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Digital Technology Literacy and Digital Economy Literacy as an Effort to Improve Business Sustainability in Banten's Micro and Small Industries in the Era of Business Uncertainty

[1]Sutisna, [2]Syamsul Hidayat, [1]Naufal Affandi, [1]Mamay Komaruddin and [3]Aghi Gilar Pratama

[1]Department of Master Management Program, Faculty of Business and Economics, Bina Bangsa Serang University, Serang, Banten, Indonesia
[2]Department of Management, Faculty of Business and Economics, Bina Bangsa University, Serang, Banten, Indonesia
[3]Departement of Information Technology, Faculty of Information Technology, Mathla'ul Anwar University, Kabupaten Pandeglang, Banten, Indonesia

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Corresponding Author:
Sutisna
Department of Master Management Program, Faculty of Business and Economics, Bina Bangsa Serang University, Serang, Banten, Indonesia
Email: sutisna0902@gmail.com

Abstract: This study focuses on the underutilization of digital technologies and the digital economy among micro and small business owners, especially in the province of Banten. This issue is important because the efficient use of digital tools can drive entrepreneurship and sustainability, especially in a rapidly developing economic landscape. To study it, a study was conducted in which 162 micro and small business owners took part, using a theoretical framework based on a model of technology acceptance. Data analysis was carried out using modeling structural equations with partial least squares. The results show that digital literacy has a positive impact on business sustainability, while digital economic literacy does not have a significant impact. In addition, the perceived ease of use and perceived usefulness of digital tools have a significant impact on the intention to adopt these technologies, which, in turn, affects the sustainability of the Company. Based on these results, we can conclude that improving the digital literacy of business owners is crucial to improving their sustainability. The novelty of this study lies in the fact that it focuses specifically on Banten's micro and small businesses, providing insights that go beyond the earlier literature and emphasizing the clear role of digital technology and economic literacy in promoting corporate sustainability. This study helps to understand how digital literacy can empower small businesses and offers practical recommendations for both business owners and policymakers.

Keywords: Business Sustainability, Digital Economy, Digital Technology, Literacy, Micro And Small Business

Introduction

Today's business progress must be connected to the development of digital technology. Digital technology helps improve a business's performance, starting from creating value, communicating value, and delivering value to satisfy customer needs and desires (Ancillai *et al*., 2023). The rapid growth of numerical knowledge has given rise to various business opportunities and is also a tool to enable business organizations to increase competitiveness (Marti and Puertas, 2023). Business opportunities from the growth of digital knowledge are very diverse and at various levels. One of the most prominent is the emergence of digital business platforms such as e-commerce in the form of online stores Huseynov and Özkan Yildirim (2019), websites, and social media. In addition to the emergence of various business platforms, various digital products are also offered to the market, such as online games, video games, and software (Vaudour and Heinze, 2020). In addition to creating business opportunities, digital technology can help companies provide services faster and more agile and deliver value. Adopting digital technology can also help companies set cheaper prices. The application of digital technology can also help companies provide services and payments (Modgil *et al*., 2022).

However, not all business people can easily take advantage of the development of digital technology.

Micro and small businesses need help adopting digital technology (Roman and Rusu, 2022). In Indonesia, obstacles to adopting digital technology arise from two sides: the business owner's side, namely, the older the owner, the less likely they are to adopt digital technology, and the higher education of business owners. Meanwhile, companies with low competition and high direct sales are less likely to adopt numerical technology (Trinugroho *et al*., 2022). Micro and small businesses face other obstacles in adopting digital technology, such as resources, marketing, competition, and capital (Martini *et al*., 2023). Micro and small businesses are also faced with obstacles such as a lack of financing, lack of knowledge of digital technology by managers, and insufficient employee expertise in using digital technology (Abdul Basit *et al*., 2024). Thus, the problem confronted by microcomputers and small commercial performers is still low digital literacy, which includes knowledge of digital technology, willingness to learn about digital technology, trying to continue learning about digital technology, and expertise in digital technology (Nikou *et al*., 2022). Currently, micro and small business actors are not only faced with a low level of numerical literateness, but their understanding of the digital economy is also low; for example, their understanding of digital marketing needs to be of better quality. In addition, the difficulty of micro and minor actors in Indonesia is due to low digital financial literacy. Many need help understanding digital transactions and fintech applications (Devi *et al*., 2023). One of the influences inhibiting the low literacy of digital technology, digital economy, and digital finance is the low level of teaching of microcomputers and unimportant commercial owners. With low education, micro and small business actors need help to utilize information technology to support their business development (Suyanto *et al*., 2023). BPS data in 2020 shows that most micro and small business owners (75.51%) in Indonesia have a junior high school education, and only 21.04% have a high school education. The study results show that the level of education affects the level of digital literateness. The higher the level of teaching, the more advanced the level of digital literacy and the more ready to adopt digital technology (Anatan and Nur, 2023). Only now is the level of digital literacy of microcomputers and small commercial performers in Indonesia still very low?

Meanwhile, of the 103,828 IMK companies in Banten Province in 2021, as many as 90.31 percent or 93,763 businesses experienced difficulties carrying out their business processes. The most significant difficulty faced by IMK companies is the capital difficulties of 72,128 businesses (Zahoor *et al*., 2023). The second difficulty faced by IMK businesses in Banten is the difficulty of marketing a total of 44,301 businesses. The next difficulty that many people experience is also the difficulty of raw materials for 34,112 companies (1). From the many IMK businesses that are experiencing difficulties, it can be seen that product marketing for micro and small businesses in Banten Province, as much as 96.24 percent of companies are still marketing in one district/city. 16.29 percent do marketing outside the district/city, but still within one province, 3.97 percent are marketed outside the province, and only 0.04 percent market their products abroad (Widayani *et al*., 2022). This happens due to the lack of technology adoption in marketing its products.

From the above problems, it is very important to measure the equality of numerical technology literateness, digital economic literacy, and digital monetary literateness to produce a model for increasing the literacy of microcomputers and unimportant commercial performers in instruction to be talented in recovering business presentation and business sustainability. As is known, the application of digital technology, digital economy, and digital finance theatres actually has significant character in improving the business performance of micro and small business actors (Rvspk *et al*., 2020). In this study, we will also want to know the digital technology gap in micro and small business actors in Banten province. In addition, by using the Technology Acceptance Model (TAM), we want to know how many benefits digital technology has for micro and small business actors. As research that produces a model, this education will inspect the association amid variable star, namely how the relationship between digital technology literacy, with the technology acceptance model and business sustainability, the association among alphanumeric economic literateness and the technology acceptance model and business sustainability (Sariwulan *et al*., 2020).

The novelty of this research is the production of a micro and small business development model in Banten Province founded on the results of measuring the level of numerical technology literacy, digital economy, and digital finance, which is moderated by the Technology Acceptance Model (TAM) which will be a significant influence in maintaining the continuity of micro and small businesses (Shashi, 2023). Of course, the expected impact of the increase in the performance of micro and small businesses shown by business continuity is the increase in the economic performance of Banten province (Lin and Wang, 2023).

The results of this research will greatly help the Banten provincial government design programs to increase digital literacy, digital economy, and digital finance as the government's efforts to help micro and small businesses develop and become sustainable (Grefen, 2021). Founded on the results of this research, the Banten provincial administration can determine a priority scale in supporting the level of digital technology literacy, digital economy, and digital finance so that microcomputer and small business performers are able to recover their business presentation, especially in terms of cumulative sales revenue (Kamal *et al*., 2020).

In the last few years, the emergence of the digital economy has completely changed the business environment and how businesses operated previously. In order to increase efficiency and, more importantly, opportunities, businesses must integrate digital tools into production, marketing, and finance activities. Nonetheless, many micro and small enterprises have been reluctant to embrace these technologies, and such benefits and potential are difficult. This literature review assesses existing literature on digital technology literacy and the particular sphere of the digital economy and sustainability of businesses, especially targeting micro and small enterprises.

Digital Technology Literacy

The term refers to the ability to harness great use of digital technology and platforms to accomplish activities within a business. Research indicates that business owners with high digital literacy tend to visualize better operational effectiveness and a broader market (Chatterjee *et al*., 2021). In the case of micro and small enterprises, which do not have the muscle of larger firms, possessing knowledge of the use of digital tools is vital for such enterprises to breach the barriers to entry in the digital economy (Li *et al*., 2020). Some studies have established that firms with better digital capabilities are situated in a better place to shift their operations with the changes in the market and changes in consumer demands, thereby improving their sustainability (Ávila-Gutiérrez *et al*., 2020).

Digital Economy

The phrase "digital economy" refers to many activities that use technologies to facilitate economic relations. This relates to e-commerce, online marketing, and electronic banking, among others. There is evidence that small and micro enterprises incorporated into the digital economy are likely to increase their customer outreach and, hence, better their revenues (T1). They still, however, employ traditional means, which inhibit their growth prospects and sustainability (T2). It has been implied in the literature that to strategize on the use of digital tools, business owners require a thorough appreciation of the digital economy (T3).

Business Sustainability

Business sustainability connotes the ability of an organization to continue functioning in an economically viable, socially acceptable, and ecologically friendly way. The intersection of sustainability and digital technology has also been an important topic of academic research. Research indicates that organizations implementing digital technologies can become more sustainable through resource efficiency and reduced ecological impacts (T4). In addition, many studies have been conducted with the technology acceptance model focussing on digital tools users perceived as easy to use and useful, which are relevant for attaining sustainability objectives (T5).

Relevance to the Journal This particular study is of great significance to the journal's audience, which is academics, professional practitioners, and policymakers dealing with technology and Business, as it informs them about artificial intelligence. It adds to the literature on economic development and sustainability by narrowing down the barriers to micro and small enterprises' adoption of digital technologies. It gives helpful guidance that can be used to design policies that seek to improve digital literacy and foster small businesses' growth in the digital economy. The literature highlights in detail the online economy and the digital technology in the economy as being critical for achieving sustainability by micro and small enterprises. Thus, this research addresses the existing void in the body of knowledge by determining the importance of adopting digital technologies among Small and Medium Enterprises (SMMEs) in Banten province. The findings will assist in both theoretical and practical implementation towards ensuring small businesses' way of life remains in a digitalized society.

Theoretical Framework and Hypothesis Development

Digital Technology Literacy, Perceived of Easy and Perceived of Usefulness

The term digital literacy is the most widely used and has diverse perspectives (Pangrazio *et al*., 2020). There is a perspective that states that digital literacy is related to the ability to use numerical technology strategies such as processors, cellphones, and other strategies for life and work activities, which are grouped into digital dexterity, digital proficiency, and digital awareness. Numerical literateness is a grouping of procedural practical skills, reasoning abilities, and social-emotional services (Reddy *et al*., 2023). Digital literacy is the skill to adopt digital technology. Another view of digital literacy is related to the level of interaction between people or society with digital technology used to create information (Tinmaz *et al*., 2022). Furthermore, reviewed various articles about digital literacy and found that the derivatives of digital literacy are computer literacy, software and hardware literacy, cultural literacy, computer program literacy, technical gadget literacy, affective and psychomotor skills to work using digital devices and generating and smearing alphanumeric literateness in actual lifetime. From some of these views, it can be stated that what is meant by numerical literateness includes the aptitude to use numerical knowledge devices, both hardware and software (Ollerenshaw *et al*., 2021). Therefore, in this study, to distinguish it from the term digital economy (which is part of digital literacy), we will use the term digital literacy as digital technology literacy. The acceptance of numerical

technology by microcomputers and unimportant businesses is greatly influenced by digital technology literacy and the digital knowledge receipt perfect (Setiawan *et al*., 2024).

The Technology Acceptance Model (TAM) is a simplification of a person's awareness of the Comfort of means of technology, the usefulness of knowledge, and the desire to use technology that allows a person to adopt technology, including digital technology (Shavazipour *et al*., 2021). With TAM, we can understand why someone might reject technology, predict possible uses of technology, and when it can be adapted. There are two important factors that reveal that a person intends to use technology, namely perceived Ease of use and perceived usefulness. Perceived ease of use is the ease that a person feels when using technology. In terms of digital technology, perceived Ease of use means that a person feels it is easy to use it before that person uses it (Barbosa Neves *et al*., 2019). Apparent practicality is related to how an individual feels that the knowledge, in this case, digital technology, is useful in supporting their life and work activities, including in supporting business activities (Martzoukou *et al*., 2020).

Digital literacy with the dimensions of data and information literateness, message and teamwork, numerical gratified formation, security, and problem-solving have an optimistic consequence on readiness to accept knowledge (Cetindamar *et al*., 2024). The findings show that external variables of knowledge perfection, such as the availability of technology facilities, have a positive effect on the Ease of using digital knowledge for both adults and adolescents. Meanwhile, social interaction has an optimistic consequence on the comfort of adults' acceptance of digital technology (Guner and Acartuk, 2020). The results of additional education on digital literacy measured by three scopes, namely technical, cognitive, and social-emotional, show a significant influence on perceived Ease of use and apparent practicality. In the use of computer knowledge, a person who already feels that he is able to use a computer has an optimistic consequence on apparent Ease and apparent practicality (Almulla, 2021).

- Hypothesis 1: Digital Technology Literacy (DTL) has a significant effect on perceived Ease of use (PEOU)
- Hypothesis 2: Digital technology literacy (DTL) influences perceived usefulness (POU)

Digital Economy Literacy, Perceived of Easy, Perceived of Usefulness, and Intention to Use

The digital economy has diverse perspectives. The first perspective views the numerical cheap as the use of network knowledge, integrating message and calculation technology in the internet system, developing the web, e-business, and delivering goods and services through the Internet. This view leads to how the usage of alphanumeric knowledge as a tool to advance commercial presentation through business alteration (Chouhan and Rathore, 2018). This view is more micro, namely, how to see the digital economy for business practice activities. The second view is to see the digital economy as an aggregate of the manufacture, marketing, and distribution of properties and facilities using digital technology and the Internet (Patterson, 2018). In this study, the concept of digital economy will refer to the first perspective, namely how to use digital technology in business activities using the concept of digital marketing, electronic commerce, electronic transactions, digital finance, and service processes using digital technology to help business activities (Salem, 2018). In this study, digital economic literacy will use a digital financial approach as a proxy.

Digital financial literateness is known to be a consequence of technology adoption, especially from the aspect of experiencing the usefulness of digital financial technology (Schön, 2019). Research on micro and small businesses in Indonesia shows that numerical monetary literateness, likewise often mentioned as monetary literacy, prepares non-consume a significant straight consequence, nonetheless has an unintended consequence finished the level of user innovativeness (Thathsarani and Jianguo, 2022). Other research on micro and small businesses in Indonesia shows that monetary literacy has an important consequence on the adoption of numerical finance through monetary accessibility. Still, research in Indonesia, financial literacy has a direct consequence on knowledge acceptance and an unintended result on knowledge acceptance finished the level of user innovation (Setiawan *et al*., 2021). Other research shows that monetary literateness has a consequence on the meaning of the usage of digital financial technology.

- Hypothesis 3: Digital Economic Literacy (DEL) has a significant effect on Perceived Ease Of Use (PEOU)
- Hypothesis 4: Digital Economic Literacy (DEL) has a significant effect on Perceived Usefulness (POU)
- Hypothesis 5: Perceived Ease Of Use (PEOU) Berengaria significance trehala intention to use
- Hypothesis 6: Perceived Usefulness (POU) has a significant effect on the intention to use

Digital Technology Literacy and Business Sustainability

Business sustainability is the business's aptitude to grow in three aspects, namely financial, communal and conservational (Fernando *et al*., 2019). Financial sustainability is the Company's ability to endure to produce and grow in terms of revenue, increasing profits, and the provision of jobs (Tien *et al*., 2020). The Company's social sustainability is how a business is able

to meet the needs of the family, empower the surrounding community, be able to absorb labor and get recognition from the community (Iazzolino *et al*., 2022). Environmental sustainability is how the Company is able to continue to protect the environment, for example, producing as little waste and waste as possible, being able to manage waste properly, and always obeying government regulations, especially regulations regarding the environment (Machado *et al*., 2020). The determinants of business sustainability consist of many factors, including digital literacy by Omiunu (2019), marketing literacy by Gao *et al*. (2023), and literacy (Kulathunga *et al*., 2020). Digital technology literateness is a significant influence needed in refining business sustainability (Dana *et al*., 2022). Some of the key performance indicators used to measure alphanumeric knowledge literateness are the aptitude to find, procedure, produce, and communicate data. In addition, it is necessary to have skills in online technology, communication norms, and environmental programming (Radovanović *et al*., 2020). Research on digital literacy measured by two edifiers, namely awareness and competence, shows a significant influence on business sustainability growth. The request for digital knowledge in commercial practices is able to guide the Company in achieving business sustainability (Xu *et al*., 2023). The request for numerical knowledge is connected to digital orientation, namely the level of digitalization of business activists. Higher digital onboarding means more business activities are digitized (Nasiri *et al*., 2022). Digital orientation affects the sustainability of inventions such as product invention, process invention, service innovation, and marketing innovation. The ability to carry out sustainable innovation improves business sustainability (Hanaysha *et al*., 2022). Thus, indirectly, technological literacy is related to business sustainability.

- Hypothesis 7: Digital Technology Literacy (DTL) has an important consequence on business sustainability

Digital Economy Literacy and Business Sustainability

It is undeniable that digital marketing is very useful in developing businesses, especially for large companies. The huge digital advertising expenditure is a clear example that digital marketing is very important in improving business performance (Ritz *et al*., 2019). Therefore, it is very significant for business people to comprehend and master digital marketing so that it can be used to improve business performance. A study on e-commerce in micro and small companies in Indonesia shows that e-commerce adoption plays a role in improving business sustainability (Yacob *et al*., 2021). The use of alphanumeric financial knowledge is now inevitable. Financial technology (FinTech) has now become one of the drivers of sustainable Business through four main pillars, namely the first importance of having a digital account, the additional is a numerical payment scheme, the tertiary is digital infrastructure and the fourth is the design of the digital financial system market (Arner *et al*., 2020). Research on small businesses in Nigeria categorized as developing countries shows that monetary literacy and practical monetary capabilities are necessary to improve the sustainability of unimportant industries (Babajide *et al*., 2023). Research in Ghana shows that monetary literateness containers recover the performance of unimportant and medium-sized businesses. The use of digital platforms will greatly help small and medium-sized businesses improve their performance (Frimpong *et al*., 2022). Additional research in Republic the Republic of Ghana found that small business managers who had good financial literacy influenced business performance from both financial and non-financial aspects. Research on business actors in Saudi Arabia found that financial literacy through consciousness of monetary foodstuffs, sympathy for monetary institutions, financial planning, and money management is able to encourage the sustainability of business performance (Seraj *et al*., 2022). At the practical level, the application of digital finance carried out by business people is able to recover business presentation, both monetary and non-financial. Micro and small businesses that are in a tight market competition and are a high-tech industry will benefit from implementing financial technology. Digital finance can improve the performance of micro and small businesses if they are given Easy access to funding sources and eliminate obstacles faced by companies (Yang and Zhang, 2020).

- Hypothesis 8: Digital economic literacy has a significant effect on business sustainability

TAM and Business Sustainability

The Technology Acceptance Model (TAM) developed shows that the adoption rate of information technology is influenced by the public's perception of the Ease of use, the feeling of usefulness, and the intention to use. The model was then developed, which has received very strong recognition and confirmation from the public and has become a reliable model for explaining the spread of various types of technology (Anshika *et al*., 2021). The three main components of TAM are Ease of use, usability of technology, and intention to use it in a simple but sturdy model. These three aspects are antecedents in the adoption of innovation in various industries, including micro and small industries. In various studies, it was found that apparent ease of use and perceived practicality have an important effect on the intention to use numerical skills (Ma *et al*., 2017). In the TAM model that has been developed, the technology acceptance model adds the actual use of technology variables.

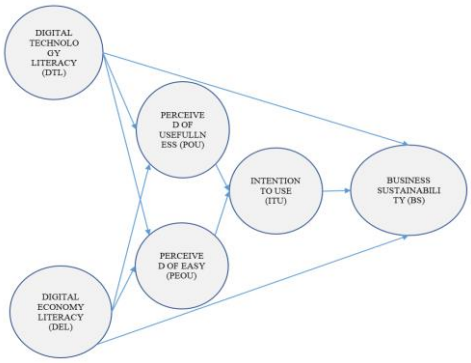

Fig. 1: Research model

This means that by using TAM, starting from the acceptance of technology to the actual use of technology, it has been explained as a unit (Loo *et al*., 2023). The actual adoption or use of digital technology has an impact on business sustainability from both economic, social, and environmental aspects. In small businesses, the adoption of innovation should be carried out in stages, starting with digital payments, especially mobile money, to be able to increase business sustainability, production, and consumption (Bai *et al*., 2021). Other research on small and medium-sized businesses found that the use of digital technology in the form of mobile applications is able to succeed in business processes and is able to increase efficiency in the long term (Rakshit *et al*., 2021).

- Hypothesis 9: Meaning to use has an important effect on business sustainability

Based on the aforementioned theoretical framework and hypothesis, a research model can be constructed to illustrate the link between antecedent and consequence variables, as depicted in Fig. (1).

Materials and Methods

The instrument in this study is a questionnaire built based on the operationalization of variables. The questionnaire was designed using Google Forms and accessible via mobile devices with an internet connection. It was distributed using social media platforms such as WA groups (Gourd, 2023). The number of respondents was 160 spread across eight districts/cities in Banten Province. The example scope meets the required example scope by referring to the formula from Hair, where the number of samples follows a ratio of 15:1 or 20:1. This means that each variable requires 15-20 samples. In this education, the amount of variables is six variables, so the least number of respondents is 6'20 = 120 respondents. Thus, the number of samples of 160 has exceeded the minimum number of samples (Regmi *et al*., 2017). The sampling technique used is purposive sampling, which is to select the respondents who are most likely to produce the most appropriate and useful information.

Participants

This research is categorized as a measurable investigation that intends to examine several theories. The project of this research is a cross-section study, which aims to collect primary data from the respondents at a certain time (Lim, 2024). The respondents in this education are microcomputers and minor commercial actors in the Banten province area.

Measurement

Each variable uses a measuring tool in the form of a questionnaire. The questionnaire is designed according to the construction of each variable. In this study, the research variables are grouped as exogen variables and endogenous variables. The exogen variable consists of two variables, namely digital technology literacy and digital economic literacy (Oosterveld *et al*., 2019). Meanwhile, endogenous variables consist of perceived Ease of use, perceived usefulness, intention to use, and business continuity. Digital technology literacy is the ability and expertise to use digital technology equipment to discover, create, evaluate, and share information. This variable was measured using four indicators: (1) Knowledge of digital technology, (2) Willingness to learn digital technology, (3) Always learning new things, and (4) Digital technology expertise (Taherdoost, 2022). Digital Economy Literacy is the use of digital technology in business activities, using the concepts of digital marketing, electronic commerce, electronic transactions, digital finance, and service processes to help in business activities (Kishore *et al*., 2021). Digital financial literacy is measured using three indicators, namely (1) Having an understanding of electronic payments, (2) Having an understanding of digital financial products, and (3) having having Experience in using financial technology (Ovo, Dana, gopak, etc.). Perceived ease of use means that a person feels it is easy to use before that person uses it. Perceived Ease of use is measured using three indicators, namely (1) Easy-to-use social media for marketing activities, (2) Easy-to-create marketing content, and (3) Easy-to-advertise on social media and the Internet. Perceived usefulness is related to how a person feels that the technology, in this case, digital technology, is useful in supporting their life and work activities, including in supporting business activities. Perceived usefulness is measured using three indicators, namely (1) Social media is important for marketing activities, (2) Marketing content can increase consumer buying interest, (3) Advertising on social media and the Internet is very important to increase sales (Scherer *et al*., 2019). Intention to use is the intention of a person to take action using digital technology and the digital economy. Intention to use is measured using three indicators, namely (1) Intending to use social media as a means of Business, (2) In the near future will use content marketing in online

marketing, (3) Will soon make advertisements on social media and the Internet. Business sustainability is the Company's ability to grow and develop in three aspects, namely economic, social, and environmental. Business sustainability is measured using three environmental indicators (less waste, waste managed, following government regulations), three economic indicators (providing jobs, increased sales, increased profits, expected profits), and two social indicators (meeting family needs, community recognition) (Jha and Verma, 2022). All variables were measured using a differential semantic scale of 1-7, where the number 1 means strongly disagree, and the number 7 means strongly agree with the proposed statement.

Analysis Methods

The data analysis methods used are descriptive statistics and Structural Equation Model (SEM) based on Partial Least Squares (PLS). The software used in SMART-PLS. This SEM-PLS method is useful for analyzing the accuracy of measuring instruments (validity and reliability), which is referred to as the outer model test (El-Dakhakhni, 2021). To ensure that the resulting SEM model is suitable or not, an inner model test will be carried out. The resulting structure will show how strong the relationship is between one variable and another variable (De Gruyter Oldenbourg, 2015). Furthermore, the research hypothesis that has been proposed is tested by comparing the P value with an alpha error rate of 5%.

Results

Respondents and Descriptive Statistics

Table (1) below describes the characteristics of the research respondents. The data that was successfully collected was 161 micro and small entrepreneur respondents, dominated by women entrepreneurs (92%). The majority of respondents were between the ages of 20-407 years old (73.5%), with the majority having a junior high and high school education (75.9%) (Patma *et al*., 2021). The majority of businesses are run by culinary (78.4%), and the rest are spread across fashion, agribusiness, automotive, and other types of businesses. The majority of businesses are relatively new because they are only between 1-5 years old (67.9%) (Rodríguez-Espíndola *et al*., 2022). Their business turnover tends to be stable, but some of them have gone up and down. Very few have experienced an increase or decrease in running their Business. The majority of businesses have used the Internet as a tool to run a business (69.8%). Social media is the most widely used internet media by micro and small entrepreneurs (64.2%), and very few use online shops, blogs, and websites (Salam *et al*., 2021).

Table 1: Descriptive statistics

Variable	label	Frequency	Percentage
Gender	Man	13	8
	Woman	149	92
Age (years)	20-30	50	30,9
	31-40	69	42.6
	41-50	34	21.0
	51-60	9	5.6
Education	SD	24	14.8
	SMP	40	24.7
	SMA	83	51.2
	Sarjana	15	9.3
Type of Business	Culinary	127	78.4
	Fashion	6	3.7
	Agribusiness	7	4.3
	Automotive	1	0.6
	Other	21	13
Business Age (years)	1-5	110	60.9
	6-10	38	23.5
	11-15	7	4.3
	16-20	3	1.9
	21-25	4	2.5
Business turnover	Stable	80	49.4
	It tends to go up	10	6.2
	Tendency down	18	11.1
	Ups and downs	54	33.3
Using the Internet for Business	Not yet using	49	30.2
	Already using	113	69.8
Internet media used	Social media	104	64.2
	Online shop	5	3.1
	Blog	3	1.9
	Website	1	0.6
	Not using	30	30.2

Data Analysis

Before testing the hypothesis in the structural equation model, the accuracy of the measuring tool, called the validity and reliability test, is carried out. Statement items to measure variables are designed using reflective models, which are measurement models that make items or indicators the embodiment of latent constructs (Yuen *et al*., 2021). To test the reflective measurement model, the following steps are required: (1) Testing the loading factor as individual reliability, the loading factor score should be more than 0.708 and t statistically significant at 0.05; (2) The results of the loading factor measurement are referred to as indicator reliability, (3) Calculating Cronbach alpha and Composite Reliability (CR) with a CR reliability limit of more than 0.7, (4) Calculating the Extracted Variant Average (AVE) to measure the convergent validity (Peter and Vecchia, 2021). The AVE score must be 0.5 or more, and (5) the validity of discrimination must be tested, namely by calculating the Heterotrait-Monotrait ratio of correlations (HTMT). The score is between 0.85-0.90. Table (2) presents the constructs and statement items, loading factor, alpha Cronbach, CR, and AVE. Based on Table (2), it can be seen that all indicators are declared reliable (more than 0.708) and that all reliable constructs are reliable because the scores of Alpha Cronbach and CR are more than 0.7. the convergent validity test using the AVE score shows that the items for each construct have high validity because the AVE score is more than 0.5 (Tuffour *et al*., 2022).

Table 2: Validity and reliability test

Constructs and items	Mean	SD	Factor loading	A	CR	AVE
Digital Technology Literacy				0.949	0.967	0.908
I know businesses can be run using social media, online stores, websites, and online transactions	5.5802	2.07238	0.884			
I am willing to learn to use digital technology to support business activities	5.4198	2.00536	0.947			
I always try to learn about the development of digital technology for business interests	5.2222	2.08812	0.943			
Digital Economy Literacy				0.917	0.947	0.857
I know electronic payments	5.3395	2.04047	0.946			
I understand the use of digital finance to support business activities	5.1728	2.07792	0.938			
I have experience using digital financial technology such as OVO, DANA, GOPAY, QRIS, etc	5.1667	2.16192	0.892			
Perceived Ease of Use				0.915	0.947	0.856
I find it easy to use social media for product marketing activities	5.3519	2.02307	0.931			
I find it easy to create digital marketing content for a running business	5.0432	2.13037	0.948			
I find it easy to place ads on social media and the Internet.	5.0123	2.09699	0.946			
Perceived of Usefulness				0.936	0.959	0.887
I consider it essential to use social media for business and marketing activities	5.2469	2.03101	0.944			
Digital marketing content can increase consumer buying interest	5.2160	2.02076	0.946			
Advertising on social media and the Internet in general is essential to increase sales	5.3642	1.91027	0.953			
Intention to Use				0.943	0.963	0.897
To support business activities, I intend to use social media	5.2840	1.95435	0.953			
Shortly, I will be using digital marketing content	5.1235	2.00857	0.936			
I will soon be advertising social media and the Internet	5.1235	1.97111	0.969			
Business Sustainability				0.959	0.966	0.778
In the production process, only a tiny amount of waste is produced	4.8704	2.10630	0.772			
Waste from the production process is well-managed	5.2037	1.94374	0.895			
Production waste management follows government regulations regarding waste	5.0309	1.93825	0.885			
The Business I run helps provide employment	5.2099	1.87309	0.891			
The Business I run has seen an increase in sales every year	5.0864	1.89276	0.881			
The Business I run is generating the expected profits	5.1852	1.91179	0.904			
The Business I run can meet the needs of my family	5.0864	1.95412	0.912			
With the Business I run, I get recognition and appreciation from the community	5.0556	1.96633	0.908			

Founded on the HTMT score in Table (3), it can be understood that, in general, the items for each construct have the validity of discrimination.

Model Fit

Before testing the hypothesis, it must first be sure that the physical model is the right model to explain the association between the variables being studied. There are several tests for model fit; the first is consistent origin Mean Four-Sided Remaining (SRMR). An SRMR score of less than 0.1 or 0.8 (more conservative) indicates that the model is declared suitable. Second, D_ULS and UG values are used as measures to assess the overall fit of the model (Campbell *et al*., 2020). The empirical correlation matrix must be non-significant ($p>0.05$) to state that the model fits as a whole. Third, use the Normed Fit Index (NFI) value. An NFI value of more than 0.9 indicates a fit model. The closer to the number 1, the better the model will fit. Table (4) presents the information on the Fit model. Of the five measurement models, three measurements were declared fit and two Chi-square and NFI measurements were declared not fit. However, based on three measures, the SEM PLS model is declared fit to explain the relationship between the variables studied (Hair *et al*., 2020).

Tabel 3: Heterotrait-Monotrait Ratio (HTMT)

	THAT	Of the	DTL	PEOU	LOUSE	BS
THAT						
Of the	0.918					
DTL	0.900	0.926				
PEOU	0.991	0.917	0.899			
LOUSE	0.952	0.895	0.938	0.959		
BS	0.908	0.832	0.859	0.860	0.872	

Table 4: Model fit

	Saturated Model	Fitness	Estimated Model	Fitness
SRMR	0.046	Fit	0.056	Fit
d_ULS	0.587	Fit	0.862	Fit
d_G	1.277	Fit	1.445	Fit
Chi-Square	1074.762	Not fit	1112.414	Not Fit
NFI	0.810	Not Fit	0.803	Not fit

Structural Equation Model

Based on the model fit test, it is concluded that the model is generally declared a suitable model to explain the relationship between variables. Figure (2) explains the model of the relationship between latent variables, namely first, the effect of DTL on PEOU is 0.400, the effect of DTL on POU is 0.597, and the effect of DTL on BS is 0.265 (Williams, 2021). The effect of DEL on PEOU was 0.510, the effect of DEL on POU was 0.324, and the effect of DEL on BS was 0.013. Furthermore, the influence of PEOU on ITU is 0.652, the influence of POU on ITU is 0.315, and the influence of ITU on BS is 0.633. The determination coefficient (R2) of DTL and DEL against PEOU was 0.769, and the determination coefficient of DTL and DEL against POU was 0.791. The determination coefficient of PEOU and POU against ITU is 0.893, and the determination coefficient of DTL, DEL, and ITU against BS is 0.773 (Setiawan *et al*., 2022).

Hypothesis Testing: Direct Influence

The proposed research hypothesis is nine hypotheses, which are tested using the P-value (sig) test criterion with an alpha error degree of 5%. If the P-value is less than 0.05, then H0 is rejected, and H1 (the research hypothesis is accepted (Rana *et al*., 2018). Based on Table (5), the first hypothesis that there is an important effect of numerical skill literacy on PEOU is accepted because it is rejected because the p-value is 0.007<0.05. Furthermore, based on the test criteria, the second, third, fourth, fifth, sixth, seventh, and ninth hypotheses were accepted (Bustinza *et al*., 2019). Therefore, it can be stated that there is a significant influence of digital technology literacy on perceived usefulness, on the significant influence of digital economic literacy on perceived Ease of use, there is a significant influence of digital economic literacy on perceived usefulness, there is a significant influence of perceived Ease of use on intention to use, there is a significant influence of perceived of usefulness on intention to use, by Khin and Ho (2019) There is a significant influence of digital technology literacy on business sustainability and there is a significant influence of intention to use on business sustainability. The eighth hypothesis is declared insignificant because the P-value is 0.898>0.05, and therefore, H0 is accepted. This means that digital economic literacy does not have a significant impact on business sustainability (Pandey *et al*., 2022).

Indirect Influence

In this study, because the model studied consists of four structures, namely PEOU = f(DTL, DEL); POU = f(DTL, DEL); ITU = f(PEOU, POU); BS =f(PEOU, POU, ITU), then the indirect influence of DTL and DEL on ITU and BS through PEOU and POU can be known (Ullah *et al*., 2022). In addition, it can also be calculated that PEOU and POU have an indirect influence on BS through ITU. Table (6) presents the indirect influence that occurs among the research variables.

From Table (6), it can be stated that the variables PEOU, POU, and ITU play a significant role as mediating variables of the influence of DTL on BS (Hadjielias *et al*., 2022). Likewise, ITU plays a significant role as a mediating variable of the influence of PEOU and POU on BS.

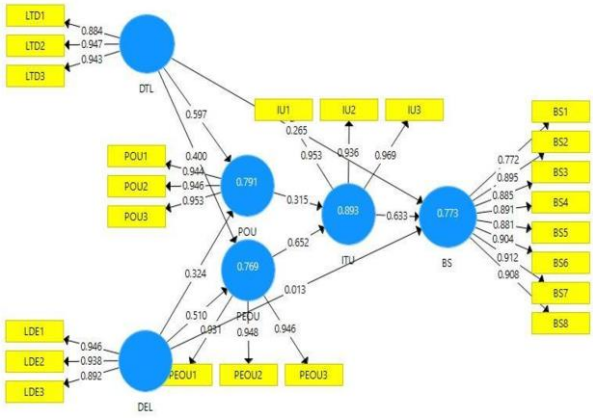

Fig. 2: Structural equation model

Table 5: Path coefficients and Significance levels

	Path coefficient	Sample Mean	SD	T-statistics	P-Values	Result
DTL -> PEOU	0.400	0.399	0.149	2.695	0.007	support
DTL -> FOR	0.597	0.600	0.119	5.024	0.000	support
DEL -> PEOU	0.510	0.512	0.143	3.556	0.000	support
DEL -> FOR	0.324	0.322	0.112	2.901	0.004	support
PEOU > IT	0.652	0.648	0.107	6.062	0.000	support
POU > THAT	0.315	0.319	0.109	2.875	0.004	support
DTL -> BS	0.265	0.270	0.130	2.041	0.042	support
FROM -> BS	0.013	0.006	0.104	0.128	0.898	Not support
THE -> BS	0.633	0.634	0.120	5.250	0.000	support

Table 6: Indirect influence

	Path coefficient	Sample mean	SD	T-Stat	p-Values	Result
DEL -> PEOU -> ITU -> BS	0.210	0.212	0.085	2.459	0.014	support
PEOU -> IT-> BS	0.412	0.410	0.102	4.050	0.000	support
DTL -> PEOU -> IT -> BS	0.165	0.162	0.071	2.323	0.021	support
DEL -> POU -> ITU -> BS	0.064	0.066	0.038	1.674	0.095*	Not support
POU -> ITU -> BS	0.199	0.202	0.083	2.383	0.018	support
DTL -> POU -> ITU -> BS	0.119	0.120	0.055	2.156	0.032	support
DEL -> PEOU -> ITU	0.332	0.334	0.115	2.880	0.004	support
DTL -> PEOU -> IT	0.261	0.256	0.103	2.538	0.011	support
DEL -> POU -> THAT	0.102	0.104	0.055	1.862	0.063*	Not support
DTL -> FOR -> ITU	0.188	0.190	0.074	2.554	0.011	support

Discussion

After testing, the first hypothesis was accepted, and it means that there is an important effect of numerical technology literateness on perceived Ease of use. This means that the higher the ability of micro and small players in the field of numerical skill, the easier it will be for them to use digital technology to help their Business (Çipi *et al*., 2023). The second hypothesis is also accepted, which states that digital technology literacy has a significant effect on the perceived usefulness. This means that the higher the literacy level of micro and small business actors, the more they feel that digital technology is useful in helping to run their Business, especially in marketing activities, increasing sales, and advertising (Wu *et al*., 2021). The results of this study support the research, which states that the economic benefits of using the Internet in the form of promotional activities for products and services are that it can save on expenses. The study also supports the findings by Ziółkowska (2021), which state that IT technology and digital tools appear in marketing activities and help build relationships with clients and create value for both parties.

The third hypothesis test resulted in the conclusion that digital economic literacy has a significant effect on perceived Ease of use. This means that the higher the level of digital economic literacy of microcomputers and minor commercial performers, the more they feel the Ease of implementing the digital economy in their Business (Brenner and Hartl, 2021). The third hypothesis test also concluded that the more advanced the numerical economic literacy, the more micro and small business actors feel the benefits of using the digital economy in their business activities. The benefits felt from the ability in the digital economy are in the form of electronic payments and marketing of products and services. The results of this study corroborate the findings of Fauzi and Sheng (2022) that micro and small business actors are willing to use digital applications, especially in terms of delivery and payment. This research is also in line with the investigation of Odoom and Kosiba (2020) that microcomputers and minor commercial actors feel the usefulness of mobile money in helping their business activities.

The fifth hypothesis test shows that when micro and small business actors feel the convenience of using digital technology and the digital economy, they will have a stronger intention to use the technology (Del Río Castro *et al*., 2021). The results of the sixth hypothesis test also produced a conclusion stating that when business actors feel the benefits of digital technology and the digital economy, they stronger the intention to use numerical skill and numerical cheap in their business activities. From the results of the research, the majority of micro and small business actors (69.8%) have used digital technology and the digital economy in running their businesses. The results of this study corroborate the findings that the Ease of use and feel of the usefulness of fintech have a significant effect on the intention to adopt fintech among Indonesian women. The results of this study also support the findings by (Crittenden *et al*., 2019), which concluded that the intention of women micro and small entrepreneurs in deciding to use ICT is influenced by their perception of the convenience and usefulness of ICT. The results of this study are also in line with the research by Camilleri and Falzon (2021) which states that feeling the usefulness of technology increases the intention to use technology.

The seventh hypothesis test concluded that digital technology literacy has a significant influence on business sustainability. This means that the higher the level of digital technology literacy of micro and small business actors, the more sustainable the Business will be. Business actors who have the ability and expertise in digital technology will be able to improve their business sustainability, both economic, social, and environmental sustainability (Grybauskas *et al*., 2022). The results of this study are relevant to the view that digital technology can improve economic, environmental, and social sustainability. Some studies reveal that digital technology is meant to increase productivity and efficiency, which has the main goal of increasing profits for business owners. As for social benefits in the form of job availability, for example, it is an element of accident and not a goal (Szalkowski and Johansen, 2024).

The eighth hypothesis test resulted in the conclusion that digital economic literacy has no effect on business sustainability. In this case, electronic payments and, more

broadly the use of digital finance and the use of digital wallets have no effect on business continuity from economic, environmental, and social aspects (Rupeika-Apoga and Petrovska, 2022). The consequences of this education are conflicting with the consequences of the research, which states that digitalization is able to encourage economic, social, and environmental sustainability. The results of this study are also contrary to the consequences of the study, which found that the adoption of communal television advertising plays a role in improving business sustainability. The difference between the fallouts of this investigation and the preceding investigation can be caused by the measurement of the digital economy only in the aspects of digital transactions and digital finance. A broader measurement is needed on the aspects of using digital technology for marketing activities (Chatterjee *et al*., 2021).

The ninth hypothesis test resulted in the conclusion that the intention to use digital technology and the digital economy as a tool to run a business plays a role in improving business sustainability. The stronger the intention of micro and small business actors to use digital technology, the higher the business sustainability will be. The acceptance of micro and small businesses in digital technology will increase the sustainability of their Business. This research is relevant to the research by Li *et al*. (2020) that digital technology has implications for economic and environmental sustainability. In this context, companies create and present information on products and services produced using digital technology, and this effort will encourage consumers to make purchases so that the economy will be sustainable. As the weight for ecological accountability upsurges, businesses can adopt advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), predictive analytics, and the Internet of Things (IoT) to achieve environmental sustainability goals (Ávila-Gutiérrez *et al*., 2020). This study also corroborates the findings that digital orientation is able to improve economic, social, and environmental sustainability.

Business sustainability is a major trend in the world economy, and micro- and small-scale businesses dominate the population of business units. Improving business sustainability in micro and small businesses is an effort that must continue to be carried out in various ways. In this study, it has been found that efforts to improve business sustainability can be carried out by increasing the literacy of micro and small business actors in the field of digital technology and digital economy. Business actors also feel that digital technology and the digital economy are easy to use and useful in encouraging stronger intentions to use digital technology and the digital economy. In fact, most micro and small business actors have used digital technology in the form of social media as a tool to promote their products and services. They have also used the digital economy in the form of using the Internet to conduct business transactions both for payments and for the sale of products and services. Another finding is that digital technology plays a role in improving business sustainability. On the other hand, digital economic literacy does not play a role in improving business sustainability. The last finding is the intention to adopt digital technology to improve business sustainability.

Theoretical Implications

This research enriches scientific insights in the field of applied technology, especially digital technology, to improve business performance and sustainability. This research also strengthens the Technology Acceptance Model (TAM) as a model that can be applied in various fields of science. People, in general, will adopt digital technology if they feel the Ease of using it. Micro and small business actors feel that it is easy to use social media, easily open an online store, create a website, and make online transactions. Another convenience in terms of using digital technology in marketing its products and services. In this study, the perception of the convenience and usefulness of digital technology and the digital economy is preceded by high literacy of two things, namely the ability and expertise in using hardware and software, digital technology, and the digital economy. Digital technology literacy is related to mastery of how to make social media, create online stores, create websites, and create online transactions, which is an important factor in shaping the perception of convenience in digital technology. Meanwhile, the digital economy is related to how digital technology hardware and software are used as a means to conduct business transactions, market products, place advertisements, and make purchases and sales.

This research also contributes to strengthening global trends regarding the Sustainable Development Goals as stated in the Sustainable Development Goals (SDGs) by 2030. In sustainable development, there has been an intense interaction between digital technology and digitalization with sustainability. These interactions have the opportunity to create sustainability in terms of economy, society, and a greener environment. This research resulted in findings that digital technology plays a role in business sustainability from the environmental aspect, namely, the production process produces little waste, and waste is managed properly and in accordance with government regulations. From the aspect of economic sustainability, the use of digital technology is able to provide jobs and increase sales and profits. Finally, digital technology is able to improve business sustainability from a social aspect in the form of the ability of business actors to meet the needs of their families, gain community recognition, and empower the community.

Managerial Implications

The results of this investigation can assist microcomputers and minor commercial actors as a conceptual basis for developing their businesses. It is inevitable that business progress and business sustainability are greatly influenced by the ability and expertise to use digital technology and the digital economy. Micro and small business actors can apply digital technology in several activities such as digital business transactions, advertising on social media, websites, and online stores, creating attractive promotional content, and placing and communicating on social media as well as on other internet media. Business actors also need to apply the concept of business sustainability in three areas, namely environmental sustainability, economic sustainability, and social sustainability, so that they can play a role in contributing to the concept of sustainable development.

The next implication is for the local government of Banten province. As a regulator and supervisor of micro and small business activities, local governments should encourage the increase of micro and small businesses through various programs. First, the government facilitates micro and small actors so that they have high literacy in digital technology and the digital economy through structured training with a curriculum that is able to improve the abilities and expertise of micro and small business actors. Second, the government facilitates access to the Internet by building information technology infrastructure that makes it easier for every micro and small business actor to run their Business. Third, the government needs to continue to focus on efforts to improve business sustainability in three aspects, namely environmental, economic, and social, by regulating green business practices to achieve sustainable development.

Application of Findings

The results of this research regarding the use of digital technology and the digital economy as measures to increase business sustainability in micro and small industries in Banten province have far-reaching consequences for business owners, policymakers, educational practitioners, and researchers alike.

For Business Owners

Micro and small business owners can use the insights in this research to increase their proficiency in using digital technology relevant to running their businesses. Business owners should understand this ability and consider investing in training and development programs that broaden their skills to use digital tools. Such investment can result in greater operational efficiency, increased customer engagement, and higher sales through online channels. In addition, digital economy comprehension can provide these entrepreneurs with new growth avenues and assist in readjusting their business models according to changing consumer behaviour.

For Policymakers

Findings from work can be helpful for policymakers in the sense that they can come up with specific measures that enhance ICT usage among micro and small enterprises. They can do this by creating friendly environments that enable smaller enterprises to have equal access to digital training programs as larger companies. Furthermore, they can implement policies that promote the use of technology in business processes, which encourages growth and sustainability within the community. It clearly shows no comprehensive support structure for small working businesses. Thus, there is a need for partnerships and alliances between government bodies, universities, and businesses to address the issue, as stated in the research.

For Educators

Educational institutions can use the findings by designing digital technology and digital economy curricula. In this way, students and business owners can be trained in ICT so that they can see the application of their education in the real world. This application-based model sharpens the skills of aspiring entrepreneurs and benefits the region in which they operate by building a technologically proficient workforce.

For Experts

The current inquiry aids in narrowing the knowledge gap about the interaction between digital technology and business sustainability, which could set a basis for further studies. Then, the researchers may apply such findings to investigate other factors affecting the acceptance of digital technologies in micro and small-sector enterprises. In addition, cross-regional or cross-industry studies on adopting best practices for enhancing digital literacy and economic resilience can be equally enjoyable.

Conclusion

To sum up, the importance of the chosen problem and its solution requires that the area of application of the results obtained in this study is not the Banten province alone. The research meets the demands of different edge providers by providing solutions that could support the sustainability of micro and small enterprises in a growing digital space. Most importantly, the lessons learned in this research are common to many people including scholars, the working class, and policymakers, because all of them are working towards better Business for the future in the digital economy.

Limitations of Research and Further Research

The first limitation of the study is that the sample composition is not proportional because it is dominated by respondents from culinary business actors. Other business

fields have very few respondents. The composition of the sample is dominated by culinary business actors, which is rather risky to generalize to all micro and small businesses. Second, the measurement of the new digital economy is in the aspect of digital financial transactions and does not measure the digital economy from the aspect of digital marketing. The impact is that the conclusion regarding the digital economy is incomplete and less comprehensive. Therefore, for further research, in order to make the conclusion more comprehensive, the composition of the sample is more proportional so that it can be more representative of the population. In addition, digital economic literacy needs to be measured from the aspect of digital marketing in order to produce a more comprehensive and accurate picture.

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Author's Contributions

All authors equally contributed to this study.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

Conflict of Interest

We declare no conflict of interest with any organization or entity in writing this article. We declare that this article is original and has not been published anywhere.

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