

The Mediating Effect of Resilient Leadership on MSMEs' Capabilities in Indonesia

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ABSTRACT

Micro, small, and medium enterprises (MSMEs) account for 60% of Indonesia's gross domestic product and employ 97% of the formal workforce. Despite their economic significance, MSMEs encounter persistent challenges, including economic instability, digital transformation, and human resource development. This study examines the impact of intellectual, emotional, and spiritual intelligence on the capabilities of MSMEs, with resilient leadership serving as a mediating variable. The research involved 223 food and beverage MSMEs located in Jember, Bondowoso, Lumajang, and Banyuwangi regencies. Data were collected through proportional random sampling using a 5-point Likert Scale and analyzed using path analysis. This research is grounded in several related theoretical frameworks from the empirical literature, including transformational leadership theory, collaborative leadership theory, and extension theory as the grand theory. The results indicate that all three forms of intelligence significantly affect both resilient leadership and MSME capabilities, with resilient leadership mediating these relationships. Intellectual intelligence supports strategic analysis (mean score: 4.21), emotional intelligence fosters effective interpersonal relationships (mean score: 4.8), and spiritual intelligence informs ethical decision-making (mean score: 4.15). As this study is limited to the food and beverage sector, future research should examine additional sectors and variables. The findings provide evidence-based recommendations for enhancing the resilience of MSMEs in response to global challenges.

Keywords: capability, intelligence, leadership, MSME, resilience leadership

INTRODUCTION

MSMEs (Micro, Small, and Medium Enterprises) play a critical role in the Indonesian economy. As the backbone of the national economy, MSMEs contribute around 60% of the total GDP and absorb more than 97% of the workforce in the formal sector. The existence of MSMEs not only contributes to the economy but also plays a role in creating jobs, reducing poverty, and encouraging inclusive economic growth (Surya et al., 2021). In this context, MSMEs are a key pillar in Indonesia's sustainable development efforts. However, MSMEs in Indonesia face various challenges that threaten their sustainability and growth. One of the biggest challenges is the impact of climate change. Increasingly extreme climate change, such as floods, droughts, and unpredictable weather, can disrupt the operations of MSMEs, especially those that depend on natural resources (Riefky et al., 2021). For example, small farmers who rely on agricultural products are very vulnerable to weather changes that can affect their harvests.

The global economic crisis has also had a significant impact on MSMEs in Indonesia. The crisis triggered by various factors, including the trade war and the COVID-19 pandemic, has led to a decline in market demand, disruption of supply chains, and increased production costs ((Tairas, 2020); (Suminah et al., 2022)). Recent studies by Satpathy et al. (2025), emphasize that post-pandemic economic recovery for MSMEs requires adaptive leadership strategies and enhanced digital capabilities to build organizational resilience, highlighting the importance of new technology adoption, effective risk management, and sustainable practices. Many MSMEs do not have sufficient financial reserves to survive this difficult situation, so they are at risk of bankruptcy. The lack of access to financing and technological support for MSMEs exacerbates this condition. Many MSMEs still have difficulty getting loans from formal financial institutions, so they are forced to rely on informal sources of financing with high interest rates (Suryono et al., 2021). This hinders their ability to invest in innovation and business development, which are crucial for increasing competitiveness in the market. On the other hand, MSMEs are also faced with the challenge of digitalization. With the increasing development of information technology, MSMEs are required to adapt to changes in consumer behaviour that are shifting to digital platforms (Radicic & Petković, 2023). Contemporary research by Klein et al. (2024) and Teixeira et al. (2025) demonstrates that digital transformation in MSMEs is not merely about technology adoption but requires fundamental changes in organizational culture, leadership approaches, and human resource development strategies. Klein et al. (2024) specifically propose a meta-model for digital transformation strategies based on knowledge management and organizational resilience mechanisms, while (Teixeira et al., 2025) emphasize the need for symbiotic relationships between SMEs and technology through holistic approaches. MSMEs' digitalization strategy is the right choice to save small businesses while encouraging the growth of digital MSMEs (Cahyani et al., 2023). However, many MSMEs are not ready to carry out digital transformation, both in terms of knowledge and infrastructure. This inability can cause them to be left behind in increasingly competitive markets.

Furthermore, climate change presents an escalating challenge for MSMEs. Research by (Alam et al., 2022), across 14 developing countries found that climate change has a significant positive impact on SMEs' innovation performance, with one standard deviation variation in climate change resulting in a 6.6% increase in innovation investment. However, this innovation response varies substantially across firms, with high-growth firms and those with high slack resources showing stronger positive responses. Similarly, (Ahmed & Liverpool-Tasie, 2023) examined adaptation to extreme temperatures among firms in Sub-Saharan Africa and found evidence of incomplete adaptation, with small and medium-sized firms exhibiting lower levels of adaptation compared to large, capital-intensive firms. These findings underscore the importance of building adaptive capacity within MSMEs to address climate-related challenges.

The Indonesian government has recognised the importance of MSMEs and has attempted to provide support through various policies and programs. However, the implementation of these policies is often hampered by complex bureaucracy and a lack of coordination between institutions (Burger et al., 2015). Therefore, a more integrated and collaborative approach is necessary to support MSMEs, enabling them to adapt and thrive in the face of existing challenges. In this context, resilient leadership is crucial. Resilient leaders can face challenges and changes with a positive attitude and inspire teams to stay focused on goals even in difficult situations (Indrianti et al., 2024). Effective leadership can foster innovation, boost employee motivation, and cultivate a work environment that promotes the growth of MSMEs.

The importance of resilient leadership in MSMEs is also evident in their ability to adapt to change. Leaders who have a clear vision and can manage risk well can help MSMEs survive and even thrive amidst uncertainty (Sestu et al., 2020). With the proper leadership support, MSMEs can develop effective strategies to face challenges, including leveraging technology and innovation to improve operational efficiency. Synergy between the government, private sector, and communities is needed to ensure the sustainability and growth of MSMEs in Indonesia. This collaboration will create an ecosystem that supports MSMEs in addressing challenges and capitalizing on existing opportunities.

Intellectual, emotional, and spiritual intelligence are three types of intelligence that contribute significantly to resilient leadership and MSME capabilities. Intellectual intelligence reflects analytical and problem-solving abilities that are important for leaders in formulating strategies and making the right decisions (Bornman & Louw, 2023). Emotional intelligence allows leaders to understand and manage their emotions and those of others, supporting effective communication and collaboration within the team (Coronado-Maldonado & Benítez-Márquez, 2023). Meanwhile, spiritual intelligence provides leaders with insight into higher values and goals, which can inspire the team and create a sense of meaning in work (Samul, 2024). Leaders with high intellectual, emotional, and spiritual intelligence will be able to facilitate effective, resilient leadership. This is important because resilient leadership not only functions as an internal driver in the organization but also as a liaison between the various elements that influence MSME capabilities. In other words, resilient leadership can act as a mediator that strengthens the relationship between the intelligence possessed by leaders and business capabilities.

The purpose of the study with reference to the description above is to analyze the direct and indirect influence of intellectual intelligence, emotional intelligence and spiritual intelligence on the capabilities of MSMEs with the mediation of resilient leadership.

LITERATURE REVIEW

Resilient leadership is a concept that is becoming increasingly relevant in the context of MSMEs, particularly in light of the challenges faced by this sector. The definition of resilient leadership refers to a leader's ability to face, overcome, and bounce back from various tricky situations or crises (Indrianti et al., 2024). Resilient leaders are not only able to survive in uncertain conditions but can also motivate and inspire their teams to stay focused on common goals. The main characteristics of resilient leadership include the ability to adapt, think positively, and have a clear vision (Garrido-Moreno et al., 2024). Resilient leaders also tend to have good communication skills, so they can convey information clearly and build trust among team members.

Resilient leadership in the context of MSMEs is crucial because this sector frequently faces numerous challenges, including market fluctuations, policy changes, and environmental impacts. Resilient leaders can help MSMEs develop effective strategies to face these challenges, such as product diversification, innovation, and increasing operational efficiency (Hokmabadi et al., 2024). In addition, resilient leadership also plays a role in creating an organizational culture that supports collaboration and creativity, which are essential to survive and thrive in a competitive market (Verissimo et al., 2024). The relevance of resilient leadership in MSMEs is also evident in its ability to encourage adaptation to change, including digitalization and shifts in consumer behavior. Resilient leaders can identify new opportunities and utilize technology to increase business competitiveness (Shore et al., 2024). Thus, resilient leadership not only contributes to the sustainability of MSMEs but also to sustainable growth and innovation. In facing global challenges such as climate change and economic crises, resilient leadership is key to ensuring that MSMEs can adapt and remain relevant in a changing business ecosystem (Grego et al., 2024).

MSME capabilities refer to the ability of micro, small, and medium enterprises to manage resources, innovate, and adapt to change in order to survive and thrive in a dynamic business environment (Octasylya et al., 2022). The definition of MSME capabilities encompasses various aspects, including managerial skills, market knowledge, access to technology, and the ability to manage finances efficiently (Rekha et al., 2024). To survive in uncertain situations, MSMEs must develop core capabilities that include operational flexibility, product innovation, and the ability to establish strong relationships with customers and business partners.

One of the key capabilities required is the ability to adapt to change, which encompasses responding to market trends, policy changes, and technological advancements. MSMEs that have this capability can diversify products and services, and adopt new technologies to improve operational efficiency and effectiveness (Radicic & Petković, 2023). For example, in the digital era, MSMEs need to utilize e-

commerce platforms and social media to reach a broader customer base and market their products more effectively. Additionally, risk management capabilities are crucial for identifying and mitigating the impact of potential threats, such as fluctuations in raw material prices or shifts in consumer preferences. By building these capabilities, MSMEs can not only survive in difficult circumstances but also create opportunities for sustainable growth. Strong capabilities enable MSMEs to innovate, improve processes, and increase competitiveness in local and global markets (Farida & Setiawan, 2022). Therefore, developing MSME capabilities should be a primary focus in efforts to increase the contribution of this sector to the Indonesian economy and ensure business sustainability in the future.

The relationship between intelligence, leadership, and MSME capabilities is a significant theme in management literature, supported by various studies that highlight the vital role of intelligence, encompassing intellectual, emotional, and spiritual intelligence, in fostering resilient leadership and enhancing MSME capabilities and competitiveness. One relevant study concluded that emotionally intelligent leaders improve business behavior and results, and have an impact on the capabilities of work teams (Coronado-Maldonado & Benítez-Márquez, 2023). Inspirational and visionary leaders can motivate team members to reach their full potential, thereby enhancing the collective capabilities of the organization (Cheng et al., 2023). Emotional intelligence plays a vital role in effective leadership (Koutsoumpa, 2023). Leaders with high emotional intelligence tend to be more transformational, make better decisions, manage stress effectively, and create cohesive team dynamics.

Other studies have found that spiritual intelligence can enhance capabilities, which is when viewed from the ability to utilize and realize spiritual qualities and resources to improve performance functions (Amram, 2022). In the context of MSMEs, leaders who can adjust their leadership style to market conditions and team needs can optimize organizational capabilities (Islam et al., 2023). For example, in a crisis, leaders who can make quick decisions and provide emotional and spiritual support to team members can enhance their organization's capabilities.

The relationship between effective leadership and increasing MSME capabilities can be seen as a dynamic interaction that is mutually reinforcing (Pigola et al., 2023), where strong leadership encourages increased skills, knowledge, and collaboration within the organization, which in turn increases business competitiveness and sustainability. Referring to several research results and explanations above, several hypotheses can be formulated, namely:

- H1 : Intellectual intelligence has a positive and significant effect on resilient leadership,
- H2 : Emotional intelligence has a positive and significant effect on resilient leadership,
- H3 : Spiritual intelligence has a positive and significant effect on resilient leadership,
- H4 : Intellectual intelligence has a positive and significant effect on MSME capabilities,
- H5 : Emotional intelligence has a positive and significant effect on MSME capabilities,
- H6 : Spiritual intelligence has a positive and significant effect on MSME capabilities,
- H7 : Resilient leadership has a positive and significant effect on MSME capabilities,
- H8 : Intellectual intelligence has a positive and significant effect on MSME capabilities mediated by resilient leadership,
- H9 : Emotional intelligence has a positive and significant effect on MSME capabilities mediated by resilient leadership,
- H10 : Spiritual intelligence has a positive and significant effect on MSME capabilities mediated by resilient leadership,

The following is a picture of the conceptual framework developed by the researcher:

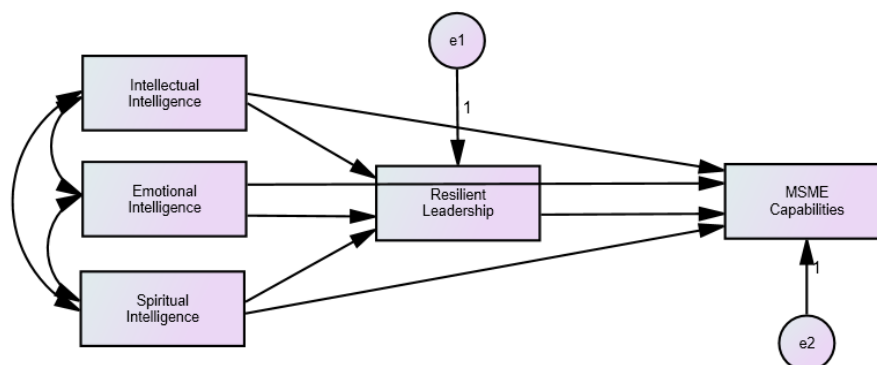


Figure 1. Conceptual framework

METHODS

This study involved MSMEs operating in the food and beverage sector across four districts: Jember, Bondowoso, Lumajang, and Banyuwangi, with a total of 498 MSMEs. This sector was chosen because MSMEs not only contribute to the national economy but also become agents of change in sustainable development in Indonesia. The proportional random sampling method was used in sampling to determine the relative size of each district. Determination of the number of samples using the Slovin formula with an error rate of 5% (Tejada et al., 2012), which obtained a sample of 223 MSMEs. The number of samples was then calculated proportionally in each district, namely Jember (70 MSMEs), Banyuwangi (62 MSMEs), Bondowoso (40 MSMEs), and Lumajang (51 MSMEs).

Data were collected from July to August 2024 using a questionnaire distributed to respondents. The questionnaire answers used a 5-point Likert Scale with questions adapted and developed based on related literature. Intellectual intelligence variables from ((Giti et al., 2021); (Fareed et al., 2021); (Odermatt et al., 2024)), namely: verbal ability, mathematical ability, spatial ability, reasoning ability, problem-solving ability, memory ability, and adaptability. Emotional intelligence from ((Fareed et al., 2021); (Bru-Luna et al., 2021); (Gkintoni et al., 2023) It consists of: self-awareness, emotional management, empathy, social skills, self-motivation, social awareness, and emotional decision-making. Spiritual intelligence from ((Sharifnia et al., 2022); (Fidelis et al., 2024); (Pinto et al., 2024)), namely: self-awareness, meaningfulness of life, social connectedness, ability to manage emotions, openness to

Table 1. Validity and reliability test results

Variable	Item	Correlation	Significance	Alpha-Cronbach
Intellectual intelligence	Verbal ability	0.470	0.009	0.620
	Mathematical ability	0.681	0.000	
	Spatial ability	0.457	0.011	
	Reasoning ability	0.585	0.001	
	Problem-solving ability	0.556	0.001	
	Memory ability	0.498	0.005	
	Adaptability	0.636	0.000	
Emotional intelligence	Self-awareness	0.508	0.004	0.621
	Emotional management	0.452	0.012	
	Empathy	0.437	0.016	
	Social skills	0.682	0.000	
	Self-motivation	0.537	0.002	
	Social awareness	0.429	0.018	
	Emotional decision making	0.807	0.000	
Spiritual intelligence	Meaningfulness of life	0.626	0.000	0.638
	Self-awareness	0.494	0.006	
	Social connectedness	0.601	0.000	
	Ability to manage emotions	0.550	0.002	
	Openness to spiritual experiences	0.420	0.021	
	Moral values	0.550	0.002	
	Spiritual resilience	0.697	0.000	
Resilient leadership	Strategic thinking skills	0.436	0.016	0.626
	Adaptability to change	0.634	0.000	
	Problem-solving skills	0.635	0.000	
	Communication that effective	0.537	0.002	
	Emotional balance	0.556	0.001	
	Results-oriented	0.552	0.002	
	Ability to learn from experience	0.627	0.000	
MSME capabilities	Business capital	0.574	0.001	0.642
	Sales turnover	0.545	0.002	
	Product or service quality	0.531	0.003	
	Access to market	0.560	0.001	
	Innovation ability	0.560	0.001	
	Financial management	0.547	0.002	
	Partnership network	0.628	0.000	

spiritual experiences, moral values, and spiritual resilience. Resilient leadership from ((Dartey-Baah, 2015); (Eliot, 2020); (Khahan et al., 2024)), consists of: strategic thinking skills, adaptability to change, problem-solving skills, effective communication, emotional balance, results-oriented and the ability to learn from experience. Finally, MSME capabilities from ((Molina-Sánchez et al., 2022); (Tarihoran et al., 2023)), consist of: business capital, sales turnover, product or service quality, access to markets, innovation capabilities, financial management, and partnership networks.

Testing the results using path analysis using the IBM AMOS computer program. Moreover, before testing, the data were first examined for validity and reliability using the SPSS computer program, as presented in Table 1. Based on the results of the validity test, the significance value for each question item is $< \alpha$ (0.05), which indicates that the items in the variables of intellectual intelligence, emotional intelligence, spiritual intelligence, resilient leadership, and MSME capabilities are valid. The Alpha-Cronbach coefficient value of each variable is also more than 0.60, which indicates that the data for each variable is reliable (Kalkbrenner, 2023).

RESULTS AND DISCUSSION

Results

The general description of the research respondents is presented according to gender, age, level of education, and length of business in Table 2. Most of the respondents in this research were male (88.3%), aged between 36 and 50 years (42.2%), with the highest level of education being high school (47.5%). They generally have been running their business between 6-15 years (44.4%).

Table 2. Overview of research respondents

Demographic	Description	Distribution	
		Frequency	Percentage (%)
Gender	Male	197	88.3
	Female	26	11.7
Age	0-35 years old	66	29.6
	36-50 years old	94	42.2
	> 50 years old	63	28.3
Last education	Elementary School	8	3.6
	Junior High School	61	27.4
	High School	106	47.5
	Diploma	28	12.6
	Bachelor's Degree	20	9.0
Work Period	< 1 year	6	2.7
	1-5 years	40	17.9
	6-15 years	99	44.4
	> 15 years	78	35.0
Total		223	100.0

Table 3 presents the results of testing the influence of exogenous variables (intellectual intelligence, emotional intelligence, and spiritual intelligence) on endogenous variables (resilient leadership and MSME capabilities). The test results show that all exogenous variables have a positive and significant effect on endogenous variables. Thus, it can be concluded that the variables of intellectual intelligence, emotional intelligence, and spiritual intelligence have increased against the variables of resilient leadership and MSME capabilities.

Table 3. Testing the direct effect hypothesis

Hypothesis	Regression Model	Direct Effect	Critical Ratio	Sig.
H1	Intellectual intelligence → Resilient leadership	0.339	4.260	0.000**
H2	Emotional intelligence → Resilient leadership	0.231	3.179	0.001**
H3	Spiritual intelligence → Resilient leadership	0.266	3.279	0.001**
H4	Intellectual intelligence → MSME capability	0.067	2.064	0.039*
H5	Emotional intelligence → MSME capability	0.061	2.130	0.033*
H6	Spiritual intelligence → MSME capability	0.073	2.268	0.023*
H7	Resilient leadership → MSME capability	1.574	43.489	0.000**

Note: ** Significance < 0.01 ; * Significance < 0.05

Table 3 presents the results of the test of the indirect influence of intellectual intelligence, emotional intelligence, and spiritual intelligence on the capabilities of MSMEs mediated by resilient leadership. The results of the indirect influence indicate a positive and significant effect, suggesting that resilient leadership mediates the impact of intellectual intelligence, emotional intelligence, and spiritual intelligence on the capabilities of MSMEs.

Table 4. Testing the indirect effect hypothesis

Hypothesis	Regression Model	Indirect Effect	Critical Ratio	Sig.
H8	Intellectual intelligence → Resilient leadership → MSME capability	0.534	4.217	0.000**
H9	Emotional intelligence → Resilient leadership → MSME capability	0.364	3.155	0.002**
H10	Spiritual intelligence → Resilient leadership → MSME capability	0.418	3.274	0.002**

Note: ** Significance < 0.01

The recapitulation of the results of testing the influence of exogenous variables (intellectual intelligence, emotional intelligence, and spiritual intelligence) on endogenous variables (resilient leadership and MSME capabilities), which include direct, indirect, and total influences, is presented in Table 5.

Table 5. Mediating effects of resilient leadership

Regression Model	Direct Effect	Indirect Effect	Total Effect
Intellectual intelligence → MSME capability	0.067	0.534	0.601
Emotional intelligence → MSME capability	0.061	0.364	0.425
Spiritual intelligence → MSME capability	0.073	0.418	0.491

The total influence of each exogenous variable is intellectual intelligence of 60.1%, emotional intelligence of 42.5%, and work ability of 49.1% (Table 5). Furthermore, the general results of the path analysis are presented in Figure 2.

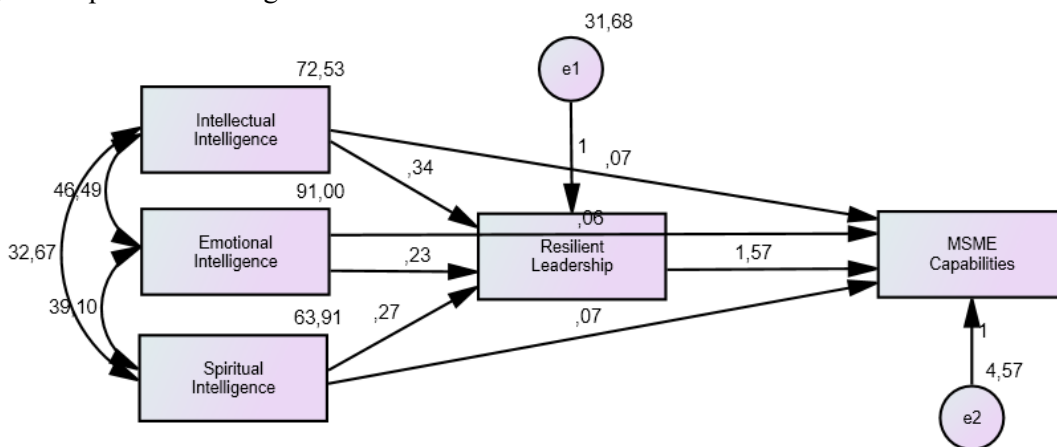


Figure 2. Path analysis results

Discussion

Intellectual intelligence has a significant influence on resilient leadership because high analytical and critical thinking skills enable leaders to face challenges with a rational and strategic approach. Leaders who possess good intellectual intelligence can analyze complex situations, identify problems quickly, and formulate effective solutions to overcome the obstacles they face. This finding aligns with the resource-based view perspective articulated by (Alam et al., 2022), who demonstrated that firms with greater analytical and innovative capabilities are better positioned to respond to external challenges such as climate change. Their research across 443 SMEs in 14 developing countries found that firms with higher innovation performance—which requires intellectual intelligence—show stronger positive responses to environmental challenges. In the context of resilient leadership, IQ plays an important role in improving the leader's ability to adapt to change, make the right decisions under pressure, and plan sustainable long-term strategies (Korherr et al., 2022). In addition, intellectually intelligent leaders tend

to be more open to learning and innovation, so that they can integrate new knowledge into their leadership practices (Timotheou et al., 2023). Thus, the combination of intellectual intelligence and resilience creates leaders who are not only able to survive in difficult situations but also motivate their team to grow and innovate in the face of existing challenges.

Emotional intelligence has a significant influence on resilient leadership because a leader's ability to understand and manage their own emotions and those of others is crucial in facing challenges. Leaders with high emotional intelligence are better able to navigate stress and pressure, so they can not only maintain their composure in difficult situations but also provide emotional support to their team members (Raghubir, 2018). With the ability to recognize and respond to emotions with empathy, these leaders can build strong relationships and strengthen team commitment, which in turn creates a positive and collaborative work environment. When faced with failure or unexpected change, emotionally intelligent leaders can inspire and motivate their teams to stay focused on common goals, while encouraging them to learn from the experience, thereby creating a sustainable culture of resilience within the organization.

Spiritual intelligence influences resilient leadership. Spiritual intelligence plays a crucial role in shaping resilient leadership, as it instills deeper values, goals, and meaning in every action of the leader. Leaders with high spiritual intelligence tend to have a clear vision and strong principles, which guide them in making ethical and responsible decisions, especially in difficult situations (Baykal, 2024). Spiritual intelligence enables leaders to remain calm and focused, even in the midst of stress and uncertainty, by grounding themselves in their core beliefs and values. In addition, leaders with good spirituality can inspire and motivate their teams to find meaning in their work, creating a deep sense of connectedness and shared purpose (Reave, 2005). This not only improves team morale but also strengthens their resilience in facing challenges, as they feel supported by greater values and have a strong sense of mutual trust, thus building the foundation for resilient and sustainable leadership.

Intellectual intelligence has a significant impact on MSME capabilities, because high analytical and problem-solving abilities enable MSME owners to make better and more strategic decisions in running their businesses (Srimulyani et al., 2023). With good intellectual intelligence, MSME leaders can analyze the market, understand consumer needs, and formulate effective strategies to compete in an increasingly competitive market. In addition, intellectual intelligence also contributes to innovation capabilities, enabling MSME owners to develop new products and services that align with market trends and demands (Sulistyo & Siyamtinah, 2016). The ability to manage information and apply knowledge practically also helps MSMEs optimize existing resources, increase operational efficiency, and ultimately, strengthen their competitiveness. Thus, the development of intellectual intelligence among MSME actors is crucial for enhancing their business capabilities and sustainability in the face of dynamic economic challenges. The level of information recipients also needs to be addressed as an effort to increase absorption, mindset, and behavioral changes, so that extension activities can run optimally to achieve their goals (Irdiana et al., 2024).

Emotional intelligence influences MSME capabilities, indicating that emotional intelligence plays a vital role in improving MSME capabilities because the ability to understand and manage one's own and others' emotions can affect team dynamics and interactions with customers. MSME owners who have high emotional intelligence tend to be more empathetic, so they can build strong relationships with employees and customers, creating a positive and collaborative work atmosphere that increases productivity (Krolikowska & Kuenzel, 2024). When leaders can manage stress and pressure well, they are also able to make more rational and wise decisions, especially in difficult situations. Additionally, emotional intelligence enables leaders to motivate their teams, address employee needs effectively, and manage conflicts more efficiently, ultimately enhancing employee retention and customer satisfaction. Thus, the development of emotional intelligence among MSME actors not only strengthens internal capabilities but also increases the competitiveness and sustainability of their businesses in an increasingly complex market.

Spiritual intelligence has a meaningful influence on MSME capabilities by forming a strong foundation of values and goals in running a business. MSME owners who have high spiritual intelligence tend to be better able to integrate ethical principles and social responsibility into their business strategies, so that they do not only focus on financial gain, but also on positive impacts on society and the environment (Rosecká et al., 2024). Spiritual intelligence enables leaders to discover meaning and purpose in their business, which in turn enhances team motivation and commitment. When all team members share a common understanding of the company's values and goals, it fosters strong synergy and enhances

collaboration toward achieving a shared vision. In addition, spiritually sensitive leaders can face challenges with greater resilience, remain calm in the face of adversity, and inspire employees to stay focused on long-term goals. Thus, spiritual intelligence not only enhances the internal capabilities of MSMEs but also fosters stronger relationships with customers and communities, thereby supporting business sustainability and growth.

Resilient leadership has a significant impact on MSME capabilities, by providing the ability to adapt and survive in the face of challenges and rapid changes in the market. Resilient leaders can cope with stress and uncertainty, and lead their teams through difficult times with calm and confidence. This finding supports (Satpathy et al., 2025), who emphasized that resilience and sustainability in MSMEs are greatly increased by embracing technology, expanding loan availability, and implementing circular economy ideas—all of which require resilient leadership to initiate and sustain. Their research highlights that resilient leadership is essential for navigating market fluctuations and unforeseen challenges in the post-COVID-19 era. This fosters a stable and supportive work environment, where team members feel secure enough to innovate and take initiative. Resilient leadership also encourages the development of a learning culture within the organization, where failure is seen as an opportunity to learn and grow, rather than as an obstacle (Tagscherer & Carbon, 2023). Thus, MSMEs led by individuals with resilient capabilities are better equipped to adjust their business strategies, manage resources effectively, and enhance their competitiveness in the market, which ultimately contributes to the long-term growth and sustainability of the business.

The importance of adaptive capacity in MSMEs is further reinforced by contemporary research on digital transformation. (Klein et al., 2024) propose a meta-model for digital transformation strategies specifically designed for SMEs, emphasizing that knowledge management and organizational resilience mechanisms are foundational for successful digital transformation. Their work demonstrates that SMEs need structured approaches to guide their digital transformation process, focusing on the strategic level and initiating business model adaptation through cycles of adaptation and response to new external demands.

Similarly, (Teixeira et al., 2025) found that digital transformation in industrial SMEs requires a holistic approach to symbiotic relationships with technology. Their research with Portuguese industrial SMEs revealed that managers often face an informational deficit about digital transformation, yet the integration of digital tools offers clear advantages to SMEs that implement them. These findings underscore the critical role of leadership in guiding digital transformation and building adaptive capacity.

The differential capacity of MSMEs to adapt to external challenges is highlighted by research on climate change adaptation. (Ahmed & Liverpool-Tasie, 2023) found evidence of incomplete adaptation to extreme temperatures among firms in Sub-Saharan Africa, with small and medium-sized firms exhibiting lower levels of adaptation compared to large, capital-intensive firms. Their research identifies potential barriers to adaptation that need to be addressed to prevent locking-in vulnerability to climate change impacts. This finding is particularly relevant to the current study's focus on resilient leadership, as it suggests that building leadership capabilities may be essential for overcoming adaptation barriers in smaller enterprises.

Furthermore, (Alam et al., 2022) demonstrated that SMEs' innovation response to climate change varies substantially across firms and industries. High-growth firms, firms with high slack resources, highly profitable firms, and those in non-vulnerable industries show stronger positive innovation responses to climate change. These findings highlight the importance of building organizational capabilities—including intellectual, emotional, and spiritual intelligence—that enable firms to respond proactively to environmental challenges.

Resilient leadership serves as an important mediator in linking intellectual intelligence with MSME capabilities, as intellectually intelligent leaders can formulate effective and adaptive strategies. In contrast, resilient traits allow them to face challenges and uncertainties with calm. When leaders possess high IQs, they can analyze data and market situations in depth, identify opportunities and risks, and make informed decisions to optimize resources. However, without resilient leadership, these capabilities may not be fully realized, especially in situations of crisis or rapid change (Eliot, 2020). Resilient leadership enables leaders to stay focused on long-term goals, motivate their teams, and foster an environment that supports innovation and collaboration. Thus, through resilient leadership, intellectual intelligence not only enhances leaders' analytical abilities but also strengthens the adaptability and sustainability of MSMEs in the face of complex market dynamics.

Emotional intelligence influences MSME capabilities through resilient leadership. Resilient leadership plays an important role in connecting emotional intelligence with MSME capabilities, because leaders who have high emotional intelligence can understand and manage their own emotions and team emotions effectively (Coronado-Maldonado & Benítez-Márquez, 2023). In this context, resilient leaders can utilize their emotional intelligence to foster strong relationships with team members, cultivate a positive work environment, and encourage when facing challenges. Emotional intelligence allows leaders to recognize and respond to the emotional needs of their team, which in turn increases job satisfaction, motivation, and commitment. When resilient leadership is present, leaders are not only able to cope with stress and pressure, but also inspire their teams to continue to adapt and innovate, even in difficult situations. Therefore, through resilient leadership, emotional intelligence not only contributes to more effective team management but also directly improves the capabilities of MSMEs to survive and thrive in a competitive and changing business environment.

Spiritual intelligence influences the capabilities of MSMEs through resilient leadership. Resilient leadership plays a key role as a mediator between spiritual intelligence and MSME capabilities, because leaders who have high spiritual intelligence can provide deeper direction and meaning in every decision and action taken. Spiritual intelligence helps leaders to recognize greater values and goals, which can guide them in creating business strategies that focus not only on profit, but also on positive impacts on society and the environment (Farhan, 2024). In the context of resilient leadership, these leaders can overcome challenges with calmness and confidence, and inspire teams to stay connected to a higher common purpose, especially during difficult times. Through resilient leadership, spiritual intelligence not only enhances integrity and ethics in decision-making, but also fosters collaboration and cohesion within the team, ultimately improving MSME capabilities to adapt, innovate, and achieve long-term sustainability. Thus, the synergistic relationship between spiritual intelligence, resilient leadership, and MSME capabilities becomes a strong foundation for sustainable growth amidst existing challenges.

Theoretical Implications

This study makes several important theoretical contributions to the literature on leadership, intelligence, and MSME development:

First, the research extends the application of Diffusion of Innovations Theory (Rogers, 2003) to the context of leadership development in MSMEs, demonstrating that the transfer of knowledge and skills related to multiple forms of intelligence can enhance organizational capabilities through resilient leadership. This finding positions resilient leaders as innovation champions who facilitate the adoption of new practices and capabilities within their organizations.

Second, the findings support and refine Transformational Leadership Theory (Bass & Avolio, 1994) by showing that resilient leadership incorporates elements of intellectual stimulation, individualized consideration, and inspirational motivation, which are mediated by different forms of intelligence. The study reveals that intellectual intelligence primarily contributes to strategic thinking and problem-solving aspects of transformational leadership, while emotional intelligence enhances relational and motivational components, and spiritual intelligence provides the value-based foundation for inspirational leadership.

Third, the study contributes to Collaborative Leadership Theory (Chrislip et al., 1994) by demonstrating how leaders leverage emotional and spiritual intelligence to build networks, establish trust, and foster partnerships that enhance MSME capabilities. This aligns with the findings of (Satpathy et al., 2025), who emphasized the importance of collaboration between MSMEs and larger organizations for long-term recovery and sustainability.

Fourth, the research provides empirical support for Visionary Leadership Theory (Westley & Mintzberg, 1989) by showing that spiritual intelligence enables leaders to articulate compelling visions that guide MSMEs through turbulent times. This is consistent with the work of (Alam et al., 2022), who found that firms with stronger innovative capabilities—often driven by visionary leadership—show more positive responses to environmental challenges.

Fifth, the study advances understanding of the intelligence-leadership-performance linkage by empirically validating resilient leadership as a mediating mechanism. This contributes to the growing body of literature, including the work of (Klein et al., 2024; Teixeira et al., 2025), that seeks to explain how organizational capabilities translate into adaptive capacity and resilience.

Practical Implications

The findings have several practical implications for MSME owners, policymakers, business development service providers, and extension workers:

For MSME Owners and Leaders: The results highlight the importance of developing all three forms of intelligence—intellectual, emotional, and spiritual—rather than focusing solely on technical business skills. Drawing from the findings of (Alam et al., 2022), MSME leaders should recognize that firms with greater innovative and adaptive capabilities are better positioned to respond to external challenges such as climate change and market disruptions. Participating in leadership development programs, seeking mentorship, and engaging in reflective practices can facilitate the development of these intelligences.

For Digital Transformation Initiatives: As emphasized by (Klein et al., 2024), SMEs need structured approaches to guide their digital transformation process. Their meta-model provides a framework for initiating business model adaptation through cycles of response to new external demands. MSME leaders should adopt similar structured approaches, integrating knowledge management and organizational resilience mechanisms into their digital transformation strategies.

For Training and Development Program Designers: Training programs should incorporate modules that address the differential adaptation needs identified by (Ahmed & Liverpool-Tasie, 2023). Programs should recognize that small and medium-sized firms may face greater barriers to adaptation and require more intensive support. Modules on digital transformation should follow the holistic approach recommended by (Teixeira et al., 2025), emphasizing symbiotic relationships with technology.

For Policymakers and Government Agencies: Policies supporting MSME development should include components that strengthen leadership capabilities and address the adaptation barriers identified in the literature. Following the recommendations of (Satpathy et al., 2025), policies should promote digital literacy, encourage partnerships between MSMEs and larger organizations, and strengthen regulations that support MSMEs' long-term recovery and sustainability initiatives.

For Extension Workers and Business Advisors: Extension workers should adopt holistic approaches that address multiple dimensions of leader development. Drawing from the resource-based view perspective (Alam et al., 2022), advisors should help MSME leaders identify and develop the internal capabilities—including intellectual, emotional, and spiritual intelligence—that enable innovative responses to environmental challenges.

CONCLUSION

The purpose of this study was to analyze the direct and indirect influence (with resilient leadership mediation) between intelligence (intellectual, emotional and spiritual) on the capabilities of MSMEs. The results of a survey conducted among 223 respondents, specifically MSMEs engaged in the food and beverage sector, revealed that intellectual intelligence, emotional intelligence, and spiritual intelligence had a positive and significant impact on resilient leadership and MSME capabilities. Resilient leadership also had a positive and significant effect on MSME capabilities. Resilient leadership was able to mediate the influence of intelligence on MSME capabilities.

There are two limitations and suggestions for further research. First, this study involves intelligence to enhance MSME capabilities, where resilient leadership serves as a mediating variable. Many variables can have an impact on MSME capabilities, making it possible to conduct research involving more variables. Second, this study is based on the capabilities of MSMEs, specifically those engaged in the food and beverage sector. The study can suggest a comparison of the capabilities of MSMEs engaged in other sectors to subsequent researchers.

This study offers a novel contribution by being among the first to integrate intellectual, emotional, and spiritual intelligence into a single analytical framework, demonstrating their collective impact on MSME capabilities through the mediating role of resilient leadership within the specific context of Indonesian food and beverage MSMEs. By empirically validating resilient leadership as a key mediating mechanism, the research provides a more nuanced understanding of how leader characteristics translate into organizational outcomes, while innovatively applying diffusion of innovations theory to explain how these leadership capabilities are developed and transmitted. Furthermore, the study's methodological approach, combining descriptive statistics with path analysis, offers a replicable model for future research across different sectors and complements existing cross-country studies on MSME resilience and adaptation.

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