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Entrepreneurship Digitalization Effectiveness in Micro Small Medium Enterprises of the Food and Beverage Sector

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ABSTRACT

This research purpose is to analyze how imperative Entrepreneurship Digitalization be developed and the Micro, Small, Medium Enterprises' (MSMEs') challenges and opportunities to be taken. To address these purposes, a qualitative research design was employed through semi-structured interviews. Interviews were done with 33 participants of the Owners, Top Management, and Managers of MSMEs' Foods and Drinks sectors through a non-probability of purposive sampling method, based on the regional sampling criteria of the four highest number of Food and Beverage MSMEs providers (West, East, and Central Java, also Jakarta). The results show that the effectiveness of Entrepreneurship Digitalization is determined by High-Skilled Human Resources, Digital Technology, and organizational management, which create Digital innovation, Sustainable Completeness, and Performance Growth, supporting the extended theory of Resources-Based, integrated with the Diffusion of Innovation, as a new model research agenda.

Keywords: Entrepreneurship Digitalization Effectiveness, Digital Innovation, Sustainable Competitiveness, Sustainable Performance

INTRODUCTION

Indonesian Micro, Small, Medium Enterprises (MSMEs) play a significant role in Indonesia's economic growth, as shown in GDP (Gross Domestic Product), contributing around 61% of the total GDP (Indonesia Ministry of MSMEs, 2024). However, a part of it came from the GDP contribution of the Food and Beverage business sector which is still low about 6.97%, even though the total GDP of MSMEs is higher, on the other hand, the total number of the Food and Beverage business sector is also higher count of 67% out of around 99% total number of MSMEs, and the employee number of Indonesia MSMEs is higher, as of 97% in 2023 compared to other ASEAN countries (ASEAN Investment Report, 2023). This condition happens due to the limitations of MSMEs' business performance in terms of sales, customer, and profit growth (Yaskun, 2023), caused by not adopting Entrepreneurship Digitalization.

Entrepreneurship Digitalization is a nowadays trend issue especially for Indonesia Micro Small Medium Business Enterprises (MSMEs) to induce their sustainable business performance

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growth, which enables them to improve sustainable competitiveness in the global market (Dabbous et al., 2023), even though Indonesia MSMEs' competitiveness index in the global market is low index among ASEAN countries, need to improve it (Ateh et al., 2020). The low competitiveness index is because of not implementing Digital Technology, so the Indonesian digital competitiveness rank still was in 43 ranks in 2024, even though the rank has increased, compared to 2023, to the rank of 45 (IMD: International Institute for Management Development, 2024). This is the challenge for the Indonesia MSMEs, especially for the Food and Beverage sector. Its challenge is how to adopt digital technology in the digital ecosystem in which the MSMEs recently employed limited digital technology (Hendrawan et al., 2024), just 30.9% in 2022, and increase to 42.06% (27 million) in the middle of 2024, even though not achieving the target 30 million out of 64.2 million (Daily Social, 2023 and Indonesia Ministry of Communication and Information (*Kominfo*), 2024).

Entrepreneurship Digitalization is the process of business entrepreneurship to utilize digital technology, including platforms to access the global market, based on innovative technology to increase the value of sustainable business performance development (Gartner, 2021 in Gartner's IT Glossary; Abdumalikovich and Diyorjon o'g'li, 2024; Osinub et al., 2025). The Business Entrepreneurship process is a crucial issue for business entrepreneurs to challenge and take the opportunities toward the new digital technology development, changing drastically. However, business entrepreneurs of MSMEs did not care to challenge and take the opportunities of Entrepreneurship Digitalization, so the implementation of digital technology in MSMEs, especially in the Food and Beverage business sector is limited. MSMEs entrepreneurs consider that Entrepreneurship Digitalization will change or even disrupt their traditional business model, and some of their employees are resistant to adopting the new digital technology development (Abdumalikovich and Diyorjon o'g'li, 2024), due to threatening the employee's jobs. Also, MSME entrepreneurs thought that if they implemented Entrepreneurship Digitalization, they were afraid to reconfigure their resources, having limited resources, primarily on low digital literacy capability and fund or capital availability (MS et al., 2024; Pahlawan (2023); Franco et al., 2021).

Therefore, this research objective is to analyze how imperative Entrepreneurship Digitalization be developed, and the MSMEs' challenges faced, and opportunities to be taken, in achieving sustainable competitiveness and the value of sustainable business performance development, even though digitalization research in conjunction with entrepreneurship has been done, the findings need to explore more due to splinter findings in various subjects and has not been optimally explored yet mainly in terms of new digital development (Franco et al., 2021; Paul et al., 2023; Bejjani et al., 2023), hereby especially for MSMEs of Food and Beverage Sector. Khlystova et al. (2022); Wang et al. (2021) stated that digital capabilities are the essential components of resilience and an innovative solution. However, research on Entrepreneurship Digitalization, especially in Indonesia's Food and Beverage Business Sector, has not yet been conducted. It needs further investigation. So, those objectives are in line with the suggestion of Modgil et al., 2022, that MSMEs should develop their performance by enhancing digital platform capability, as the Entrepreneurship Digitalization development. To answer the research objectives, the following structure of this paper will include a literature review of the foundation Theory, Entrepreneurship Digitalization concept, and Micro, Small, and

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Medium Enterprises (MSMEs) Profile. Then, this paper presents Methods, Results, Discussion, and Conclusion.

LITERATURE REVIEW

1. Resources-Based View Theory and Diffusion of Innovation Theory

The theoretical foundation of this research is to apply the Resources-Based View (RBV) Theory, referring to Barney (1991), integrated with the Diffusion of Innovation Theory (DIT). RBV was used in this research to analyze how the business resources, drawing on the internal unique-valuable resources such as Asset, and Entrepreneurship Digitalization capability, should be utilized to improve sustainable competitiveness bringing about sustainable business performance growth (MS et al.,2024). Entrepreneurship Digitalization is one of the firms' capabilities as one of the intangible resources (Osinubi et al., 2025). So, this research needed to explore how Entrepreneurship Digitalization was applied by Indonesia MSMEs in that the entrepreneurs of MSMEs, especially in the Food and Beverage business sectors, were reluctant to utilize it, due to the handicaps or the challenges faced, and not to take the big opportunities to mainly attract many global customers, and efficiently operate business process. They do not understand whether the implementation of Entrepreneurship Digitalization is a valuable resource that has many benefits to improve their sustainable competitive advantage in the global market competition.

Diffusion of Innovation Theory (DIT) explores how a new technology breeds in a digital system (Rogers, 1995). DIT postulates the evolution of technology changes drastically forcing the changing of consumers' behaviors to adapt to the changes, as stated also by Modgil et al. (2022). The changes can be addressed by the adoption of the new technology development. Entrepreneurship Digitalization can raise sustainable business performance by adopting new technology, following the sustainable business innovation framework (Morioka et al., 2022). Wathanakom et al. (2020) stated that Entrepreneurship Digitalization implements the new digital technology to strengthen entrepreneurial orientation development leading to innovation activity. Innovation is the activity of admitting changes and creating a new idea by embracing changes enthusiastically (Bhagat & Sambargi, 2019). Therefore, Entrepreneurship Digitalization is an innovative solution to extend the Diffusion of Innovation Theory. In other words, innovation can be a critical indicator of Entrepreneurship Digitalization to develop Digital Innovation

2. Entrepreneurship Digitalization

Entrepreneurship Digitalization is one of the firms' valuable resources that enable them to achieve the highest sustainable competitive advantage so that sustainable business performance can be attained. Entrepreneurship Digitalization comes from two words combining Entrepreneurship and Digitalization (Franco et al., 2021). So, Entrepreneurship and Digitalization combined in developing business entrepreneurship is an imperative strategy to be studied. However, the study of Entrepreneurship Digitalization remains unclear (Hsieh & Wu, 2019) due to different research contexts (Franco et al., 2021). It means that Entrepreneurship Digitalization discusses how business entrepreneurship can raise challenges and capture significant opportunities due to the development of digital technology rapidly to gain a high sustainable competitive advantage to develop sustainable business performance

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growth in the global competitive market, as the definition stated by Gartner (2021) in Gartner's IT Glossary; Abdumalikovich and Diyorjon o'g'li (2024); Osinub et al. (2025).

Entrepreneurship Digitalization also can be known as Digital Entrepreneurship (Franco et al., 2021; Rodrigues and Franco, 2021) because it drives the business model transformation from a traditional to be digital business model as the impact of digital technology development (Osinubi et al., 2025). According to Ribeiro-Navarrete et al. (2021), Entrepreneurship Digitalization is the ultimate driver of key digital technologies.

Entrepreneurship Digitalization in Asian countries, such as Indonesia, mostly uses websites, and social media (Facebook, Instagram, TikTok, Twitter), mobile messaging services (WhatsApp), or freelance marketplace (Amazon, Taobao, eBay, Fiverr, or Lyft) for a commercial purpose, and the digital wallets (Paypay, Mobi, or 2C2P, DANA, OVO) or mobile payments (QRIS, Apple Pay, Google Pay, LINE Pay, or GrabPay) for commercial transactions (Sonobe et al., 2021). However, Indonesia's MSMEs mostly apply the platform digital social media, as a marketing strategy (Septiana et al., 2024), because of the easiness of use.

Chatterjee et al. (2022) explored that Entrepreneurship Digitalization can assist MSMEs entrepreneurs to capitalize information to store rapidly, code, formalize, and distribute various information by using digital platforms, such as Facebook, Instagram, Twitter, various E-Commerce platforms, and e-payment especially for their marketing activities to access and expand their global customers successfully. According to Brem et al. (2021), Entrepreneurship Digitalization shares multiple emerging platforms developing values and innovation in business entrepreneurship. Therefore, Entrepreneurship Digitalization covers digital entrepreneurship (Rodrigues and Franco, 2021).

Berger et al. (2021) use the term Entrepreneurship Digitalization is associated with the intersection of digital technologies with business entrepreneurship processes and outcomes so that it corresponds with the terms of digital entrepreneurship (Nambisan, 2017). Digital entrepreneurship raises a transition from traditional business to integrated digital platform business models, as an inevitable challenge to implement digital entrepreneurship to achieve sustainable business growth and to foster a new conceptual framework (Baranauskas and Raišiene, 2022).

Several scholars have different definitions of digital entrepreneurship. Digital entrepreneurship, according to Hull et al. (2007) is a part of entrepreneurship subject in which the firms have digitized their operational business. Davidson and Vaast (2010, p. 2) stated that digital entrepreneurship is "the pursuit of opportunities referring to the use of digital media and other information and communication technologies (ICTs). Meanwhile, Susan and Acs (2017) defined it as a firm covering any agent in any kind of venture that uses digital technologies. Le Dinh et al. (2018) stated that Digital Entrepreneurship is the reconciliation of entrepreneurship with the new way of doing business in the digital days. Sahut et al. (2019) represent digital entrepreneurship as the general condition of the firm in digitalization adoption, motivating Modgil et al. (2022); and Baranauskas and Raišiene (2022) to propose the dimension from different perspectives. Modgil et al. (2022) suggest the perspective of the digital entrepreneurship dimension referring to business sectors. Baranauskas and Raišiene (2022) indicated a dimension based on the value perspective to achieve sustainable business performance, called sustainable digital entrepreneurship. Most of those definitions cover the term digitalization. The term digitalization by Nambisan (2017) is the most relevant to implement the concept of Entrepreneurship Digitalization, corresponding with the use of digital technologies in entrepreneurship development.

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Moreover, Modgil et al. (2022) propose four dimensions of digital entrepreneurship based on the qualitative research design by a semi-structured interview with 23 entrepreneurs from different organizations and sectors servicing local and regional markets in India, which are E-Commerce covering the activity of Contactless delivery, Payment methods, and Augmented reality, Technology including Educational Technology, Financial Technology, Cybersecurity, Healthcare (Diagnostics, Virtual care, and Wellness), and Entertainment (Over the top, Gaming, and social media) that can be used for all firms' age. Meanwhile, Baranauskas and Raišiene (2022) used dimensions of digital entrepreneurship as sustainable digital entrepreneurship, involving three components (economic, social, and environmental) in the digital business ecosystem domains. Another dimension of digital entrepreneurship, according to Meepung et al. (2022) is called Digital Entrepreneurship Competency (DEC) for educational studies, covering the design thinking process, entrepreneurship skills, digital platform, E-Commerce Platform, 7Cs virtual commerce context (Context, Content, Community, Customize, Communication, Connection, Commerce), Digital User Citizenship. The dimensions of digital entrepreneurship by Rodrigues and Franco (2021) are in terms of Business networks, Attractive business environment, Citizens' involvement, and Local digital strategy.

This research context referred definition of digital entrepreneurship by Davidson and Vaast (2010, p. 2), that the use of digital media and other ICTs was common for all company sectors, including MSMEs of the Food and Beverage sector, as the study by Obermayer et al. (2022), that the firms use information and communication technology or ICT (Digital Technology) as the marketing activities by using social media (Facebook, TikTok, Instagram, YouTube, especially for Indonesian MSMEs of Food and Beverage sector), as a powerful tool to maintain the long-life relationship with the customers. Digital technology, according to Kraus et al. (2019), could be implemented to grab new customers and improve market share, establish optimum distribution, enhance advertising strategies, and offer better pricing. According to Le Dinh et al. (2018), the Internet and ICT bring Entrepreneurship Digitalization to the forefront of innovation and become a key driver of growth in the post-pandemic world (Autio et al., 2024). Akhter (2017) stated that Entrepreneurship Digitalization has impactful on the sustainable growth of SME development.

3. MSMEs in the Food and Beverage Business Sector

MSMEs are a business sector, based on the category of sales volume and venture capital, as stated in the government rule of MSMEs No. 77, 2021, about the easiness, protection, and empowerment of MSMEs and Cooperation. A Microenterprise has a venture capital of not more than IDR1 billion, a Small enterprise between IDR1 – 5 billion, and Medium IDR between UDR5 – 10 billion, not including business Land, and Building. The sales volume for a Microenterprise annually is not more than IDR2 billion, for a Small enterprise between IDR 2 – 15 billion, and for a Medium size is between IDR 15 – 50 billion. However, referring to the United Nations, A Microenterprise employs ten employees, a small enterprise for less than 50, and a medium-sized enterprise for 50 and less than 250 employees. Therefore, MSMEs play a strategic role focused on employing a large number of employees accounting for 99,.6% of employees and sharing a higher portion of GDP (Fridayani et al., 2021), a crucial to conduct further research, especially in analyzing Entrepreneurship Digitalization in the digitalized development era (Mukhoryanova et al. (2021) to improve the MSMEs the highest competitiveness in the global market so that it can enhance sustainable business performance growth (Dabbous et al., 2023). The GDP of Indonesian MSMEs has increased number 1.52% in 2023, compared to 2022. However, the GDP growth of Indonesian MSMEs in 2023 just grew 5.05%, lower than the GDP

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growth in 2022, 5.31%. On the other hand, the number of Indonesia MSMEs has increased to 1.7% with the highest number coming from a Microenterprise 99.62%, 0.03% a small enterprise, the rest from a medium scale out of 65.5 million in 2023, that also is the highest number compared to other MSMEs of ASEAN countries. But, the share of GDP still was lower than the GDP of Myanmar (69.3%) with the number of MSMEs 72,700.00 (ASEAN *Investment Report*, 2023).

If seen from the data report of SMEs and Cooperation Ministry, visualized by DailySocial.id (2022), the highest scattered number of MSMEs based on Province is in West Java (1,494,723), East Java (1,152,576), DKI Jakarta (658,365), represent that the adoption of Entrepreneurship Digitalization will be higher, even though recently still is lower than 50%, categorized in low category of adopting Digital Technology, even though it is higher than 2022, just 30.9% (Daily Social, 2022). However, MSMEs have adopted the highest number of digital platforms in terms of social media (83.8% of the 45% used) because of the ease of use to grab the global market (Septiana et al., 2024). The primary challenge of the MSMEs is to apply Internet sources such as using IoT (internet of thing) or big data by implementing E-Commerce itself (Li et al., 2024) because they consider to do not have many resources.

Further, if traced from the data report of Daily Social Innovate MSME Report (2023), the Food and Beverage business sector has mostly used social media compared to the others about 37.9% in 2022, known as the culinary sector, as stated in Figure 1. However, based on the Indonesian Central Statistics Agency (BPS-Statistics Indonesia, 2024), in 2023 internet use has increased at 18.59%, 25.70% using online ordering and delivery, and 7.75% using digital payment for marketing activities. The media used by utilizing the internet was 92.21% through instant messaging, 22.72% by using social media, and 17.51% by using marketplaces/digital platforms of E-Commerce.

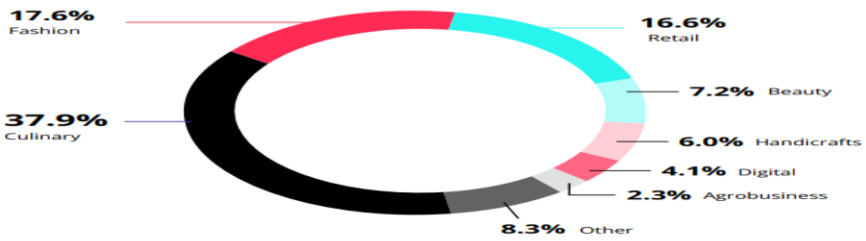

Figure 1. Indonesia Business Sector Used Social Media
Source: SMES and Cooperation Ministry (DailySocial.id, 2023)

The food and Beverage business sector according to BPS-Statistics Indonesia (2024) provides complete meals and drinks suitable for immediate consumption, served by traditional restaurants, self-service or take-away restaurants, or online ordering with free delivery. The various cuisines either from foreign or local wisdom food, or modified both, incorporating foreign recipes with Indonesian flavors, such as Korean, Japanese, and Western food, also serving the local wisdom food, such as "Batagor, Seblak, Mie Kocok, or Tahu Sumedang" food (West Java), "Rawon or Sate Madura" (Eastern Java), "Soto Betawi or Kerak Telor" food (Jakarta), and "Soto Kudus or Lumpia Semarang" food (Central Java) with healthy ingredients. However, BPS-Statistics Indonesia (2024) recorded that Indonesian cuisine has a hold over foreign cuisine, counted for 96.96%, foreign cuisine only 1.09%, and offering both combining Indonesia and foreign about 1.95%.

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The total number of MSMEs in the Food and Beverage sector is 4,854,311 in 2023, growing by 21.13% compared to 2016. 99.49% of it is in the Microenterprises scale (having sales volume less than 2 billion), 0.49% in a Small enterprise (sales volume 2 – <15 billion), 0.02% in Medium enterprise scale (sales volume 15 - 50 billion), and almost no one in the enterprise of big scale (sales volume > 50 billion), but just 33.13% of it used the internet application, online store, and digital payment for marketing activities, based on BPS-Statistics Indonesia (2024). However, the Food and Drinks service providers are highest marketed in West Java (31.5%), East Java (20.2%), and Central Java (17.9%), followed by Jakarta (9.0%), as stated in Figure 2. The workers in the Food and Beverage sector have improved by 9.80 million, an increase of 20.48 percent compared to 2016, just 8.13 million workers based on the 2016 Economic Census (BPS-Statistics Indonesia, 2024). West Java has the highest portion of workers, accounting for 23.52 percent, East Java at 14.93 percent, Central Java at 13.84 percent, and Jakarta at 7,00%. Therefore, this research used the participants' samples from the food and beverage business management of West Java, East Java, Central Java, and Jakarta which has adopted digital technology in business entrepreneurship development.

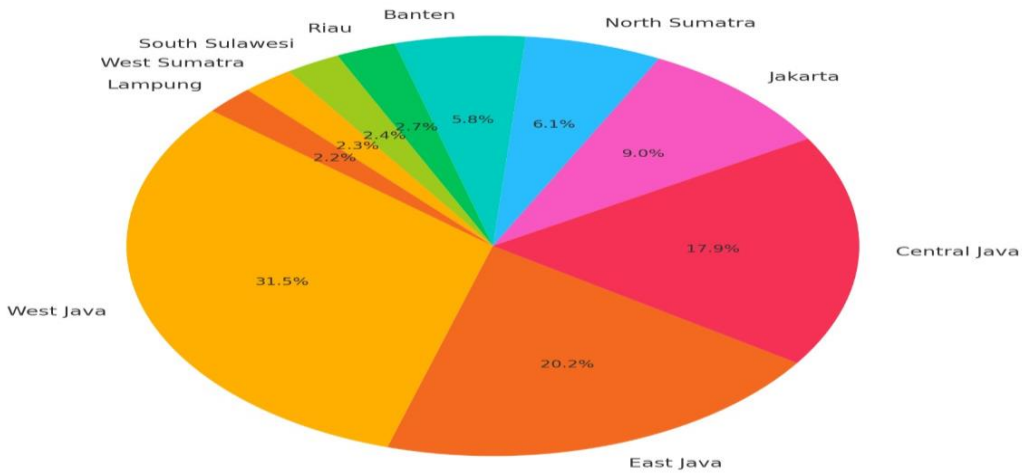

Figure 2. The Percentage Number of Food and Beverage Services Based on The Provinces
Source: BPS-Statistics Indonesia, 2024

METHODS

This research applied a qualitative research design, consistent with the research objectives. An in-depth study was developed to support the theoretical framework. A qualitative research design is suitable for understanding professional research results (Modgil et al., 2022), examining a comprehensive research result, and the details description of business model components, and the multiple institutional logics (Gregori & Holzmann, 2020).

Data collection started with determining the MSMEs of Food and Beverage Business providers that have implemented Entrepreneurship Digitalization by using digital technology through the Internet or social media, especially for marketing activities, in West Java, East Java, Central Java, and Jakarta (having the highest number of Food and Beverage providers, in Figure 2) to examine the research objectives, in terms of challenges and opportunities in dealing with

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the implementation of Entrepreneurship Digitalization. The continued data collection was conducted by interviewing 35 business owners, top management, or managers of MSMEs' participants with semi-structured interviews following Modgil et al. (2022), and observing the business process including business models, especially to know deeply how their business operational process and management overall in gaining sustainable competitive advantage and sustainable business performance growth.

The 35 participants used, as the unit samples, followed a non-probability of purposive sampling method, with the representative criteria of the four highest number of Food and Beverage MSMEs providers (West, East, and Central Java, also Jakarta) because the details framework of population characteristics was not available (Hair et al., 2017), The unit sample has taken the opinion of Bryman and Bell's (2015), that there is no unequivocal number as a sample size, in qualitative research tend to be small to support the fundamental depth of analysis, relevant to the research inquiry. So, the unit samples of this research are small, providing in-depth contributions with the sample's characteristics of the right relevant knowledge, skills, and correct information. However, after careful transcription and filtering, 33 participants' responses were finally used for further analysis.

Interviewing in this research follows Myers and Avisons' opinion (2002), covering an excellent "window" to achieving the research objectives to know the perspective of participants on Entrepreneurship Digitalization issues or to know the participants can confirm the detailed insights of Entrepreneurship Digitalization implementation in terms of benefits or impacts, challenges, and opportunities. The semi-structured interview schedule was developed based on the research conducted by Modgil et al. (2022). The open-ended questions were designed for interviewing, following the measurement of Entrepreneurship Digitalization or Digital technology adoption benefits or impacts, challenges, and opportunities raised, developed by Osinubi et al. (2025); Li et al. (2024); Dabbous et al. (2023); and also supported by Lauer et al. (2020).

After the data collection results were transcribed, transcripts results were analyzed with NVIVO model analysis, a software designed for qualitative analysis, using "codes" to identify common themes among the transcripts. Before formal coding, the entire set of transcripts was reading the meaning and patterns (Braun and Clarke, 2019). Once, the data and ideas results for coding were noted, the author moved on to the data analysis. The transcripts based on interview results were analyzed by importing the data into NVIVO software. Then, the identification of initial codes was done based on the research objectives and literature references. All data were coded, compiled, and categorized into themes during the third step. All coded data were well organized into groups of themes and subthemes. In the last step, the identified overarching themes were refined. Each theme needed a thorough elucidation of how it suits the overall narrative and related to underlying research objectives, so it allowed to focus on the study's research objectives and find out its generic themes (Kelly & McAdam, 2022).

RESULTS

Before the data analysis results were done by the NVIVO statistical analysis model, the following participants' characteristics were performed, as shown in Table 1.

Table 1. Characteristics of Participants

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No	Characteristics of Participants	Number of participants	Percentage Number of participants
1	Male	15	45.45%
	Female	18	54.55%
2	25-28 Years Old	7	21.21%
	29-49 Years Old	21	63.64%
	More than, and Equal to 50 Years Old	5	15.15%
3	Senior High School	7	21.21%
	Vocation degree	8	24.24%
	Bachelor degree	15	45.45%
	Post Graduated	3	9.09%
4	Food and Drink Providers of Microenterprises	31	93.94%
	Food and Drink Providers of Small Enterprises	1	3.03%
	Food and Drink Providers of Medium Enterprises	1	3.03%
5	Participants' Origin of West Java	12	36.36%
	Participants' Origin of East Java	9	27.27%
	Participants' Origin of Central Java	7	21.21%
	Participants' Origin of Jakarta	5	15,.15%
6	Restaurant and Eateries Category	9	27.27%
	Catering Services Category	1	3.03%
	Mobile/Temporary Food and Beverage Services	5	15.15%
	Food and Beverage Stalls, Traditional Medicine Stalls, Cafes, Bars, and Similar Establishments	18	54.55%
7	Monthly Average of Sales Volume in the last year of Microenterprises, counting for IDR160 million	31	93.94%
	Monthly Average of Sales Volume in the last year of Small Enterprises, counting for IDR1,100million	1	3.03%
	Monthly average of Sales Volume in the last year of Medium Enterprises, counting for IDR2,450 million	1	3.03%
8	Average Number of Employees for Microenterprises	2 – 10	9.09%
	Average Number of Employees for Small Enterprises	11 - 20	27.27%
	Average Number of Employees for Medium Enterprises	> 21	63.64%
9	Job Position Title of Owners	21	63.64%
	Job Position Title of Top Management	3	9.09%
	Job Position Title of Managers	9	27.27%
10	Time experience of 2- 5 years	3	9,.09%
	Time experience of 6- 10 years	5	15.15%
	Time experience of more than 10 years	16	48.48%
	Time experiences of more than 15 years	9	27.27%
11	Company's Establishment of 1 - 5 Years	2	6.06%
	Company's Establishment of 6 - 10 Years	5	15.15%
	Company's Establishment of 11- 15 Years	9	27.27%
	Company's Establishment of more than 15 Years	11	33.33%
	Company's Establishment of More Than 20 Years	6	18.18%
12	The use of a Website	1	3.03%
	The use of Email Marketing	1	3.03%
	The use of Instant Message (WA, SMS, & Telegram)	5	15.15%
	The use of social media (TikTok, Facebook, Instagram, Twitter, YouTube)	17	51.52%
	The use of Market Place/Platform Digital (GoFood & Shopee)	9	27.27%

Sources: Data Collection Results (2025)

Table 1 above shows that Female participants dominate this research accounting for 54.55%. The productive age also dominates the research results from 29 – 49 years old (63.63%), the young generation portion from 25 - 28 years old was 21.21%, the rest was from the age of 50 and more than 50 years old. Bachelor's degree dominates the education level

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(45.45%), followed by Vocation Degree 24.24%, Senior High School degree 21.21%, and the rest from Post Graduated 9.09%. The participants came from Microenterprises dominated at 93.94%, followed by small and medium enterprises at 3.03% each.

All participants come from West Java (39.93%), East Java (31.97%), Central Java (17.81%), and Jakarta (31.03%). The category of Food and Beverage providers was dominated by Food and Beverage Stalls, Traditional Medicine Stalls, Cafes, Bars, and Similar Establishments (54.55%), followed by Restaurants and Eateries (27.27%). The total average of the monthly company's sales volume in the last year (2024) was dominated by IDR160 million (USD9,849.69) or 93.94%, as a micro-scale company, then 3.03% was from the average monthly sales volume of IDR1,100 million (USD6,768.19), as a small business enterprise, the rest 3.03% from the average monthly sales volume IDR 2,450 million (USD150,778.51), as the medium size company.

The average number of Employees employed by the micro business scale was around 2 - 10 employees, followed by the average number of 10 - 20 employees for small business enterprises, and the average number of employees employed by medium enterprises was more than 21 employees (63.64%). Job position title as the owner dominates the participants' profile accounting for 63.64%. Moreover, the time of work experience dominates at more than 10 years (48.48%). In addition, the youngest year of the company's establishment is 1- 5 years (6.06%), and the oldest is more than 20 years (18.18%). The digital technology used was dominated by social media: TikTok, Facebook, Instagram, Twitter, and YouTube (51.52%).

The NVIVO statistical application was used to analyze what is the benefits, challenges, and opportunities in implementing the Entrepreneurship Digitalization of MSMEs of the Food and Beverage business sector, through using coding. The coding splits up two codes: First Code Order and Second Code Order. The coding draws on the interview results. Then, the second code order can determine Theoretical Dimensions, as stated in the table below. The Interview results are determined by 2 categories, that are 1) Entrepreneurship Digitalization Implementation and Benefits; and 2) Challenges and Opportunities, as described below.

Entrepreneurship Digitalization can be drawn under the research questions of how imperative Entrepreneurship Digitalization is to be implemented, and what are the benefits in terms of Output and Outcome. All participants agree that digitalization gives firms the ability to increase the sustainable firm's competitiveness and performance development. The firm's competitiveness can be improved and sustained by implementing Entrepreneurship Digitalization through the mediating role of Digital Innovation. Entrepreneurship Digitalization could spread their products wider, improve the high-skilled human resources employed, and have more thorough digital technology and organizational management. These findings were analyzed based on the interview results, as stated in Table 2.

Table 2. Code for "Entrepreneurship Digitalization Implementation and Benefits"

First Code Order	Second Code Order	Theoretical Dimensions
"Entrepreneurship Digitalization can be run effectively because of the high skill of human resources, high technology, and professional organizational management availability". **(Code: The effectiveness of Entrepreneurship Digitalization Implementation due to the**	**The Effectiveness of Entrepreneurship Digitalization**	**Entrepreneurship Digitalization Effectiveness Factors** in terms of Human Resources, Digital Technology, and

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human resources, digital technology, and organizational management)		Organizational Management
"High skills of Human Capability are a crucial factor in implementing Entrepreneurship Digitalization allowing human resources to act more creative and productive". (**Code: High-skilled Human resources, as a key factor in implementing Entrepreneurship Digitalization effectively)**	**The Effectiveness of Entrepreneurship Digitalization**	**High-skilled Human Resources**
"The only different use in Entrepreneurship Digitalization focuses on the intensity of marketing communication technology through Internet Use, such as platform E-Commerce, and social media, such as TikTok Shop, WA Business, Instagram, and YouTube". (**Code: Internet and Social Media used for marketing food and drink)**	**Communication Technology** through Internet and Social Media Use	**Internet and Social Media Use** as the Factors of Communication Technology
"Entrepreneurship Digitalization needs digital technology through Websites to grab or attract more customers and higher sales and market share requiring connectivity". (**Code: connectivity to attract more customers through Website or IoT as the factor of Digital Technology**)	**Connectivity** through Website	**Connectivity Factors of Digital Technology**
"Entrepreneurship Digitalization requires connectivity through the access of search engine, cloud-based computing tools, and data analytics applications integrating the manufacturing process". (**Code: connectivity to integrate Manufacturing Process with Customers' Database accessibility through IoT, Search Engine Optimization (SEO), Cloud-based Computing Tools, and Data Analytics)**	**Connectivity** through Search Engine Optimization (SEO), Cloud-based Computing Tools, and Data Analytics, integrated with Manufacturing Process	**Connectivity Factors of Technology**
"Entrepreneurship Digitalization needs also Technology Digital by collaborating with digital payment providers and strengthening their website application, known as Digital Integration". (**Code: Digital Integration for strengthening the use of Digital Payment tools)**	**Digital Integration** through Financial Technology Implementation for Digital Payments	**Digital Integration,** as a Technology Factor
"Entrepreneurship Digitalization is a necessary strategy to improve digital innovation through empowering digital technology by having Digital Skills & Public Services". (**Code: Digital Technology Empowerment by High Digital Skills and Public Services Ownership)**	**Empowering Digital Technology** by having Digital Skills and Public Services	**Digital Skills and Public Services** as the Factor of Digital Technology
"Entrepreneurship Digitalization ability can depend on Organizational Management in terms of strategic planning and budgeting availability so that Entrepreneurship Digitalization can be	**The effectiveness of Entrepreneurship Digitalization Based on Organizational**	• **Digital Innovation** • **Sustainable Competitiveness** • **Sustainable Firms**

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effective in developing Digital Innovation, Competitiveness, and Sustainable firms' performance". (**Code: Entrepreneurship Digitalization Effectiveness can be a determinant factor in developing Digital Innovation, Sustainable Competitiveness, and Sustainable Firms Performance, based on Organizational Management)**	**Management** in terms of strategic planning and budgeting availability	**Performance**
"Entrepreneurship Digitalization can improve digital innovation for developing digital process innovation in the manufacturing process, digital product innovation, and digital business model innovation" (**Code: Entrepreneurship Digitalization through Digital Innovation Improvement to develop Digital Process Innovation, digital product innovation, and digital business model innovation**)	**Entrepreneurship Digitalization Effectiveness**	**Digital Innovation** through Developing Digital Process Innovation, Digital Product Innovation, and Innovative Digital Business Model**s**
"Entrepreneurship Digitalization can be implemented to achieve the companies' competitiveness in terms of Cost Efficiency, superior quality services, and the unique market's value offering (modified value of the foods and drinks with the local wisdom content)**,** but it must run through the mediation role of Digital Innovation in terms of the digital technology use such as for marketing the product and services by using platform digital in the market place/E-Commerce and social media to enhance the accessibility of the customers across the city, digital payments, and also the digital product and operational process innovation, so developing new digital business model**" (Code: Entrepreneurship Digitalization brings output benefit of Digital Innovation and the outcome benefit of sustainable competitiveness)**	**Develop Digital Innovation** for digital marketing of the products and services, digital payments, and the digital operational process bringing the new digital business model.	**Sustainable Competitiveness** in terms of Cost Efficiency, Superior Quality Services, and the market's value offering
We get more benefits not only from growing sales, market shares, global customers' accessibility, and profits due to cost efficiency, but also from gaining the value of superior quality services such as saving energy, and faster delivery orders, as a strategic tool to gain sustainable high competitiveness to be the output benefits because of Digital Innovation existence (**Code: the benefits it brings the competitiveness due to superior quality services)**	**Digital Innovation Adoption** to gain the value of superior quality services and high-cost efficiency as a strategic means of sustainable high competitiveness	Output Benefit: **Sustainable Competitiveness**
"Entrepreneurship Digitalization brings more benefits. It reduces expenses and gains more customers across the city as a means of sustainable competitiveness to achieve the firm's performance, especially in the economic aspect	**Entrepreneurship Digitalization Implementation Entrepreneurship Digitalization**	Output Benefit: **Sustainable Competitiveness** Outcome Benefit

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(marketing performance: sales growth, market share growth, and profit growth), social aspect (in increasing the employment rate growth), and environmental degradation (**Code: Entrepreneurship Digitalization brings benefits of cost reduction, gaining more customers globally as a means of competitiveness, and then develops sustainable business performance)**	**Implementation**	**Sustainable Business Performance** in terms of Economic, Social, and Environmental Performance
"By doing Entrepreneurship Digitalization, We did get Economic performance improvement, in terms of marketing performance (sales growth, market share growths, and accessibility of global customers) and financial performance (High Profit), and environmental performance sustainability because of the platforms' quality system availability. Also, they confirm both economic and environmental performance were the main factors in developing sustainable business performance". **(Code: higher economic performance improves sustainable firms' performance growth)**	**Economic and Environmental Performance development,** as one of the sustainable firms' performance developments	Outcome Benefit: **Sustainable Firms' Performance Growth** in terms of Economic and Environmental Performance

Sources: Interview Results by NVIVO Processing Tool (2025)

The next part below reports the challenges and opportunities faced by each firm when they implement Entrepreneurship Digitalization. They answered the most occurred challenges and raised opportunities, as stated in Table 3 below.

Table 3. Code for "Challenges and Opportunities"

First Code Order	Second Code Order	Theoretical Dimensions
"The main challenge faced in implementing Entrepreneurship Digitalization is the lack of digital knowledge or low digital literacy and skills for our business". **(code: Low Digital Literacy and Skills)**	**Main Challenge of** Entrepreneurship Digitalization Implementation	**Low Digital Literacy and Skills**
"We did not know and use cyber security due to lack of digital knowledge or low literacy how to apply and operate the cyber security and the limited investment fund availability". (**code: potential cyber security breach on the consumer's data due to Low Digital Literacy and Skills)**	**Low Digital Literacy and Skills** to operate Cyber Security	**Potential Cyber Security Breach**
"Doing Entrepreneurship Digitalization using E-Commerce as the Marketing Digital Media, including digital payment (any other E-Wallet	**Entrepreneurship Digitalization Implementation Challenge**	**Limited Infrastructure of Internet Access**

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such as QRIS, Dana, and OVO), and serving product quality, by providing a hotline to receive a complaint or online review from our customers and handle it as fast as we can and give the best solution for it. Also, we only give them the original picture of our products and provide the details of our products when they ask more about it because in our opinion consumer satisfaction is our priority". But the use of Digital Marketing and Payment is limited, and sometimes digital error systems appear and bother due to the limited infrastructure of internet access". (**Code: it needs the established infrastructure of internet access and also empowers Digital Marketing and Payment through E-Commerce, QRIS, or any other E-Wallets to maintain customer trust)**		
"The biggest challenge of Entrepreneurship Digitalization implementation is to obtain funding due to a lack of financial literacy on where and how to obtain funding, so we need help to improve our knowledge and literacy to obtain the funding, or at least the government support to socialize and train where and how obtaining especially for the crowdfunding, as a source of the fund". (**code: Low Financial Literacy on obtaining funding or getting financial support**)	**Entrepreneurship Digitalization Implementation Challenge**	**Low Financial Literacy**
"We need a collaboration with the postal and express consignments companies to deliver the products selling all over the world, but how the collaboration would be established, as our digital knowledge and skills were low, so we need to upskill training in dealing with collaboration establishment" (**code: the need to upscale skills training due to the limited digital technical skills**)	**Entrepreneurship Digitalization Implementation Challenge**	**Limited Digital Skills Training**
"Entrepreneurship Digitalization Implementation struggles to partner with postal and express consignment	**Entrepreneurship Digitalization Implementation Challenge**	**Lack of Digital Partnerships in terms of Digital Marketing and Payment**

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delivery companies. But we are still limited to the digitalization partnership implementation, mainly for marketing activities by cooperating with E-Commerce providers, such as Tokopedia and Shopee as the biggest E-Commerce, and Digital Payment Providers". (**code: having Lack of Digital Partnership**)		**Providers**
"Entrepreneurship Digitalization widens the opportunity to market new products or services outside our city with the help of internet platforms, such as E-Commerce use and social media use such as YouTube, Instagram, TikTok, and Facebook. It also broadens our chances to gain more global target market, as our market expansion so it brings the sustainable competitiveness" (**code: the opportunity to gain market expansion globally by offering new products and services affecting** sustainable competitiveness)	**Across-Border Market Expansion Opportunity**	**Sustainable Business Competitiveness**
"Another Opportunity also could get a higher company image due to superior competencies and capabilities, primarily because they offer fast and free cost delivery with higher quality products, contributing to the sustainable competitiveness of the companies in the marketplace ". (**code: getting a higher company image contributing to Sustainable Business Competitiveness**)	**The Opportunity of Corporate Image Improvement Opportunity**	**Sustainable Business Competitiveness** in terms of Superior Competencies and Capabilities

Sources: Interview Results by NVIVO Processing Tool (2025)

The participants (93.93% of the Owners, Top Management, and Managers) said that when they implement Entrepreneurship Digitalization, they mainly grapple with low Digital Literacy and Skills, low Knowledge to manage Cybersecurity, limited Infrastructure of Internet Access, limited Digital Skills Training, low Financial Literacy, and lack of Digital Partnerships, as their challenges to develop Digital Innovation. Also, two opportunities have been recorded in the forms of Border Market Expansion and Corporate Image. The challenges and opportunities stated in Table 3 above have been found based on interviews, that were analyzed referring to the first and second codes.

DISCUSSION

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Entrepreneurship Digitalization Implementation and Benefits

The subject participants agreed on what Entrepreneurship Digitalization is, as the definition by Gartner (2021) in Gartner's IT Glossary; Abdumalikovich and Diyorjon o‘g‘li (2024); Osinub et al. (2025), that Entrepreneurship Digitalization is the business entrepreneurship raising challenges and opportunities because of digital technology development to develop Digital Innovation, that can affect the high sustainable competitiveness so that the business can develop sustainable business performance growth in the global competitive market, as supported by the research results by Sahibzada et al. (2025); Khodor et al. (2024). The influence of Digital Innovation towards sustainable competitiveness fits with the statement of all participants, supporting the research results by Awad et al. (2025); Galindo-Martín et al. (2023).

They thought, as stated by the Owners and Top Management, that Entrepreneurship Digitalization brings more benefits as reducing expenses or gaining cost efficiency, increasing high-quality foods and drinks, maintaining superior quality services, and achieving the high value of market offerings than risks as the challenges in developing Digital Innovation, including Digital Process Innovation, Digital Product Innovation and Innovative Business Model (Bican and Brem, 2020; Ciriello et al., 2018. This statement is related to the opinion of Hamdouna and Khmelyarchuk (2025). Those benefits represent the sustainable competitiveness of the business, especially for serving superior quality services and the unique value markets' offering, such as offering modified value of the foods and drinks with local wisdom content (MS et al., 2024).

In advance, they said that Entrepreneurship Digitalization can be done effectively if the companies have highly high-skilled Human Resources, as the research results by Bergholz et al. (2024); Lauer et al. (2020), Digital Technology as the findings of Dabbous et al. (2023); Luneto et al. (2022); and Lauer et al. (2020) in terms of Internet and Social Media Use for communication technology, Connectivity through using Website, IoT, Search Engine Optimization (SEO), Cloud-based Computing Tools, and Data Analytics integrated with Manufacturing Process and Market the foods and drinks as Digital Integration. Also, they need Digital skills and public services to develop Digital Innovation, including Digital Process Innovation, Product Innovation, and Innovative Business Models, bringing sustainable competitiveness, such as superior quality services, cost savings, operational efficiency, market flexibility, and unique value market offerings, to fulfill consumers' appetite, as the studies of Awad et al. (2025); Soluk (2022). In addition, the participants of owners and top managements said that the firms require organizational management, as thought by Lauer et al. (2020) in implementing Entrepreneurship Digitalization effectiveness, especially for having strategic planning and budgeting management to enhance Digital Innovation, the Firms' Sustainable Competitiveness, and Sustainable Firm Performance, as the research results of Hamdouna and Khmelyarchuk (2025); Gomez et al. (2025); Sharma and Gupta (2024); Dabbous et al. (2023); Ha et al. (2023).

Specifically, Gherbi (2025); Liang et al. (2024); Sarfraz et al. (2022); andCentobelli et al. (2020) explored that Digital Innovation can directly affect sustainable business performance, as the owners said. Sustainable business performance is determined by three pillars in terms of economic, social, and environmental sustainability (Secundo et al., 2020). Secundo et al. (2020) noted that economic and environmental sustainability are two crucial pillars in attacking future challenges, similarly with all participants said, even though they comprehend the sustainable performance of the foods and drinks business sectors in terms of economic, social, and

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environmental performance success in the future because of digital innovation adoption. Moreover, the economic performance of all companies in terms of monthly sales growth gradually increased on average by 35%. Of course, monthly average market shares also grow by 35%, and the monthly average profit margin growth rises about 20% due to the implementation of digital innovation.

The participants' owners and managers stated that their companies' competitiveness, in the long run, can enhance the firm's performance sustainability, especially in the economic aspect (marketing performance: sales growth, market share growth, and getting high accessibility of global customers, and also financial performance: measured by profit growth), social aspect to increase the employment rate growth, and environmental factors like reduce the degradation of the environment or deteriorated environment, as the study results by Arshad et al. (2025), Osinubi et al. (2025).

Most of the food and drink business sectors, based on all participants' statements, implement digital technology in E-Commerce, Websites, social media, and cloud computing as a part of Entrepreneurship Digitalization. They believed that Entrepreneurship Digitalization could leverage their economic performance in terms of sales, market share, and profit margin growth. The only different use focuses on intensive marketing communication and digital content sharing through E-Commerce and social media. Also, Websites can attract more customers and higher sales and market share, so the company's profitability can improve resilience in the long run, especially in facing the global market competition.

Based on the interviews, all foods and drinks business sectors adopted Digital Innovation mainly for marketing activity through E-Commerce, Websites, and social media, such as TikTok, Instagram, Facebook, WhatsApp, YouTube, and Twitter. The most digital technology used is E-Commerce platforms as many as TikTok and Instagram (IG), around 63.63%, followed by Facebook, approximately 12.12%. Meanwhile, Website accounts for about 0.09%, and What's Up about 18.18%. Each social media, such as YouTube and Twitter, accounts for 5.98%.

They all business entrepreneurs, will maintain Entrepreneurship Digitalization implementation by empowering Digital Innovation adoption in the future, involving integrated Information technology systems, such as implementing more types of digital payment by collaboration with digital payment providers as they faced the handicaps with digital payments media due to low financial literacy, and strengthening a website application, also increasing the number of digitalization tools or artifact, even though the food and drinks business sector encounter several challenges.

Challenges and Opportunities

The challenges of low Digital Literacy and Skills support the study results by Najib and Fahma (2020); and Situmorang (2022). Situmorang (2022) said that the lack of Digital Literacy causes low Digital Innovation development for Digital Process Innovation and Product Innovation, primarily only focusing on social media use, such as TikTok and Instagram.

Additionally, most firms (as stated by Owners and Managers) also use E-Commerce as a tool to expand their market across borders. However, they often gain from the customers' complaints when buying transactions, due to error systems, security, and privacy to secure personal profiles and financial information of the customers. These conditions happen because of limited digital literacy on how to operate cyber security in the Digital system, as the findings by Elrayah and Jamil (2023); and Rocha Estrada et al. (2022). Specifically, Elrayah and Jamil (2023) implied that Digital Innovation as technology development can play a potential moderating role of cyber security in cyber security behavior, and find out more relationship

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between digital literacy and cyber security awareness in other countries. Rocha Estrada et al. (2022) suggested that future research needs to develop more scientific work in dealing with digital skills, and digital security, also providing digital technical skill training for enhancing Digital Innovation development due to the limited digital technical skills owned. Limited digital technical skills among entrepreneurs owned by MSMEs Food and Drink sector are in line with the research findings by Gherbi (2025).

Moreover, they as stated by top management and managers, also sometimes gain the customers' complaints of the product quality (not as promised in the online ad) when delivery, even though they offer free and fast delivery. But they give solutions for the complaints by giving a gift and or returning the products, including money refund to enhance the company and product image, as stated by the owners and top management. Enhancement of product and company image is necessary for sustainable business competitiveness development, as noted by Alam and Islam (2021). Therefore, potential cyber security breach is a crucial issue in securing personal profiles and financial information to strengthen digital innovation adoption, as the research results by Awad et al. (2025); and Modgil et al. (2022).

The interviewing results with all participants (owners, top management, and managers) noted that established infrastructure of internet access is a key driver to strengthen Digital Innovation in which their business operations are always disrupted so that it bothered the market accessibility that can decrease the opportunity to grab more customers and higher market share. The established infrastructure of internet access for the MSMEs' Food and Drinks needs to be developed so the development of Digital innovation in a sustainable way can proceed well in supporting the development of sustainable MSMEs' Foods and Drinks performance. These interviewing results support the research results by Gherbi (2025); Bergholz et al. (2024), Galindo-Martín et al. (2023);

Limited financial literacy is another challenge, based on reviewing results with the owners and managers, so that they proceed lack of information on how to obtain funding or get financial support or have crowdfunding and MSMEs Loan scheme from a Fintech provider. They additionally said that the companies need funds to expand their business operations. They primarily fund their business operations through the banking system as the traditional scheme, or a soft loan from the state-owned enterprises as a partnership loan. They (81.81% of participants) did not know the existence of digital fundraising providers, such as "Avante Company", a Fintech provider providing funding in the forms of MSME's Loan scheme by Peer-to-Peer Lending and Crowdfunding. On the other hand, all firms said that digital technology can enhance their digital fundraising as a source of funds used to develop Digital Innovation so that their business competitiveness sustainability can be achieved to accelerate their sustainable business performances. These interview results support the research findings of Ahmad and Oon (2025); Asrini et al. (2025); Ferilli et al. (2024); and Koskelaine et al. (2023). The research finding by Ahmad and Oon (2025) specifically implied that Digital financial literacy potentially moderates digital innovation activity. Asrini et al. (2025) found that financial literacy as a challenge can interact with Digital Innovation consequently affecting firms' sustainable performance.

Moreover, 81.81% of the Owners and Top Management participants stated that the companies still have limitations in dealing with postal and digital payment partnerships to support the ordering and delivery of products, and as digital payment by the customers due to the use of digital money from more customers while ordering and buying the products. Therefore, they need digitalization partnerships, especially with E-Commerce and digital

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money providers to broaden the firms' chances for gaining more global target markets, as the market expansion, so bringing sustainable firms' performance.

All challenges are handicaps that can interfere development of Digital Innovation due to Effective Entrepreneurship Digitalization implementation, which can create the firms' sustainable competitiveness and develop sustainable performance growth. Therefore, the challenges of low digital literacy and skills, low financial literacy, low skill how to overcome cybersecurity, limited infrastructure of internet access, and limited digital partnerships can potentially chance to moderate the relationship of the implementation of Entrepreneurship Digitalization effectiveness with Digital Innovation development, so the development of sustainable competitiveness and firms' performance will be disrupted. It means that all challenges play an important role as the moderating variables that can strengthen or weaken Entrepreneurship Digitalization effectiveness relationship with Digital Innovation. Li et al. (2024); and Hidayat-ur-Rehman (2024), specifically supported the moderating effect of Financial Literacy in the digital Innovation relationship with the firms' performance, so low digital financial literacy needs to be improved through Digital Training skills, as the suggestion of Tariq et al. (2024).

Border Market Expansion and corporate image improvement become opportunities while implementing Entrepreneurship Digitalization to develop Digital Innovation so that it improves the firms' sustainable competitiveness and performance**,** as stated by 69.69% of all participants. These statements follow the opinions of Xie and Wu (2024); Kim, C.-G., and Yang, O.-S. (2024); Petersen et al. (2023); Matalamäki and Joensuu-Salo (2022). Border Market Expansion can be achieved by supporting internet platforms, such as E-Commerce use, and social media use such as YouTube, Instagram, TikTok, and Facebook. A higher company image can be developed because of superior competencies and capabilities, primarily offering fast and free-cost delivery with higher quality products, contributing to the sustainable competitiveness of the companies in the marketplace.

All results above can be drawn in the research model (shown in Figure 3) as the future research agenda, referring to the theoretical development of the Resources-Based View Theory and Diffusion of Innovation Theory.

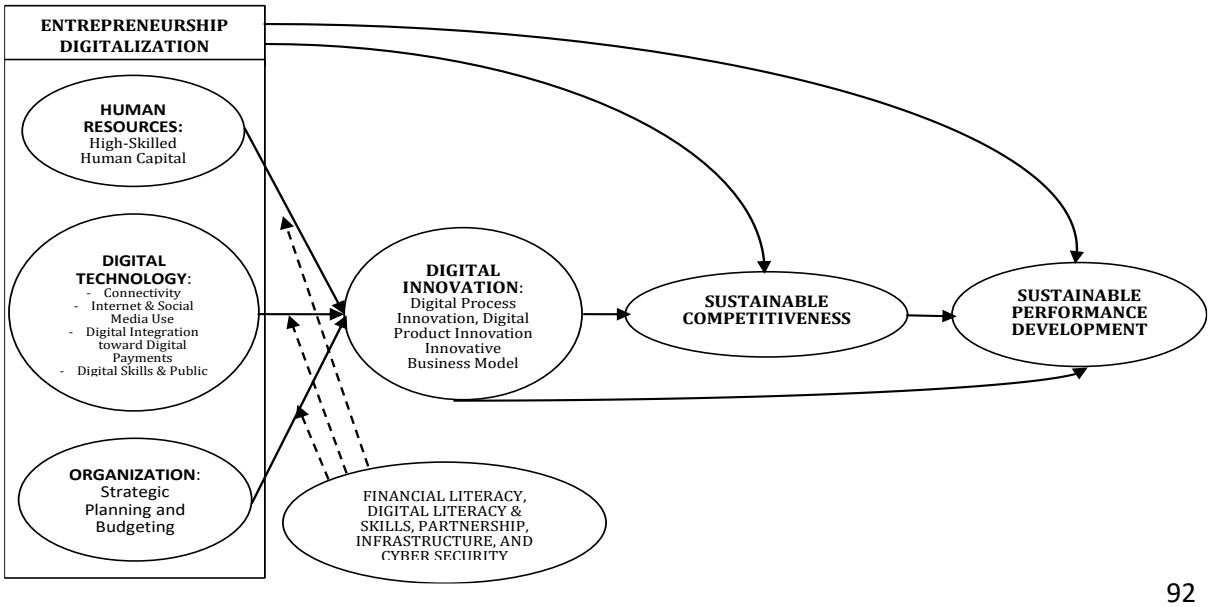

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Figure 3. Research Model of Entrepreneurship Digitalization Effectiveness

CONCLUSION

The findings of this study have proved the study's purposes. Entrepreneurship Digitalization has many benefits in building Digital Innovation determined by three dimensions of Digital Process Innovation, Product Innovation, and Innovative Business Model in the MSMEs Food and Drinks Business sectors. Moreover, Entrepreneurship Digitalization can be run effectively, if implementing three main strategies, known as High-Skilled Human Resources, Digital Technology, and Strategic Planning and Budgeting of Organizational Management.

Digital Innovation is the main part of the MSMEs' Foods and Drinks business sectors to develop Sustainable Business Competitiveness and Performance growth, even though Entrepreneurship Digitalization can directly develop Sustainable Business Competitiveness and Performance growth.

Sustainable Business Competitiveness can be measured by superior quality services, cost savings, operational efficiency, market flexibility, and unique value market offerings. While, Sustainable Business Performance growth measurement has three dimensions that are Economic, Social, and Environment Performance.

However, to improve Digital Innovation development in a sustainable way in adapting the Digital Technology advancement, the MSMEs encounter more challenges, even though some opportunities can be raised in terms of Border Market Expansion and Corporate Image. The challenges faced are low Digital Literacy and Skills, low Knowledge in managing Cybersecurity, limited Infrastructure of Internet Access, limited Digital Skills Training, low Financial Literacy, and lack of Digital Partnerships. Therefore, the primary program needs should be implemented through a Training Skills Building Program to improve digital literacy and skills and also to provide sufficient digital technology infrastructure by relevant stakeholders or government roles.

Because the research conducted focuses on the Indonesian MSMEs' Foods and Drinks sectors by using a cross-sectional survey design, it requires expanding the research in other business sectors with a longitudinal data design approach expanded to other countries. MSMEs' characteristics in Indonesia are possibly different from MSMEs' characteristics in other countries due to the lack of Entrepreneurship Digitalization development in creating Digital Innovation, so examining Entrepreneurship Digitalization effectiveness implementation across countries for future research needs to be conducted in a sustainable manner.

Future research also can be conducted to examine how the research model works well by using quantitative research design to extend the Resources-Based View Theory, represented in Entrepreneurship Digitalization effectiveness effect on Sustainable Competitiveness and Performance growth, integrated with the Diffusion of Innovation Theory, represented in the effect of Entrepreneurship Digitalization effectiveness on Digital Innovation, moderated by the challenges of low Digital Literacy and Skills, low Knowledge in managing Cybersecurity, limited Infrastructure of Internet Access, limited Digital Skills Training, low Financial Literacy, and lack of Digital Partnerships, bringing about Sustainable Competitiveness and Performance growth.

REFERENCES

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Abdumalikovich, Bektemirov Abduxamid & Diyorjon o'g'li, Ortiqboev Elbek (2024). Issues of Digitalization of Entrepreneurship Based on Innovative Technologies. *Western European Journal of Historical Events and Social Science*, Volume 2, Issue 3, March 2024. https://westerneuropeanstudies.com/index.php/4.

Ahmad, Z. and Oon, E.Y.N. (2025), "Agile mindset and digital innovation: creative centrality, fintech usage, financial literacy, and the "not-invented-here" syndrome", *Management Decision*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/MD-01-2024-0135

Akhter, F. (2017). Unlocking digital entrepreneurship through technical business process. *Entrepreneurship and Sustainability Issues*, *5*(1), 36-42.

Alam, S.M. Shafiul, and Islam, K.M. Zahidul (2021). Examining the role of environmental corporate social responsibility in building green corporate image and green competitive advantage. *Int J Corporate Soc Responsibility,* 6, 8, 1-16. https://doi.org/10.1186/s40991-021-00062-w

Arshad, Zeeshan; Madaleno, Mara; Lillebo, Ana I; Vieira, Helena (2025). Decoding sustainable growth: The role of digital technology and entrepreneurship in carbon reduction. *Sustainable Technology and Entrepreneurship*, Volume 4, Issue 1, 1-15.100094. https://doi.org/10.1016/j.stae.2024.100094.

Asrini; Kurniawan; Salida, Amrizal; Haeril; Fatra, Emil (2025).The Role of Financial Literacy and Digital Innovation in Enhancing SME Performance. *JOURNAL LA BISECOMAN*, VOL. 06, ISSUE 01, 107-120. DOI: 10.37899/journallabisecoman.v6i1.1882

Ateh, M. Y., Berman, E., & Prasojo, E. (2020). Intergovernmental Strategies Advancing Performance Management Use. *Public Performance & Management Review*, *43*(5), 993–1024. https://doi.org/10.1080/15309576.2020.1736588.

Autio, Erkko and Estrada, Gemma Bolotaulo and Park, Donghyun and Uddin, Gazi Salah and Tan, Yeng-May (2024), The Nexus between Digitalization, Entrepreneurial Ecosystem Quality, and Economic Resilience A Cross-Country Analysis during the COVID-19 Pandemic (February 16, 2024). *Asian Development Bank Economics Working Paper Series* No. 716, Available at SSRN: https://ssrn.com/abstract=4730911 or http://dx.doi.org/10.2139/ssrn.4730911.

Awad, I.M.; Nuseibeh, H.; Amro, A.A. (2025). Competitiveness in the Era of Circular Economy and Digital Innovations: An Integrative Literature Review. *Sustainability*, 17, 4599. https://doi.org/10.3390/su17104599.

Baranauskas, G. and Raišiene, A.G. (2022). Transition to Digital Entrepreneurship with a Quest of Sustainability: Development of a New Conceptual Framework. *Sustainability*, Vol. 14, 1-13. https://doi.org/10.3390/su14031104.

Barney, J. (1991). Firm resources and sustained competitive advantage. *J. Manag.* 17 (1), 99–120. Baum, C.F., Lewbel. https://doi.org/10.1177/014920639101700108

Bejjani, M., G¨ocke, L., Menter, M. (2023). Digital entrepreneurial ecosystems: a systematic literature review. *Technol. Forecast. Soc. Change* 189, 122372. https://doi.org/10.1016/j.techfore.2023.122372.

Berger, E. S., von Briel, F., Davidsson, P., & Kuckertz, A. (2021). Digital or not – The future of entrepreneurship and innovation. *Journal of Business Research*, 125, 436–442. https://doi.org/10.1016/j.jbusres.2019.12.020.

Bergholz, Christian; Füner, Lena; Lubczyk, Moritz; Sternberg, Rolf; Bersch, Johannes (2024). Infrastructure required, skill needed: Digital entrepreneurship in rural and urban areas.

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Journal of Business Venturing Insights, 22, 1-18. e00488. https://doi.org/10.1016/j.jbvi.2024.e00488.

BPS-Statistics Indonesia (2024). *Food and Beverage Service Activities Statistics,* **2023,** Volume 7, 2024.

Bican, Peter M. and Brem, Alexander (2020). Digital Business Model, Digital Transformation, Digital Entrepreneurship: Is There A Sustainable "Digital"?. *Sustainability,* 12, 5239. doi:10.3390/su12135239.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, *11*(4), 589–597. https://doi.org/10.1080/2159676x.2019.1628806.

Brem, A., Viardot, E., & Nylund, P. A. (2021). Implications of the coronavirus (COVID-19) outbreak for innovation: Which technologies will improve our lives?. *Technological Forecasting and Social Change*, 163, 120451. https://doi.org/10.1016/j.techfore.2020.120451.

Bryman, A., & Bell, E. (2015). *Business research methods* (4th ed.). Oxford: Oxford University Press.

Centobelli, P., Cerchione, R., Chiaroni, D., Del Vecchio, P., & Urbinati, A. (2020). Designing business models in circular economy: A systematic literature review and research agenda. *Business Strategy and the Environment.* 29, 1734–1749. doi:10.1002/bse.2466

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Thrassou, A. (2022). SME entrepreneurship and digitalization – the potentialities and moderating role of demographic factors. *Technological Forecasting and Social Change*, 179, 121648. https://doi.org/10.1016/j.techfore.2022.121648.

Ciriello, Raffaele Fabio; Richter, Alexander; Schwabe, Gerhard (2018). Digital Innovation. *Bus Inf Syst Eng.* https://doi.org/10.1007/s12599-018-0559-8.

Dabbous, Amal; Barakat, Karine Aoun; Kraus, Sascha (2023). The impact of digitalization on entrepreneurial activity and sustainable competitiveness: A panel data analysis. *Technology in Society*, 73. https://doi.org/10.1016/j.techsoc.2023.102224.

Davidson, E. and Vaast, E. (2010), "Digital entrepreneurship and its sociometric enactment", Proceedings of the 2010 43rd *Annual HI International Conference on System Sciences*, Honolulu, HI.

Daily Social. (2023). *Daily Social Innovate MSME Report, 2022*.

Elrayah, Musaddag, and Jamil, Saima (2023). Impact of Digital Literacy and Online Privacy Concerns on Cybersecurity Behaviour: The Moderating Role of Cybersecurity Awareness. *International Journal of Cyber Criminology*, Vol 17 (2), 166–187. DOI:10.5281/zenodo.4766711

Ferilli, Greta Benedetta; Palmieri, Egidio; Miani, Stefano; Stefanelli, Valeria (2024). The impact of FinTech innovation on digital financial literacy in Europe: Insights from the banking industry. *Research in International Business and Finance*, Volume 69, 102218. https://doi.org/10.1016/j.ribaf.2024.102218

Franco, Mário; Godinho, Luis; & Rodrigues, Margarida (2021): Exploring the influence of digital entrepreneurship on SME digitalization and management, *Small Enterprise Research*, DOI: 10.1080/13215906.2021.1938651.

Fridayani, Helen Dian, Iqbal, Muhammad, Chiang, Li-Chung, Pratama, Mardha Adhi, & Atmojo, Muhammad Eko (2021). Opportunities and Challenges of Digital Economy for Micro, Small, and Medium Enterprises Facing Pandemic Covid-19 in Indonesia: A Case Study.

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Advances in Economics, Business and Management Research, Volume 209. Proceedings of the International Conference on Public Organization (ICONPO 2021). Atlantis Press.

Gherbi, A. (2025). Digitalization and its role in developing entrepreneurs' skills towards achieving sustainable development. *International Journal of Economic Perspectives*, *19*(2), 425–440. Retrieved from https://ijeponline.org/index.php/journal/article/view/873.

Gomez Gandia, J.A.; Gavrila Gavrila, S.; de Lucas Ancillo, A.; del Val Nunez, M.T. (2024). Towards Sustainable Business in the Automation Era: Exploring Its Transformative Impact from Top Management and Employee Perspective. *Technol. Forecast. Soc. Change*, 210, 123908. https://doi.org/10.1016/j.techfore.2024.123908.

Gregori, P., & Holzmann, P. (2020). Digital sustainable entrepreneurship: A business model perspective on embedding digital technologies for social and environmental value creation. *Journal of Cleaner Production*, *272*, 122817. https://doi.org/10.1016/j.jclepro.2020.122817.

Ha, M.-T.; Mai, S.-T.; Tran, T.-K.; Nguyen, T.-S. (2024). The Adoption of Industry 4.0 Technology and the Circular Economy: A Solution for the Sustainable Development of Enterprises. *J. Glob. Bus. Adv*. 16, 225–249. https://doi.org/10.1504/JGBA.2023.138497.

Hair, Joseph F., Celsi, Mary W., Ortinau, David J., Bush, Robert P. (2017). *Essentials of marketing research*. Fourth edition, New York, NY: McGraw-Hill Education.

Hamdouna, M. and Khmelyarchuk, M. (2025). Technological Innovations Shaping Sustainable Competitiveness—A Systematic Review. *Sustainability*, 17, 1-45, 1953. https://doi.org/10.3390/su17051953

Hendrawan, S. A., Afdhal Chatra, Nurul Iman, Soemarno Hidayatullah, & Degdo Suprayitno. (2024). Digital Transformation in MSMEs: Challenges and Opportunities in Technology Management. *Jurnal Informasi Dan Teknologi*, *6*(2), 141-149. https://doi.org/10.60083/jidt.v6i2.551

Hidayat-ur-Rehman, I. (2024)."The role of financial literacy in enhancing firm's sustainable performance through Fintech adoption: a moderated mediation analysis", *International Journal of Innovation Science*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJIS-03-2024-0056.

Hull, C. E., Hung, Y. T. C., Hair, N., Perotti, V., & DeMartino, R. (2007). Taking advantage of digital opportunities: a typology of digital entrepreneurship. *International Journal of Networking and Virtual Organisations*, 4(3), 290. https://doi.org/10.1504/ijnvo.2007.015166.

IMD: Institute for Management Development. (2024). *IMD WORLD DIGITAL COMPETITIVENESS RANKING 2024*. https://imd.widen.net/s/xvhldkrrkw/20241111-wcc-digital-report-2024-wip.

Indonesia Ministry of Communication and Information (*Kominfo*), 2024). *Kominfo Targetkan 30 Juta UMKM Adopsi Teknologi Digital pada 2024*. https://menpan.go.id/site/berita-terkini/berita-daerah/kominfo-targetkan-30-juta-umkm-adopsi-teknologi-digital-pada-2024

Kelly, D. G., & McAdam, M. (2022). Scaffolding liminality: The lived experience of women entrepreneurs in digital spaces. *Technovation*, *118*, 102537. https://doi.org/10.1016/j.technovation.2022.102537

Khlystova, O., Kalyuzhnova, Y., & Belitski, M. (2022). The impact of the COVID-19 pandemic on the creative industries: A literature review and future research agenda. *Journal of Business Research*, 139, 1192–1210. https://doi.org/10.1016/j.jbusres.2021.09.062.

Kim, C.-G. and Yang, O.-S. (2024). Global Companies' Dynamic Response to Business Environment Uncertainty through Digital Transformation: Sustainable Digital Quality–

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Customer Value–Market Performance Relationships. *Sustainability,* 16, 6541. https://doi.org/10.3390/ su16156541.

Khodor, Shatila; Ar´anega, Alba Yela; and Ramadani, Veland (2024). Impact of digitalization and innovation in women's entrepreneurial orientation on sustainable start-up intention. *Sustainable Technology and Entrepreneurship* 3 (2024) 100078. https://doi.org/10.1016/j.stae.2024.100078

Koskelaine, Tiina; Kalmi, Panu; Scornavacca, Eusebio; Vartiainen,Tero (2023). Financial literacy in the digital age—A research agenda. *Journal of Consumer Affairs*, 57, 507–528. DOI: 10.1111/joca.12510

Kraus, S., Palmer, C., Kailer, N., Kallinger, F.L. and Spitzer, J. (2019). "Digital entrepreneurship: A research agenda on new business models for the twenty-first century", *International Journal of Entrepreneurial Behavior & Research*, Vol. 25 No. 2, 353-375. https://doi.org/10.1108/IJEBR-06-2018-0425.

Lauer, Tim; Wolf, Maximilian; Puchan, Jörg (2020). Framework for Quantitative Digitalization Measurement in Supply Chain Planning. *Anwendungen und Konzepte der Wirtschaftsinformatik*, 60-70. ISSN: 2296-4592) http://akwi.hswlu.ch Nr. 11 (2020).

Le, ThangDinh & Chien, Manh Vu & Ayi, Ayayi (2018). Towards a Living Lab for Promoting the Digital Entrepreneurship Process. *International Journal of Entrepreneurship*, Allied Business Academies, Vol. 22(1).

Li, Jingwen; Wang, Haoliang; Soh, WeiNi (2024). Digital transformation, financial literacy, and rural household entrepreneurship. *Finance Research Letters*, 62 (2024) 105171. https://doi.org/10.1016/j.frl.2024.105171.

Luneto, B.; Mala, A.R.; Hasbi, M.; Supiah (2022). The Challenge in School Education Management in Achieving Sustainability and Advantages in the Technological Digital Era. *Educ. Adm. Theory Pract*, 28, 94–107.

Matalamäki, M.J. and Joensuu-Salo, S. (2022), "Digitalization and strategic flexibility – a recipe for business growth", *Journal of Small Business and Enterprise Development*, Vol. 29 No. 3, pp. 380-401. https://doi.org/10.1108/JSBED-10-2020-0384

Meepung, Tippawan; Pratsri, Sajeewan; Rajamangala; Thepsatri (2022). Virtual Commerce Management Using Design Thinking Process to Promote Digital Entrepreneurship for Education Studies, *International Education Studies*, Vol. 15, No. 2., 73-88. https://doi.org/10.5539/ies.v15n2p73.

Modgil, S., Dwivedi, Y. K., Rana, N. P., Gupta, S., & Kamble, S. (2022). Has COVID-19 accelerated opportunities for digital entrepreneurship? An Indian perspective. *Technological Forecasting and Social Change*, 175, 121415. https://doi.org/10.1016/j.techfore.2021.121415.

MS, Mahrinasari; Bangsawan, Satria; and Sabri, Mohamad Fazli (2024). Local Wisdom and Government's role in strengthening the sustainable competitive advantage of creative industries. *Heliyon*, 10, p. 1 -21. e31133. https://doi.org/10.1016/j.heliyon.2024.e31133.

Mukhoryanova, Oksana, Larisa Kuleshova, Nina Rusakova, and Olga Mirgorodskaya (2021). Sustainability of micro-enterprises in the digital economy. E3S Web of Conferences 250: 06008.

Myers, M.D. and Avison, D. (Eds) (2002), *Qualitative Research in Information Systems: A Reader*, Sage, Publications, London.

Najib, M., & Fahma, F. (2020). Investigating the Adoption of Digital Payment System through an Extended Technology Acceptance Model: an Insight from the Indonesian Small and

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Medium Enterprises. *International Journal on Advanced Science, Engineering and Information Technology*, *10* (4), 1702. https://doi.org/10.18517/ijaseit.10.4.11616

Nambisan, S. (2017). Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055. https://doi.org/10.1111/etap.12254.

Osinubi, Tolulope T.; Ajide, Polorunsho M.; Simatele, Munachinga (2025). What Role Does Digitalization Play in The Entrepreneurship Sustainable Performance Nexus in Africa? *Journal of Open Innovation: Technology, Market, and Complexity, 11.*

Pahlawan, P. N. M. (2023). Blockchain Technology in Digital Marketing: Roles and Challenges. *International Journal of Economics, Business, and Entrepreneurship*, *5*(1), 58-67. https://doi.org/10.23960/ijebe.v5i1.241

Paul, J., Alhassan, I., Binsaif, N., Singh, P. (2023). Digital entrepreneurship research: a systematic review. *J. Bus. Res*. 156, 113507 https://doi.org/10.1016/j. jbusres.2022.113507

Petersen, N.H.; Fuerst, S.; Torkkeli, L. (2023). Sustainable Entrepreneurship Management and Digitalization: A Green Digital Innovation Radar. *Sustainability*, 15, 14120. https://doi.org/10.3390/

Ribeiro-Navarrete, S., Botella-Carrubi, D., Palacios-Marqués, D., & Orero-Blat, M. (2021). The effect of digitalization on business performance: An applied study of KIBS. *Journal of Business Research*, 126, 319–326. https://doi.org/10.1016/j.jbusres.2020.12.065.

Rocha Estrada, F.J., George-Reyes, C.E., & Glasserman-Morales, L.D. (2022). Security as an emerging dimension of Digital Literacy for education: a systematic literature review. *Journal of e-Learning and Knowledge Society*, *18*(2), pp. 22-33. https://doi.org/10.20368/1971-8829/1135440

Rodrigues, Margarida and Franco, M´ario (2021). Digital entrepreneurship in local government: Case study in Municipality of Fund˜ao, Portugal, *Sustainable Cities and Society*, Vol. 73, 1-11. https://doi.org/10.1016/j.scs.2021.103115

Rogers, E.M., (1995). *Diffusion of innovations*, Fourth edition. Free Press, New York.

Sahibzada, U.F., Aslam, N., Muavia, M., Shujahat, M. and 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*, Vol. 38 No. 2, pp. 474-501. https://doi.org/10.1108/JEIM-01-2024-0023

Sahut, J. M., Iandoli, L., & Teulon, F. (2019). The age of digital entrepreneurship. *Small Business Economics*, 56(3), 1159–1169. https://doi.org/10.1007/s11187-019-00260-8.

Sarfraz, M.; Ivascu, L.; Abdullah, M.I.; Ozturk, I.; Tariq, J. (2022). Exploring a Pathway to Sustainable Performance in Manufacturing Firms: The Interplay between Innovation Capabilities, Green Process, Product Innovations and Digital Leadership. *Sustainability*, 14, 5945. https:// doi.org/10.3390/su14105945

Secundo, G.; Ndou, V.; Del Vecchio, P.; De Pascale, G. (2020). Sustainable development, intellectual capital, and technology policies: A structured literature review and future research agenda. *Technol. Forecast. Soc. Chang*, 153, 119917. https://doi.org/10.1016/j.techfore.2020.119917

Septiana, D.; MS. Mahrinasari; Bangsawan, Satria (2024). Fear of Missing out Behaviour : An Indonesian Consumer's Perspective of Food and Beverage. *AgBioForum*, *26*(1), 92–106.

Sharma, R.; Gupta, H. (2024). Harmonizing Sustainability in Industry 5.0 Era: Transformative Strategies for Cleaner Production and Sustainable Competitive Advantage. *J. Clean. Prod*. 445, 141118. https://doi.org/10.1016/j.jclepro.2024.141118.

IJEBE INTERNATIONAL JOURNAL OF ECONOMICS, BUSINESS AND ENTREPRENEURSHIP

Vol.8, No.1, 2025

Situmorang, S. H. (2022). The Challenges of FinTech Inclusion and Digitization of SMEs in Indonesia. *FinTech Development for Financial Inclusiveness*, 118–134. https://doi.org/10.4018/978-1-7998-8447-7.ch008

Soluk, J. (2022). Organizations' resources and external shocks: exploring digital innovation in family firms. *Ind. Innovat.* 29 (6) (2022) 792–824, https://doi.org/ 10.1080/13662716.2022.2065971.

Sonobe, T., A. Takeda, S. Yoshida, and H. T. Truong (2021). The Impacts of the COVID-19 Pandemic on Micro, Small, and Medium Enterprises in Asia and Their Digitalization Responses. *ADBI Working Paper* 1241. Tokyo: Asian Development Bank Institute. Available: https://www.adb.org/publications/impacts-COVID-19-pandemic-msme-asia-their-digitalization-responses.

Susan, F. and Acs, Z.J. (2017). The digital entrepreneurial ecosystem. *Small Bus Econ* 49, 55–73 https://doi.org/10.1007/s11187-017-9867-5.

Tariq, A., Sumbal, M.S.U.K., Dabic, M., Raziq, M.M. and 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*, Vol. 28 No. 11, pp. 179-198.

Wang, C., Teo, T.S., Dwivedi, Y., & Janssen, M. (2021). Mobile services use and citizen satisfaction in government: integrating social benefits and uses and gratifications theory. *Inf. Technol. People*. DOI: 10.1108/ITP-02-2020-0097.

Xie, Yu and Wu, Desheng (2024). How Does Competition Policy Affect Enterprise Digitization? Dual Perspectives of Digital Commitment and Digital Innovation. *Journal of Business Research,* vol. 178, 114651. Https://doi.org/10.1016/j.jbusres.2024.114651

Yaskun, M., Sudarmiatin., Hermawan, A., Rahayu, W. P. (2023). The Effect of Market Orientation, Entrepreneurial Orientation, Innovation and Competitive Advantage on Business Performance of Indonesian MSMEs. *Intern. Journal of Profess. Bus. Review.* Miami, v. 8, n. 4, p. 01-21. e01563.