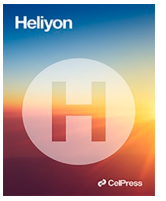
Heliyon 10 (2024) e34285

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.cell.com/heliyon



Research article

A resilient Startup Leader's personal journey: The role of entrepreneurial mindfulness and ambidextrous leadership through scaling-up performance capacity

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ARTICLE INFO

Keywords:
Entrepreneurial resilience
Entrepreneurial mindfulness
Ambidextrous leadership
Scaling-up performance
Startup leader

ABSTRACT

Startups always face challenges during every scaling-up phase, so they need leaders who are resilient. Entrepreneurial resilience is the capacity of startup leaders to continue functioning in the face of various challenges. This research aims to explore how the dynamic interaction between entrepreneurial mindfulness and ambidextrous leadership influences the resilience of startup leaders during the scaling-up phase. The ability of startup leaders to execute entrepreneurial decisions and demonstrate ambidextrous leadership is crucial for increasing performance capacity. This study adopts a quantitative approach, utilizing a survey of startup leaders who have successfully undergone the scaling-up process, and analyzes the survey results using the SMART PLS program. Research findings suggest that entrepreneurial mindfulness influences decision-making, risk management, and strategic adaptability. This research examines how ambidextrous leadership, characterized by simultaneously exploring new opportunities and exploiting existing resources, enhances leaders' adaptive capacity in uncertain environments. These findings highlight the synergistic relationship between entrepreneurial awareness and ambidextrous leadership, collectively impacting startup leaders' ability to foster resilience during the scale-up journey. This research contributes to the existing literature by offering insights into practical strategies used by resilient leaders to enhance organizational performance and adaptability. In conclusion, this research emphasizes the importance of cultivating a mindful entrepreneurial mindset and adopting ambidextrous leadership practices for startup leaders aiming to thrive in a volatile scaling landscape. These findings not only contribute to individual leadership development but also inform organizational strategies and interventions aimed at fostering resilience and sustainable growth in the startup ecosystem.

1. Introduction

Startups operate within a dynamic and uncertain business environment, necessitating continual innovation and adaptability [1]. Startups often face many challenges, especially when facing the scaling up phase. These challenges include managing rapid growth with limited resources, maintaining company culture, and navigating increased operational complexity due to intense competition. Startup leaders must be able to make strategic decisions quickly and accurately and ensure the team continues to perform according to

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https://doi.org/10.1016/j.heliyon.2024.e34285
Received 10 January 2024; Received in revised form 1 July 2024; Accepted 7 July 2024
Available online 9 July 2024

their demands. Failure to address these challenges can hinder growth and threaten a startup's sustainability [2]. Startups are on the verge of the "valley of death" when they have to make a decision between owned resources and commercialization resources. The valley of death is a critical phase where many startups have difficulty obtaining sufficient funding to sustain their operations or generate profits [3]. Accurate decision-making at critical points, along with the dynamics of startup life filled with risks, requires leaders who are resilient.

A resilient leader is an essential quality for startup leaders as they navigate the unpredictable and challenging startup landscape. Resilient leaders focus on the ability to quickly adapt strategies in the face of unexpected situations [4], engage in crisis management that creates opportunities and change [5], and guide businesses towards normality and fundamental recovery [6]. Research suggests that a leader's resilience influences their perception of success and their capacity to enact transformative actions in response to threats [7]. Various factors that can contribute to entrepreneurial resilience need further study [8–10], especially those related to psychological traits, strategies for dealing with uncertainty, bricolage response, and crisis management [5,11–13].

Entrepreneurial resilience is not only needed by startup leaders to survive but also for scaling-up or even for exiting. The decision to scale up is a strategy aimed at improving the life cycle of a long-term business [14,15]. Scaling up requires not only a performance foundation from the conceptualization phase to the commercialization phase [16] but also entails carrying out various developmental stages in a stronger, more powerful organization with greater resources and more appropriate strategies [17]. Therefore, scaling-up performance is a capacity embedded in a startup leader, as they will continue to make efforts to continuously improve performance.

In the journey to bring a startup to success in every scaling-up process, cognitive resilience underlies how startup leaders think, carry out identification processes, gather information and make decisions quickly and precisely. Entrepreneurial mindfulness serves as the basis of an entrepreneurial mindset and the ability to evaluate existing opportunities and create value as an entrepreneur [18]. A study found that entrepreneurial mindfulness influences the formation of entrepreneurial habits, resulting in good performance and resilience in facing challenges [19]. Entrepreneurial mindfulness makes startup leaders more creative, and a study proposes mindfulness as a new stage in the evolution of marketing [20]. By having entrepreneurial mindfulness, startup leaders will develop indigenous knowledge and innovations that underlie long-term entrepreneurial habits, which are proven to provide significant results [21]. Entrepreneurial Mindfulness manifests in startup leaders' decision-making processes through their ability to remain calm and focused amidst uncertainty, integrate deep self-reflection, and manage emotions effectively. This allows them to make wiser, flexible and inclusive decisions, and build strong mental resilience to face various entrepreneurial challenges [19].

The entrepreneurial habit of resilient startup leaders requires the capacity of leaders who are able to frame future success with the capacity to manage unique creativity and innovation so that the capacity for newness is evenly distributed at every hierarchical level of the company. Startups need ambidextrous leaders because they are more flexible, situational and versatile in developing increasingly new and different ideas [22]; and encourage high levels of employee exploration and exploitation behavior [23]. A study found that employees will be more active in taking actions that support the entrepreneurial strategy of companies built by leaders with high ambidexterity [24].

Table 1
Sample Demographic data.

Category	Amount	Percentage
Gender		
Male	157	85 %
Female	28	15 %
Total	185	100 %
Age		
<26	1	1 %
26-35	128	69 %
36–45	54	29 %
45–55	2	1 %
>55	0	0 %
Total	185	100 %
Startup Stage		
Ideation	0	0 %
Pre-Seed/Bootstrap	0	0 %
Seed Funding	184	99 %
Venture Capital	1	1 %
Total	185	100 %
Education		
High School	1	1 %
Diploma	2	1 %
Bachelor	167	90 %
Masters	13	7 %
Doctor	2	1 %
Total	185	100 %
Entrepreneurial experience		
<5	137	74 %
5–10	42	23 %
>10	6	3 %
Total	185	100 %

The social and practical relevance of this research lies in the potential of startups to drive social innovation and economic growth. This research contributes to efforts to increase startup success, thereby potentially improving the quality of life and economic welfare of society. In light of the limited empirical studies on the entrepreneurial resilience of startup leaders in Indonesia, this article aims to investigate its interaction with entrepreneurial mindfulness and ambidextrous leadership in relation to scaling-up performance capacity. By addressing this research gap, the study aims to shed light on the dynamics of startup leadership journeys in Indonesia.

The paper is structured as follows: First, a review of related literature will be conducted in the fields of entrepreneurial resilience, entrepreneurial mindfulness, ambidextrous leadership, and scaling-up performance capacity to build the entrepreneurial resilience construct. Considering the limitations of empirical studies regarding entrepreneurial resilience of startup leaders in Indonesia, this research will investigate the interaction of these variables and the basis for entrepreneurial resilience. This research will also explore the applicability of the research hypothesis to the startup sector, especially in Indonesia. The importance of researching and studying this topic more deeply is underscored by the research limitations. Second, several studies emphasize resilience in the resilience business concept [6,25]. This study will frame the concept of resilience in a psychological context as a personal resilience capacity. Third, this study will encourage personal resilience practices to create a comprehensive startup leader capacity to carry out exploration and exploitation at a tiered level from the individual to the company level. This study will provide unique insight into interpreting mindfulness and ambidexterity as booster capacities in realizing scaling-up and resilience performance, thus strengthening the sustainability of startups in Indonesia. Therefore, research questions will be answered through further explanation of relevant literature reviews, research methods, formulation of hypotheses, and discussion of the results that have been obtained. This research will conclude with a study of contributions, implications, and suggestions for future research (Table 1) (Fig. 1).

2. Literature review

The grand theory of this research is strategic entrepreneurship. Strategic entrepreneurship is a new term that has emerged in various literature, representing the intersection between strategic management and entrepreneurship. This theory is quite broad and rich because it builds on research from various scientific disciplines, including economics, psychology, sociology, along with other scientific sub-disciplines, namely management within the framework of behavior and organizational theory. Strategic entrepreneurship is based on strategic management and entrepreneurship theory. It involves the action taken in exploiting current advantages while simultaneously exploring new opportunities to maintain an entity's ability to create value over time [26].

Strategic entrepreneurship theory has four main dimensions. The first dimension is an entrepreneurial mindset, culture, and leadership. In strategic entrepreneurship theory, those who lead and manage companies aim to simultaneously overcome the dual challenges of exploiting current competitive advantages while exploring opportunities where future competitive advantages can be developed and maximized. The second dimension is the strategic management of organizational resources. The third dimension is the application of creativity, and the fourth dimension is the development of innovation [26]. From a strategic perspective, the use of strategic entrepreneurship theory challenges entrepreneurs to become more strategic. Meanwhile, from an entrepreneurial perspective, strategic entrepreneurship demonstrates a dynamic process for companies in producing performance. Entrepreneurship serves as the basis on which organizations are conceptualized, and resources are allocated [27,28]. Strategic entrepreneurship is also based on several theoretical foundations, including the resource-based view (RBV) of the company, human capital, social capital, organizational learning, and creative cognition. This integration is important in entrepreneurial strategy theory because it discusses how combining and synthesizing opportunity-seeking behavior and profit-seeking behavior leads to wealth creation [27].

The uncertainty faced by startups makes resilience an important capacity that startup leaders must have [4,29]. Resilience is an active action by startup leaders that ultimately determines whether they or the business they manage become successful. The characteristic of entrepreneurial practice is the entrepreneur's active approach, which cannot be separated from aspects of human psychology as a personal journey. Psychological theory serves as the basis for regulating entrepreneurship research and its implementation in entrepreneurial practice. This theory is very important for entrepreneurship research because the nature of entrepreneurship is to proactively generate effective solutions to problems and opportunities [30].

At the individual level, resilience has been defined as a psychological/behavioral attribute because it is built on a foundation of being able to respond quickly and effectively to change. Resilience in a personal context is often interpreted as the human ability to adapt in the face of ongoing tragedy, trauma, difficulties, problems, and significant life pressures. This is a concept that psychologists

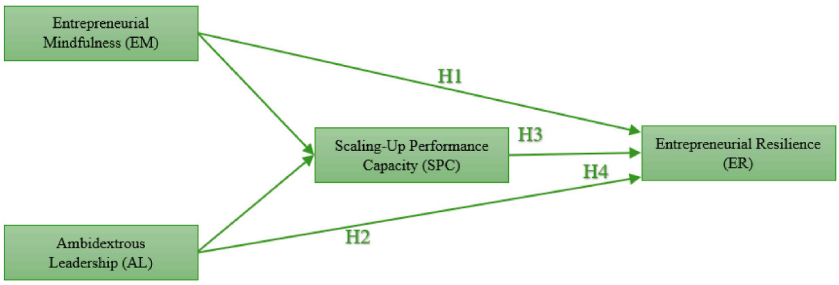

Fig. 1. Research model.

have known for a long time. In fact, several studies have shown various behaviors associated with resilience—behaviors that are ordinary, not extraordinary, and can be learned by almost anyone [31]. Therefore, the term is sometimes used to describe the ability of company employees and managers to bounce back, and even succeed, in the face of problems and difficulties [32]. Entrepreneurial resilience for startups has been proposed since the 1970s. To enable startups to get through the crisis phase, an effective management strategy is needed that emphasizes the practice of personnel who are always willing to re-adapt and re-learn. How often startup actors carry out the re-adaptation and re-learning process will provide re-learning, which allows for increased decision-making capacity [33].

Resilient entrepreneurs are those who are likely to perform well again when business opportunities arise or difficulties are encountered [8]. Thus, entrepreneurs with resilient abilities are able to take action in difficult times and have a higher propensity to act than non-resilient individuals, who are easily discouraged by challenges and dangerous environments [34]. Resilient entrepreneurs are able to spread resilient beliefs, feelings, and culture to all members of the organization, which contribute to increasing organizational success. As a consequence, individual resilience and organizational resilience are strongly correlated, and in the case of small businesses, entrepreneurial resilience can greatly influence individual resilience and organizational resilience, thereby driving business growth and overall business success [4].

Entrepreneurial resilience can be improved by increasing networks and forming a professional network of coaches and mentors, accepting that change is part of life, and avoiding seeing crises as insurmountable [35]. In an integrated model of entrepreneurial failure, the author links the causes of entrepreneurial failure to one internal factor and three external factors, namely entrepreneur (personal characteristics), company (structure and strategy), context (environment, micro/macro), and process (failure events) [36].

Entrepreneurial resilience is one of the drivers of entrepreneurial success. Entrepreneurial success involves achievements not only at the organizational level but also at the individual level. Including micro (individual) and macro (organizational) indicators acknowledges the relationship between entrepreneurs and their businesses because entrepreneurs are the heart of their organizations [35].

Entrepreneurial resilience has been proven to have a positive influence on individual and business success [35]. Various studies increase understanding of entrepreneurial resilience by conceptualizing it consistently with current psychological research. The concept of entrepreneurial resilience is based on the assumption that startup actors need to recover after failure and those who start a business again will experience more positive emotions than before [37]. Entrepreneurial resilience is part of the crisis management of startup actors in overcoming the crises and pressures they experience [38]. However, higher self-confidence does not necessarily lead to greater resilience. Boundary conditions related to entrepreneurs, their situations, and the types of beliefs they have underscore the limitations in establishing entrepreneurial resilience [8]. Several studies on entrepreneurial resilience conducted in developing countries, especially for startups, are still limited and conclude that entrepreneurial resilience varies greatly in its definition and measurement, and is inconclusive about the factors that influence it [6,13].

2.1. Entrepreneurial mindfulness (EM) and entrepreneurial resilience (ER)

The concept of Entrepreneurial Mindfulness provides insight into how the endemic failure of business actors related to the inability to find, capture and exploit opportunities must be overcome [19]. Entrepreneurial Mindfulness is a comprehensive experiential capacity that influences actions based on the ability to focus on goals and at the same time focus on current conditions [39]. Startup actors who experience Entrepreneurial Mindfulness will be more open to new experiences and proactive in seeking new information [40]. Therefore, Entrepreneurial Mindfulness plays a very important role in the entrepreneurial actions carried out [41].

Several studies have found a positive relationship between the concept of mindfulness and entrepreneurial resilience. Entrepreneurial Mindfulness can have a significant impact on startups because it is able to build resilience quickly after a crisis [42]. However, research still questions the extent to which employees' strengths in terms of Entrepreneurial Mindfulness and information processing will contribute to their entrepreneurial resilience [43].

Entrepreneurial Mindfulness is the quality of collective attention that enables entrepreneurs to minimize mistakes, stay alert, and respond effectively to unexpected events. Entrepreneurial Mindfulness allows startups to anticipate and respond better to unexpected events and opportunities with previous experience so they can become more successful. However, Entrepreneurial Mindfulness is a difficult condition and has the potential to cause performance problems [19]. Entrepreneurial Mindfulness is measured by six indicators, namely Internal motivation, Distinctive character, Preoccupation with failure, Managing complexity to base decisions, Improve learning, and Explore entrepreneurial strategies through experience.

Based on the description above, it is reasonable to suspect that Entrepreneurial Mindfulness has an influence on the entrepreneurial resilience of startup actors. This means that when startup actors have increased entrepreneurial mindfulness, entrepreneurial resilience will increase. Therefore, the hypothesis of this research reads.

H1. Entrepreneurial Mindfulness has a positive and significant effect on entrepreneurial resilience

2.2. Ambidextrous leadership (AL) and entrepreneurial resilience (ER)

A study found that innovation-based companies need leadership that is more than just transformational. Leadership and innovation in organizations found that ambidextrous leadership behavior predicted team innovation above and beyond transformational leadership behavior. The ambidextrous leadership theory is the right leadership theory for innovation. The central idea of ambidextrous leadership is that the complexity of innovation activities needs to be adapted to an equally complex leadership approach [44].

Ambidextrous leadership can help overcome the complexities of entrepreneurial resilience. Ambidextrous leaders have the ability

to embrace and mitigate challenges in and around 'opposite and complementary poles' in a flexible manner [22,45]. Developing an ambidextrous leadership style as a dynamic capability will help companies maintain competitive advantages and build resilience to mitigate corporate risks. This is because ambidextrous leadership is an important factor in increasing competence to face uncertainty [46].

A rigorous literature review found that the ambidextrous leadership style is the most appropriate leadership style when it comes to innovation because it will encourage employees to be more proactive in looking for ideas and solutions that lead to innovative performance. Therefore, ambidextrous leadership will produce a sustainability orientation and strive to foster values towards entrepreneurial resilience [47].

Ambidextrous leadership adopts a balance between transformational and transactional styles because if not, it will actually show the dark side of leadership which hinders the realization of entrepreneurial resilience [48]. Apart from that, for startups the ambidextrous concept is still very new and leadership style as a single variable is not necessarily able to give birth to innovation [49].

Ambidextrous leadership contributes to the adaptive capacity of startup leaders by creating an environment that supports innovation as well as operational efficiency. By accommodating diverse ideas, encouraging team collaboration, and facilitating learning, ambidextrous leaders enable startups to continually adapt quickly to changing environments and market needs. On the other hand, the ability to monitor, evaluate, and take corrective action helps startups to stay focused on long-term goals while being responsive to emerging challenges [22,44,45]. In the research, the operationalization of ambidextrous leadership was carried out through the use of an instrument consisting of eight indicators and questions designed to measure the extent to which startup leaders apply these principles in their daily leadership practices. By taking into account the responses of startup leaders, the research allows evaluating the relationship between ambidextrous leadership and adaptive capacity, providing valuable insights for the development of more adaptive leadership strategies in the startup context.

Based on the description above, it is reasonable to suspect that ambidextrous leadership has an influence on the entrepreneurial resilience of startup players. This means that when startup actors have increased ambidextrous leadership, entrepreneurial resilience will increase. Therefore, the hypothesis of this research reads.

H2. Ambidextrous leadership has a positive and significant effect on entrepreneurial resilience

2.3. Entrepreneurial mindfulness (EM), scaling-up performance capacity (SPC) and entrepreneurial resilience (ER)

Performance capacity refers to adaptability which involves cognitive capacity to overcome disturbances, and develop adaptive strategies as an important part of resilience [11].

In carrying out entrepreneurial practices, minimizing stress and increasing resilience are the keys to success. To increase resilience, it is necessary to reduce various emotional disorders through the concept of Entrepreneurial Mindfulness which focuses on self-management, self-regulation and increasing awareness of personal goals and roles [50]. The higher the entrepreneurial mindfulness, the more the individual learns to manage and control his emotions, the higher his level of motivation will be to achieve higher performance in his work [51].

Entrepreneurial resilience is an effort to meet the flow of information and recover quickly after going through a crisis for sustainable performance [52]. In this condition, Entrepreneurial Mindfulness is characterized by a high level of alertness and the ability to act quickly which will help startups experience recovery. However, how Entrepreneurial Mindfulness can help manage resources appropriately when a crisis occurs, has not yet been fully explored [42].

Therefore, recently many studies have attempted to look at these three concepts together. Previous entrepreneurial experience which influences the level of Entrepreneurial Mindfulness positively influences the discovery of opportunities and exploitation of opportunities which will shape the startup's performance capacity in the scaling-up process and how startups develop their entrepreneurial resilience. Entrepreneurial Mindfulness will form habits related to an entrepreneurial practice framework that produces insight into how, when and why past experiences can improve future performance [19]. One of the positive impacts of the mindfulness process is a commitment to increasing resilience [53].

Entrepreneurial Mindfulness is a relevant concept in the field of entrepreneurship, especially in startup practice. The effects of Entrepreneurial Mindfulness on performance in organizational settings have been studied with samples of employees and leaders. However, most of these have not been explored in the context of entrepreneurship in more depth [52].

Based on the description above, it is reasonable to suspect that Entrepreneurial Mindfulness influences the entrepreneurial resilience of startup actors through scaling-up performance capacity. This means that when startup actors have increased Entrepreneurial Mindfulness and scaling-up performance capacity, entrepreneurial resilience will increase. Therefore, the hypothesis of this research reads.

H3. Entrepreneurial Mindfulness has a positive and significant effect on entrepreneurial resilience through scaling-up performance capacity.

2.4. Ambidextrous leadership (AL), scaling-up performance capacity (SPC) and entrepreneurial resilience (ER)

Entrepreneurial resilience in startup businesses requires ambidextrous leadership capabilities who are able to generate innovation dynamically [6]. Ambidextrous leadership is a leader's capability to explore and exploit the resources they manage. This capability will help leaders be more flexible in developing and implementing their creative ideas. Ambidextrous leader behavior will become a role model for employees so that they can improve the performance and resilience of startups together [22,23].

Ambidextrous leadership is not only an important antecedent for innovation at the organizational level, but also includes teams and individuals. However, there are several studies that actually found the opposite impact. The opposition between the need to develop and empower actually looks confusing and often just becomes a paradox in leadership [54].

Ambidextrous leadership requires the capacity and competence to adopt it in a balanced way. And this leadership concept is still relatively new so it still requires deeper study in order to anticipate the dark side of leadership which will actually hinder the realization of performance and entrepreneurial resilience [48,49].

Based on the description above, it is reasonable to suspect that ambidextrous leadership influences the entrepreneurial resilience of startup players through scaling-up performance capacity. This means that when startup actors have increased ambidextrous leadership and scaling-up performance capacity, entrepreneurial resilience will increase. Therefore, the hypothesis of this research reads.

H4. Ambidextrous leadership has a positive and significant effect on entrepreneurial resilience through performance capacity scaling-up.

3. Research methodology

This research aims to examine the role of entrepreneurial mindfulness and ambidextrous leadership on entrepreneurial resilience through scaling-up performance capacity. This research was designed with a survey-based quantitative method using research instruments that have been developed in accordance with theoretical constructs built to test hypotheses. Data collection technique, with a Likert Scale questionnaire, scale range 1–6 as an interval scale [55–57]. The 6-point scale was chosen to provide balance in respondents' choices, allowing for a more accurate reflection of their perceptions.

The data collection methodology targeted startup leaders in Indonesia who had progressed beyond the scaling-up phase, with a minimum requirement of having received Seed Funding. The sampling technique used was simple random sampling with the Hair method, where the number of indicators was multiplied by 5 so that the minimum sample size was 130 [58]. The distribution of the questionnaire resulted in 185 respondents, all of whom were used for analysis.

The research samples were spread evenly from all provinces in Indonesia, covering a wide and diverse geographic area. Starting from North Sumatra, South Sumatra, West Sumatra, Riau, to the Riau Islands on Sumatra Island, and West Kalimantan on Kalimantan Island. The sample also includes Banten, DKI Jakarta, West Java, Central Java, Special Region of Yogyakarta, and East Java on Java Island, as well as Bali, East Nusa Tenggara, and West Nusa Tenggara on the Nusa Tenggara Islands. Not to forget, the sample also covers North Sulawesi and South Sulawesi on Sulawesi Island, making the geographical coverage representative of various regions in Indonesia.

The data were then analyzed using SMART-PLS software, a tool commonly used for structural equation modeling (SEM) in quantitative research. Ethical considerations were also taken into account during the research process by ensuring the confidentiality and anonymity of respondents' answers, thereby minimizing potential risks or discomfort for respondents.

Entrepreneurial Resilience is measured by six indicators with six items. Entrepreneurial Resilience indicators are Existential fear capacity, "Follow up" capacity, Networking capacity, Capacity to manage resources, Value proposition, and Internal restructuring.

The Scaling-Up Performance Capacity is measured by six indicators containing 6 question items. Scaling-Up Performance Capacity is measured by Top Talent identification, Performance management, Responding to Opportunities, Risk Management, Scaling-up strategy, and Scaling-up decisions.

The Entrepreneurial Mindfulness is measured by six indicators containing 6 question items. The indicators of Entrepreneurial Mindfulness are Internal motivation, Distinctive character, Preoccupation with failure, Managing complexity to base decisions, Improving learning, and Exploring entrepreneurial strategies through experience.

The Ambidextrous Leadership instrument consists of 8 indicators containing 8 question items. Ambidextrous Leadership indicators are Accommodating different ideas, Encouraging team, Accommodating learning, Monitoring and evaluation capacity, Capacity to manage rules, Sticking to Plan, Corrective action, and Focus on completeness.

The validity test is carried out using two tests, namely convergent and discriminant validity. Convergent validity can be seen through loading factors which have a value of more than 0.7 and Average variance extracted (AVE) which has a value of more than 0.5 for each variable [59]. To fulfill the requirements, this research conducted a discriminant validity test using cross loading and Fornell-Larcker analysis. Where the loading value of each latent variable must be higher than the other latent variables and the square root of the AVE of each construct must be higher than the correlation between constructs [60]. Meanwhile, reliability testing was carried out to determine the consistency of the research instruments tested through Cronbach's alpha and composite reliability. The Cronbach's alpha value must be more than 0.60 and the composite reliability value must be more than 0.70 to be declared reliable [60,61].

Based on the SMART PLS analysis, the Average Variance Extracted (AVE) values for Ambidextrous Leadership, Entrepreneurial Mindfulness, Entrepreneurial Resilience, and Scaling-up Performance Capacity are 0.518, 0.513, 0.609, and 0.630 respectively, indicating acceptable convergent validity. Furthermore, the Cronbach's Alpha values for Ambidextrous Leadership, Entrepreneurial Mindfulness, Entrepreneurial Resilience, and Scaling-up Performance Capacity are 0.842, 0.809, 0.871, and 0.882 respectively, demonstrating high levels of internal consistency and reliability.

To validate the overall structural model, goodness of fit is used. The PLS model is declared to have met the goodness of fit criteria if the SRMR value is < 0.10, and the model is declared a perfect fit if the SRMR value is < 0.08. The SRMR value in this study is 0.073, so it can be said that the model fits well.

3.1. Study variables and measurement

The research instrument was built using a literature review to find theoretical constructs which were used as a basis for preparing research dimensions and indicators. Fig. 2 shows the research model and the results of measurements carried out to evaluate this research model.

Based on theoretical studies, the operational definition of entrepreneurial resilience in this research is Entrepreneurial resilience in this research is defined as the capacity of startup actors to continue to "function" in facing various challenges so that they are able to turn difficulties into resilience and maximize resources as opportunities to continue carrying out bricolage [9,38]. Entrepreneurial resilience has six indicators and three dimensions, namely adversity capacity, bricolage response and pursuing opportunities.

Entrepreneurial Mindfulness is the capacity of startup actors to increase the roots of awareness construction that underlies entrepreneurial actions consistently to find, construct cognitive resilience and build entrepreneurial habits in situations full of uncertainty [19,53,62,63]. This theoretical construct produces six indicators with the dimensions of capacity to increase the root construct of awareness, capacity to construct cognitive resilience and capacity to build entrepreneurial habits in the face of uncertainty. Ambidextrous leadership in this research is the capacity of startup actors to be balanced in exploring and exploiting the resources they have. This capacity consists of eight indicators and three dimensions, namely opening behavior that encourages exploration, closing behavior that encourages exploitation, and flexibility to switch between the two as needed [44,47,49].

Scaling-up performance capacity in this research is defined as the capacity of startup actors to manage performance as well as carry out flawless scaling-up execution [64,65]. Scaling-up performance capacity has six indicators with two dimensions, namely managing performance and flawless execution.

Table 2 show that all indicators of entrepreneurial resilience and scaling-up performance capacity have factor loading values of more than 0.7, indicating robust convergent validity (see Table 2). This suggests that these indicators reliably measure their respective constructs. Regarding the entrepreneurial mindfulness variable, while one of its indicators has a factor loading value of 0.659, slightly below the preferred threshold of 0.7, it still demonstrates acceptable convergent validity and can be retained for analysis.

However, an issue arises with one indicator of ambidextrous leadership, which has a factor loading value of 0.472. This loading value is below the desired threshold, suggesting weaker convergent validity. Consequently, this indicator was removed from the analysis as it was found to adversely affect the Average Variance Extracted (AVE) value, compromising the overall reliability and validity of the measurement model.

3.2. Measurement model

Model measurements were carried out in two stages to see the outer model and inner model. The outer model consists of validity

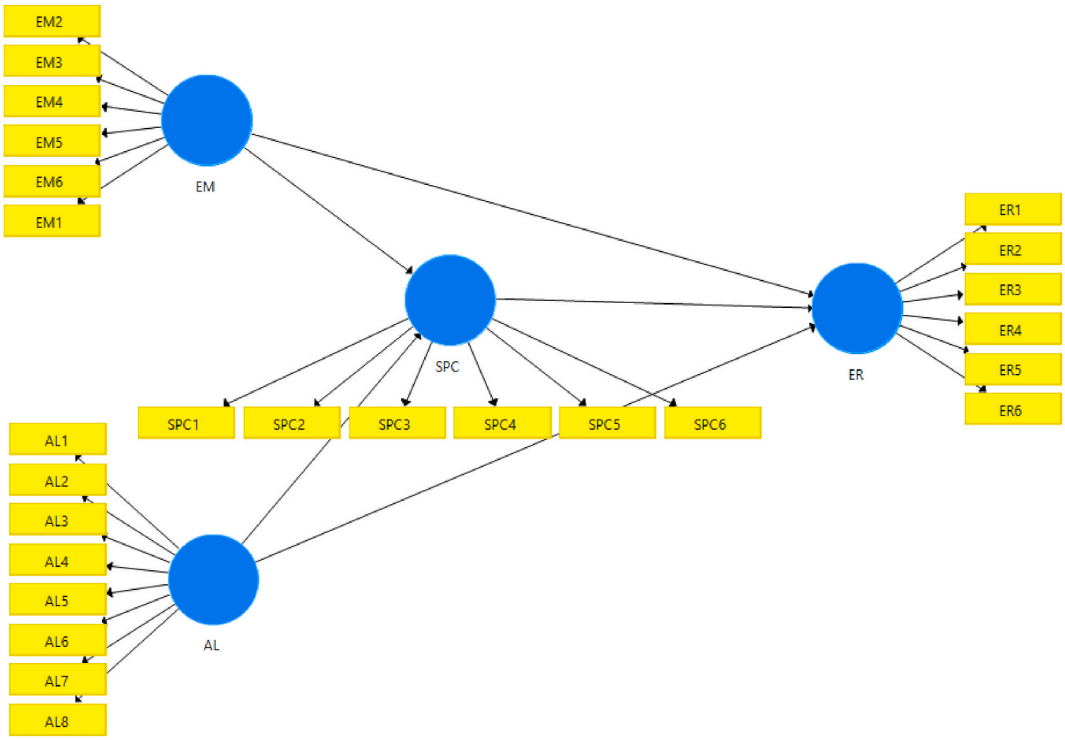

Fig. 2. Research model.

Table 2
Confirmatory factor analysis and scale reliability.

Constructs	Measurements	Loadings	Alpha	CR	AVE
Entrepreneurial Resilience			0.871	0.903	0.609
ER1	Existential fear capacity	0.769			
ER2	"Follow up" capacity	0.830			
ER3	Networking capacity	0.773			
ER4	Capacity to manage resources	0.740			
ER5	Value proposition	0.849			
ER6	Internal restructuring	0.714			
Entrepreneurial Mindfulness			0.809	0.863	0.513
EM1	Internal motivation	0.720			
EM2	Distinctive character	0.741			
EM3	Preoccupation with failure	0.659			
EM4	Managing complexity to base decisions	0.742			
EM5	Improve learning	0.704			
EM6	Explore entrepreneurial strategies through experience	0.727			
Ambidextrous Leadership			0.842	0.880	0.518
AL1	Accommodate different ideas	0.472			
AL2	Encouraging team	0.664			
AL3	Accommodate learning	0.538			
AL4	Monitoring and evaluation capacity	0.806			
AL5	Capacity to manage rules	0.667			
AL6	*Sticks to Plan*	0.796			
AL7	Corrective action	0.782			
AL8	Focus on completeness	0.734			
Scaling-Up Performance Capacity			0.882	0.911	0.630
SPC1	Top Talent identification	0.784			
SPC2	*Performance management*	0.737			
SPC3	Respond to Opportunities	0.797			
SPC4	Risk Management	0.801			
SPC5	Scaling-up strategy	0.847			
SPC6	Scaling-up decision	0.794			

and reliability tests, while the inner model consists of the coefficient of determination and hypothesis testing.

Reliability analysis was carried out with the aim of determining the consistency of the research instruments tested through Cronbach's alpha and composite reliability [61]. The Cronbach's alpha value must be more than 0.60 and the composite reliability value must be more than 0.70 to be declared reliable [60]. This research shows that the variable is declared reliable because it meets the requirements attached in Table 2.

Table 2 shows that Cronbach's Alpha for Entrepreneurial Resilience (ER) is 0.871, indicating strong internal consistency among the items measuring this construct. Additionally, the Composite Reliability is 0.903, further confirming the reliability of the measurement. Both values suggest that the scale effectively captures the concept of Entrepreneurial Resilience with high reliability. Cronbach's Alpha for Entrepreneurial Mindfulness (EM) is 0.809, indicating good internal consistency among the items measuring this construct. Additionally, the Composite Reliability is 0.863, suggesting strong reliability of the measurement. These values demonstrate that the scale effectively captures the concept of Entrepreneurial Mindfulness with high reliability. Cronbach's Alpha for Ambidextrous Leadership (AL) is 0.842, signifying strong internal consistency among the items measuring this construct. Additionally, the Composite Reliability is 0.880, indicating high reliability of the measurement. These values imply that the scale effectively captures the concept of Ambidextrous Leadership with a high degree of reliability. Cronbach's Alpha for Scaling-up Performance Capacity (SPC) is 0.882, demonstrating robust internal consistency among the items measuring this construct. Additionally, the Composite Reliability is 0.911, indicating high reliability of the measurement. These values suggest that the scale effectively captures the concept of Scaling-up Performance Capacity with a high level of reliability.

An inner model test analysis was conducted to analyze the direct influence between the variables, examined through the R-square test, predictive relevance (Q2), goodness of fit index (GoF), and path coefficient. The R-square test revealed an R2 value of 0.422, indicating that 42.2 % of the variance in the entrepreneurial resilience variable could be explained by entrepreneurial mindfulness, ambidextrous leadership, and scaling-up performance capacity variables, while 57.8 % could be attributed to other variables.

Discriminant validity shows that the root of the AVE value is > from the correlation value between latent variables so it can be

Table 3
Cronbach's alpha and composite reliability.

Constructs	Cronbach's Alpha	Composite Reliability
ER	0.871	0.903
EM	0.809	0.863
AL	0.842	0.880
SPC	0.882	0.911

concluded that the latent variable has good discriminant validity.

Table 3 shows that the discriminant validity of Ambidextrous Leadership (AL), Entrepreneurial Mindfulness (EM), Entrepreneurial Resilience (ER), and Scaling-Up Performance Capacity (SPC) is established with values of 0.720, 0.716, 0.781, and 0.794 respectively, indicating that each construct is sufficiently distinct from others in the model.

The analysis continues to test the hypothesis which can be seen from the requirement that the p value be lower than 0.005 to indicate a significant relationship and the T-statistics value must be greater than 1.96 [66]. The path coefficient shows the direct influence of the variable determined as the cause on the variable determined as the effect. Path Coefficients with positive values indicate a positive relationship. Values are seen from the original sample table. Table 5 shows the results of the hypothesis test.

Table 4 presents the findings from the path analysis conducted for various hypotheses. The hypothesis H1 shows that Entrepreneurial Mindfulness (EM) directly affects Entrepreneurial Resilience (ER) is rejected. The obtained p-value is 0.880, exceeding the typical significance level of 0.05. Consequently, the null hypothesis, suggesting no association between EM and ER, is rejected. Thus, there is inadequate evidence to affirm a direct relationship between EM and ER.

The hypothesis H2 shows that Ambidextrous Leadership (AL) directly affects ER is supported. With a p-value of 0.000, which is less than the significance level, the null hypothesis is rejected. Therefore, there is sufficient evidence to support a direct relationship between AL and ER. There is significant evidence indicating a positive relationship between AL and ER.

The hypothesis H3 shows that EM affects ER through Scaling-Up Performance Capacity (SPC) is supported. With a p-value of 0.005, less than the significance level, the null hypothesis is rejected. There is significant evidence suggesting a positive relationship between EM and ER when mediated by SPC.

The hypothesis H4 shows that AL affects ER through SPC is supported. With a p-value of 0.015, less than the significance level, the null hypothesis is rejected.There is significant evidence indicating a positive relationship between AL and ER when mediated by SPC.

4. Discussion

The research results show that entrepreneurial mindfulness does not have a positive and significant influence on entrepreneurial resilience. It is important to remember that the impact of mindfulness can vary across individuals and situations. Entrepreneurial Mindfulness focuses on awareness to act alertly and act quickly so as to speed up recovery. The mindfulness perspective focuses more on the mindful preparation of resources before a crisis. A study found that a dynamic process in which businesses embrace mindful resource organizing behaviors driven by digital innovation will enable rapid resilience [42]. Therefore, it is important to dig deeper into the latest research and scientific literature to gain a better understanding of the relationship between entrepreneurial mindfulness and entrepreneurial resilience. In addition, the implementation of mindfulness practices must be holistic, integrated with other factors that can influence entrepreneurial resilience.

The existence of a relationship between ambidextrous leadership and entrepreneurial resilience shows that the results of this research are in line with findings which state that ambidextrous leadership can help overcome the paradoxical complexity of psychological resilience in leadership [45]. An ambidextrous leader can be broadly defined as someone who has the ability to accept and mitigate challenges in and around 'polar opposites and complementarities' in a flexible manner [67]. Ambidextrous leadership refers to a leader's ability to effectively manage and integrate two contrastive dimensions: exploration and exploitation. Exploration involves the search for and innovation of new things, while exploitation is concerned with optimizing existing resources and efficiency. When a leader is able to carry out these two dimensions in a balanced manner, it is called ambidextrous leadership. Startup organizational situations are unique, and the impact of ambidextrous leadership may vary depending on the specific context. Therefore, the implementation of ambidextrous leadership must be adjusted to the characteristics and needs of each organization.

Previous research on startups provides similar results regarding startup efforts in overcoming contradictory pressures, in anticipating, facing and emerging from business turmoil so that they remain resilient. The research results explore complex factors that can increase resilience [6].

The findings of this study show that the dynamics of the variables that form the entrepreneurial resilience of startup actors are very important, especially when the startup leader has the capacity to scale-up performance. Scaling-up performance capacity is characterized by evidence of performance in overcoming critical events, and making sustainable choices for subsequent business recovery and reconstruction [67]. Entrepreneurial mindfulness is characterized by a high level of alertness and the ability to act quickly which will help startups develop performance capacity to continue scaling-up so they can build entrepreneurial resilience [42]. The capacity for scaling-up performance will also strengthen how startup leaders' ambidextrous leadership produces a sustainability orientation and strives to foster values towards entrepreneurial resilience [47]. Thus, the study results show the important role of scaling-up performance capacity in strengthening the increase in entrepreneurial resilience of startup leaders.

The research results show that entrepreneurial mindfulness has a positive effect on entrepreneurial resilience through scaling-up

Table 4
Discriminant validity.

	AL	EM	ER	SPC
AL	0.720			
EM	0.090	0.716		
ER	0.533	0.352	0.781	
SPC	0.448	0/759	0.571	0.794

Table 5
Path analysis.

	Original Sample	STDEV	T statictic	P Value	Result
H1 = EM →ER	0.017	0.114	0.151	0.880	Rejected
H2 = AL →ER	0.353	0.083	4.236	0.000	Supported
H3 = EM → SPC →ER	0.289	0.104	2.793	0.005	Supported
H4 = AL→ SPC → ER	0.153	0.063	2.445	0.015	Supported

performance capacity. This shows that increasing entrepreneurial mindfulness helps entrepreneurs face challenges better. This finding is in line with the literature review that mindfulness training can increase emotional and cognitive resources to overcome challenges as a startup leader. Entrepreneurial mindfulness also forms habits of how past experiences can influence future performance [19].

The results also indicate that ambidextrous leadership significantly enhances entrepreneurial resilience when mediated by scaling-up performance capacity. This suggests that ambidextrous leadership practices effectively balance startups' explorative and exploitative efforts. As a result, this increases performance capacity and, ultimately, entrepreneurial resilience. This finding is in line with previous research that ambidextrous leadership empowers organizations to adapt to dynamic environments by exploiting opportunities and mitigating risks. Ambidextrous leadership behavior can serve as a role model for employees, inspiring them to work together to improve startup performance and resilience [22,23].

5. Implications

This research provides several important contributions to the development of the startup world in Indonesia related to the antecedents of entrepreneurial resilience which include entrepreneurial mindfulness, ambidextrous leadership and scaling-up performance capacity. Our findings show that the development of the theoretical construct of entrepreneurial resilience is focused on an understanding, namely the capacity of startup actors to increase the root of the awareness construct that underlies entrepreneurial actions consistently to find, construct cognitive resilience and build entrepreneurial habits in situations full of uncertainty [19,53,62,63]. When startup leaders have high entrepreneurial resilience, they will develop startups with the best capacity to face uncertain situations.

Research findings also show the importance of startup leaders building entrepreneurial mindfulness and carrying out self-development through training programs that focus on aspects of mindfulness, ambidextrous leadership and the ability to manage growth (scaling-up). Ambidextrous leader behavior will become a role model for employees so that they can improve the performance and resilience of startups together [22,23].

These findings have significant relevance to startup situations that are often faced with multiple challenges, including limited resources, rapid environmental change, and intense competition. In fact, the startup landscape is characterized by a high failure rate and startups easily find themselves on the verge of the "valley of death" when they have to decide on scaling-up. The valley of death is a critical phase where many startups experience difficulty in obtaining sufficient funding to maintain their operations or generate profits. In this context, the finding that ambidextrous leadership has a significant positive impact on entrepreneurial resilience by mediating scaling-up performance capacity is important. Balanced leadership in exploration and exploitation helps startups overcome the challenges of the valley of death, increase their competitiveness, and extend their survival. Thus, understanding and applying the principles of ambidextrous leadership can be the key to success for startups to survive and develop in a rapidly changing environment and intense competition.

Based on our findings, startup leaders can increase resilience by implementing practical strategies such as cultivating a culture of continuous learning and adaptation, encouraging open communication and collaboration within teams, fostering a balance between exploration and exploitation in decision-making processes, and actively monitoring. and address challenges through timely corrective action. In addition, integrating entrepreneurial mindfulness as an entrepreneur will involve full awareness of the situation and actions taken, as well as the ability to manage emotions, stay focused, and adapt quickly to change. Therefore, startup leaders will understand strengths and weaknesses and learn from experience, as well as develop an open attitude towards uncertainty and the possibility of failure as part of the learning and growth process. By implementing these strategies, startup leaders can cultivate entrepreneurial resilience and effectively navigate a startup landscape that continues to scale up, is dynamic and unpredictable.

This research can contribute to empowering the startup ecosystem in Indonesia by providing insight to the government, investors and other stakeholders about the factors that can support sustainable growth in the startup ecosystem by prioritizing the main provisions that startup leaders must have. This research provides a fundamental contribution to efforts to help stakeholders better understand how to manage challenges and increase the resilience of startup leaders. The dynamics of the startup ecosystem may change over time, so this research can serve as a basis for further research and adaptation to current market developments and trends. By highlighting the role of entrepreneurial mindfulness, ambidextrous leadership, and scaling-up performance capacity, this research can help startup leaders develop best practices in dealing with dynamic and complex situations.

6. Conclusion

Entrepreneurial resilience is an important key in the personal journey of startup leaders who are always faced with uncertainty and the complexity of dynamic situations to bring startups to continue to experience scaling-up and become sustainable. Therefore,

determining the foundation that has an impact and contributes to developing entrepreneurial resilience is very important. The conclusion of this research is that entrepreneurial mindfulness provides a strong emotional foundation and cognitive awareness as initial capital for startup leaders in managing startups. Meanwhile, ambidextrous leadership is a strategic balance for startup leaders in exploring and exploiting which can support sustainable growth and entrepreneurial resilience as their personal journey. These two things are strengthened by the existence of scaling-up performance capacity as the main foundation of entrepreneurial resilience. Having the capacity to manage growth will increase operational, structural and strategic readiness in facing changes in scale, thereby ensuring that startups are able to respond to opportunities and challenges that arise along with growth. Therefore, the conclusion of this research shows that the relationship between entrepreneurial mindfulness, ambidextrous leadership, and scaling-up performance capacity creates a strong synergy in providing holistic support for entrepreneurial resilience.

Research findings provide enrichment of entrepreneurship literature. The research makes a contribution through the study of various constructs, namely entrepreneurial mindfulness, ambidextrous leadership, scaling-up performance capacity, and entrepreneurial resilience. The results of empirical tests enrich theoretical understanding of how individual and organizational factors interact in entrepreneurial success. This research also expands the ambidextrous leadership theory by showing its role in increasing entrepreneurial resilience. This research also integrates the concept of mindfulness into entrepreneurship research. Cognitive and emotional resources are able to facilitate adaptive responses that impact the entrepreneur's capacity to face entrepreneurial challenges.

Limitations and future research

The main limitation of this research is its geographical coverage which only focuses on startups in Indonesia, so the research findings are not able to explore the diversity of dynamics in the startup ecosystem in various countries. Therefore, future research can replicate this research model to be applied in diverse cultural and socio-economic environments, thereby increasing the external validity of the findings.

The limitations of this research also lie in the limited variables that influence entrepreneurial resilience. Future research could consider broader variables, for example personal traits, organizational practices, sociocultural influences, and others to provide a more comprehensive understanding of the process of building resilience in startups.

Additionally, a limitation of this research is the lack of in-depth exploration of cultural or contextual factors that may influence the relationship between entrepreneurial resilience and leadership practices. This research has not investigated in depth how these factors specifically impact efforts to build resilience in the startup ecosystem in Indonesia. Future research could address these limitations by conducting cross-cultural comparisons or qualitative investigations to uncover unique cultural and contextual influences on entrepreneurial resilience and leadership practices across regions or countries.

This research also has limitations in terms of methodology. Even though the quantitative approach taken has explained the relationship between variables, if this approach adds qualitative aspects and subjective experiences it will be able to enrich the understanding of entrepreneurial resilience. Therefore, further research is needed that adopts a mixed methods approach to provide a more holistic and nuanced exploration of resilience dynamics in the startup context, thereby increasing the depth and richness of research findings.

Despite several limitations, the findings of this study offer valuable insights into the relationship between entrepreneurial resilience, entrepreneurial awareness, leadership practices, and improved startup performance in a startup context. By highlighting the importance of factors such as ambidextrous leadership and conscientiousness in cultivating resilience, this research contributes to the growing body of knowledge in entrepreneurship research, providing actionable strategies to increase organizational adaptability and success in dynamic and uncertain environments.

Funding Statement

This research was supported by Beasiswa Pendidikan Indonesia. I would like to thank the Lembaga Pengelola Dana Pendidikan (LPDP) and Balai Pembiayaan Pendidikan Tinggi (BPPT) Pusat Layanan Pembiayaan Pendidikan (PUSLAPDIK) for funding this research. I would like to thank the Management Department, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Podomoro University and all parties for their support for the awardees in completing this research.

Data availability statement

Data will be made available on request.

CRediT authorship contribution statement

Yasinta Indrianti: Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sasmoko:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation, Conceptualization, Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation, Conceptualization. **Sri Bramantoro Abdinagoro:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation, Conceptualization. **Rano Kartono Rahim:** Writing – review & editing, Validation, Supervision, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:Yasinta Indrianti, Sasmoko, Sri Bramantoro Abdinagoro, Rano Kartono Rahim reports administrative support was provided by BINUS University. Yasinta Indrianti reports financial support was provided by Lembaga Pengelola Dana Pendidikan (LPDP) and Balai Pembiayaan Pendidikan Tinggi (BPPT) Pusat Layanan Pembiayaan Pendidikan (PUSLAPDIK). If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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