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Article

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Understanding the role of financial literacy, entrepreneurial literacy, and digital economic literacy on entrepreneurial creativity and MSMEs success: a knowledge-based view perspective

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ABSTRACT

Business literacy is intellectual capital, which includes financial literacy, entrepreneurial literacy, and digital economic literacy, and its role in entrepreneurial creativity and the success of MSMEs is an important aspect to study, especially from a knowledge-based perspective. This research aims to identify and explore the influence of financial literacy, entrepreneurial literacy, and digital economic literacy on the success of MSMEs, with entrepreneurial creativity as a moderator variable. This research uses quantitative methods. The data collection technique used in this research is a questionnaire. The sample in this study was 700 respondents and were selected using purposive sampling techniques. Data analysis using PLS-SEM through Smart PLS software version 4. This research provides a comprehensive exploration and understanding of the fact that financial literacy, entrepreneurial literacy, and digital economic literacy are intangible assets that have an impact on business success. This research succeeded in finding and confirming that financial literacy, entrepreneurial literacy, and digital economic literacy have a positive and significant effect on the success of MSMEs through entrepreneurial creativity. This finding emphasizes the development of new concepts and insights related to intellectual capital in MSMEs that include financial literacy, entrepreneurial literacy, and digital economic literacy as part of intellectual capital in the knowledge-based view perspective.

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1. Introduction

Micro, small, and medium enterprises (MSMEs) play an important role in improving the economies of various countries because the MSME sector has the potential to create jobs that can overcome the problem of unemployment (Marcus et al., 2022). Blake (2022) found that the existence of MSMEs cannot be doubted because they have been proven capable of being the driving force of the economy and can survive in the midst of the economic crisis and various external environmental challenges. Furthermore, Bielawska (2022) found that MSMEs need special attention to achieve business success.

MSMEs have a significant role in creating jobs, improving community welfare, and contributing to income distribution. However, there are still a number of challenges faced by MSME players. Problems often faced by MSME players are a lack of ability to manage finances, a lack of innovative business development, and not being able to utilize internet assistance (Wattanakomol & Silpcharu, 2023). The challenges faced by MSME business actors must be handled swiftly by the business owners themselves and the government, so that business actors must be astute in seeing opportunities so that their

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businesses continue to grow and provide large profits. The findings of Chen et al. (2021) concluded that every business actor must be able to understand good financial management, be able to develop innovative businesses, be able to utilize technological and economic collaboration, and be able to develop new ideas to achieve business success.

Several empirical facts show that MSMEs in Indonesia face obstacles to success and contribute to the economy due to low literacy factors, especially the level of financial literacy and digital economic literacy. The results of the National Survey of Financial Literacy and Inclusion (SNLIK) conducted by the Indonesian Financial Services Authority in 2022 showed an increase, but the level of financial literacy of the Indonesian people was still at 49.68 percent. The results of the survey also showed that the literacy index in rural areas was still behind the urban area index, with a figure of 48.43 percent when compared to urban areas, which were at 50.52 percent (Indonesia Financial Services Authority, 2022). Based on the results of the survey, to date only 20.5 million MSMEs out of a total of 65 million MSMEs in Indonesia have entered the digital ecosystem (Indonesia Financial Services Authority, 2022). This shows that most MSMEs in Indonesia still have problems with aspects of financial literacy and digital economic literacy, so MSMEs do not yet have a strategy for utilizing digital technology to increase their competitive advantage. The digital access gap has an impact on the inability of MSME actors to benefit from digital economic growth, financial inclusion, and MSME digitalization, so that financial literacy, entrepreneurial literacy, and digital economic literacy are factors that must be optimized to be able to increase the success of MSMEs and their contribution to the Indonesian economy (Mujiatun et al., 2023; Prayitno et al., 2022; Rahadi et al., 2023; Raharjo et al., 2024).

In the last few decades, the relationship between various types of business literacy and business success has been widely studied, but only from a purely financial perspective as a moderating variable (see Adomako et al., 2016; Çera et al., 2020; Fatoki, 2014; Rahmawati et al., 2023; Rapina et al., 2023). Several previous studies have succeeded in exploring that there are non-financial aspects that are important in mediating between business literacy and business success, including entrepreneurial creativity. The findings of Khan and Mohiya (2020) and González-González and García-Almeida (2021) show that the ability to direct thoughts and ideas into new efforts that are different from previous efforts is very necessary for business actors, thus including the aspect of creativity as an important variable in determining the success of MSMEs. Blazar and Kraft (2017) findings conclude that business literacy can strengthen business success through entrepreneurial creativity.

Several previous studies found that there are many combinations of literacy that can determine the success of MSMEs, such as digital economic literacy and financial literacy (Kurnia et al., 2024; Naganjani & Sita, 2023), financial literacy (Derbyshire et al., 2023; Liu et al., 2021; Rai et al., 2019), and entrepreneurial literacy (Guampe et al., 2022). Running a business requires financial literacy, entrepreneurial literacy, and digital economic literacy in order to be able to manage the business well and get big profits (Liu et al., 2023). Therefore, entrepreneurial innovation is needed in an enterprise or business so that it can compete in its business sector. Business actors need to have the skills to produce innovation, whether it is a completely new innovation or a new idea that emerges through combining existing elements into something new (Razzaque et al., 2024).

Research conducted by Lin and Bates (2022) shows that financial literacy influences business performance and success. This view is in line with the findings Ye and Kulathunga (2019) who stated that good financial literacy will produce appropriate management and financial decisions to improve business performance and success. The findings of Tejedor et al. (2020) also concluded that financial literacy has an impact and contributes 88.9% to business success. Similar findings were found by Shaji George et al. (2023), who state that financial literacy has an influence on business performance and success.

Entrepreneurial literacy is also very important for the success of a business (De Lange, 2018). The higher the entrepreneurial literacy you have, the easier it is to achieve success in running a business. Research by Golder et al. (2023) also found something similar. Apart from entrepreneurial literacy, digital economic literacy is also very important for business actors because the digital economy can create opportunities for business actors (Igbinkhase, 2021). Economic actors with high economic capacity must be able to turn all threats and challenges into opportunities that bring profits and benefits to the economy (Weixiang et al., 2022). Digital economic literacy refers to a person's capacity to utilize digital devices to search for and retrieve the right information, think critically, generate new ideas, work together, and

communicate clearly. Williams (2021) also found that every business actor needs to be proficient in digital economic literacy in order to compete in the modern market.

In the perspective of the case of MSMEs in Indonesia, the findings of Iramani et al. (2018), Widyastuti et al. (2023), Rahadi et al. (2023), and Mujiatun et al. (2023) show that financial literacy influences the success of MSME businesses in Indonesia. Furthermore, Rahmawati et al. (2023) found that entrepreneurial creativity can strengthen the relationship between financial literacy and the success of MSME businesses in Indonesia. In addition, the findings of Sutisna et al. (2021) and Guampe et al. (2022) show that the development of entrepreneurial literacy in the MSME community in Indonesia can have an impact on the success of MSMEs. In another perspective, Susanti et al. (2023) found that digital transformation can form digital economic literacy, which can influence the success of MSME businesses in Indonesia. Using the perspective of social cognitive learning theory, Raharjo et al. (2024) found that digital economic literacy can influence the success of MSME businesses in Indonesia through business transformation. The latest findings from Rosyidiana and Narsa (2024) found that a combination of various literacies, such as financial literacy and digital economic literacy, can produce innovations that can have an impact on the success of MSME businesses in Indonesia. From a theoretical perspective, based on previous studies related to the relationship between various literacies and the success of MSMEs, this study seeks to fill the gap in previous research and provide meaningful contributions to the entrepreneurship literature by presenting new insights related to aspects of intellectual capital in a knowledge-based perspective that is still rarely studied in previous literature. This perspective views literacy as part of intellectual capital that can increase the success and competitiveness of MSMEs by being strengthened by entrepreneurial creativity.

Based on the knowledge-based view perspective on MSMEs, this research was conducted to explore and investigate the research questions (RQ):

RQ1: How do financial literacy, entrepreneurial literacy, and digital economic literacy affect entrepreneurial creativity?

RQ2: How do financial literacy, entrepreneurial literacy, and digital economic literacy affect business success?

RQ3: How does entrepreneurial creativity affect business success?

RQ4: How do financial literacy, entrepreneurial literacy, and digital economic literacy affect business success through moderating entrepreneurial creativity?

From the four research questions, this study aims to understand the role of financial literacy, entrepreneurial literacy, and digital economic literacy on the success of MSME businesses through moderation of entrepreneurial creativity based on the knowledge-based perspective. This research makes three contributions. First, explore various literacies, including financial literacy, entrepreneurial literacy, and digital economic literacy, for the success of MSMEs. Second, this research presents the concept of moderation through entrepreneurial creativity, which can provide deeper insight into how this factor can influence the relationship between financial literacy, entrepreneurial literacy, and digital economic literacy and the success of MSME businesses. Third, this study helps the government design a strategy for empowering MSMEs based on knowledge and creativity that can stimulate the growth of MSMEs in Indonesia.

This article consists of seven comprehensive, interrelated parts. The first part is an introduction, containing the background, novelty, research questions, research objectives, and research urgency. The second part is constructed through theoretical perspectives and facts consisting of several previous findings that serve as theoretical bases for building a conceptual framework and developing hypotheses. The third part will present the methodology, which includes variable measurements, samples, and data collection. The fourth part contains the findings consisting of respondent characteristics and testing of the relationship between research variables. The fifth part contains a discussion, which contains a comprehensive analysis and comparison between research results with previous theories and research. The sixth part contains conclusions on the results and discussions. Finally, the seventh part contains theoretical implications, managerial implications, and limitations of this study.

2. Literature review and hypotheses development

2.1 Literacy as intellectual capital: a knowledge-based view

This research is built using the main theory of intellectual capital internalized into the case of MSMEs. Ulrich (1998) reconstructs the conceptualization of intellectual capital as a combination of competence and commitment. In the perspective of this research, intellectual capital is an intangible asset in the form of information resources and knowledge that functions to increase competitive ability and can improve company performance. Several studies have shown that unique or rare resources affect company performance, including intangible assets (Barney, 1991; Grant, 1991). Barney (1991) and Barney et al. (2021) state that organizations have a competitive advantage when assets, capabilities, or processes are rare, valuable, difficult to imitate, and have few substitutes are important resources for competitive advantage. The development of the idea of intellectual capital within the framework of the knowledge-based view theory (Grant, 1991) is the middle theory of this research.

Based on the knowledge-based view theory (Grant, 1991), this study shows that MSMEs need various knowledge to create business success. The various knowledge in this study is referred to as literacy. In order to be successful, MSMEs must be able to combine various literacies to become the intellectual capital they have in order to be able to face competition (Zhicheng et al., 2016). These various literacies are combined to form intellectual capital that is accumulated in the intangible assets of MSMEs (Muchran, 2020). Various literacies accumulated in various intellectual capital are considered very important for business development (Nonaka et al., 2006). The conceptualization of literacy in this study is an applied theory developed from organizational knowledge creation theory (Nonaka et al., 2006), which considers that various literacies accumulated in various intellectual capital are considered very important for business development. The knowledge-based view sees that literacy is a strategic resource for MSMEs. MSMEs must implement knowledge well so that it gives birth to creativity. Therefore, literacy is an important intellectual capital to create creativity, which will have an impact on business success (Burcher et al., 2021; Yüksel et al., 2022).

In the perspective of the Indonesian case, the findings of Astuti et al. (2017) and Hariyono and Narsa (2024) show that intellectual capital has an influence on the sustainability and success of MSME businesses in Indonesia. These findings provide new evidence of the importance of intellectual capital for the sustainability, competitiveness, and success of MSME businesses in Indonesia. To further clarify the development of the main theory and several previous studies related to literacy as part of intellectual capital, it can be seen in Table 1.

Referring to several main theories and previous research in Table 1, it is stated that literacy is part of intellectual capital when viewed from a knowledge-based perspective. In the perspective of the case of MSMEs in Indonesia, various literacies have been identified that can influence entrepreneurial creativity and the success of MSMEs in Indonesia, including financial literacy (Mujiatun et al., 2023; Rahadi et al., 2023), entrepreneurial literacy (Guampe et al., 2022; Sutisna et al., 2021), and digital economic literacy (Raharjo et al., 2024; Susanti et al., 2023). In this research perspective, these three literacies will be studied for their influence on the success of MSME businesses through moderation of entrepreneurial creativity based on a knowledge-based view perspective. This will be described in the next section, which explains the development of the hypothesis in this study.

2.2. The relationship between financial literacy and entrepreneurial creativity

Financial literacy is an understanding of matters relating to money management and its use to improve welfare and business success (Huang et al., 2024). Financial literacy is carried out by adding aspects of financial attitudes and behavior in addition to knowledge, skills, and beliefs about financial institutions, products, and services (Lone & Bhat, 2024). The definition of financial literacy is knowledge, skills, and beliefs, which influence attitudes and behavior to improve the quality of decision-making and financial management in order to achieve welfare. Financial literacy is also known as skills and knowledge that enable individuals to make effective decisions about investments that can improve their economy in the future (Aman et al., 2024). Financial literacy includes financial knowledge, financial ability, financial behavior, financial attitudes, and financial performance (Graña-Alvarez et al., 2024).

Table 1. Summary of the development of major theories and some previous research.

No	Author's Nama/Year	Research Title	Findings
1.	Grant (1991)	The resource-based theory of competitive advantage: Implications for strategy formulation.	The internal resources of an organization are tangible assets, specific internal capabilities, routines, and knowledge that are managed by the organization and can be used to implement, run, and achieve organizational goals.
2.	Nonaka et al. (2006)	Organizational knowledge creation theory: Evolutionary paths and future advances.	Organizational knowledge creation is the process of providing and strengthening knowledge created by individuals and crystallizing and connecting it to the organization's knowledge system. Various literacies accumulated in various intellectual capitals are considered very important for business development.
3.	Zhicheng et al. (2016)	The impact of intellectual capital on companies' performances: A study based on MAKE award winners and non-MAKE award winner companies.	The accumulation of human capital and intellectual capital has an influence on the success of an organization or company.
4.	Muchran. (2020)	Effect of intellectual capital on sustainable financial performance of Indonesian pharmaceutical firms with moderating role knowledge management.	Various literacies can be combined to form intellectual capital that accumulates in intangible assets and can impact the success of an organization.
5.	Yüksel et al. (2022)	A new theoretical approach to intellectual capital: Meta-synthesis definitions of innovative literacy.	Various literacies are part of intellectual capital. Integrating knowledge will have an impact on the success of the organization.
6.	Purnomo et al. (2022)	Sustainability MSMEs performance and income distribution: Role of Intellectual capital and strategic orientations.	Intellectual capital has a substantial positive influence on innovation and the success of MSMEs in Indonesia.
7.	Hariyono and Narsa (2024)	The value of intellectual capital in improving MSMEs' competitiveness, financial performance, and business sustainability.	Intellectual capital is recognized as one of the factors that influence organizational progress. Intellectual capital has an influence on the continuity and success of MSME businesses in Indonesia.

Source: Processed by researchers, 2024.

According to Al Rahahleh (2022), financial literacy has a good and big impact on the creativity and innovation of MSME players. This is in line with research by Joensuu-Salo et al. (2022), who found that financial literacy has a positive effect on business performance and creativity. Apart from that, research by Manafe et al. (2023) also agrees that financial literacy also has a significant influence on the creativity of MSMEs to face crises and maintain the sustainability of their businesses. Research Zeng et al. (2023) also said that financial literacy influences entrepreneurial creativity, especially in managing MSME finances. Based on several studies, it is shown that good financial literacy will encourage entrepreneurial creativity in the capacity of entrepreneurs to improve the quality of financial management of MSMEs. Based on this, a hypothesis can be put forward:

Hypothesis 1. Financial literacy has a positive and significant effect on entrepreneurial creativity.

2.3. The relationship between entrepreneurial literacy and entrepreneurial creativity

Entrepreneurial literacy can be understood as an awareness of the importance and existence of entrepreneurship, the ability to identify, find, observe, analyze, process, and use entrepreneurial knowledge (Liu et al., 2021; 2023). Entrepreneurial literacy is directed at the process of knowledge to create, develop, organize, and manage new companies, and then lead them to achieve success (Gupta & Gupta, 2024).

Entrepreneurs must see business opportunities that can benefit individuals and consumers by applying various positive, innovative, and creative characters (Barinua et al., 2022). The findings of Muthumeena and Yogeswaran (2022) concluded that entrepreneurial literacy shapes an individual's ability to create something new so that it has an impact on the birth of creative thinking and innovative actions that enable the formation of new ideas or business opportunities. Furthermore, Wen et al. (2024) and Moorthy and Sahid (2022) stated that entrepreneurial literacy has an impact on understanding the basics of business to design a product creatively. Therefore, entrepreneurs must have good entrepreneurial literacy to increase entrepreneurial creativity. Previous findings from Razzaque et al. (2024) also stated that entrepreneurial literacy has a significant impact on entrepreneurial creativity, which can help develop businesses innovatively. Based on this, a hypothesis can be put forward:

Hypothesis 2. Entrepreneurial literacy has a positive and significant effect on entrepreneurial creativity.

2.4. The relationship between digital economic literacy and entrepreneurial creativity

Digital economic literacy refers to the skills needed by individuals to navigate the use of technology in business and other economic decisions (Peng & Mao, 2023). Digital economic literacy involves searching the internet, critically analyzing the content it contains, and using media in the form of special tools in carrying out every MSME business activity (Aminullah et al., 2024). Digital economic literacy includes elements of creating, accessing, and interpreting digital media in every economic and business activity and decision (Raharjo et al., 2024).

Several previous findings show that digital economic literacy can have a positive impact on increasing entrepreneurial creativity (Raharjo et al., 2024; Susanti et al., 2023). Digital economic literacy influences entrepreneurial creativity because it provides an understanding in interpreting information from social media and is able to adopt digital devices, both applications and services, so that MSMEs are increasingly creative in utilizing data references in business and entrepreneurial activities (Aminullah et al., 2024; Coco et al., 2024).

In running a business, entrepreneurs must understand digital economic literacy to utilize digital tools to search for and retrieve the right information, think critically, and generate new ideas. The findings of Abdurakhmanova et al. (2020) show that every business actor needs to be proficient in digital economic literacy in order to compete in the modern market. Shaikh et al. (2020) found that economic literacy can be considered an important aspect of economic behavior because it can be used to measure the level of individual confidence in their knowledge about the creativity of business strategies that benefit a company. Furthermore, Buckingham (2020) found that digital economic literacy refers to the skills needed to navigate network technology and interpret the importance of digital messages for running a business, which will ultimately lead to creating creativity in running a business. Abad-Segura and González-Zamar (2019) also say that digital economic literacy has a significant impact on entrepreneurial creativity, especially when working together and communicating well. Based on this, a hypothesis can be put forward:

Hypothesis 3. Digital economic literacy has a positive and significant effect on entrepreneurial creativity.

2.5. The relationship between Financial Literacy and the success of MSMEs

Financial literacy is important for the success of MSMEs because it is knowledge about financial principles in business management. The findings of Culebro-Martínez et al. (2024) show that the ability to apply information and insight to make wise financial decisions can improve individual well-being and the success of MSME businesses. Furthermore, the findings of Graña-Alvarez et al. (2024) show that financial literacy can improve the success of MSMEs because the ability to handle personal finances properly and appropriately, including in determining investment choices and financial planning decisions for businesses, contributes significantly to business development. Financially literate MSME actors will be able to recognize and react strategically to changes in the business, economic, and financial climates, allowing them to make decisions that will produce effective solutions for the success of MSMEs (Rosyidiana & Narsa, 2024).

Knowledge about financial management must be understood by entrepreneurs, so it is very important to have the ability to apply information and insight to make good financial decisions (Tajpour et al., 2022). Financial literacy is important for business success because it involves knowledge about financial management, savings, credit, insurance, and investment (Kraus et al., 2022). Kumar et al. (2023) found that financial literacy refers to the ability to handle personal finances well and appropriately, which will have an impact on business success. This statement agrees with Panjaitan et al. (2022) that to achieve business success, business actors must understand financial literacy. This is also in line with Manafe et al. (2023) who found that a person's ability to make effective decisions regarding financial management, both now and in the future, will make it easier to achieve success in business. Furthermore, Twumasi et al. (2022) say that financial literacy has a significant impact on business success. Based on this, a hypothesis can be put forward:

Hypothesis 4. Financial literacy has a positive and significant effect on business success.

2.6. The relationship between entrepreneurial literacy and the success of MSMEs

Several previous studies have found that entrepreneurial literacy is needed, especially for entrepreneurs, to improve understanding and knowledge about entrepreneurial skills in finding and utilizing opportunities and potential for the success of the business they run (Lestari et al., 2024). Entrepreneurial literacy produces several competencies, namely knowledge, attitudes, and skills that are connected to each other, which are needed for entrepreneurs to be trained and developed in order to be able to produce the best performance in managing their business by carrying out planning, organizing, driving, and monitoring functions so that the business they run can achieve success (Kang et al., 2024). From this explanation, entrepreneurial skills and literacy have a significant impact on the ability of an MSME to succeed because it allows an entrepreneur to more easily develop innovative business strategies and produce new ideas or goods that are able to compete in the market.

In running a business, entrepreneurs must have a positive, creative, and innovative personality that turns problems and challenges into business opportunities that benefit themselves, society, or consumers (Westman et al., 2023). An entrepreneur needs to have entrepreneurial literacy, which is reflected in creative and innovative skills, sensitivity in identifying opportunities, and openness to input and positive changes to ensure business growth and create added value as a form of business success (Prayitno et al., 2022). Dabić et al. (2023) found that entrepreneurship, including entrepreneurial literacy, functions as a tool to create something new and has unique characteristics to achieve success in a business. Furthermore, Golder et al. (2023) also found that entrepreneurial literacy has a significant impact on business success. Based on this, a hypothesis can be put forward:

Hypothesis 5. Entrepreneurial literacy has a positive and significant effect on business success.

2.7. The relationship between digital economic literacy and the success of MSMEs

Digital economic literacy can impact the success of MSMEs through functional skills on digital devices in business to search and select information, think critically, be creative, work with others, collaborate effectively, and remain alert to electronic security and changes in socio-cultural contexts in a constantly changing business environment (Bachmann et al., 2024; Nguyen et al., 2024).

In running a business, entrepreneurs must utilize digital devices to search for and retrieve the right information (Lopus et al., 2019). Every business actor needs to be proficient in digital economic literacy to achieve business success (Chong et al., 2021). The ability to understand and use economic information from various sources displayed on the internet is very important for business actors to understand to achieve business success (Nyu et al., 2021). Digital economic literacy is very important because the use of digital media such as communication tools, internet networks, and business-related digital media shows the decision-making abilities, knowledge, and skills of users, which in the long term will have an impact on the success of their business (Tajpour et al., 2022). Furthermore, Igbinkhase (2021) found that digital economic literacy has a significant impact on business success. Based on this, a hypothesis can be put forward:

Hypothesis 6. Digital economic literacy has a positive and significant effect on business success.

2.8. The relationship between entrepreneurial creativity and the success of MSMEs

Several previous studies have shown that entrepreneurial creativity is one of the main factors influencing business success. MSMEs will be able to maintain their business continuity if they have creativity in business management, including innovation activities in marketing and products (Dhar et al., 2024; Esubalew & Adebisi, 2024; Sreen et al., 2024). It has also been proven that entrepreneurial creativity is a key indicator in determining the success of MSMEs (Raja et al., 2024).

Thukral (2021) found that entrepreneurial creativity is one of the main factors influencing business success. Creativity is important to apply in companies to achieve business success (Channuwong et al., 2023). The same thing was found by González-González and García-Almeida (2021), who found that entrepreneurs must have the ability to direct thoughts and ideas into new efforts that are different from

previous efforts so that this will have an impact on the success of their business. Entrepreneurial creativity is important for business actors to develop new ideas in order to achieve business success (Khan & Mohiya, 2020). The findings of Harms et al. (2021) also stated that entrepreneurial creativity has a significant impact on business success. Based on this, a hypothesis can be put forward:

Hypothesis 7. Entrepreneurial creativity has a positive and significant effect on business success.

2.9. The moderating effect of entrepreneurial creativity on the relationship between Financial Literacy and the success of MSMEs

Financial literacy is needed in financial management to achieve business success. So that business actors can make decisions that can increase the effectiveness and efficiency of the business they manage, they must have good financial management knowledge (Pandey et al., 2022). Panjaitan et al. (2022) found that financial literacy seems to have a good impact on company financial management behavior. The growth of a company can be influenced by the financial management practices used (George et al., 2023). Therefore, with good financial management, a business can survive and even develop over time by increasing entrepreneurial creativity (Andriamahery & Qamruzzaman, 2021). Based on this, a hypothesis can be put forward:

Hypothesis 8. Entrepreneurial creativity moderates the relationship between financial literacy and business success.

2.10. The influence of entrepreneurial creativity on the relationship between entrepreneurial literacy and the success of MSMEs

Entrepreneurial literacy is important to shape thought patterns, attitudes, and behaviors necessary to become a successful entrepreneur (Prayitno et al., 2022). When choosing to start their own business, someone with high entrepreneurial literacy must have good creativity so they can understand what needs to be done for the success of their business (Yu et al., 2022). Entrepreneurial literacy is very important for someone to have entrepreneurial creativity in taking action, fostering the courage to take calculated risks in managing any business for business success (Boldureanu et al., 2020). Entrepreneurial literacy refers to the knowledge needed to understand all forms of information processed in the cognitive domain in the form of memory and understanding, which will have an impact on entrepreneurial creativity and business success (Portuguez Castro & Gómez Zermeño, 2021). Furthermore, Wang et al. (2022) findings conclude that entrepreneurial creativity is a strong mediator that can mediate between entrepreneurial literacy and entrepreneurial success. Based on this, a hypothesis can be put forward:

Hypothesis 9. Entrepreneurial creativity moderates the relationship between entrepreneurial literacy and business success.

2.11. The influence of entrepreneurial creativity on the relationship between digital economic literacy and the success of MSMEs

Creativity is very important in mediating digital economic literacy and the success of MSMEs. MSME actors must be able to understand and make decisions, accepting the consequences of these decisions. Previous researchers, Subagja and Muna Almaududi Ausat (2022) said that utilizing digital media for business success can strengthen the entrepreneurial creativity of MSMEs. Entrepreneurial creativity is important for new ideas that utilize science and technology to achieve success for MSMEs (Lantowa & Machmud, 2020). By developing entrepreneurial creativity that originates from digital economic literacy, MSMEs can find new, distinctive, useful, and commercially viable products that are expected to support their success (Pricopoaia et al., 2024). Based on this, a hypothesis can be put forward:

Hypothesis 10. Entrepreneurial creativity moderates the relationship between digital economic literacy and business success.

3. Methodology

3.1. Research Stages

This research is quantitative research designed into five main stages (see [Figure 1](#)). The steps used in this study begin with the first stage of building a conceptual framework by formulating four research questions, determining relevant literature, building a theoretical framework and conceptual definition, and developing hypotheses. This stage involves selecting research problems and obtaining related literature, such as financial literacy, entrepreneurial literacy, and digital economic literacy, entrepreneurial creativity, and MSME success. In the second stage, research design and planning are carried out by designing research methods, identifying populations and samples, and determining measurements. The third stage is data collection and validation related to the variables studied. Then the fourth stage is continued with analysis, which includes data filtering activities, data analysis, interpretation, and discussion of data analysis results. Finally, the fifth stage is continued with dissemination in the form of communicating findings in the form of theoretical implications and policy implications.

3.2. Ethical approval

Every procedure in this research involving human participants has gone through an ethical review process by the Institute for Research and Community Service, Universitas Negeri Makassar, and was declared appropriate to comply with ethical standards and in line with the principles contained in the Helsinki Declaration through approval letter number 3057/UN36.11/TU/2024. Before data collection was carried out, each research respondent was asked for written consent and informed about the purpose of the questionnaire. Each respondent was also informed that their involvement was voluntary and strictly confidential.

3.3. Measurements

This research is a quantitative study that measures and investigates the relationship between the variables financial literacy, entrepreneurial literacy, digital economic literacy, entrepreneurial creativity, and the success of MSMEs. This research includes 50 statement items, consisting of: 10 statement items for the financial literacy variable; 10 statement items for the entrepreneurial literacy variable; 10 statement items for the digital economic literacy variable; 10 statement items for the entrepreneurial creativity variable; and 10 statement items for the variable success of MSMEs. Next, the research determined each construct using a five-point Likert scale consisting of 'strongly disagree' (1), 'disagree' (2), 'neutral' (3), 'agree' (4), and 'strongly agree' (5).

The financial literacy variable is measured by three indicators, namely: (1) financial management ability; (2) savings management; and (3) expertise in making financial decisions (Tavares et al., 2023). The entrepreneurial literacy variable is measured by three indicators, namely: (1) attitudes and skills in entrepreneurship; (2) working together to gain opportunities; and (3) having experience starting a business (Debarliev et al., 2022). The digital economic literacy variable is measured by three indicators, namely: (1) utilizing technological and economic collaboration; (2) facing competition in the modern world; and (3) selling goods on the internet (Peng & Mao, 2023). The success variable for MSMEs is measured by three indicators, namely: (1) increase in sales turnover; (2) production volume; and (3) profit income (Tudose et al., 2022). The entrepreneurial creativity variable is measured by three indicators, namely: (1) own thinking; (2) diligence; and (3) the ability to develop new ideas (Taneo et al., 2020).

3.4. Sample and data collection

The sample in this study used a purposive sampling technique. Based on the results of population screening and profiling, not all samples have criteria that match the research criteria. Purposive sampling

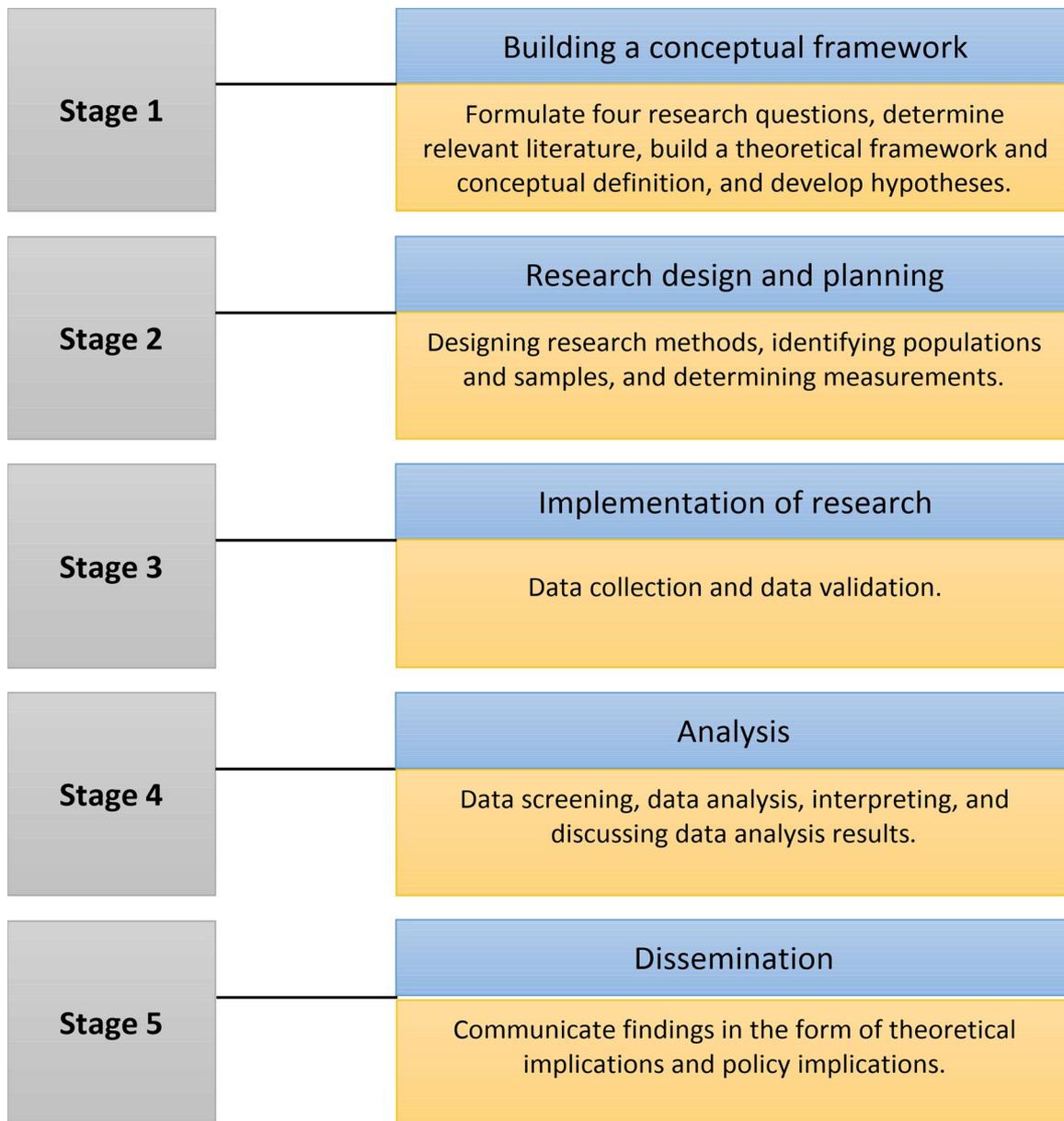


Figure 1. Research Stages.

is a technique used to collect samples using certain criteria or considerations and provide complete data information in the research. The criteria for this research are: (1) MSMEs engaged in culinary (food and drink) businesses in South Sulawesi Province, Indonesia; (2) have been running the business for at least 1 year; and (3) MSME actors who obtain economic information from the internet and run their businesses based on information technology. Researchers distributed 700 questionnaires to respondents, which were distributed within 3 months, from January to April 2024.

3.5. Data analysis

The data that has been collected is analyzed using the Partial Least-Square Structural Equation Modeling (PLS-SEM) analysis tool via SmartPLS4 software, which is specifically carried out through measurement model analysis and structural model analysis. PLS-SEM analysis is used in this research because the data has many independent and dependent variables, the relationships between variables are complex, and there is interdependence. Based on this, PLS-SEM allows to see the relationship between variables simultaneously and take into account both direct and indirect effects between variables. This allows to create

a path model that can better explain the relationship between variables. The use of PLS-SEM in this study with a sample size of 700 respondents refers to Hair et al. (2017), which state that the minimum sample size in PLS-SEM analysis is \geq of the conditions: (1) 10 times the largest number of formative indicators used to measure a construct, and (2) 10 times the largest number of structural paths leading to a particular construct. These guidelines by Hair et al. (2017) are referred to as the 10 time rule of thumb, which is practically 10 times the maximum number of arrows (paths) that hit a latent variable in the PLS-SEM model, so based on this, the larger the number of samples, the better the model.

The analysis of the measurement model was carried out through validation and reliability tests. The validity test in SEM-PLS analysis is determined by convergent validity and discriminant validity. An indicator is said to meet the convergent validity criteria if it has a factor loading value of more than 0.7 and an average value of variance extraction (Hair et al., 2017). Meanwhile, the validity test is based on discriminant validity with cross-loading, and the Fornell-Larcker criteria are referred to as cross-loading criteria if each indication has a higher value than other indicators in the variable. Standardization of the Fornell-Larcker criteria is carried out if the correlation between variables with the squared AVE is greater than the correlation of other variables in the research model (Hair et al., 2020). For the data to be said to be reliable, several conditions are required, namely Cronbach's alpha value > 0.7 , rho_c value > 0.7 , and rho_a value > 0.7 (Hair et al., 2020). Furthermore, in SEM-PLS analysis, there are several criteria that must be met, such as having statistical significance with a P value < 0.05 (the basis for drawing conclusions), having an R2 value of 0.75 (high), 0.50 (medium), and 0.25 (low). In addition, the f2 value should be in the range of 0.02 (small effect), 0.15 (medium effect), and 0.35 (large effect) (Hair et al., 2017).

4. Results

4.1. Demographic Profiles

Based on answers from 700 respondents from MSMEs in South Sulawesi Province (see Table 2), based on gender, there were 437 female culinary entrepreneurs (62.84%) and 263 male entrepreneurs (37.6%). Based on age, 57 business actors aged 10–20 (8.1%), 219 business actors aged 21–30 (31.2%), 274 business actors aged 31–40 (39.1%), 138 business actors aged 41–50 (14.7%), and 12 business actors aged > 50 (1.9%). Furthermore, 90 business actors graduated from elementary school (12.8%), 109 business actors graduated from junior high school/equivalent (15.5%), 120 business actors graduated from high school/equivalent (17.1%), 54 business actors graduated from diploma (7.7%), 205 business actors have bachelor's degrees (29.2%), 69 business people have master's degrees (10.2%), and 53 business people have doctoral degrees (7.5%). Based on length of business, as many as 137 business actors have businesses that have been running for 1–5 years (19.5%), 307 business actors have been in business for 6–10 years (43.8%), 163 business actors have been in business for 11–15 years (23.2%), and 93 business actors whose businesses have been established for > 15 years (13.5%).

4.2. Measurement model

The first test carried out was a validity and reliability test to ensure the quality of the data in the research model. Table 3 and Figure 2 show the loading factor values > 0.7 and AVE > 0.5 so that the research model meets the requirements for convergent validity. For discriminant validity based on the cross-loading criteria and Fornell-Larcker criteria in Table 4, the latent variable indicator has a larger construct than the other indicator constructs, and the square root of AVE $>$ the sum of all construct relationships indicates sufficient discriminant validity. The reliability test results in Table 3 show Cronbach's alpha > 0.7 , rho_c > 0.7 , and rho_a > 0.7 (reliable). Therefore, it can be decided that all latent variables have good reliability.

4.3. Structural model

The structural model analysis in this research was carried out with the help of SmartPLS4. Table 5 shows the R2 and f2 values. R2 shows how the independent variable contributes to the dependent variable.

The variables financial literacy, entrepreneurial literacy, and digital economic literacy contributed 0.802 (80.2%) to the entrepreneurial creativity variable. Meanwhile, the variables financial literacy, entrepreneurial literacy, and digital economic literacy are 0.630 (63%) for the culinary business success variable. In this study, the f^2 value of the financial literacy variable has a moderate influence on business success, while financial literacy has a small influence on entrepreneurial creativity. Entrepreneurial literacy and digital economic literacy have a limited impact on business success. Meanwhile, the influence of entrepreneurial literacy and digital economic literacy on entrepreneurial creativity is moderate, and entrepreneurial creativity has a limited impact on business success.

As seen in Table 5, to test the hypotheses H1, H2, H3, H4, H5, H6, H7, H8, H9, and H10 with the variables financial literacy, entrepreneurial literacy, and digital economic literacy as independent variables, with culinary business success as the dependent variable and entrepreneurial creativity as moderator variables, for H1, the test results based on Table 5 show a positive and significant relationship between financial literacy and entrepreneurial creativity ($\beta=0.063$, $t=5.645$, $p<0.000$); thus, H1 is accepted. Table 5 also shows that the relationship between financial literacy and business success is positive and significant ($\beta=0.100$, $t=4.138$, $p<0.000$). Therefore, H2 is accepted. Likewise, the relationship between entrepreneurial literacy and entrepreneurial creativity is positive and significant ($\beta=0.074$, $t=4.311$, $p<0.000$), so H3 is accepted. Table 5 shows a positive and significant relationship between entrepreneurial literacy and business success ($\beta=0.118$, $t=5.436$, $p<0.000$), so H4 is accepted. Then Table 5 shows a positive and significant relationship between digital economic literacy and entrepreneurial creativity ($\beta=0.069$, $t=4.343$, $p<0.000$), so H5 is accepted. Table 5 also shows a positive and significant relationship between digital economic literacy and business success ($\beta=0.097$, $t=2.456$, $p<0.014$), so H6 is accepted. Table 5 also shows a positive and significant relationship between entrepreneurial creativity and business success ($\beta=0.143$, $t=3.514$, $p<0.000$); therefore, H7 is accepted.

Table 5 shows the results of the indirect effect test. Entrepreneurial creativity is able to mediate the relationship between financial literacy and business success ($\beta=0.083$, $t=2.429$, $p<0.015$), so H8 is accepted. Entrepreneurial creativity is also able to mediate the relationship between entrepreneurial literacy and business success ($\beta=0.097$, $t=2.041$, $p<0.041$), so H9 is accepted. Entrepreneurial creativity is also able to mediate the relationship between digital economic literacy and business success ($\beta=0.065$, $t=2.232$, $p<0.026$), so H10 is accepted.

5. Discussion

The results of this research found that the entrepreneurial creativity of MSMEs actors is influenced by financial literacy. MSME players feel that creativity can be increased by understanding good finances because this has a big influence on the business they run. Financial literacy is needed by MSMEs to

Table 2. Demographic Profiles.

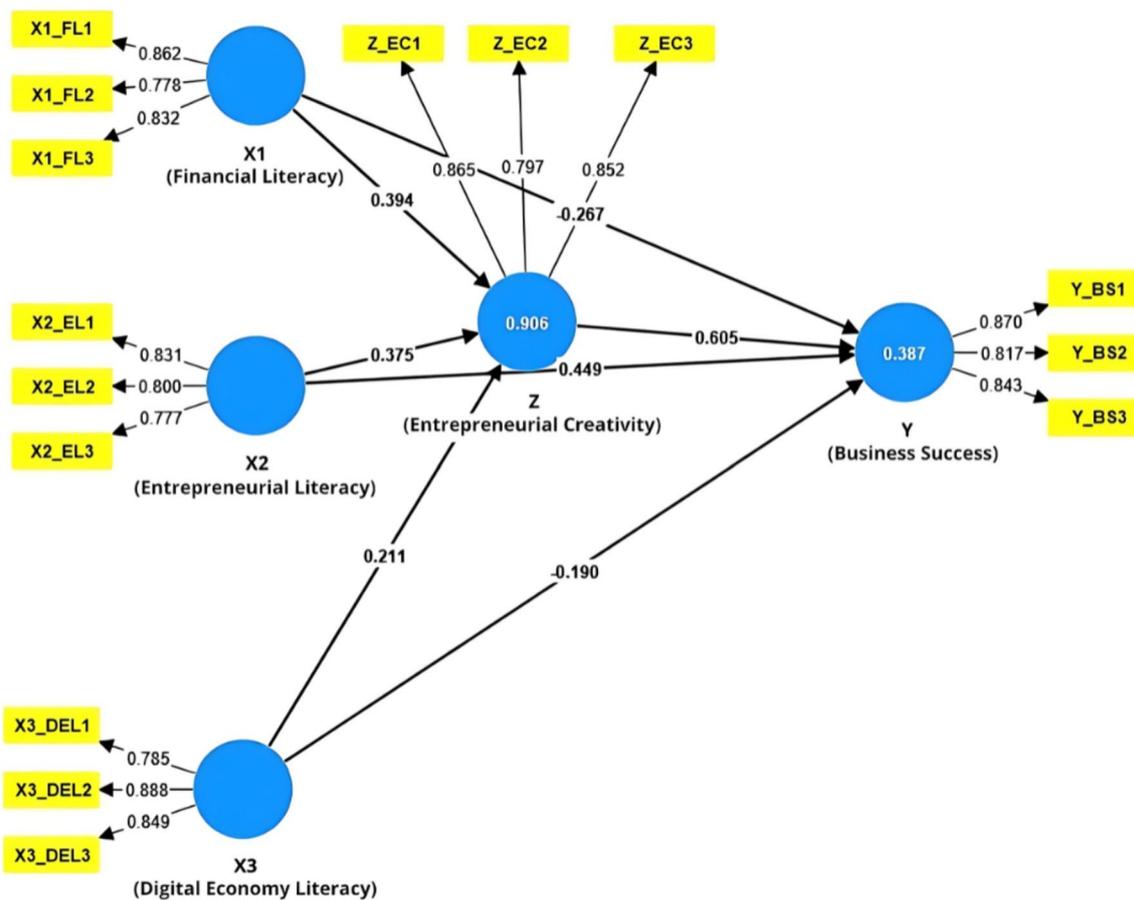
Description	Category	Frequency	Percent	Comments
Gender	Female	437	62.4	The number of respondents in MSMEs is dominated by women.
	Male	263	37.6	
Age	10-20	57	8.10	The number of respondents in the culinary business was dominated by respondents aged 31–40 years.
	21-30	219	31.2	
	31-40	274	39.1	
	41-50	138	14.7	
	>50	12	1.90	
Last Education	Elementary School	90	12.8	The number of respondents in the culinary business was dominated by respondents who had bachelor's degrees.
	Junior High School	109	15.5	
	Senior High School	120	17.1	
	Diploma	54	7.70	
	S1	205	29.2	
	S2	69	10.2	
Length of Business	S3	53	7.50	The number of respondents in the culinary business was dominated by respondents who had been in business for 6–10 years.
	1-5 Year	137	19.5	
	6–10 Year	307	43.8	
	11-15 Year	163	23.2	
	> 15 Year	93	13.5	

Source: Processed by researchers, 2024.

Table 3. Convergent validity and reliability.

Construct	Item	Convergent validity		Reliability		
		Loading Factor	AVE	Cronbach's Alpha	<i>Rho_C</i>	<i>Rho_A</i>
Financial Literacy (FL)	FL1	0.862	0.680	0.764	0.864	0.768
	FL2	0.778				
	FL3	0.832				
Entrepreneurial Literacy (EL)	EL1	0.831	0.644	0.724	0.845	0.724
	EL2	0.800				
	EL3	0.777				
Digital Economy Literacy (DEL)	DEL1	0.785	0.709	0.793	0.879	0.794
	DEL2	0.888				
	DEL3	0.849				
Entrepreneurial Creativity (EC)	EC1	0.865	0.703	0.788	0.976	0.790
	EC2	0.797				
	EC3	0.852				
Business Success (BS)	BS1	0.87	0.712	0.797	0.881	0.802
	BS2	0.817				
	BS3	0.843				

Source: Processed by researchers, 2024.

**Figure 2.** Measurement model.

avoid financial problems, so that financial literacy has an impact on the performance and creativity of culinary businesses. It is hoped that, under this influence, MSME players will make appropriate financial management decisions for entrepreneurial creativity in order to achieve business success (Ausat et al., 2023). The findings of this research are in line with research by Ogheneogaga Irikefe and Isaac Opusunju (2021), which found that financial literacy also has a significant effect on entrepreneurial creativity. Another finding from Sugangga et al. (2023) was that financial literacy has a positive and significant impact on the creativity and innovation of MSME players. Strong financial literacy skills will increase the

Table 4. Discriminant validity.

Construct	Item	Cross-loading					Fornell-Larcker				
		X1	X2	X3	Y	Z	X1	X2	X3	Y	Z
FL	FL1	0.862	0.803	0.852	0.430	0.811	0.935				
	FL2	0.778	0.704	0.643	0.418	0.713					
	FL3	0.832	0.754	0.760	0.469	0.772					
EL	EL1	0.762	0.831	0.803	0.449	0.764	0.915	0.933			
	EL2	0.729	0.800	0.748	0.496	0.732					
	EL3	0.711	0.777	0.646	0.482	0.737					
DEL	DEL1	0.721	0.762	0.785	0.522	0.745	0.915	0.912	0.922		
	DEL2	0.836	0.803	0.888	0.405	0.816					
	DEL3	0.749	0.734	0.849	0.402	0.739					
EC	EC1	0.768	0.789	0.786	0.523	0.865	0.533	0.593	0.528	0.844	
	EC2	0.755	0.755	0.714	0.464	0.797					
	EC3	0.813	0.788	0.794	0.519	0.852					
BS	BS1	0.480	0.534	0.478	0.870	0.538	0.929	0.927	0.913	0.6	0.838
	BS2	0.369	0.434	0.330	0.817	0.438					
	BS3	0.490	0.525	0.517	0.843	0.536					

Source: Processed by researchers, 2024.

Table 5. Structural Model.

Hypothesis testing results	Hypothesis	Std.B	T-Statistics	P Values	Result
Direct Effect	FL -> BS	0.100	4.138	0.000	Supported
	FL -> EC	0.063	5.645	0.000	Supported
	EL -> BS	0.118	5.436	0.000	Supported
	EL -> EC	0.074	4.311	0.000	Supported
	DEL -> BS	0.097	2.456	0.014	Supported
	DEL -> EC	0.069	4.343	0.000	Supported
	EC -> BS	0.143	3.514	0.000	Supported
Indirect Effect	FL -> EC -> BS	0.092	2.594	0.001	Supported
	EL -> EC -> BS	0.098	2.316	0.021	Supported
	DEL -> EC -> BS	0.062	2.042	0.041	Supported

Source: Processed by researchers, 2024.

number of MSMEs that successfully survive the crisis and maintain sustainability in the long term (Mujiatun et al., 2023).

Further research results found that the entrepreneurial creativity of MSME actors is influenced by entrepreneurial literacy. MSME players feel that creativity can be increased with a good understanding of entrepreneurship because this has a big influence on the businesses they run. Understanding entrepreneurial literacy plays a crucial role in forming positive, creative, and innovative entrepreneurial traits and developing business potential into business opportunities (Juwairia et al., 2023). This finding is also in line with the findings of Kirby and Kaffass (2022) that entrepreneurial literacy has a big impact on the formation of entrepreneurial creativity. MSME players play a role in driving change through creativity and innovation, where they create new products to market because they have good entrepreneurial literacy (Ausat et al., 2023).

Further research results found that the entrepreneurial creativity of MSME actors is influenced by digital economic literacy. MSME players feel that creativity can be increased with a good understanding of the digital economy because this has a big influence on the businesses they run. MSME players are expected to be able to understand various business information obtained to increase creativity (Frimpong et al., 2022). This finding is also in line with the findings of Rai et al. (2019), who found that digital economic literacy is very important for individuals because it encourages creative economic behavior in MSME players. Digital economic literacy can increase creativity in running a business through various access to creative things (Koskelainen et al., 2023).

Further research results found that the success of MSMEs is influenced by financial literacy. MSME players feel that business success can be increased by understanding good finances because this has a big influence on the business they run. MSME players who have good financial literacy will have an impact on business success (Twumasi et al., 2022). The effective application of financial literacy by MSME players has an important role in strategic decision-making, as found by Chong et al. (2021). This finding is also in accordance with the findings of Alshebami and Murad (2022) and Rosyidiana and Narsa (2024),

who managed to find that financial literacy has a significant impact on business success because the financial literacy skills possessed by an entrepreneur can make financial management easier.

The results of this research found that the success of MSMEs is influenced by entrepreneurial literacy. MSME players feel that the success of culinary businesses can be increased by understanding good entrepreneurial literacy because this has a big influence on the businesses they run. Understanding entrepreneurs with a variety of positive, creative, and innovative personalities can turn business opportunities into profitable business opportunities (Song & Wu, 2021). This finding is in line with research by Prayitno et al. (2022), who found that entrepreneurial literacy greatly influences the success of a business. Entrepreneurs' mastery of entrepreneurial literacy will make it easier for them to plan innovative strategies and create new ideas or products that can compete in the market. This finding is in line with Tumba et al. (2022), who emphasized that entrepreneurial literacy has a big impact on the success of a business because it is able to develop a business with an innovative and creative approach.

Further research results found that the success of MSMEs is influenced by digital economic literacy. MSME players feel that business success can be increased by understanding good digital economic literacy because this has a big influence on the businesses they run. Understanding digital economic literacy is needed to recognize and use economic information originating from various sources by utilizing technology (Zhang & Wei, 2023). Every MSME actor needs to have digital economic literacy to make decisions regarding sources of income and various options for consumers (Kurowski, 2021). Digital economic literacy generates benefits and efficiency because digital technology drives innovation, changes the way consumers interact, and brings significant social change (Polyakov & Kovshun, 2021).

Further research results found that the success of MSMEs is influenced by entrepreneurial creativity. MSME players feel that business success can be increased with good entrepreneurial creativity because this has a big influence on the business they run. With entrepreneurial creativity, someone can apply their ideas and thoughts through a creative thinking process, creating something that requires concentration, attention, will, hard work, and perseverance (Gajdzik & Wolniak, 2022). This finding is in line with Anjum et al. (2021), which emphasize that one of the key elements that influences an entrepreneur's business success is entrepreneurial creativity. This finding is also in line with Childs et al. (2022) who found that a business owner who shows significant creativity and innovation will be able to maintain the continuity of his business. Entrepreneurial spirit and creativity have been proven to be strong and reliable predictors of economic success (Tripopsakul et al., 2022).

Further research findings found that entrepreneurial creativity was able to mediate the influence of financial literacy on the success of MSMEs. Thus, good financial literacy skills have the potential to be driven by entrepreneurial creativity so that MSMEs are able to manage their finances to achieve business success. Thus, financial literacy influences a person's mindset towards financial situations and has an impact on strategic decision-making regarding finances as well as improving financial management for business owners (Tyoso & Soegiastuti, 2023). Given the importance of financial literacy, MSME players must have financial literacy in order to manage their finances effectively (Caplinska & Ohotina, 2019). Without good financial literacy, business people cannot make the right managerial decisions based on their financial situation. The findings of this study are in line with the findings of Pandey et al. (2022) who found that understanding financial literacy is very important for business actors to increase entrepreneurial creativity and business success.

Further research findings found that entrepreneurial creativity was able to mediate the influence of entrepreneurial literacy on the success of MSMEs. Thus, good entrepreneurial literacy has the potential to be driven by entrepreneurial creativity so that MSMEs are able to run their businesses well to achieve business success. This finding is in line with research by Fleck and Asmuth (2021), which found that the development of an entrepreneur's mindset, character, and creativity is basically influenced by entrepreneurial literacy, which is the main component of entrepreneurial activity. This is also in accordance with the research findings of Jardim (2021), as well as Chesbrough and Tucci (2020), who found that someone who has business creativity and is able to create something new, different from competitors, or different from what already exists is one of the keys to business success.

Further research findings found that entrepreneurial creativity was able to mediate the influence of digital economic literacy on the success of MSMEs. Thus, good digital economic literacy has the potential to be driven by entrepreneurial creativity so that MSME players are able to run their

businesses well to achieve business success (Koskelainen et al., 2023). Digital economic literacy is very important for the success of businesses and MSMEs as a means of accessing economic resources in society (Shepherd & Williams, 2023). This finding is in line with the findings of No and Bist (2023), who found that creativity is very important when using digital media for the success of a business. Creativity has a significant impact on digital business literacy to help MSMEs succeed (Song & Wu, 2021).

The findings of this study within the framework of the knowledge-based view theory (Grant, 1991) show that financial literacy, entrepreneurial literacy, and digital business literacy of MSMEs are knowledge to create business success that must be integrated (Zhicheng et al., 2016). In the perspective of organizational knowledge creation theory (Nonaka et al., 2006), the accumulation of financial literacy, entrepreneurial literacy, and digital business literacy of MSMEs is intellectual capital that is considered to contribute to business success. The findings of this study emphasize that MSMEs must implement knowledge in the form of financial literacy, entrepreneurial literacy, and digital business literacy properly so as to give birth to entrepreneurial creativity that will have an impact on business success (Burcher et al., 2021).

The findings of this study successfully justify that financial literacy, entrepreneurial literacy, and digital business literacy are intellectual capital that forms competence and has an impact on entrepreneurial creativity and the success of MSMEs. Financial literacy, entrepreneurial literacy, and digital business literacy are intangible assets that can increase competitiveness and can increase the success of MSMEs (Hariyono & Narsa, 2024; Sydler et al., 2014). Financial literacy, entrepreneurial literacy, and digital business literacy are unique or rare resources that can make MSMEs have a competitive advantage (Utama et al., 2024).

The results of this study provide reinforcement that financial literacy, entrepreneurial literacy, and digital business literacy are intellectual capital in the form of intangible assets that can help MSMEs to be creative and successful (Octasyilva et al., 2022; Upadhyay & Kundu, 2019). Through these three literacies, MSMEs can develop business opportunities into business opportunities that benefit MSMEs and the community (Sreen et al., 2024). Furthermore, financial literacy, entrepreneurial literacy, and digital business literacy can increase the success of MSMEs because all three are strategic assets for MSMEs to produce new products or services, generate new added value, pioneer new businesses, and develop new organizations (Tarihoran et al., 2023).

Financial literacy, entrepreneurial literacy, and digital business literacy encourage MSMEs to produce something new through creative thinking and innovative actions so that they can create business ideas or opportunities that can be utilized by themselves and others, as well as for business success (Octasyilva et al., 2022). In addition, financial literacy, entrepreneurial literacy, and digital business literacy also encourage MSMEs to find or create business opportunities to help their business success (Marinelli et al., 2024).

6. Conclusion

Based on the four research questions proposed, this study aims to understand the role of financial literacy, entrepreneurial literacy, and digital economic literacy on the success of MSME businesses through moderation of entrepreneurial creativity based on the knowledge-based perspective. The findings of this study successfully investigated that financial iteration, entrepreneurial literacy, and digital economic literacy contribute positively and significantly to shaping MSME entrepreneurial creativity. Furthermore, the findings of this study also successfully explored that financial literacy, entrepreneurial literacy, and digital economic literacy have a positive and significant influence on the success of MSME businesses. No less importantly, it was also successfully found that entrepreneurial creativity has a positive and significant influence on the success of MSME businesses. The final findings of this study indicate that financial literacy, entrepreneurial literacy, and digital economic literacy influence business success through moderation of entrepreneurial creativity.

This study concludes that entrepreneurial creativity can strengthen the relationship between financial literacy, entrepreneurial literacy, and digital economic literacy on the success of MSME businesses. Therefore, the findings of this study have succeeded in emphasizing that based on the perspective of

knowledge-based view, the success of MSME businesses is greatly influenced by intellectual capital such as financial literacy, entrepreneurial literacy, and digital economic literacy, which can shape entrepreneurial creativity.

7. Implications, limitations, and suggestions for future research

7.1. Theoretical implications

Theoretically, this research offers several theoretical contributions from the perspective of intellectual capital in MSMEs. This research succeeded in exploring that MSMEs need knowledge and information to maintain the sustainability of their businesses in a competitive market. This research succeeded in identifying that intellectual capital in the context of knowledge-based view theory possessed by MSMEs consists of three literacies, which include financial literacy, entrepreneurial literacy, and digital economic literacy. This research provides a comprehensive exploration and understanding of the fact that financial literacy, entrepreneurial literacy, and digital economic literacy are intangible assets that have an impact on business success. This is something new that substantially makes a significant contribution to the knowledge-based view theory in the case of MSMEs.

Apart from that, this research also succeeded in enriching the literature related to intellectual capital in the context of knowledge-based view theory, which has only been widely used in cases involving large companies. The findings of this research contribute to viewing various business literacies as intellectual capital in the case of MSMEs in Indonesia. This research also succeeded in revealing and enriching intellectual capital theories that business literacy, which includes financial literacy, entrepreneurial literacy, and economic literacy, encourages MSMEs to continue learning and adapting creatively in integrating technology and knowledge implementation processes well so that this can support the success of MSMEs.

7.2. Practical implications

Based on the findings of this study, the author highlights practical implications, especially those related to the development of new literacies such as financial literacy, entrepreneurial literacy, and digital economic literacy that can encourage entrepreneurial creativity and the success of MSME businesses. These new literacies are intellectual capital that is very valuable for the success of MSME businesses. Therefore, the government and educational institutions have an important role in designing MSME empowerment strategies based on knowledge and creativity so that they can stimulate the growth of MSMEs in Indonesia. Education and training programs in the context of MSME empowerment must be implemented with an orientation towards the formation of intellectual capital through new literacies, so that they can improve the knowledge, skills, and practical experience of MSME actors, so that in carrying out every business activity, MSME actors can always be guided by the literacies they have, such as financial literacy, entrepreneurial literacy, and digital economic literacy. Ultimately, the main objective of education and training programs in the context of MSME empowerment must encourage MSME actors to utilize the knowledge resources they have to increase the competitive advantage of MSMEs, which is then expected to be able to encourage the contribution of the MSME sector to strengthening the nation's economy in the future.

7.3. Limitations and suggestions for future research

The findings of this study indicate that intellectual capital such as financial literacy, entrepreneurial literacy, and digital economic literacy can influence the success of MSME businesses that are strengthened through moderation of entrepreneurial creativity. However, there are several limitations that need to be of important concern for this development study in the future. First, the sample of this research group (n=700) is still limited to MSMEs in the culinary sector, which were selected purposefully. The sample group does not represent MSMEs as a whole because of the many other sectors and subsectors in MSMEs. In the future, this research should be focused on various other MSME sectors and subsectors so that the generalization of research results can be more accurate. Second, the intellectual capital owned by MSMEs consisting of three literacies, namely financial literacy, entrepreneurial literacy, and digital

economic literacy in a knowledge-based perspective, needs to be developed and re-explored by other researchers in the future because there are still many new business literacies that continue to develop along with the dynamics of the business environment.

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Author contributions

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Data availability statement

Data supporting the findings of this study are available and can be requested through the corresponding author (M.H.). The data are not publicly available because they contain information that is still under research.

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