

DETERMINANTS OF SUSTAINABILITY PERFORMANCE THROUGH DIGITAL INNOVATION IN WOMEN ENTREPRENEURS BASED ON HOME INDUSTRY MSMEs IN THE CREATIVE ECONOMY SECTOR IN MAKASSAR CITY

Asmawiyah*, Afiah Mukhtar, Mariana Teni

Sekolah Tinggi Ilmu Ekonomi Tri Dharma Nusantara
Jl. Kumala II No. 2 Makassar, Indonesia

Article history:

Received
9 March 2026

Revised
22 June 2026

Accepted
11 September 2026

Available online
30 September 2026

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



ABSTRACT

Background: In the era of digital transformation, digital platforms and networking capabilities play an important role in helping entrepreneurs enhance innovation and achieve sustainable business performance. Purpose: The utilization of digital technology enables entrepreneurs, especially women entrepreneurs operating home-based businesses, to strengthen their competitiveness, expand their market access, and improve their business sustainability.

Purpose: This study aims to explore the influence of digital platform and networking capabilities on sustainability performance through digital innovation among home-based female entrepreneurs in the creative economy sector.

Design/methodology/approach: This study used a concurrent mixed-methods approach with a concurrent embedded design. Quantitative data analysis uses partial least squares structural equation modeling (PLS-SEM). Furthermore, qualitative data analysis uses an interpretive approach. Data were collected from 220 female entrepreneurs in the creative economy sector.

Findings/Results: The results show that digital platform capability and networking capabilities have a positive effect on sustainability performance. Digital platform capability has a positive effect on sustainability performance through digital innovation. However, digital innovation can not mediate the effect of networking capabilities on sustainability performance.

Conclusion: These findings highlight the importance of digital platform capabilities in driving digital innovation and improving sustainability performance among female entrepreneurs. Strengthening digital capabilities and innovation strategies can support the long-term sustainability of home-based businesses in the creative economy.

Originality/value (State of the art): This study provides an integrated analysis of digital platform and network capabilities in improving sustainability performance through digital innovation among home-based women entrepreneurs.

Keywords: digital innovation, digital platform capabilities, networking capabilities, sustainability performance, and women entrepreneurs

How to Cite:

Asmawiyah, Mukhtar, A., & Teni, M. (2026). Determinants of sustainability performance through digital innovation in women entrepreneurs based on home industry MSMEs in the creative economy sector in Makassar City. *Indonesian Journal of Business and Entrepreneurship*, 12(3), 568 <https://doi.org/10.17358/IJBE.12.3.568>

*Corresponding author:
Email: asmawiyah49@gmail.com

INTRODUCTION

Creative economy MSMEs are a business sector that contributes significantly to a country's economy. MSME Amidst the development of digital technology, digital innovation has emerged as a crucial factor in the sustainable performance of MSMEs. However, it is evident that failure to innovate digitally is a significant challenge for many MSMEs, despite their crucial contributions to inclusive economic development. The majority of workers in the MSME sector are women operating in home industries. Despite women's important role in entrepreneurship, women are sometimes victims of violence and marginalization. Women are often underestimated and struggle to compete with men. Many women survive by becoming entrepreneurs to meet their families' needs. However, the threat of technological advancements is currently driving research on digitalization and entrepreneurship, attracting many researchers' attention. Business success can be increased through the use of digital technology in marketing and business operations.

The rapid evolution of women entrepreneurs in recent years is seen as a roadmap for poverty reduction and economic growth (Abd Aziz et al. 2021). Currently, the majority of women work in the creative economy sector. The creative sector in Indonesia is projected to absorb 1 million jobs through MSMEs (Tempo.co, 2025). Adapting to today's rapidly changing business environment is essential for MSMEs (Carayannis et al. 2025). Business success can be enhanced through the use of digital technology in marketing and operations (Asmawiyah et al. 2025). Companies have leveraged technology to operate flexibly and efficiently in the ever-evolving business world. Big data, the Internet of Things (IoT), digital platforms, and social media technologies are examples of technologies that enable greater connectivity, effective communication, and automation (Y. Li et al. 2020; Zaman et al. 2025). Business success can be increased through the use of digital technology in marketing and business operations.

Women entrepreneurs based in home industries were chosen as research subjects because they play a crucial role in promoting creative economic activities while simultaneously improving family welfare. Most of these businesses are micro-scale, with limited access to digital technology, market information, financing sources, and business networks that can support business

development. This situation makes adapting to changes in the business environment an increasingly significant challenge. The development of digital technology requires entrepreneurs to rely not only on their own resources but also on the ability to utilize digital platforms and build productive networks (Cenamor & Wincent, 2019). These capabilities are considered crucial because they can expand market access, increase business efficiency, and create opportunities for innovation that support business sustainability. This situation makes women entrepreneurs based in home industries in Makassar City a relevant context for examining the factors determining business success in the era of digital transformation.

This study uses Drucker's (1985) productivity theory as a theoretical foundation to explain the relationship between digital platform capabilities, network capabilities, digital innovation, and sustainability performance. This theory positions innovation as a primary source of productivity and value creation in organizations, as the ability to generate innovation enables organizations to increase efficiency, expand market opportunities, and maintain competitiveness. This perspective holds that digital platforms and network capabilities are strategic resources that enable digital innovation. The resulting digital innovation then becomes a means to increase business productivity by developing more effective products, services, and business processes. This increased productivity is ultimately reflected in sustainability performance, demonstrating a business's ability to survive, grow, and create economic value sustainably.

The United Nations has placed digital innovation on its agenda, and it serves as a foundation for achieving the Sustainable Development Goals (SDGs) by 2030. The UN recognizes the global importance of digital innovation (Fatima & Masood, 2024). The increased attention to achieving the SDGs has had a significant impact on the global business landscape (Janjua et al. 2024). Business performance is significantly influenced by digital innovation (Al Issa & Omar, 2024); (Ochinawata et al. 2023); (Opland et al. 2022) and organizational sustainability performance (Malik et al. 2024). Innovation reflects how sustainability performance can be improved (Sahibzada & Mumtaz, 2023). Sustainability performance is about ensuring the use of natural resources without jeopardizing future economic prospects or harming society and the environment (Mondal & Palit, 2022). It also integrates

environmental integrity, social equity, and economic prosperity into corporate functions (Lee & Ha-Brookshire, 2020).

To improve sustainability performance and competitiveness, digital innovation is a key strategic tool (Amouei et al. 2023; Sahibzada et al. 2025). Based on Drucker's productivity theory, digital innovation plays a crucial role in generating new ideas, thereby creating entrepreneurial opportunities to achieve organizational performance (Shahzadi et al. 2021; Ali et al. 2024). Digital innovation requires employee technological capabilities and competencies (Cetindamar Kozanoglu & Abedin, 2021; Ciarli et al. 2021; Huu, 2023). Organizations with digitally capable employees can create new products and services through innovative strategies and procedures (Heredia et al. 2022). Previous research has examined the impact of digital platform capabilities as a digital process (Proksch et al. 2024), a driver of innovation (Ferreira et al. 2024), and firm performance (Heredia et al. 2022). Meanwhile, Khin & Ho (2019) demonstrated that organizational digital capabilities and digital innovation have a positive impact on SMEs in Malaysia.

In addition to digital platform capabilities, network capabilities can encourage collaboration between business partners and improve the quality of resources, thereby driving innovation activities (Chen et al. 2021). Various studies also emphasize the role of network capability in innovation (Mokhtarzadeh et al. 2020; Mitrega et al. 2017). Network capability provides the knowledge, skills, capital, talent, and equipment needed for innovation (Y. Li et al. 2024). The relationship between networking capabilities and sustainability performance has also been explored (Mokhtarzadeh et al. 2020; Y. Li et al. 2024). However, most studies do not address how women entrepreneurs' digital and networking capabilities impact sustainability performance, and the mediating role of digital innovation in this relationship, in the context of MSMEs and gender. Researchers have suggested that the mechanisms underlying this relationship warrant further exploration (Ochinanwata et al. 2023). Therefore, this study fills a specific gap in the existing literature.

Research on digital innovation is gaining increasing attention (Aránega et al. 2023; Liu et al. 2023; Xie, Han, et al. 2022). If companies fail to prioritize digital innovation, it will impact their sustainability

performance. This has attracted academic interest in navigating the complex path to sustainability (Ukko et al. 2022; Broccardo et al. 2023). However, previous studies have largely ignored employee factors that enhance digital innovation and sustainability performance (Márquez et al. 2022; Opland et al. 2022; L. Li, 2022). Consequently, the influence of employee factors, namely, digital platform capability and network capability, on sustainability performance remains largely unknown and poorly understood. Therefore, this study aims to explore the influence of digital platform capability, network capability, and digital platform capability on sustainability performance, with digital innovation as a mediator.

This study is novel in that it examines the role of digital innovation in explaining the relationship between digital platform capabilities, network capabilities, and sustainability performance among women entrepreneurs in home-based industries using the productivity theory. This study is important because the development of digital technology requires MSMEs to continuously adapt to sustain their business. The ability to utilize digital platforms and build business networks is thought to be a factor supporting the creation of digital innovation. Therefore, this study aims to explore the influence of digital platform capabilities, network capabilities, and digital innovation on sustainability performance, with digital innovation as a mediating variable.

METHODS

This study used a mixed-methods approach, specifically a concurrent mixed-methods approach with a concurrent embedded design. Quantitative data analysis was performed using partial least squares structural equation modeling (PLS-SEM). Qualitative data analysis was conducted using an interpretive approach.

This research was conducted in Makassar City, South Sulawesi Province. The subjects were home-based female entrepreneurs in the creative economy sector who utilized digital technology for both service delivery and product marketing. A sample size of 227 individuals was randomly selected (simple random sampling). This number met the requirements for data analysis using the maximum likelihood estimation method, with a sample size of 100 to 200, as recommended (Hair et

al. 2019). Quantitative data were collected through online surveys and in-person visits. Qualitative data were collected through observation and in-depth semi-structured interviews with 30 participants. Quantitative and qualitative data were collected simultaneously (concurrent embedded design).

This research instrument used a questionnaire developed from previous research. The questionnaire quality testing procedure involved a pilot test with potential respondents. The pilot test results were then tested for validity and reliability. Variables and indicators were measured using a 5-point Likert scale, with a combination of positive and negative questions. The variables and indicators are presented in Table 1.

Table 1. Research variables of sustainability performance, digital innovation, digital platform capability, and networking capabilities

Variables	Indicator	Source
Sustainability Performance	Our customers are highly satisfied	(Tariq et al. 2024)
	We have well-managed relationships with suppliers	
	We care deeply about the well-being of our stakeholders	
	We strive to minimize energy consumption	
	We strive to reduce waste	
	We strive to reduce pollutant emissions to a reasonable level	
	Sales	
Digital Innovation	Net profit	(Shee et al. 2023);(Khin & Ho, 2019)
	Market share	
	I utilize limited digital resources creatively and innovatively to support my business activities.	
	I adopt digital technology efficiently and relevantly to support my business processes without burdening my budget.	
	I have partners or collaborate with others to access affordable digital resources.	
Digital Platform Capability	I use free or relatively inexpensive digital technology applications.	(Ahmed et al. 2022)
	I adapt my business strategy to low-cost digital trends.	
	We have easy access to digital platforms and communication with our customers.	
	We can communicate with customers in real time.	
	Our digital platform can aggregate critical information (e.g., operational information, customer business performance, and cost information).	
Networking Capabilities	Our digital platform is easily adaptable for adding new customers.	(Parida et al. 2016); (Walter et al. 2006)
	Our digital platform can be expanded to accommodate new IT applications and functions.	
	Our platform consists of software that can be applied across various branches.	
	We hold regular meetings for all projects.	
	Managers and employees provide feedback to each other during these meetings.	
	We consistently analyze customer needs and expectations.	
	We develop relationships with customers to build their loyalty.	
	We frequently discuss with customers how we can support one another.	
	We almost always resolve issues constructively with our customers.	
	We understand our target market.	
	We understand the ucts/services/procedures that our customers desire.	

PLS-SEM is a quantitative data analysis tool used for hypothesis testing. The analysis stages consisted of a measurement and structural model. The measurement model was evaluated by examining the factor loading (LF) values, composite reliability values, average variance extracted (AVE), discriminant validity values, and cross-loadings. The structural model was evaluated by examining the R² and path coefficient estimates (T-values).

Convergent validity was assessed by examining the factor loadings for each item, with a requirement of >0.7. Convergent validity testing required an average variance extracted (AVE) value of >0.5 and a CR reliability value of >0.7 (Hair et al. 2019). Discriminant validity was then examined to determine whether the other factors were correlated. The square root of the AVE must be greater than the correlation between the latent variables. The structural model was evaluated using the R² value to determine whether the model was good, moderate, or weak in fit. Finally, path coefficient estimates were examined from the bootstrapping results, and the T-values were observed.

Qualitative data analysis employs interpretive analysis, which allows researchers to explore social phenomena and realities in depth and comprehensively, considering multiple perspectives. This method is used to demonstrate explanations, social activities, group or individual thinking, and respondents' attitudes.

In studies on digitalization and information technology, resource-based theory has become the most widely used theoretical framework (Barney et al. 2021), as it allows for assessing the relationship between information technology and corporate strategy, and how their performance improves with the use of technology (Tsou & Chen, 2023). However, other theories provide a better framework for studying digital entrepreneurship, such as the theory of reasoned action (TRA) and the theory of planned behavior (TPB).

Digital platform capability and sustainability performance

Digital platform capability is defined as an organization's ability to use digital technology or

advanced tools to improve performance (Ahmed et al. 2022). Recent research has shown that organizations can improve sustainability performance through digital capabilities (Lu et al. 2023); (J. Xu et al. 2023); (Borah et al. 2022); (Shin et al. 2023). H1: Digital platform capabilities influence sustainability performance.

Networking capabilities and sustainability performance

Based on its digital infrastructure, an organization can build and manage networks with potential business partners and integrate capabilities and resources (Xie, Wu, et al. 2022). The relationship between network capabilities and organizational performance has been widely studied (Y. Li et al. 2024); (Cenamora et al. 2019). H2: Networking capabilities influence sustainability.

The role of digital innovation mediation

Digital capabilities can be characterized as the skills, experience, and knowledge necessary for creating new products or services for an organization (Proksch et al. 2024). Research has examined the influence of digital capabilities as a driver of innovation (Ferreira et al. 2024) and firm performance (Heredia et al. 2022). Networking capabilities can foster collaboration between business partners and improve the quality of resources pooled through digital technology, which in turn drives innovation activities (Chen et al. 2021):

H3. Digital platform capabilities influence sustainability performance via digital innovation.

H4. Networking capabilities influence sustainability performance through digital innovation.

The conceptual framework (Figure 1) of this study illustrates the relationships between digital platform capabilities, network capabilities, digital innovation, and sustainability performance. Digital platforms and network capabilities are positioned as independent variables that directly and indirectly influence sustainability performance. Digital innovation acts as a mediating variable that explains how the capabilities of business actors are transformed into improved sustainable performance.

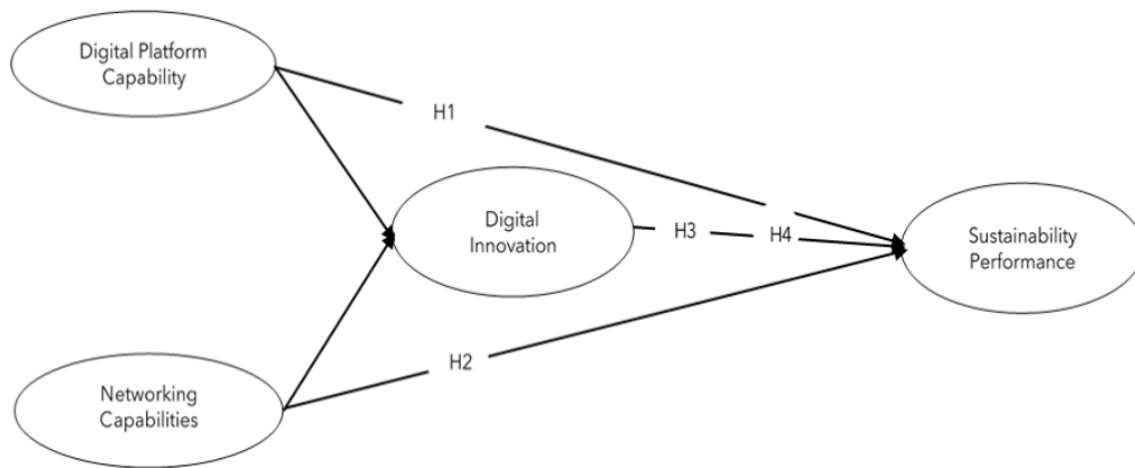


Figure 1. Conceptual Framework: determinants of sustainability performance through

RESULTS

Respondent Demographic Characteristics

Respondent demographics were used to describe characteristics based on business age, type of business, and education level. The respondent demographics are presented in Table 2.

Validity and Reliability Test

The analysis at this stage is the measurement model. We used a convergent validity test measured by examining individual items (factor loadings), internal consistency reliability (composite reliability), and Average Variance Extracted (AVE). We used a loading cutoff value of 0.5 as recommended by (Hair et al. 2014). The composite reliability (CR) cutoff value was 0.7 as suggested by Fornell and Larcker (Haryanto, 2017). Furthermore, an AVE cutoff value of 0.5 is a good measure of convergent validity according to Fornell and Larcker. The factor loading values are shown in Figure 1. All indicators outside the cutoff value were removed.

Figure 2 shows that the loading factor for each construct indicator exceeds the 0.6 limit. Furthermore, the validity test in Table 3 yields a composite reliability value for each construct above 0.7. These results demonstrate the accuracy, precision, and consistency of the instrument used. The AVE value for each construct is above 0.5,

proving excellent. These results indicate that the latent variables can explain the variance of all indicators. The results of the validity and convergent reliability tests are presented in Table 3.

To ensure that each concept in each latent model differs among variables, a discriminant validity test was conducted. Validity tests are useful for determining how well an instrument performs its measurement function. Discriminant validity was examined by observing whether the square root of the AVE value was higher than the correlation between the variables. This discriminant validity test is important in ensuring that the assessment instrument is accurate and reliable. Construct discriminant validity was evaluated using the Fornell–Larcker criteria. The test results are presented in Table 4 and show that the square root of the AVE value is higher than the correlation value between the variables. This result explains the uniqueness of the variables in this research model.

Hypothesis Testing

Bootstrap analysis was used to test the research hypotheses. T-values were compared to determine whether the assumed effect was significant. A commonly used critical value is 1.96 (5% significance). The Sobel test was used to test the mediation effects. The results of the hypothesis testing are shown in Table 5.

Table 2. Respondent demographics of women entrepreneurs by age, type, and education

Characteristics	Frequency	Percentage
Business Age (Years)		
< 2	79	35%
3-5	93	41%
6-10	31	13%
>10	24	11%
Type of business		
Fashion	18	8%
Culinary	132	58%
Handicrafts (Craft)	17	7%
Content creator, Advertising, Music, Video Design/Animation, Photography, Games, Apps	5	2%
Other	55	24%
Education		
Senior High School	135	60%
Bachelor	84	37%
Master	5	2%
Other	3	1%

Table 3. Validity test of digital platform capability, and networking capabilities, digital innovation, and sustainability performance

Variables	Items	Loading	Composite Reliability	AVE
Digital platform capability (DPC)	DPC1	0.794	0.889	0.6
	DPC2	0.773		
	DPC3	0.75		
	DPC4	0.742		
	DPC5	0.812		
	DPC6	0.749		
	DPC7	0.8		
Networking capabilities (NC)	NC2	0.749	0.826	0.534
	NC3	0.734		
	NC5	0.716		
	NC6	0.728		
	NC7	0.727		
	NC8	0.732		
Digital innovation (DI)	DI1	0.777	0.743	0.66
	DI2	0.825		
	DI5	0.889		
Sustainability performance (SP)	SP3	0.675	0.851	0.574
	SP5	0.686		
	SP6	0.705		
	SP7	0.783		
	SP8	0.813		
	SP9	0.865		

Table 4. Discriminant validity test (Fornell Larcker Criterion) of digital platform capability, digital innovation, networking capabilities, and sustainability performance

	DPC	DI	NC	SP
Digital platform capability (DPC)	0.775			
Digital innovation (DI)	0.686	0.813		
Networking capabilities (NC)	0.597	0.562	0.731	
Sustainability performance (SP)	0.545	0.566	0.761	0.758

Table 5. Hypothesis Testing of digital platform capability, networking capabilities, digital innovation, and sustainability performance

Hypotheses	Effects	T-Statistics	P-Value	Result
H1	Digital platform capability (DPC) → Sustainability performance (SP)	1.879	0.060	Rejected
H2	Networking capabilities (NC) → Sustainability performance (SP)	9.234	0.000	Accepted
H3	Digital platform capability (DPC) → Digital innovation (DI) → Sustainability performance (SP)	2.096	0.036	Accepted
H4	Networking capabilities (NC) → Digital innovation (DI) → Sustainability performance (SP)	1.708	0.087	Rejected

The structural model was evaluated using R-square. The R-square value indicates that 60.8% of the variation (diversity) in the Sustainability Performance variable can be explained by the independent variables in the structural model, while 39.2% is explained by other variables outside the research model. The R-square value of 60.8% indicates that the structural model is very good at predicting sustainability performance. The adjusted R-square value also confirms that the model's predictive ability is in the strong category. The R-square values are presented in Table 6.

The test results show that digital platform capability has no effect on sustainability performance. The statistical test results show a t-statistic value of 1.879, smaller than 1.96 with a p-value of 0.060. Although these results do not support the theory of planned behavior (TPB), they do support several studies that prove that digital platform capability does not affect sustainability performance. The results of research (Xi et al. 2025) in China show that in the early stages of digital transformation in a company often does not significantly impact the company's economic performance. Similar findings are also explained by (Tasleem et al. 2019), which show that technological capability does not affect the company's sustainability performance. Furthermore, (P. Xu et al. 2022) found that the digital transformation of small and medium enterprises in China has an insignificant impact on environmental performance. Their findings identified that digital transformation of companies significantly

improves environmental performance only in state-owned enterprises (SOEs), large companies, and companies that produce pollution.

Networking capabilities positively affect sustainability performance. The statistical test results show a t-statistic value of 9.234, which is greater than 1.96, with a p-value of 0.000. These results support the theory of planned behavior. Many studies have highlighted how networking capabilities are a key driver of sustainability performance in terms of economic dimensions (market share, sales, and profits). MSMEs that are active in networks (associations, communities, and exhibitions) are more quickly informed about market trends and new technologies. The creative industry in Makassar, which is dominated by culinary and fashion, relies heavily on product innovation. Strong networks with suppliers, consumers, and universities help MSMEs access more efficient local raw materials or production processes that are more market-preferred (sustainably sourced), directly increasing net profit and sales. Networking capability is not only measured by the number of contacts held, but also by how effectively those contacts facilitate knowledge transfer that encourages more ethical, environmentally friendly, and economically efficient business practices. The results of this study are in line with those of (Ben Amara & Chen, 2020), (Tariq et al. 2024), and (Zhao & Lee, 2023), which prove the direct and positive influence of networking capability on sustainability performance.

Table 6. Analysis of determination coefficient of the determination coefficient of sustainability performance

	R-square	R-square adjusted
Sustainability performance (SP)	0.608	0.599

The mediation effect test shows that digital platform capability has a positive effect on sustainability performance through digital innovation. Digital innovation mediates the effect of digital platform capability on sustainability performance. The statistical test results show a t-statistic value of 2.096, which is greater than 1.96 with a p-value of 0.036. These results indicate that digital innovation capability can encourage cooperation between business partners and improve the quality of resources collected through digital technology, which then encourages sustainable performance. These results are in accordance with the theory of planned behavior, especially on perceived behavioral control (Perceived Behavior Control). Digital platform capability is measured by the ease of accessing data and the ability to exchange real-time information. A high digital platform capability provides confidence to MSMEs. When MSME digital platforms are easily adaptable and can access data, MSME owners feel capable (Perceived Behavior Control) to implement complex sustainable practices, such as reducing waste, emissions, or increasing sales. Several studies have found similar results (Y. Li et al. 2024), revealing that novelty-centered business model innovation positively mediates the influence of network capabilities on economic and environmental performance. The findings (Tariq et al. 2024) also indicate that network capabilities positively impact sustainable performance through digital innovation.

However, networking capabilities did not affect sustainability performance through digital innovation. The statistical test results showed a t-statistic value of 1.708, smaller than 1.96, with a p-value of 0.087. These results indicate that digital innovation has not been able to support the relationship between networking capabilities and sustainability performance. Research (Tariq et al. 2024) shows that digital innovation does not mediate the relationship between networking capabilities and the social performance of SMEs. Digital innovation through information sharing does not have a statistically significant mediating effect between networking capabilities and sustainability performance (Ma et al. 2022).

Based on the results of interviews with creative industry MSME actors regarding the influence of networking capabilities on sustainability performance from Informant A (Coto Mangkasara Culinary MSME):

“Our ratings on GoFood used to be mediocre. After we started having coffee and regular discussions with local food bloggers (partners), they taught us the tricks of the platform. For example, photos must be in a 1:1 format, descriptions must use Makassar keywords, and there must be special promotions on Fridays. We implemented all of these features in our digital app. Our sales increased drastically, our ratings improved, and orders increased automatically.”

The impact of networking capabilities in the form of routine discussions and problem solving with partners on sustainability performance was also explained by informant A.

“Previously, there was too much waste oil, so I discussed it with the culinary entrepreneur community in Makassar. They introduced us to a third party who would collect the oil; thus, it was not dumped into the sewers. This reduced waste and simultaneously improved the welfare of other entrepreneurs in our community.”

Informant B further stated:

“We participated in an incubation program facilitated by a university in Makassar. From there, we were encouraged to take care of our legalities and establish a clearer employee structure, which is crucial for the well-being of our team and securing larger contracts in the future.”

In Makassar, creative MSMEs often network with the Cooperatives and MSMEs Office or through empowerment programs. These networks provide not only capital but also soft skills and management training to entrepreneurs. This management training often covers aspects such as business ethics and social responsibility.

The informant also explained the mediating role of digital platform capability in influencing sustainability performance through digital innovation. A strong digital platform capability enables MSMEs to innovate

digitally, and this digital innovation ultimately drives their sustainability performance in Makassar. Informant C (culinary business) revealed the use of a sales database for inventory and production management.

“This is the most noticeable part. In the past, we often overcooked because we just estimated. Now, with the information system from online sales, we know exactly how many ingredients to buy and cook. This has significantly reduced our food waste. There are no more wasted ingredients.”

This quote explains that the ability to use digital platforms enables MSMEs to utilize innovations from applications to address the potential for excess food waste, thereby increasing their efficiency.

Managerial Implication

The results of this study indicate that women entrepreneurs managing home-based MSMEs in the creative economy sector need to strengthen their capabilities in using digital platforms to encourage digital innovation and improve the sustainability of their businesses. Utilizing digital platforms, such as social media, e-commerce, and digital payment systems, can help expand market access, improve customer interaction, and strengthen business competitiveness. Strengthening networks with the business community, business partners, and supporting institutions is crucial for gaining access to information, resources, and market opportunities that can support long-term business sustainability.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Overall, this quantitative and qualitative analysis of creative industry MSMEs provides nuanced insights into the role of digital capabilities and networks in driving sustainability performance. Networking capability is shown to be a direct and significant driver of MSME sustainability performance. This finding aligns with the Theory of Planned Behavior, where strong networks serve as a critical resource that provides access to knowledge that directly improves sustainability performance. While digital platform capability does not directly impact sustainability performance, it is shown to have a positive and

significant influence through the mediation of digital innovation. These results confirm that the concept of perceived behavioral control from the Theory of Planned Behavior provides MSMEs with a sense of empowerment, encouraging them to innovate digitally and ultimately supporting sustainability. Interestingly, however, networking capability is not shown to impact sustainability performance through digital innovation. These results indicate that knowledge transfer from the very strong networking capability network in South Sulawesi tends to be operational or non-digital in nature. This knowledge is directly implemented in sustainable actions without being fully internalized, resulting in measurable digital innovation.

Recommendations

This study focuses only on creative industry MSMEs; therefore, the results may not be applicable to other industrial sectors, such as manufacturing or agribusiness. Digital platform capability and networking capability are based on the perceptions and assessments of MSME owners/managers (self-reported). There is a potential social desirability bias, in which respondents may overestimate their networking capabilities (high networking capability) or digital platform capabilities (high digital platform capability) to project a positive, sustainable business image. The study failed to prove the DI mediation of the NC-SP relationship, despite finding a direct positive NC-SP relationship. This failure suggests that there are other mediating variables that are stronger than DI in the network context. This limitation lies in the exclusion of non-digital mediating variables, such as non-digital knowledge sharing, trust, and reputation.

Future research should incorporate digital HR expertise as a moderator or antecedent of digital innovation. Incorporating non-digital mediating variables, such as knowledge sharing or trust, can explain the strong influence of networking capability on sustainability performance more comprehensively.

FUNDING STATEMENT: We express our deepest gratitude to the Ministry of Education and Science, DPPM, LL-Dikti Wilayah 9 Sulawesi, and STIE Tri Dharma Nusantara for the 2025 research funding.

CONFLICTS OF INTEREST: The author declares no conflict of interest

DECLARATION OF GENERATIVE AI STATEMENT: During the preparation of this work, the authors used ChatGPT to check grammar and polish the text. After using this tool/service, the authors reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

REFERENCES

- Abd Aziz, N. A., Ramdan, M. R., Nik Hussin, N. S., Abdul Aziz, Z., Osman, J., & Hasbollah, H. R. (2021). The determinants of global expansion: A study on food and beverage franchisors in Malaysia. *Sustainability*, 13(18), 10328. <https://doi.org/10.3390/su131810328>
- Ahmad Amouei, M., Valmohammadi, C., & Fathi, K. (2023). Developing and validating an instrument to measure the impact of digital supply chain activities on sustainable performance. *Journal of Enterprise Information Management*, 36(4), 925–951. <https://doi.org/10.1108/JEIM-12-2021-0520>
- Ahmed, A., Bhatti, S. H., Gölgeci, I., & Arslan, A. (2022). Digital platform capability and organizational agility of emerging market manufacturing SMEs: The mediating role of intellectual capital and the moderating role of environmental dynamism. *Technological Forecasting and Social Change*, 177, 121513. <https://doi.org/10.1016/j.techfore.2022.121513>
- Al Issa, H.-E., & Omar, M. M. S. (2024). Digital innovation drivers in retail banking: the role of leadership, culture, and technostress inhibitors. *International Journal of Organizational Analysis*, 32(11), 19–43. <https://doi.org/10.1108/IJOA-08-2023-3905>
- Ali, M., Shujahat, M., Fatima, N., Lopes de Sousa Jabbour, A. B., Vo-Thanh, T., Salam, M. A., & Latan, H. (2024). Green HRM practices and corporate sustainability performance. *Management Decision*, 62(11), 3681–3703. <https://doi.org/10.1108/MD-05-2023-0787>
- Aránega, A. Y., Montesinos, C. G., & del Val Núñez, M. T. (2023). Towards an entrepreneurial leadership based on kindness in a digital age. *Journal of Business Research*, 159, 113747. <https://doi.org/10.1016/j.jbusres.2023.113747>
- Asmawiyah, A., Mukhtar, A., & Rahmat, R. (2025). Digital Entrepreneurship: The Role of Digital Marketing, Human Capital and Entrepreneurship Orientation On The Success of Small and Medium Culinary Business.
- Barney, J. B., Ketchen Jr, D. J., & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management*, 47(7), 1936–1955. <https://doi.org/10.1177/01492063211021655>
- Ben Amara, D., & Chen, H. (2020). Investigating the effect of multidimensional network capability and eco-innovation orientation for sustainable performance. *Clean Technologies and Environmental Policy*, 22(6), 1297–1309. <https://doi.org/10.1007/s10098-020-01871-6>
- Benítez-Márquez, M. D., Sánchez-Teba, E. M., Bermúdez-González, G., & Núñez-Rydman, E. S. (2022). Generation Z within the workforce and in the workplace: A bibliometric analysis. *Frontiers in Psychology*, 12, 736820. <https://doi.org/10.3389/fpsyg.2021.736820>
- Borah, P. S., Iqbal, S., & Akhtar, S. (2022). Linking social media usage and SME's sustainable performance: The role of digital leadership and innovation capabilities. *Technology in Society*, 68, 101900. <https://doi.org/10.1016/j.techsoc.2022.101900>
- Broccardo, L., Truant, E., & Dana, L.-P. (2023). The interlink between digitalization, sustainability, and performance: An Italian context. *Journal of Business Research*, 158, 113621. <https://doi.org/10.1016/j.jbusres.2022.113621>
- Carayannis, E. G., Dumitrescu, R., Falkowski, T., Papamichail, G., & Zota, N.-R. (2025). Enhancing SME Resilience through Artificial Intelligence and Strategic Foresight: A Framework for Sustainable Competitiveness. *Technology in Society*, 102835. <https://doi.org/10.1016/j.techsoc.2025.102835>
- Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability and ambidexterity. *Journal of Business Research*, 100, 196–206. <https://doi.org/10.1016/j.jbusres.2019.03.035>
- Cetindamar Kozanoglu, D., & Abedin, B. (2021). Understanding the role of employees in digital transformation: conceptualization of digital literacy of employees as a multi-dimensional organizational affordance. *Journal of Enterprise Information Management*, 34(6), 1649–1672. <https://doi.org/10.1108/JEIM-01-2020-0010>

- Chen, Y., Kumara, E. K., & Sivakumar, V. (2021). Investigation of finance industry on risk awareness model and digital economic growth. *Annals of Operations Research*, 1–22. <https://doi.org/10.1007/s10479-021-04287-7>
- Ciarli, T., Kenney, M., Massini, S., & Piscitello, L. (2021). Digital technologies, innovation, and skills: Emerging trajectories and challenges. *Research Policy*, 50(7), 104289. <https://doi.org/10.1016/j.respol.2021.104289>
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Harper & Row.
- Fatima, T., & Masood, A. (2024). Impact of digital leadership on open innovation: A moderating serial mediation model. *Journal of Knowledge Management*, 28(1), 161–180. <https://doi.org/10.1108/JKM-11-2022-0872>
- Ferreira, J. J. M., Fernandes, C. I., & Veiga, P. M. (2024). The effects of knowledge spillovers, digital capabilities, and innovation on firm performance: A moderated mediation model. *Technological Forecasting and Social Change*, 200, 123086. <https://doi.org/10.1016/j.techfore.2023.123086>
- Garousi Mokhtarzadeh, N., Amoozad Mahdiraji, H., Jafarpanah, I., Jafari-Sadeghi, V., & Cardinali, S. (2020). Investigating the impact of networking capability on firm innovation performance: using the resource-action-performance framework. *Journal of Intellectual Capital*, 21(6), 1009–1034. <https://doi.org/10.1108/JIC-01-2020-0005>
- Ghozali, I. (2008). *Structural equation modeling: Metode alternatif dengan partial least square (pls)*. Badan Penerbit Universitas Diponegoro.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*. <https://doi.org/10.1108/EBR-10-2013-0128>
- Haryanto, S. (2017). Metode SEM, AMOS, LISREL, PLS Untuk Penelitian Manajemen. *Jakarta: PT. Luximan Metro Media*.
- Heredia, J., Castillo-Vergara, M., Geldes, C., Gamarra, F. M. C., Flores, A., & Heredia, W. (2022). How do digital capabilities affect firm performance? The mediating role of technological capabilities in the “new normal.” *Journal of Innovation & Knowledge*, 7(2), 100171. <https://doi.org/10.1016/j.jik.2022.100171>
- Huu, P. T. (2023). Impact of employee digital competence on the relationship between digital autonomy and innovative work behavior: a systematic review. *Artificial Intelligence Review*, 56(12), 14193–14222.
- Janjua, N. A., Shi, D. A., & Sahibzada, U. F. (2024). Harnessing green innovation via green transformational leadership in Italian luxury hotels: key strategic takeaways. *International Journal of Hospitality Management*, 120, 103739.
- Khin, S., & Ho, T. C. F. (2019). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2), 177–195. <https://doi.org/10.1108/IJIS-08-2018-0083>
- Lee, S. H., & Ha-Brookshire, J. E. (2020). In pursuit of corporate sustainability: factors contributing to employees’ workplace behavior. *Journal of Fashion Marketing and Management: An International Journal*, 24(2), 235–249.
- Li, L. (2022). Digital transformation and sustainable performance: The moderating role of market turbulence. *Industrial Marketing Management*, 104, 28–37. <https://doi.org/10.1016/j.indmarman.2022.04.007>
- Li, Y., Cui, L., Wu, L., Lowry, P. B., Kumar, A., & Tan, K. H. (2024). Digitalization and network capability as enablers of business model innovation and sustainability performance: The moderating effect of environmental dynamism. *Journal of Information Technology*, 39(4), 687–715.
- Li, Y., Dai, J., & Cui, L. (2020). The impact of digital technologies on economic and environmental performance in the context of industry 4.0: A moderated mediation model. *International Journal of Production Economics*, 229, 107777.
- Liu, X., Liu, F., & Ren, X. (2023). Firms’ digitalization in manufacturing and the structure and direction of green innovation. *Journal of Environmental Management*, 335, 117525. <https://doi.org/10.1016/j.jenvman.2023.117525>
- Lu, H. T., Li, X., & Yuen, K. F. (2023). Digital transformation as an enabler of sustainability innovation and performance—Information processing and innovation ambidexterity perspectives. *Technological Forecasting and*

- Social Change*, 196, 122860. <https://doi.org/10.1016/j.techfore.2023.122860>
- Ma, J.-Y., Shi, L., & Kang, T.-W. (2022). The effect of digital transformation on the pharmaceutical sustainable supply chain performance: The mediating role of information sharing and traceability using structural equation modeling. *Sustainability*, 15(1), 649. <https://doi.org/10.3390/su15010649>
- Malik, M., Raziq, M. M., Sarwar, N., & Tariq, A. (2024). Digital leadership, business model innovation and organizational change: role of leader in steering digital transformation. *Benchmarking: An International Journal*.
- Mitrega, M., Forkmann, S., Zaefarian, G., & Henneberg, S. C. (2017). Networking capability in supplier relationships and its impact on product innovation and firm performance. *International Journal of Operations & Production Management*, 37(5), 577–606. <https://doi.org/10.1108/IJOPM-11-2014-0517>
- Mondal, S., & Palit, D. (2022). Challenges in natural resource management for ecological sustainability. In *Natural resources conservation and advances for sustainability* (pp. 29–59). Elsevier. <https://doi.org/10.1016/B978-0-12-822976-7.00004-1>
- Ochinanwata, C., Igwe, P. A., & Radicic, D. (2023). The institutional impact on the digital platform ecosystem and innovation. *International Journal of Entrepreneurial Behavior & Research*, 30(2/3), 687–708.
- Opland, L. E., Pappas, I. O., Engesmo, J., & Jaccheri, L. (2022). Employee-driven digital innovation: A systematic review and a research agenda. *Journal of Business Research*, 143, 255–271. <https://doi.org/10.1016/j.jbusres.2022.01.038>
- Parida, V., Patel, P. C., Wincen, J., & Kohtamäki, M. (2016). Network partner diversity, network capability, and sales growth in small firms. *Journal of Business Research*, 69(6), 2113–2117. <https://doi.org/10.1016/j.jbusres.2015.12.017>
- Proksch, D., Rosin, A. F., Stubner, S., & Pinkwart, A. (2024). The influence of a digital strategy on the digitalization of new ventures: The mediating effect of digital capabilities and a digital culture. *Journal of Small Business Management*, 62(1), 1–29. <https://doi.org/10.1080/00472778.2021.1883036>
- Sahibzada, U. F., Aslam, N., Muavia, M., Shujahat, M., & Rafi-ul-Shan, P. M. (2025). Navigating digital waves: unveiling entrepreneurial leadership toward digital innovation and sustainable performance in the Chinese IT industry. *Journal of Enterprise Information Management*, 38(2), 474–501.
- Sahibzada, U. F., & Mumtaz, A. (2023). Knowledge management processes toward organizational performance—a knowledge-based view perspective: an analogy of emerging and developing economies. *Business Process Management Journal*, 29(4), 1057–1091. <https://doi.org/10.1108/BPMJ-09-2022-0457>
- Shahzadi, R., Ali, M., Khan, H. Z., & Naeem, M. (2021). UAV assisted 5G and beyond wireless networks: A survey. *Journal of Network and Computer Applications*, 189, 103114. <https://doi.org/10.1016/j.jnca.2021.103114>
- Shee, H., Kaswi, S., Fitrian, Z., Adi, A. S., & Yudaruddin, R. (2023). The mediating role of digital transformation and innovation on SME performance during the COVID-19 pandemic. *Problems and Perspectives in Management*, 21(4), 84–100.
- Shin, J., Mollah, M. A., & Choi, J. (2023). Sustainability and organizational performance in South Korea: The effect of digital leadership on digital culture and employees' digital capabilities. *Sustainability*, 15(3), 2027. <https://doi.org/10.3390/su15032027>
- Tariq, A., Sumbal, M. S. U. K., Dabic, M., Raziq, M. M., & Torkkeli, M. (2024). Interlinking networking capabilities, knowledge worker productivity, and digital innovation: a critical nexus for sustainable performance in small and medium enterprises. *Journal of Knowledge Management*, 28(11), 179–198.
- Tasleem, M., Khan, N., & Nisar, A. (2019). Impact of technology management on corporate sustainability performance: The mediating role of TQM. *International Journal of Quality & Reliability Management*, 36(9), 1574–1599.
- Tempo.co. (2025). *Menekraf: Sektor Ekonomi Kreatif Bisa Serap Hingga 1 Juta Lapangan Kerja di 2025*. Tempo.Co. <https://www.tempo.co/ekonomi/menekraf-sektor-ekonomi-kreatif-bisa-serap-hingga-1-juta-lapangan-kerja-di-2025-1221997>
- Tsou, H.-T., & Chen, J.-S. (2023). How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators. *Technology Analysis*

- & *Strategic Management*, 35(9), 1114–1127. <https://doi.org/10.1080/09537325.2021.1991575>
- Ukko, J., Saunila, M., Nasiri, M., & Rantala, T. (2022). The importance of sustainability engagement in small businesses supplier collaboration. *Sustainable Development*, 30(1), 1–9. <https://doi.org/10.1002/sd.2224>
- Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, 21(4), 541–567. <https://doi.org/10.1016/j.jbusvent.2005.02.005>
- Xi, X., Yang, J., & Wang, C. (2025). Can digital transformation improve sustainable performance of manufacturing firms? Empirical evidence based on core technology capabilities. *Chinese Management Studies*, 19(3), 640–675. <https://doi.org/10.1108/CMS-01-2024-0054>
- Xie, X., Han, Y., Anderson, A., & Ribeiro-Navarrete, S. (2022). Digital platforms and SMEs' business model innovation: Exploring the mediating mechanisms of capability reconfiguration. *International Journal of Information Management*, 65, 102513. <https://doi.org/10.1016/j.ijinfomgt.2022.102513>
- Xie, X., Wu, Y., Palacios-Marqués, D., & Ribeiro-Navarrete, S. (2022). Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technological Forecasting and Social Change*, 177, 121548. <https://doi.org/10.1016/j.techfore.2022.121548>
- Xu, J., Yu, Y., Zhang, M., & Zhang, J. Z. (2023). Impacts of digital transformation on eco-innovation and sustainable performance: Evidence from Chinese manufacturing companies. *Journal of Cleaner Production*, 393, 136278. <https://doi.org/10.1016/j.jclepro.2023.136278>
- Xu, P., Chen, L., & Dai, H. (2022). Pathways to sustainable development: Corporate digital transformation and environmental performance in China. *Sustainability*, 15(1), 256. <https://doi.org/10.3390/su15010256>
- Zaman, S. A. A., Vilkas, M., Zaman, S. I., & Jamil, S. (2025). Digital technologies and digitalization performance: the mediating role of digitalization management. *Journal of Manufacturing Technology Management*, 36(2), 307–333. <https://doi.org/10.1108/JMTM-04-2024-0176>
- Zhao, Y., & Lee, J. (2023). How does board interlock network matter for sustainability? A social learning approach to corporate environmental performance. *Business Strategy and the Environment*, 32(8), 5889–5908. <https://doi.org/10.1002/bse.3454>