



## Examining the Role of Information Technology, Creativity, and Business Capital in Supporting MSMEs Sustainability in Bandar Lampung's Fashion Industry

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**Abstract.** *The Indonesian economy is largely driven by Micro, Small, and Medium Enterprises (MSMEs), which play a vital role in economic growth. MSMEs have proven resilient during economic crises. This study analyzes the impact of Information Technology, Creativity, and Business Capital on MSME sustainability using quantitative methods. Data from 115 MSMEs were gathered through structured questionnaires. The t-test results reveal that Creativity significantly influences MSME sustainability. Similarly, Information Technology and Business Capital have significant positive impacts, aligning with existing literature. The coefficient of determination ( $R^2$ ) of 43.7% shows that these three variables explain variations in MSME sustainability. To enhance Information Technology utilization, MSMEs should improve data systems and provide training for managers. Creativity can be strengthened by fostering innovation and organizing brainstorming sessions. For Business Capital, MSMEs need investment strategies focused on long-term growth. Additionally, increasing market value through product innovation and collaboration is crucial. These efforts are expected to support the sustainability of MSMEs in Bandar Lampung's fashion sector.*

**Keywords** *Information Technology, Creativity, Business Capital, SME Sustainability*

### 1. INTRODUCTION

MSMEs play a crucial role in a country's economic growth and have shown resilience during economic crises in Indonesia. Their contributions include boosting the National Gross Domestic Product (GDP), creating national investments, absorbing labor, and generating foreign exchange. According to the Ministry of Cooperatives and SMEs (March 2021), Indonesia has 64.2 million MSMEs, contributing 61.07% of GDP, equivalent to Rp 8,573.89 trillion. MSMEs account for 97% of total employment and 60.42% of total investments in Indonesia (Kemenkeu, 2023). MSMEs thrive in various industries, including fashion. In Bandar Lampung, the fashion industry significantly boosts economic growth and job creation. With 20,122 units recorded in 2022, fashion MSMEs play a vital role in the local economy (BPS Lampung, 2024).

Despite their potential, fashion MSMEs in Bandar Lampung face challenges in sustaining their businesses. Many struggle to survive and grow, leading to closures and job losses. Key issues include limited access to information technology, insufficient capital, and a lack of creativity and innovation. Advancements in information technology significantly impact MSMEs, enabling improvements in planning, production, distribution, and financial

management. To stay competitive, MSMEs must integrate technology into their operations, boosting productivity and business performance in the digital era (Ana & Nanang, 2024).

The complexity of products, fluctuating demand, and short life cycles drive entrepreneurs to innovate. Creativity is key in the fashion industry, setting brands apart (Diharto, 2022). Fashion MSMEs in Bandar Lampung have untapped creative potential, but many follow global "fast fashion" trends instead of showcasing Lampung's unique culture. This limits competitiveness and hinders brand sustainability. Business sustainability relies on capital, which is essential for starting and running a business (Wahyuni et al., 2023). Limited access to capital and slow turnover hinder growth. In Bandar Lampung, a 2022 survey by Diskominfo found only 30% of fashion MSMEs have access to banks, 60% rely on personal funds, and 10% use family or friend loans, highlighting challenges in securing external capital for growth (Diskominfo, 2022).

Azzahra et al. (2021) found creativity influences MSME sustainability, while business capital does not. In contrast, Al-Dawiyah & Sugianto (2023) reported both have a significant positive impact. Yani et al. (2021) noted information technology enhances MSME sustainability, but Kisin & Setyahuni (2024) found no effect from financial technology. These conflicting findings highlight a research gap, prompting this study to integrate information technology, creativity, and business capital to assess MSME sustainability with a fresh perspective.

## **2. LITERATURE REVIEW**

### **Sustainable Business Practices of Micro, Small, & Medium Enterprises (MSMEs)**

Business sustainability is the ability to maintain, expand, and protect resources while meeting industry needs. This strategy is based on personal experience, external information, and current economic conditions (Fatimah & Azlina, 2021). It involves consistency in growth, development, and strategic planning, all of which contribute to the business's continuity and existence.

### **Information Technology**

Information technology (IT) as the use of computers and telecommunications to store, retrieve, transmit, and manipulate data (Djalil et al., 2021). IT plays a key role in efficient information handling, decision-making, and communication across various domains. In business management, IT greatly impacts both employees and companies, making tasks easier, faster, and more accurate (Taufik et al., 2022). Globally, IT is a crucial element in the economic

development of many countries, and its advancements have enhanced the capabilities of society.

### **Creativity**

Creativity as the ability to generate new ideas or inventions that are distinct from common ones (Supriadi, 2017). Creativity drives innovative thinking and better approaches to problem-solving and business opportunities. However, many MSMEs struggle to succeed, often lacking creativity in their operations. Many owners follow existing businesses, resulting in little differentiation between MSMEs (Hariyanto & Le, 2023).

### **Business Capital**

Business capital is essential for entrepreneurship, alongside other factors like human resources, technology, economy, and legality (Liantifa, 2023). Sufficient capital can significantly influence the growth of MSMEs. Nitisusastro also emphasizes that capital is crucial for running a business, and if personal funds are insufficient, loans can be used to meet capital needs.

### **Hyphotesis**

**H1:** Information Technology has a positive and aignificant influence on The Sustainability pf Fashion MSMEs in Bandar Lampung

**H2:** Creativity has a positive and aignificant influence on The Sustainability pf Fashion MSMEs in Bandar Lampung

**H3:** Business Capital has a positive and aignificant influence on The Sustainability pf Fashion MSMEs in Bandar Lampung

## **3. METHODS**

### **Design, Data, and Sample Research**

This study uses a descriptive quantitative method, analyzing data with statistical tools to test hypotheses. Causal research examines the relationship between independent (X) and dependent (Y) variables. Data were collected through online questionnaires (Google Form) analyzed with a Likert scale (5=strongly agree to 1=strongly disagree). The population includes 670 MSMEs in Lampung in 2021 and 1,875 in 2022. A purposive sampling method was used, selecting 115 respondents based on criteria: 1) fashion MSMEs operating for at least 2 years in Bandar Lampung, 2) using information technology, 3) applying creativity with trends, and 4) having business capital. The sample was determined using Slovin's formula (Hair, 2014).

## Operational Definition of Variables

**Table 1. Operational Definition of Variables**

<b>Variable</b>	<b>Definition</b>	<b>Indicator</b>	<b>Scale</b>
Technology Information (X1)	Information technology (IT) refers to using computers and telecommunications to store, retrieve, transmit, and manipulate data, enabling efficient information handling, decision-making, and communication across domains (Djalic et al., 2019).	<ol style="list-style-type: none"> <li>1. Human resources sector</li> <li>2. Quality sector</li> <li>3. Manufacturing sector</li> <li>4. To achieve market competitiveness</li> <li>5. For decision-making by managers</li> <li>6. For efficient communication within the company (Djalic et al., 2019).</li> </ol>	Likert
Creativity (X2)	Creativity in sales performance is defined as the ability to generate new ideas and innovative behavior by salespeople in performing their tasks. The importance of creativity in achieving competitive advantage in a competitive business environment (Wang & Netemeyer, 2004).	<ol style="list-style-type: none"> <li>1. Unique approach in delivering information</li> <li>2. Ability to find unconventional solutions</li> <li>3. Development of new products or services</li> <li>4. Ability to brainstorm various solutions</li> <li>5. Different approach to existing problems</li> <li>6. Adaptability to unexpected situations</li> <li>7. Ability to develop ideas from concept to implementation (Wang and Netemeyer, 2004).</li> </ol>	Likert
Business Capital (X3)	Business capital is the financial resource used by a company to run operations and support growth strategies. It includes both internal and external financial assets essential for daily operations and investments in innovation and expansion (Boso et al., 2012).	<ol style="list-style-type: none"> <li>1. Sound financial planning</li> <li>2. Business asset growth through investment</li> <li>3. Access to external funding sources (banks, investors, etc.)</li> <li>4. Ability to make strategic investments (Boso et al., 2012).</li> </ol>	Likert
Sustainable Business Practices of MSMEs (Y)	It refers to the ability of MSMEs to survive and grow sustainably by integrating economic, social, and environmental dimensions in their operations. The focus is on ensuring MSMEs achieve not only economic profit but also positive impacts on society and the environment, enabling long-term operation and adaptability to business environment changes (Urban & Naidoo, 2012).	<ol style="list-style-type: none"> <li>1. Job growth</li> <li>2. Sales revenue growth</li> <li>3. Profit growth</li> <li>4. Market value growth</li> <li>5. MSME sustainability measured over two years</li> <li>6. Growth relative to competitors (Urban &amp; Naidoo, 2012).</li> </ol>	Likert

## Instrument and Hypothesis Test

The instrument test involves validity and reliability checks. Validity, as per Sugiyono (2019), is when collected data aligns with the actual situation, and factor analysis groups related questionnaire items. Reliability, according to Sugiyono (2019), is when data shows consistency over time, with an instrument considered reliable if Cronbach's Alpha exceeds 0.60.

Hypothesis testing uses t-tests and  $R^2$ . Ghozali (2018) states that the partial regression coefficient tests the individual impact of independent variables on the dependent variable.  $R^2$  measures the model's explanatory power, where higher values indicate better explanation of variations in the dependent variable.

#### 4. RESULTS AND DISCUSSION

##### Instrument Test Results

The validity test results table shows that each research variable indicator has an Anti-Image Correlation  $> 0.50$  and a Loading Factor  $> 0.50$ . According to Imam Ghozali, a Loading Factor  $> 0.50$  meets the convergent validity requirement. These results confirm that all indicators in this study are valid for use.

**Table 2. Validity Test Results**

Variable	Item	KMO-MSA	Anti-Image Correlation	Loading Factor	Result
Information Technology (X1)	X1.1	0.85	0.75	0.8	Valid
	X1.2		0.72	0.82	Valid
	X1.3		0.7	0.78	Valid
	X1.4		0.68	0.75	Valid
	X1.5		0.65	0.76	Valid
	X1.6		0.67	0.74	Valid
	X1.7		0.64	0.73	Valid
	X1.8		0.62	0.72	Valid
	X1.9		0.6	0.71	Valid
Information Technology (X1)	X1.10	0.85	0.58	0.7	Valid
	X1.11		0.56	0.69	Valid
	X1.12		0.54	0.68	Valid
	X1.13		0.52	0.67	Valid
Creativity (X2)	X2.1	0.85	0.71	0.689	Valid
	X2.2		0.732	0.748	Valid
	X2.3		0.702	0.695	Valid
	X2.4		0.72	0.775	Valid
	X2.5		0.715	0.729	Valid
	X2.6		0.74	0.79	Valid
Business Capital (X3)	X2.7	0.765	0.725	0.74	Valid
	X3.1		0.58	0.765	Valid
	X3.2		0.58	0.819	Valid
	X3.3		0.583	0.778	Valid
MSME Sustainability in the Fashion Industry (Y)	X3.4	0.803	0.668	0.816	Valid
	Y1		0.534	0.765	Valid
	Y2		0.627	0.819	Valid
	Y3		0.615	0.778	Valid
	Y4		0.66	0.816	Valid
	Y5		0.821	0.793	Valid
	Y6		0.715	0.793	Valid
Y7	0.803	0.815	Valid		

Source: Processed Data by Researcher (2024)

The table below shows that each variable meets the Cronbach's alpha standard of greater than 0.60, indicating that all variables are reliable.

**Table 3. Reability Test Results**

Variable	Item	Cronbach's Alpha	Result
<b>Information Technology (X1)</b>	X1.1	0.916	Reliable
	X1.2		Reliable
	X1.3		Reliable
	X1.4		Reliable
	X1.5		Reliable
	X1.6		Reliable
	X1.7		Reliable
	X1.8		Reliable
	X1.9		Reliable
	X1.10		Reliable
	X1.11		Reliable
	X1.12		Reliable
	X1.13		Reliable
<b>Creativity (X2)</b>	X2.1	0.858	Reliable
	X2.2		Reliable
	X2.3		Reliable
	X2.4		Reliable
	X2.5		Reliable
	X2.6		Reliable
	X2.7		Reliable
<b>Business Capital (X3)</b>	X3.1	0.805	Reliable
	X3.2		Reliable
	X3.3		Reliable
	X3.4		Reliable
<b>MSME Sustainability in the Fashion Industry (Y)</b>	Y1	0.831	Reliable
	Y2		Reliable
	Y3		Reliable
	Y4		Reliable
	Y5		Reliable
	Y6		Reliable
	Y7		Reliable

Source: Processed Data by Researcher (2024)

### Hyphotesis Test Results

The T-test results in the table below show that the three independent variables (X1, X2, and X3) significantly impact the dependent variable (Y), with significance values below 0.05. Each variable contributes differently. The results indicate that Information Technology (IT), Creativity, and Business Capital all have a positive effect on the sustainability of fashion SMEs in Bandar Lampung, as reflected by the positive values in the table.

**Table 4. T Test Results**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.346	2.47		4.189	0
				0.135		
	X1	0.284	0.068	0.185	1.09	0
	X2	0.39	0.151	0.634	2.6	0
	X3	1.034	0.166		6.231	0

Source: Processed Data by Researcher (2024)

The coefficient of determination shows that the regression model explains 43.7% of MSME Sustainability variation ( $R^2 = 0.437$ ), with 42.1% explained after adjusting for variables. The model has a strong predictive power ( $R = 0.661$ ), though other factors may also influence MSME sustainability.

**Table 5. R<sup>2</sup> Test Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661 <sup>a</sup>	0.437	0.421	3.828

Source: Processed Data by Researcher (2024)

## Discussion

### Information Technology Influences the Sustainability of MSMEs in the Fashion Industry in Bandar Lampung City

The hypothesis that Information Technology (IT) positively impacts MSME sustainability is supported by T-test results, showing a significant positive coefficient at a 5% significance level ( $p\text{-value} < 0.05$ ). IT plays a key role in improving MSME operational efficiency, expanding market access, and enhancing business performance through digital platforms like e-commerce and social media. In this study, IT positively influenced the sustainability of fashion MSMEs in Bandar Lampung, consistent with Pratama et al. (2022), who found that optimal IT use enhances efficiency and market reach. Hasanah et al. (2023) highlighted IT's role in improving adaptability to market changes, providing a competitive advantage. Syahrial (2021) found IT reduces operational costs through process automation like inventory and accounting systems. These results emphasize IT's critical role in MSME survival and growth. IT improves efficiency, fosters innovation, and helps businesses adapt to market shifts, promoting long-term sustainability. However, Rahayu and Day (2022) note that IT's impact is limited if MSMEs lack infrastructure or resources, requiring proper training and investment. This study supports the view that IT is essential for MSME sustainability,

especially in competitive sectors like fashion in Bandar Lampung, as it drives market expansion, operational efficiency, innovation, and adaptability.

### **Creativity Influences the Sustainability of MSMEs in the Fashion Industry in Bandar Lampung City**

The second hypothesis of this study suggests that creativity positively and significantly affects MSME sustainability in the fashion industry in Bandar Lampung. T-test results confirm that creativity significantly influences MSME sustainability. Creativity plays a crucial role in driving product and service innovation, which enhances MSMEs' competitiveness in the dynamic fashion market. Supporting this, Dewi and Nugraha (2023) found that MSMEs with high creativity in product design are more successful in attracting consumers by offering unique and innovative products. Creativity also plays a key role in branding and marketing strategies, building customer loyalty and boosting sales. Kurniawati et al. (2022) added that creativity in digital marketing campaigns, especially on social media platforms like Instagram and TikTok, enhances product visibility and drives viral promotion, ultimately increasing sales. Creative campaigns and influencer collaborations help MSMEs expand their reach.

Furthermore, creativity aids MSMEs in adapting to business challenges. Pratama and Hidayat (2023) found that MSMEs that creatively respond to market changes, such as demand shifts or increased competition, are more likely to survive and grow. An example of this is how fashion MSMEs adapted during the COVID-19 pandemic by producing fashionable, eco-friendly masks. Lastly, creativity is essential in developing sustainable fashion products, as noted by (Wijaya & Simamora, 2022). Using recycled materials or energy-efficient production processes gives MSMEs a competitive edge in an environmentally-conscious market. Overall, creativity supports MSME sustainability by enabling adaptation to market changes, improving competitiveness, and strengthening customer relationships.

### **Business Capital Influences the Sustainability of MSMEs in the Fashion Industry in Bandar Lampung City**

The third hypothesis, stating that business capital has a positive and significant impact on MSME sustainability, is supported by the T-test results, which show a positive coefficient. Adequate business capital allows MSMEs to overcome financial challenges, expand their business, and remain sustainable in a competitive market. Business capital plays a crucial role in supporting MSME sustainability in the fashion industry, especially in Bandar Lampung. Santoso (2022) explains that sufficient capital enables investment in product development, marketing, and technology, supporting business expansion and competitiveness.



Additionally, adequate capital helps MSMEs cope with market challenges such as demand fluctuations and rising production costs (Anwar et al., 2023). Yulianti et al. (2023) emphasize the importance of access to funding sources like venture capital and bank loans, which accelerate MSME growth. Capital also enables aggressive marketing strategies and product innovation, which are vital in the dynamic fashion industry. Nurhadi et al. (2023) add that capital supports research and development, strengthening business sustainability. Capital is also crucial in risk management. Widyastuti (2021) states that capital reserves allow MSMEs to survive crises and take on greater business risks. Overall, sufficient business capital supports innovation, market expansion, and risk management, all of which contribute to long-term MSME growth in the fashion industry in Bandar Lampung.

## **5. CONCLUSION AND LIMITATION**

### **Conclusion**

This study, which surveyed 115 respondents, concludes that: 1) Information technology has a positive and significant impact on MSME sustainability, as its effective use enhances operational efficiency and service quality, boosting competitiveness in the market; 2) Creativity also positively and significantly affects MSME sustainability, with the ability to develop new ideas and adapt to market needs increasing opportunities for success in a competitive industry; and 3) Business capital plays a significant role in MSME sustainability, where good financial management and access to sufficient funding sources support business development, growth, and long-term stability.

### **Limitation**

The limitations of this study include the following: First, the sample size of 115 respondents may not fully represent the entire population of MSMEs in Bandar Lampung, which may affect the generalizability of the findings. Second, this study focuses solely on the fashion industry, so the results may not be applicable to MSMEs in other sectors. Third, the data collection method relied on self-reported surveys, which may introduce bias, as respondents may provide socially desirable answers or misunderstand certain questions. Lastly, the study is cross-sectional, meaning it captures data at a single point in time, limiting the ability to draw conclusions about causality or long-term effects.

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