Investigating the Relationship between Agile Leadership and Startup Organizational Performance : Exploring the Mediating Role of Learning Agility

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Abstract

As the 4th Industrial Revolution progresses, the importance of startups was increasingly emphasized. Nevertheless, the five-year survival rate of Korean startups was lower than that of OECD countries. In this study, we analyzed the relationship between agile leadership, learning agility, and organizational performance of startups under the premise that organizational performance was most important for startups to achieve sustainable growth. For the empirical analysis, agile leadership was set as an independent variable, learning agility was set as a mediating variable, and organizational performance was set as a dependent variable. Data was collected from startup employees across the country, and 197 valid samples were selected for analysis. The empirical analysis used Process Macro 4.2. As a result of the empirical analysis, agile leadership was found to have a significant positive effect on startup organizational performance. Additionally, agile leadership had a positive (+) effect on learning agility, and learning agility had a positive (+) effect on startup organizational performance. As a result of analyzing the mediating effect of learning agility, learning agility was found to play a mediating role between agile leadership and organizational performance. Academically, these research results tested the usefulness of agile leadership suited to the startup culture among various leadership styles that can improve the organizational performance of startups. In practical terms, such agile leadership not only directly affects organizational performance, but also through the learning agility of startup employees. This means that by creating a culture of learning agility that encourages startup employees to continuously learn and adapt, startups can increase their chances of survival and success.

■ *Keyword:* Startup, Agile Leadership, Learning Agility, Organizational Performance

I. Introduction

The significance of startups in driving innovation and economic growth has become increasingly

prominent in the midst of the 4th Industrial Revolution, a period characterized by rapid technological advancements and digital transformation. This era, marked by its unprecedented pace of change, presents a unique set of opportunities and challenges for startups. The ability of these fledgling companies to not only grow but also sustain that growth over the long term is becoming a critical measure of their success. The survival and continuous advancement of startups are intrinsically linked to their organizational performance, a factor that has become a cornerstone in the discourse on startup resilience and longevity.

While there is a rich and growing body of research that delves into various aspects of startups, ranging from funding strategies to market entry tactics, a notable gap exists in the academic exploration of how specific leadership styles, particularly agile leadership, influence the performance of these organizations. This gap is particularly significant given the dynamic and often unpredictable environment in which startups operate, an environment that demands a leadership style that is both flexible and responsive. Agile leadership, characterized by its adaptability, responsiveness to change, and resilience in the face of challenges, appears to be a natural fit for the startup context. However, the academic exploration of this leadership style, especially in relation to how it impacts the learning agility of employees and, in turn, the overall organizational performance, has not been thoroughly examined(Putra et al., 2022).

This study seeks to bridge this gap by building upon existing research to more clearly define and understand the components of agile leadership within the startup environment. Drawing from a range of scholarly works, this research identifies key elements of agile leadership as adaptability, proficiency, and the promotion of collaboration(Susanto et al., 2023). Adaptability speaks to the leader's ability to adjust strategies and operations in response to changing market conditions and internal dynamics(Akkaya et al.,2022). Proficiency highlights the leader's skill in navigating challenges and obstacles that are inherent in the startup journey(Renault & Tarakci,2023). The promotion of collaboration underscores the importance of fostering a team-oriented culture where collective efforts and shared knowledge contribute to the achievement of organizational goals(Kalluri, 2023).

Conducted against this backdrop, the study aims to provide a comprehensive analysis of the role of agile leadership in startups. It endeavors to empirically investigate the impact of agile leadership on the organizational performance of startups, a critical factor for their survival and success in the highly competitive and fast-evolving landscape of the 4th Industrial Revolution. Additionally, this research explores the mediating role of learning agility, a key attribute in today's workforce(De Meuse, 2017), in the relationship between agile leadership and organizational performance. By doing so, the study aims to contribute both theoretically and practically to the understanding of how agile leadership, tailored to the unique characteristics and needs of startups, can enhance their prospects for long-term success.

In summary this research is positioned to offer valuable insights into the dynamics of agile leadership and learning agility within startups, providing a nuanced understanding of how these elements interact to drive organizational performance. It aims to contribute to the ongoing discourse on effective startup management and leadership strategies in an era defined by rapid change and innovation.

II. Theoretical Background and Previous Research

2.1 Startups and Agile leadership

The concept of a startup, which gained prominence in Silicon Valley during the dot-com boom of the 2000s alongside the rise of the Internet and significant shifts in industrial structures, is often equated with venture companies in Korea, though there are distinct differences between the two. Both startups and venture companies are similar in their pursuit of creating value through technological innovation and navigating uncertainties in their early stages. However, a venture company typically refers to a new business with a structured organization, a significant focus on research and development, and high growth potential. In contrast, a startup is usually a dynamic, smaller-scale project-based company driven by innovative ideas or advanced technology aimed at commercialization(Kang & Chung, 2023). Kim(2022) broadly categorizes startups as rapidly growing entities founded on advanced technology, describing them as temporary organizations in search of scalable and repeatable profitable business models. Similarly, Men(2021) views them as organizations striving to develop new products or services under conditions of extreme uncertainty. Since there are no specific legal classifications for startups in Korea, obtaining precise statistical data on their proportion among new businesses is challenging. However, if we apply Kim's (2022)definition, startups with a focus on high-tech can be considered a subset of this group. According to the Ministry of SMEs and Startups (2023), out of the 1,317,000 new businesses in 2022, approximately 229,000, or 17.4%, could be categorized as high-tech startups.

Agile leadership, a proactive and dynamic leadership, is essential in managing the complexities and uncertainties of the modern business landscape(Akkaya & Yazici, 2020; Akkaya & Bagienska, 2022). This leadership is particularly vital for startups, which must rapidly adapt to evolving challenges and changes. Agile leadership is characterized by its acceptance of change as a constant factor, fostering quick decision-making, cultivating a culture of ongoing learning, and prioritizing customer value(Akkaya & Yazici, 2020). In the fast-paced environment of startups, this leadership style is crucial as it enables swift pivoting in response to shifts in market trends and customer needs. Agile leaders in such settings are known for promoting innovation, experimentation, and embracing new technologies like Industry 4.0. They focus on a customer-oriented approach, adapting sales strategies to meet changing consumer demands and behaviors. This leadership is key in guiding organizations through economic fluctuations and disruptions, enhancing both resilience and adaptability(Susanto et al., 2023). Research by Putra et al. (2022), which reviewed studies from the past two decades, indicates a growing interest in agile leadership's role in digital transformation, particularly its impact on employee commitment and organizational performance.

The foundational insights provided by Akkaya & Sever (2022) and Adhiatma et al. (2022) underscore the significance of agile leadership in guiding startups through the complexities of contemporary business terrains. Startups, known for their dynamic and often unpredictable market conditions, require a leadership approach that is both flexible and evolutionary. Agile leadership steps into this role effectively, enabling startups to quickly adapt to market shifts, refine their

business strategies, and make informed decisions regarding their organization and product development. Moreover, the role of agile leadership in fostering innovation and enabling effective digital transformation is critical for startups striving to maintain a competitive edge in an increasingly digital global market. As highlighted by de Souza et al. (2020) and Delio?lu & Uysal (2022), agile leadership creates an environment conducive to innovation, supporting the implementation of strategies that drive digital transformation. This capability is vital for startups seeking to differentiate themselves and succeed in the digital era. Further emphasizing the importance of agile leadership, Markopoulos et al. (2019) highlight its crucial role in enhancing startups' innovative capabilities and facilitating their digital transformation efforts. This aspect of agile leadership is indispensable, marking a shift towards not only adapting to changes but also actively pursuing innovation and digital transformation as key pillars of success. Agile leadership, therefore, is not just about managing change, it's about leading startups to thrive by embracing innovation and leveraging digital advancements to their advantage.

Key elements of agile leadership include adaptability, problem-solving proficiency, and promotion of collaboration. Firstly, adaptability involves the ability to foresee, react to, and guide change. Agile leaders view change as an opportunity for growth and innovation, not something to fear. They are adept at navigating ambiguous situations and modifying their strategies based on new information or evolving scenarios. Research has shown the significant impact of adaptability on employee engagement and organizational performance. For instance, Akkaya et al.(2022) found that agile leadership positively influences the career success of healthcare workers in Turkey, with job engagement playing a mediating role. Arifin & Purwanti(2023) observed that the adaptability of agile leaders significantly boosts employee engagement, while Kiziloglu et al.(2023) noted its impact on job satisfaction and commitment in the Turkish financial sector.

Secondly, agile leaders are skilled at identifying and resolving issues promptly. They adopt a solution-oriented mindset, viewing challenges as learning and improvement opportunities. Studies have underscored the importance of this problem-solving proficiency. Aftab et al.(2022) found that agile leadership's problem-solving capabilities greatly influence job satisfaction in Pakistan. Carolino & Rouco(2022) observed a significant impact on the commitment of Portuguese firefighters, and Renault & Tarakci (2023) noted its effect on the engagement of nurses during the COVID-19 pandemic.

Thirdly, agile leaders foster a collaborative and open communication culture. They value diverse viewpoints, understanding that the best solutions often emerge from teamwork. They work towards dismantling silos and creating an environment where ideas and information flow freely. The positive effects of promoting collaboration on job involvement and organizational performance are well-documented. Adhiatma et al.(2022) showed its significant impact on employee engagement in Indonesian SMEs. Rietze & Zacher(2022) found that it influences job involvement and well-being in German software developers, and Kalluri(2023) observed its effect on team autonomy and commitment among U.S. software developers.

Based on this discussion, the following hypotheses are proposed.

Hypothesis 1 : Agile leadership will have a significant positive effect on startup organizational performance

Hypothesis 2 : Agile leadership will have a significant positive effect on learning agility

2.2 Mediating Effect of Learning Agility

Recent research underscores the critical role of learning agility in organizational success, especially in dynamic environments like startups. Learning agility, as defined by De Meuse(2017), is the capacity and willingness to learn from experiences and adapt this learning flexibly to new and evolving situations, thereby enhancing job performance. Smith(2015) emphasizes that individuals with high learning agility rapidly gain necessary knowledge and skills for new tasks, embrace change positively, and demonstrate flexibility in their actions.

The growing interest in learning agility stems from the recognition that each individual possesses unique growth aspirations and the ability to swiftly learn from experiences and apply this learning effectively(Batcheller, 2016). Employees exhibiting high learning agility are proactive in seeking job-related information and feedback, reflecting on experiences, and translating these into practical outcomes.

In today's fast-paced business world, learning agility is increasingly seen as a vital attribute for organizational members. Kim(2023) notes its importance as a research topic, given that the capabilities of organizational members are a crucial resource. De Meuse(2017) argues that leaders must focus on developing this agility to ensure consistent performance in a rapidly changing environment.

Previous studies, including those by Swisher(2013) and Smith(2015), have linked high learning agility with the ability to adapt quickly to change, solve problems critically, and enhance organizational competitiveness. A meta-analysis by Lee et al.(2021) further supports this, showing a positive correlation between learning agility and various factors like goal orientation, job involvement, innovation, and overall organizational performance across different occupational groups.

Research exploring the mediating effects of learning agility, such as those by Park & Chung (2021), Hwang & Lee(2022), Joung & Hong(2018), and Kwon & Lee (2020), reveals its role in linking various factors like leadership styles and job challenges to innovative behavior, organizational performance.
Based on this discussion, the following hypotheses are proposed.

Hypothesis3 : Learning agility will have a significant positive effect on startup organizational performance.

Hypothesis4 : Learning agility will play a mediating role between agile leadership and startup organizational performance.

Ⅲ. Research Design

3.1 Research Model

This study was conducted to empirically analyze the impact of agile leadership on organizational performance among startup employees. Agile leadership can be composed of various elements,

and in this study, adaptability, proficiency, and collaboration promotion were set as the main components. In addition, it was established that learning agility would mediate the relationship between agile leadership and organizational performance. This structural relationship is shown in <Fig. 1> was set as a research model.
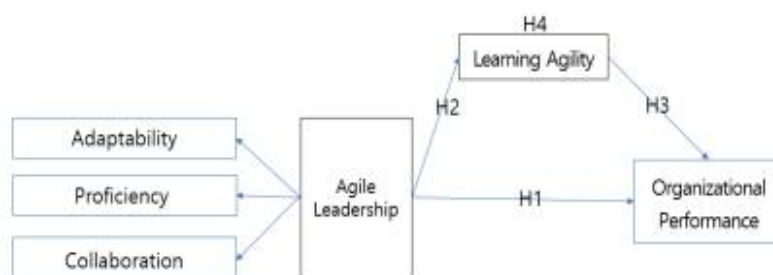

Fig. 1. Research Model

3.2 Survey Design

This study aimed to investigate the perspectives of startup employees across South Korea. To gather data, an online survey was conducted, targeting employees from various startups nationwide. We requested responses from a total of 300 individuals, from which we received 215 completed surveys. The data collection period spanned 10 days, starting from December 10, 2023. Upon a thorough review of the collected data, responses that were deemed insincere or contained missing values were excluded from the analysis. Consequently, the results from 197 respondents were ultimately utilized for the study's analysis. SPSS 24 and Macro Process 4.2 were used for the empirical analysis. Since this study collected data using a self-administered questionnaire, there was a possibility that data could be distorted due to common method bias. Regarding this, when conducting a survey, separation of respondents according to survey items or separation of survey time may be considered. However, this method also has some difficulties in completely eliminating the common method bias (CMB). Therefore, in this study, we chose to test for common method bias using a post hoc statistical method. To test for common method bias, Harman's single factor test was performed. In the exploratory factor analysis, principal component analysis was conducted including items from all variables. As a result of the analysis, if the single factor with the highest explanatory power does not account for more than 50% of the total explanatory power, it is judged that the distortion phenomenon due to the common method bias is not significant (Podsakoff et al., 2003). In this study, the explanatory power of the factor with the highest was found to be 30.771%. Therefore, it was determined that the measurement data in this study were not significantly influenced by the common method bias.

<Table 1> summarizes the number of measurement items and operational definitions of variables used in this study.

<Table 1> Measurement Items and Operational Definition of Variables

Variables		Items	Operational Definition	References
Independent Variables	agile leadership		a style of leadership that is adaptable, flexible, and responsive to the changing needs of an organization in a fast-paced environment	Akkaya & Yazici, 2020 ; Adhiatma et al.,2022 ; Aftab et al.,2022 ; Kiziloglu et al.,2023
	adaptability	5	the capacity of a leader to recognize, react to, and manage changes in the organizational environment effectively	
	proficiency	5	the ability of a leader to identify, analyze, and effectively resolve issues in a timely and efficient manner	
	collaboration promotion	5	the ability of a leader to foster an environment where teamwork, open communication, and joint problem-solving are encouraged and practiced	
Mediating Variables	learning agility	5	the ability to rapidly learn, adapt, and apply new skills and knowledge in varying and complex situations	De Meuse, 2017 ; Kwon & Lee, 2020
Dependent Variables	organizational performance	5	the measure of a startup's effectiveness and efficiency in achieving its business goals and objectives	Hwang & Lee, 2022 ; Putra et al.,2022

The characteristics of the respondents of this study are as follows. Gender was similar at 47.2% female and 52.8% male. The majority age were in their 30s, with 13.2% in their 20s, 75.1% in their 30s, and 11.7% in their 40s. Regarding educational background, 68.5% graduated from college and 19.8% graduated from graduate school. The number of employees was 11.2% with less than 5 people, 48.2% with 5 to 10 people, 29.4% with 10 to 15 people, 9.1% with 15 to 20 people, and 2.0% with 20 people or more. By rank, 22.3% were employee level, 40.6% were assistant manager level, 24.4% were manager level, and 12.7% were department head level.

IV. Empirical Analysis Results

4.1 Validity and Reliability Analysis Results

To test the hypotheses of this study, we first tested the validity and reliability of the measurement items. The validity test was done using exploratory factor analysis, and the reliability test was done using Cronbach's α. The validity and reliability test results are shown in <Table 2>. First, as a result of exploratory factor analysis, the KMO value, which can determine the suitability of the model, was found to be .943, and the Bartlett value was 4314.932, which was significant at p = .000. As with the research model, the factors were well grouped, and the factor loading values of all measurement items were above .5, so all measured items were used in theanalysis.

<Table 2> Results of Validity and Reliability Test

Factors	Variables	agile leadership	organizational performance	learning agility	Cronbach's α
agile leadership	ala4	.850	.165	.170	.970
	ala3	.848	.126	.176	
	alc1	.830	.138	.134	
	ala2	.825	.223	.195	
	alc2	.823	.138	.145	
	alc4	.814	.199	.186	
	alp2	.814	.226	.074	
	ala5	.803	.231	.204	
	alp1	.794	.219	.172	
	alp5	.791	.238	.224	
	alc3	.774	.248	.140	
	alp3	.768	.262	.213	
	ala1	.756	.248	.209	
	alc5	.756	.199	.109	
	alp4	.699	.284	.223	
organizational performance	op4	.174	.880	.090	.928
	op3	.251	.859	.097	
	op2	.372	.765	.152	
	op5	.268	.661	.284	
	op1	.357	.549	.328	
learning agility	la4	.100	.097	.858	.925
	la3	.103	.205	.796	
	la1	.188	.282	.727	
	la5	.204	.131	.725	
	la2	.357	-.011	.685	
eigen value		9.074	4.547	3.835	
Variance(%)		30.771	19.696	19.357	
cumulative variance(%)		30.771	50.466	69.823	

Meanwhile, as a result of testing reliability using Cronbach's α value, agile leadership was found to be very high at .970. Organizational performance was found to be .928 and learning agility was .925, all values above .9. Summarizing the above, it is judged that the validity and reliability of the measurement items have been tested.

4.2 Correlation Analysis

The correlation analysis results are shown in <Table 3>. Agile leadership and learning agility were all significant at .465, agile leadership and organizational performance at .592, and learning agility and organizational performance at .449. As a result of correlation analysis, all results showed a positive (+) correlation. Additionally, since the correlation between all variables did not exceed .8, it was determined that multicollinearity between variables did not exist.

<Table 3> Results of Correlation Analysis

	Mean	SD	agile leadership	learning agility	organizational performance
agile leadership	3.872	.803	1		
learning agility	3.963	.618	.465**	1	
organizational performance	3.744	.667	.592**	.449**	1

**. p< .01,

4.3 Hypotheses Test Results

In this study, since learning agility was set as a mediating variable, Model 4 of Process Macro 4.2 was used to analyze causal and mediating relationships simultaneously. In addition, bootstrapping was performed 10,000 times, and the interval estimation method was used to support or not support hypotheses. In other words, it was judged based on whether 0 exists between LLCI(Lower Limited Confidential Interval) and ULCI(Upper Limited Confidential Interval). This is a method to not support the hypothesis if 0 exists and to support it if 0 does not exist (Hayes, 2022). The empirical analysis results are shown in <Table 4>. First, as a result of analyzing the impact of agile leadership on startup organizational performance, the β value was found to be .492. Since there was no 0 between LLCI and ULCI, it was judged to be significant. Therefore, Hypothesis 1 was supported. Agile leadership will have a significant positive effect on startup organizational performance. As a result of analyzing the impact of agile leadership on learning agility, the β value was found to be .358. Since there was no 0 between LLCI and ULCI, it was judged to be significant. Therefore, Hypothesis 2 was supported that agile leadership would have a significant positive effect on learning agility. As a result of analyzing the impact of learning agility on startup organizational performance, the β value was found to be .239. Since there was no 0 between LLCI and ULCI, it was judged to be significant. Therefore, Hypothesis 3 was supported. Learning agility will have a significant positive effect on startup organizational performance.

<Table 4> Results of Hypotheses Test

Path			β	S.E.	t	P	LLCI	ULCI	R²	Results
Agile Leadership	-->	Organizational Performance	.492	.048	10.251	.000	.397	.586	.350	Supported
Agile Leadership	-->	Learning Agility	.358	.049	7.332	.000	.262	.454	.216	Supported
Learning Agility	-->	Organizational Performance	.239	.068	3.4961	.001	.104	.374	.389	Supported

Meanwhile, the results of analyzing the mediating effect of learning agility are shown in <Table 5>. The total effect of agile leadership on startup organizational performance was .492, which was

found to be significant. The direct effect was also analyzed as significant at .406. The indirect effect, which represents the mediating effect, was found to be .086 and was analyzed as significant because there is no 0 between LLCI and ULCI. Therefore, Hypothesis 4, that learning agility will play a mediating role between agile leadership and startup organizational performance, was supported.

<Table 5> Results of Mediating Effect Test

Effects	β	S.E.	t	P	LLCI	ULCI	Results
Total Effect	.492	.048	10.251	.000	.397	.586	
Direct Effect	.406	.053	7708	.000	.302	.510	
Indirect Effect	.086	.036	–	–	.023	.165	Supported

V. Conclusion

Based on the study's findings that agile leadership, characterized by adaptability, proficiency, and collaboration promotion, significantly positively impacts startup organizational performance, we can infer the following. The positive influence of agile leadership on organizational performance suggests that startups with agile leaders are more adept at adjusting to market fluctuations. Adaptability, a crucial aspect of agile leadership, enables these startups to swiftly modify their strategies, products, or services in response to changing market demands or technological disruptions. This flexibility is especially vital in the dynamic startup environment, where the capacity to adapt quickly can be a key factor in a startup's success or failure. The inclusion of proficiency as a component of agile leadership implies that startups led by such leaders are likely more effective in executing their plans and strategies. Proficiency, in this context, refers to the ability to perform tasks with a high level of skill and competence. This ability is critical in the startup context, where efficient and skillful execution of tasks can significantly impact the company's overall performance, helping to maintain operational efficiency and drive growth. The correlation between agile leadership and enhanced startup performance also highlights the importance of promoting collaboration. Agile leaders who encourage teamwork create an environment where diverse skills and perspectives are valued. This collaborative culture not only boosts employee engagement and satisfaction but also leads to a more resilient and adaptable organization. In startups, where collaboration is essential for innovation and rapid development, such an approach can be instrumental in driving organizational success.

The finding that learning agility mediates the relationship between agile leadership and startup organizational performance allows for several key inferences. This result suggests that the effectiveness of agile leadership in improving startup performance is significantly enhanced when coupled with a culture of learning agility. Learning agility, which involves the ability to rapidly learn, unlearn, and relearn, enables organizations to effectively assimilate and apply the adaptive strategies and innovative solutions proposed by agile leaders. This implies that for agile leadership to be fully effective, it must foster an environment where employees are encouraged to continuously develop

new skills and adapt to changing circumstances. The mediating role of learning agility indicates that it acts as a catalyst in translating agile leadership into tangible performance outcomes. In startups, where the pace of change is rapid and the need for innovation is high, learning agility ensures that the organization is not just responsive to change but is also proactive in anticipating and preparing for future challenges and opportunities. This proactive stance can be a significant competitive advantage in the startup ecosystem. The mediation effect of learning agility also infers that startups with a strong learning culture are likely to be more resilient and adaptable. In an environment where agile leadership provides direction and vision, learning agility equips the workforce with the skills and mindset needed to navigate through uncertainties and disruptions. This combination can lead to enhanced organizational performance, as it enables startups to quickly adjust to market demands, embrace technological advancements, and overcome obstacles more effectively.

In conclusion, the study's findings illuminate the pivotal role of agile leadership in enhancing the performance of startups, particularly in the context of the 4th Industrial Revolution. The key revelation that learning agility serves as a mediating factor between agile leadership and organizational performance underscores the importance of fostering a culture of continuous learning and adaptability within startups. Agile leadership, characterized by adaptability, proficiency, and a focus on promoting collaboration, significantly contributes to the effectiveness and success of startups. However, it is the presence of learning agility within the organization that truly activates and amplifies the benefits of such leadership, translating agile practices into tangible performance outcomes. This synergy between agile leadership and learning agility highlights a crucial pathway for startups aiming to thrive in the dynamic and often unpredictable business landscape. It suggests that startups should not only invest in developing agile leaders but also in cultivating an environment where learning agility is valued and encouraged. This dual focus can enhance a startup's resilience, adaptability, and ultimately, its long-term success. As the startup ecosystem continues to evolve, these insights become increasingly relevant, offering a roadmap for startups to navigate the challenges and leverage the opportunities presented in this era of rapid technological and market changes.

5.1 Implications

The academic implications of this study are as follows. Firstly, this study contributes to the academic field by providing a deeper understanding of how agile leadership impacts startup organizational performance. It empirically tested the hypotheses that agile leadership traits such as adaptability, proficiency, and the promotion of collaboration are significantly correlated with improved organizational performance. This finding enriches the leadership literature by highlighting the specific attributes of agile leadership that are most effective in the startup context. Secondly, the research advances academic knowledge by identifying learning agility as a critical mediating variable that enhances the effectiveness of agile leadership in startups. This insight extends the theoretical framework of leadership impact on organizational performance by demonstrating how the capacity for learning and adaptation can amplify leadership effectiveness. It suggests a new avenue for future research on the dynamic interplay between leadership styles and organizational learning capabilities.

Thirdly, by examining the relationship between agile leadership, learning agility, and startup performance, this study offers a novel framework for analyzing the success factors in startups. It encourages further academic exploration into how these elements interact and contribute to the resilience and adaptability of startups in the face of rapid market and technological changes.

The practical implications of this study are as follows. Firstly, startups should prioritize the development of agile leadership qualities among their leaders. This involves investing in leadership development programs that emphasize adaptability, responsiveness, and the ability to foster a culture of continuous learning and innovation. Leaders should be prepared to undergo training that enhances their ability to navigate uncertainty, encourages open communication, and supports collaborative problem-solving. Secondly, to leverage the full potential of agile leadership, startups must also cultivate a culture of learning agility within the organization. This means creating an environment where employees are encouraged to continuously seek new knowledge, challenge existing assumptions, and adapt their skills to evolving circumstances. Organizations can achieve this by providing access to ongoing learning opportunities, encouraging experimentation, and recognizing and rewarding adaptive and innovative behaviors. Thirdly, for startups to thrive, there must be a strategic alignment between agile leadership practices and the promotion of learning agility. This requires organizational policies and practices that support the seamless integration of agile leadership behaviors with a learning-oriented culture. Leaders should be equipped with the tools and resources to implement adaptive strategies effectively, and there should be clear mechanisms in place to facilitate continuous learning and knowledge sharing across the organization. This alignment ensures that the organization is not only responsive to immediate challenges but also proactively prepared for future opportunities and threats.

By addressing these academic and practical implications, the study underscores the importance of agile leadership and learning agility in driving startup success. It provides a roadmap for both scholars and practitioners to explore and implement these concepts, thereby enhancing the resilience, adaptability, and overall performance of startups in the dynamic business landscape of the 4th Industrial Revolution.

5.2 Limitation and Future Research Directions

The use of self-administered surveys in this study, while practical and efficient, brings with it certain limitations that should be considered. Self-administered surveys rely heavily on the honesty and self-awareness of respondents. This can lead to response bias, where participants might provide answers they perceive as desirable or acceptable rather than their true thoughts or experiences. Additionally, the subjective nature of self-assessment can affect the accuracy of the data, especially in areas like self-evaluation of learning agility and perceptions of leadership effectiveness. While self-administered surveys are useful for gathering quantitative data, they often lack the qualitative depth that methods like interviews or focus groups can provide. This limitation can lead to a less nuanced understanding of the complex dynamics between agile leadership, learning agility, and organizational performance. Important subtleties and contextual factors that might influence these relationships could be overlooked.

In future research, incorporating strategies like separating respondents into different groups or staggering the response times could enhance the reliability of the survey data. This approach would help in mitigating potential biases that might arise from respondents influencing each other or from the specific timing of the survey administration, which could be influenced by external factors or particular events. By diversifying the respondent groups and varying the timing of responses, researchers can obtain a more representative and unbiased set of data, leading to more robust and reliable findings.

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애자일 리더십과 스타트업 조직성과 관계 탐색 : 학습민첩성의 매개효과

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국 문 요 약

4차산업혁명의 진전에 따라 스타트업의 중요성이 더욱 강조되고 있는 시점이다. 그럼에도 불구하고 한국 스타트업의 5년내 생존율이 OECD국가보다 낮은 편이다. 본 연구에서는 스타트업이 지속가능한 성장을 위해서는 조직성과가 무엇보다 중요하다는 전제하에 애자일리더십, 학습민첩성과 스타트업 조직성과의 영향 관계를 분석하였다. 실증분석을 위해 애자일리더십을 독립변수로, 학습민첩성을 매개변수로, 조직성과를 종속변수로 설정하였다. 전국의 스타트업 종업원을 대상으로 자료를 수집하였으며, 이중 유효한 197부를 분석의 대상으로 삼았다. 실증분석은 Process Macro 4.2를 활용하였다. 실증분석결과 애자일리더십은 스타트업 조직성과에 정(+)의 유의한 영향을 미치는 것으로 나타났다. 또한 애자일리더십은 학습민첩성에 정(+)의 영향을 미쳤으며, 학습민첩성은 스타트업 조직성과에 정(+)의 영향을 미쳤다. 학습민첩성의 매개효과를 분석한 결과 학습민첩성은 애자일리더십과 조직성과간 매개역할을 하는 것으로 나타났다. 이러한 연구 결과는 학술적으로는 스타트업의 조직성과를 향상시킬수 있는 다양한 리더십 스타일 중에서 스타트업의 문화에 맞는 애자일리더십의 유용성을 검정한 것이다. 실무적으로는 이러한 애자일리더십이 조직성과에 영향을 직접 미치기도 하지만 스타트업 종업원의 학습민첩성을 통해서도 영향을 미친다는 것이다. 이는 스타트업 종업원들이 지속적으로 학습하고 적응하도록 장려하는 학습 민첩성 문화를 조성함으로써 스타트업은 생존과 성공 가능성을 높일 수 있다는 것이다.

■ 중심어: 스타트업, 애자일리더십, 학습민첩성, 조직성과

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