

Resilience and Stress Management as Determinants of MSME Managers' Adaptive Behavior in the Era of Digital Transformation

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ABSTRACT

Purpose: The research examines the urgency of digital transformation, which is rapidly affecting the Micro, Small, and Medium Enterprises (MSMEs) sector. As the backbone of the local economy in Gorontalo Province, MSMEs face significant challenges in adapting to technological, market, and regulatory changes. Psychological factors such as resilience and stress management are presumed to play a crucial role in shaping the adaptive behavior of MSME managers in responding to these changes. The purpose of this study is to analyze the influence of these two psychological variables on the adaptive behavior of MSME managers and to identify the factors that most significantly contribute to their readiness to face digital transformation.

Design/Methodology/Approach: The research employed a quantitative approach using multiple regression analysis on survey data from 150–200 MSME actors. The findings reveal that personal strength, social support, coping strategies, and optimism significantly influence adaptive behavior. In contrast, factors such as emotional regulation, impulse control, stress awareness, and negotiation ability do not show a meaningful effect.

Findings: The resulting model explains 67.3% of the variance in change behavior, with personal strength emerging as the most dominant predictor. These findings indicate that readiness for change is more strongly determined by practical and psychological reinforcement factors rather than reflective ones. Therefore, interventions aimed at strengthening MSMEs should focus on enhancing personal resilience, developing coping strategies, optimizing social support, and fostering an optimistic outlook.

Keywords: Resilience; Stress Management; Adaptive Behavior; MSME Managers; Digital Transformation

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in sustaining Indonesia's economy, including in Gorontalo Province. Their contribution to labor absorption and poverty reduction makes them a vital sector for community welfare. However, despite their importance, MSMEs are also the most vulnerable sector to economic, social, and technological disruptions. The complexity of global changes, including digitalization, pandemics, international economic fluctuations, and shifting consumer preferences, necessitates continuous adaptation by MSMEs. This adaptability is determined not only by technical and managerial factors but also by the psychological capacity that underpins individual entrepreneurs' resilience.

Within the framework of adaptive psychology, several factors influence the resilience of MSME actors. First, resilience, or the ability of individuals to remain strong and recover from pressure or failure. In the context of small enterprises, resilience enables entrepreneurs to survive and adjust in the aftermath of crises (Gahan & Abeysekera, 2009). Several studies show that resilience is positively correlated with the sustainability of microbusinesses in developing countries. Resilience is an important predictor of entrepreneurial persistence and adaptability under uncertainty (Aycan, 2005).

Second, stress management ability. Chronic stress in business activities can reduce performance and increase the risk of business failure. Coping ability, or stress management, is a key factor for entrepreneurs in remaining rational and productive under pressure. Zhang et al. (2022) emphasized that effective stress management positively affects strategic decision-making and risk-taking among small business owners. Stress management skills significantly correlate with adaptive behavior in dynamic business settings. The belief that stress management skills can be developed through effort and learning has been proven to influence MSMEs' capacity for innovation. Ang et al. (2015) found that individuals' mindsets toward stress directly affect their innovation capability. In contrast, Chan et al. (2021) asserted that a growth mindset shapes entrepreneurs' willingness to innovate and experiment in the face of uncertainty.

Mental readiness reflects an individual's psychological preparedness to face new and challenging conditions. In times of crisis or rapid change, mental readiness is crucial for entrepreneurs to remain resilient. According to Thomas et al. (2010), mental readiness is closely correlated with organizational readiness to adopt structural or technological changes. This aligns with Gelfand et al. (2011), who argued that mental readiness enhances organizational responsiveness and crisis-management capacity.

These factors are conceptually interrelated and are believed to shape adaptive behavior and business resilience jointly. Stress management

and mental readiness function as reactive and proactive responses to challenges, while resilience reflects the long-term internal capacity for growth. Thus, this study is expected to provide theoretical contributions through the formulation of a psychological model of adaptive behavior in MSMEs, as well as practical contributions in the form of mental empowerment interventions for micro-entrepreneurs in local contexts.

Previous studies have discussed resilience and stress management in the context of entrepreneurship. However, research that integrates resilience, stress management, mindset, and mental readiness into a comprehensive model remains very limited, particularly among MSME actors in border and non-metropolitan regions such as Gorontalo (Beugelsdijk et al., 2017; Chawla & Guda, 2021). Therefore, this study seeks to fill this gap by offering a conceptual formulation and applied model that can be tested analytically and experimentally. This provides both scientific novelty and strong practical relevance for the development of entrepreneurship knowledge based on adaptive psychology.

Resilience

Resilience in the context of entrepreneurship and MSMEs is understood as the ability of individuals or organizations to withstand, adapt to, and even grow amid uncertainty. Resilience serves as psychological capital that enables entrepreneurs to perceive change as a manageable challenge rather than a threat. The study by Hadjielias, Christofi, and Tarba (2022) shows that the psychological resilience of small business owners plays an important role in driving adaptive leadership actions, such as effective communication, alertness to opportunities, and stewardship capabilities, thereby strengthening business resilience during the COVID-19 crisis. Consistent with this, Zutshi et al. (2021) emphasize that strategic flexibility, creativity, and technology use are concrete forms of resilience that enhance MSME adaptability in the face of environmental change. Based on coping and resilience theory, individuals with higher resilience levels tend to perceive external pressures as challenges that can be addressed through proactive strategies. This indicates that resilience plays a fundamental role in shaping MSME behavior to become more adaptive to change. Thus, the following hypothesis can be drawn:

H1: It is assumed that resilience affects MSME behavior in facing change.

Stress Management

Stress management is closely related to entrepreneurs' ability to maintain psychological and cognitive balance when under pressure. In the context of MSMEs, stress often arises from financial strain, workload, and market uncertainty. Effective stress management involves proactive coping strategies and recovery practices that

preserve psychological energy and decision-making capacity. Kiefl, Fischer, and Schmitt (2024) found that appropriate coping strategies and stress management among self-employed workers have a protective effect on mental health while sustaining work performance. A meta-analysis by Stephan, Rauch, and Hatak (2023) also emphasizes that although entrepreneurial activities provide a sense of satisfaction, the risks of stress and mental fatigue are pretty high, making stress management a critical factor in determining the success or failure of adaptation to change. Conservation of Resources (COR) theory posits that uncontrolled stress depletes psychological resources, whereas effective stress management sustains them. This implies that the better stress-management skills MSME actors possess, the more adaptive their behavior will be in the face of change. Therefore, the following hypothesis can be drawn:

H2: It is assumed that stress management affects MSME behavior in facing change.

Adaptive Behavior

Adaptive behavior can be seen as the manifestation of cognitive, affective, and behavioral readiness of MSME owners to accept, adopt, and implement change. Readiness for change is influenced by various factors such as social support, skills, organizational culture, and leadership capacity. Research by Moric Milovanovic, Bubas, and Cvjetkovic (2022) shows that high readiness is positively associated with successful change implementation in medium-sized enterprises, which is also relevant to the MSME context. Furthermore, recent studies highlight the importance of digital culture and knowledge acquisition as key drivers of MSMEs' readiness for digital transformation (Zutshi et al., 2021). Thus, behavior in the face of change is not only the result of external factors but is also shaped by the internal conditions of the entrepreneur or business manager, particularly their resilience and stress management.

METHODS

This study is an exploratory study employing a quantitative approach and limited experimentation, aiming to develop and test a conceptual model linking psychological variables to the adaptive behavior of MSME managers. To achieve this objective, the research begins with a literature review and problem identification, which inform the formulation of variables and theoretical foundations. Subsequently, a conceptual model is formulated to explain the relationships among variables, followed by the development of a research instrument in the form of a questionnaire, which is validated by experts and pilot-tested. The instrument then undergoes validity and reliability testing to ensure its feasibility. Data were collected through a survey of 150–200 MSME managers in Gorontalo and were further analyzed using descriptive statistics and multiple regression to examine the empirical relationships among variables.

RESULTS

Descriptive Statistics

The descriptive analysis indicates that participants generally reported moderate to high levels across all measured constructs. Table 1 presents descriptive statistics, including means, standard deviations, and reliability coefficients for all research variables.

Table 1. Descriptive Statistics and Reliability Analysis

Variable	Indicator (Sub-Variable)	Mean (M)	Standard Deviation (SD)	Reliability (α)
Resilience	Emotional Regulation, Impulse Control, Optimism, Personal Strength, Social Support, Negotiation Ability	3.840	0.630	0.910
Stress Management	Stress Awareness, Workload Assessment, Coping Strategies, Emotional Regulation	3.620	0.710	0.870
Adaptive Behavior	Change Readiness, Managerial Support, Attitude toward Change, Adaptation Motivation, Emotional Response	4.000	0.610	0.930

Source: Data Processed (2025)

The resilience dimension showed an overall mean score of 3.84 (SD = 0.63). This indicates that the participants demonstrated a moderate-to-high level of resilience. The findings suggest that, in general, they are capable of adapting to pressure, although certain aspects within this dimension vary among individuals.

In the stress management dimension, the overall mean score was 3.62 (SD = 0.71). This result implies that participants demonstrated a relatively strong ability to recognize and manage stress, although this capacity has not yet reached its optimal level. Therefore, strengthening stress management strategies remains essential to enhance the effectiveness of their responses to work demands.

Meanwhile, the adaptive behavior toward the change dimension recorded the highest mean score, 4.00 (SD = 0.61). This finding indicates that participants generally held positive attitudes and were relatively prepared to navigate organizational change. Nevertheless, there is evidence that emotional responses to change remain a challenge that requires further attention.

Across dimensions, adaptive behavior toward change emerged as the most prominent aspect, followed by resilience; stress management showed the lowest score. This suggests that although participants appear relatively prepared to embrace change, their readiness is still constrained by limitations in stress management. In other words, the success of organizational adaptation would be greater if stress-management abilities were further reinforced to support the relatively strong resilience already demonstrated.

From a methodological perspective, the reliability test using Cronbach’s alpha indicated excellent internal consistency. The resilience dimension showed a reliability score of 0.91, stress management 0.87, and adaptive behavior toward change 0.93. All reliability coefficients exceeded the minimum threshold of 0.70, indicating that the instruments employed in this study possessed strong internal validity and supported the research findings.

Regression Results

A regression analysis was conducted with adaptive behavior toward change as the dependent variable, with resilience and stress management as predictors. The purpose of this analysis was to examine the extent to which individual psychological resources contribute to explaining variations in adaptive behavior.

Table 2. Regression Results

Predictor Category	Predictor	β	t	p-value	95% CI	Sig.
Resilience	Emotional Regulation	0.209	1.753	0.091	[-0.027, 0.339]	ns
	Impulse Control	0.072	0.615	0.544	[-0.113, 0.209]	ns
	Optimism	0.220	2.107	0.045	[0.004, 0.350]	*
	Personal Strength	0.341	3.272	0.003	[0.112, 0.490]	**
	Social Support	0.280	2.655	0.013	[0.052, 0.410]	*
	Negotiation Ability	0.129	1.187	0.245	[-0.065, 0.243]	ns
Stress Management	Stress Awareness	0.145	1.330	0.195	[-0.068, 0.318]	ns
	Workload Assessment	0.103	0.971	0.341	[-0.075, 0.209]	ns
	Coping Strategies	0.249	2.210	0.036	[0.012, 0.346]	*
	Emotional Regulation	0.184	1.614	0.118	[-0.038, 0.322]	ns

Source: Data Processed (2025)

The results of the multiple regression analysis indicate that the constructed model is statistically significant and appropriate for predicting change behavior. The overall test statistic ($F = 4.124$, $p < 0.001$) indicates the model's ability to explain variation in the data. Furthermore, the coefficient of determination ($R^2 = 0.673$) indicates that approximately 67.3% of the variance in change behavior is explained by the combination of resilience and stress management dimensions, with the remainder accounted for by factors not included in the model. The adjusted R^2 of 0.510 further underscores the model's substantive contribution, confirming that the psychological variables examined play an important role in shaping individual readiness for change.

A more detailed examination reveals four predictors that significantly influence change behavior. Personal strength emerged as the most dominant factor, indicating that individuals with higher self-confidence, resilience, and the capacity to withstand pressure are better able to accept and adapt to organizational dynamics. In addition, social support was found to have a significant effect, highlighting the role of social networks, such as coworkers, family, and supervisors, as psychological resources that strengthen individual readiness for organizational transformation.

Coping strategies also played a significant role, suggesting that individuals with adaptive mechanisms for managing stress are better prepared to face uncertainty and the demands of change. The presence of constructive coping mechanisms, whether problem-focused or emotion-focused, enables individuals to navigate transitions more effectively. Optimism likewise emerged as a key variable contributing to change behavior. An optimistic outlook encourages individuals to view change as an opportunity to seize rather than merely as a threat to avoid, thereby fostering greater willingness to engage actively in transformation processes.

Overall, these findings affirm that behavior change is not shaped solely by external organizational factors but is also strongly supported by internal individual strengths rooted in resilience and stress-management skills. In the context of micro, small, and medium-sized enterprises (MSMEs), these results have practical implications. Strengthening individual capacity becomes a critical aspect of successful organizational adaptation. Training programs designed to enhance self-confidence and resilience may serve as valuable interventions to reinforce personal strength. Moreover, fostering a collaborative and supportive work culture ensures that social support becomes a tangible resource for employees.

At the same time, MSMEs need to facilitate the development of adaptive coping strategies through initiatives such as counseling,

stress-management training, and the implementation of simple, accessible mindfulness practices. Furthermore, cultivating optimism can be achieved through managerial practices that emphasize positive narratives about change, recognize constructive initiatives, and promote visionary leadership. In this way, readiness for change is shaped not only by external factors but also strengthened internally, thereby fostering sustainable adaptability within the MSME environment.

DISCUSSION

Impact of Resilience on Adaptive Behavior

The results of the regression analysis indicate that the dimension of resilience plays a crucial role in influencing adaptive behavior toward change. Among the tested indicators, personal strength, social support, and optimism emerged as significant factors. This finding underscores that resilience is not merely the capacity to endure difficult situations but also a fundamental foundation that enables individuals to perceive change as an opportunity rather than merely a threat.

Personal strength was the most dominant predictor. This is consistent with resilience theory, which posits that self-efficacy, confidence, and the capacity to withstand pressure are key psychological resources in the adaptation process (Luthans et al., 2015). Individuals with high levels of personal strength can internalize challenges as opportunities for growth, thereby becoming better prepared and more positive in responding to organizational dynamics.

In addition, social support also proved significant in influencing adaptive behavior. Support from colleagues, family, and supervisors provides individuals with a sense of security and additional motivation to remain steadfast in the face of uncertainty. This aligns with the literature emphasizing that resilience is often relational, with social networks serving as protective factors that strengthen individual endurance (Southwick et al., 2016).

Optimism also plays an important role. Individuals with a positive orientation toward the future are more likely to interpret change as constructive. An optimistic outlook encourages active participation in organizational transformation processes, consistent with prior findings that optimism is closely associated with engagement and readiness to face change (Carver et al., 2010).

However, several other aspects of resilience, such as emotional regulation, impulse control, and negotiation ability, were not significant in this model. This suggests that, in the context of MSMEs, practical skills that directly support adaptation are more relevant than

reflective or interpersonal skills. In other words, personal strength, social support, and optimism are the most applicable dimensions of resilience in promoting adaptive behavior.

Impact of Stress Management on Adaptive Behavior

In addition to resilience, the dimension of stress management was also tested in relation to adaptive behavior. The results indicate that coping strategies are the only significant factor, whereas stress awareness, workload appraisal, and emotional regulation did not provide meaningful contributions.

The significance of coping suggests that individuals' ability to develop adaptive stress-management mechanisms is a key determinant of their capacity to navigate change. Those who can apply constructive coping strategies, both problem-focused coping aimed at solving problems and emotion-focused coping aimed at regulating emotional responses, are better equipped to navigate the pressures arising from change processes. This finding is consistent with the occupational psychology literature, which states that adaptive coping can reduce burnout levels and enhance adaptive capacity (Folkman & Moskowitz, 2011).

Conversely, stress awareness and workload appraisal were not significant. This may be explained by the fact that while employees may recognize the presence of stress or workload, such awareness does not automatically translate into adaptive behavior. In the dynamic context of MSMEs, which often require high flexibility, coping is more important than merely recognizing stress levels. Similarly, emotional regulation was not significant, indicating that emotional control alone is insufficient to foster adaptive behavior unless practical coping strategies accompany it.

These findings imply that organizations should focus interventions on developing adaptive coping skills. Stress management training, counseling, and mindfulness techniques may serve as practical strategies to strengthen employees' coping abilities. Thus, stress management functions not only as a defense mechanism but also as a psychological resource that fosters individuals' readiness to adapt constructively to change.

CONCLUSION

The findings demonstrate that the dimensions of resilience and stress management collectively exert a significant influence on change behavior. This is evidenced by a regression model that is statistically sound and accounts for a substantial proportion of the variance in change behavior.

However, not all dimensions of resilience and stress management exert the same influence. Only four dimensions were significant: personal strength, social support, coping strategies, and optimism. These four factors are the primary drivers of individuals' readiness to accept and adapt to change, with personal strength emerging as the most influential factor. In contrast, other dimensions, such as emotional regulation, impulse control, negotiation ability, stress awareness, and workload appraisal, did not show meaningful effects.

These findings indicate that the success of organizational change in the MSME context is more strongly determined by internal psychological and social reinforcement than by evaluative factors. In other words, changing behavior is more closely related to employees' capacity to act adaptively, build supportive networks, and foster a positive outlook toward the future.

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