “A digital marketing strategy based on applications to rise customer satisfaction,” *International Journal of Cyber and IT Service Management*, vol. 2, no. 2, pp. 139–145, 2022.
- [41] L. Cahyani, R. Hidayat, and D. Marcelino, “Strengthening digital capabilities and entrepreneurship for smes in the creative economy sector during a pandemic,” *Jurnal Penyuluhan*, vol. 19, no. 1, p. 93, 2023.
- [42] R. A. Basuki, I. Pahala, and P. Yuniarti, “Empowering creative economy msme through public-private partnerships and digital transformation,” *Journal of Business and Behavioural Entrepreneurship*, vol. 9, no. 2, pp. 254–268, 2025.
- [43] I. Supriadi, R. U. Maghfiroh, and R. Abadi, “Transforming msme through innovation and technology: Driving growth and sustainability in the digital age,” in *Proceedings of the BISTIC Business Innovation Sustainability and Technology International Conference (BISTIC 2023)*, vol. 267. Springer Nature, 2023, p. 241.
- [44] L. Shee, “Beyond boundaries: A history of gauteng’s dinokeng game reserve as public-private partnership and conservation initiative, 1995-2018,” Ph.D. dissertation, North-West University (South Africa), 2024.
- [45] B. C. Mtebe and H. Gao, “Exploring the effects of digital market adaptability on supply chain innovation,” *South African Journal of Economic and Management Sciences*, vol. 28, no. 1, p. 6357, 2025.
- [46] H. Koll and A. Jensen, “Narrative habitus: How actors connect episodic and continuous change in the moment,” in *A Research Agenda for Organisational Continuity and Change*. Edward Elgar Publishing, 2023, pp. 147–165.
-