The Mediation Role of Innovation Ambidexterity in The Influence of Dynamic Managerial Capability in Organizational Resilience to Achieve Business Sustainability in Digital Startup Companies

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Abstract. Organizational resilience is a prerequisite for achieving business sustainability. Data shows that digital startup companies are businesses that are vulnerable to crisis conditions such as during Covid-19. This makes it necessary to discuss how digital startup companies can build business sustainability through organizational resilience to face future crises. This research aims to examine the mediating role of innovation ambidexterity in the influence of dynamic managerial capabilities on organizational resilience in digital startup companies to achieve business sustainability. Data was collected through a survey of 100 managers working at digital startups. The data obtained was tested using WarpPLS and SPSS Macro Process software. The results show that the proposed hypothesis is accepted. This research provides several important contributions, namely answering gaps in previous research and providing information to individuals and companies to form dynamic managerial capabilities in managers and implementing innovation ambidexterity to achieve organizational resilience in order to create sustainability in digital startup businesses.

Keywords: Business Sustainability, Dynamic Managerial Capabilities, Innovation Ambidexterity, Organizational Resilience, Digital Startups, Covid-19

1 Introduction

The Covid-19 Pandemic has had a detrimental effect on all economic sectors, including small and medium-sized organizations (SMEs) in both developed and developing nations. Digital startup businesses are particularly vulnerable to these conditions, which is where this research got its start. [1] [2]. Due to the negative effects of COVID-19 on digital startups, measures regarding layoffs have been implemented. Startups in the digital space, such Sorabel, Airy Rooms, and Stoqo, were forced to close their doors and fire every employee. [3]. Digital startups have been particularly hard struck by the recession because of their high degrees of vulnerability, lack of readiness, reliance on big local and governmental

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institutions, and external macro conditions. Digital startups must since business resilience dictates business continuity, digital startup organizations must have a method for dealing with effective crisis planning and long-term resilience [4]. [4].

Due to their ability to provide cash flow to the market, employment opportunities for the workforce, and services to consumers, business organizations are critical to economic sustainability. This means that an essential component of society's overall recovery from a crisis is an organization's capacity to endure and continue operating during it. [5]. Therefore, developing organizational resilience is essential for handling crisis circumstances. [6]. Building organizational resilience is still a concept that startup organizations need to know in order to be prepared for challenging circumstances.

Organizational resilience is essential to ensuring business continuity, according to earlier research. (7). Organizations should be resilient in the face of ambiguous circumstances given the uncertain future. (8). Restoring stability to an organization after encountering a disruptive circumstance is known as organizational resilience. The organization will inevitably experience disruptions due to both internal and external environmental causes. [9].

For digital entrepreneurs to thrive in emergency scenarios like a pandemic, resilience is a crucial notion [2]. Nonetheless, a review of the literature by [10] demonstrates the need for additional study to come to an agreement regarding the elements that boost organizational resilience. The fact that there is still a dearth of study on the origins of organizational resilience lends credence to this [6]. Furthermore, [11] clarifies that there is a dearth of research that provides empirical support for the idea, raising concerns about how organizations—especially digital startup companies—can develop a certain degree of resilience.

The existence of managers or executives who are crucial to the establishment, growth, and success of the company is one trait shared by digital startup enterprises. In practically every corporate activity within an organization, decision-making involves leaders. [12] Given that the capacity and availability of resources will determine the level of resilience in microenterprises, the resource-based view and dynamic capability approach are deemed appropriate [11]. [11]. Discussions in the scholarly literature point to the need to investigate the factors—such as organizational ambidexterity—that lead to dynamic management competencies that influence organizational resilience through strategic change mechanisms. [13]. Innovation ambidexterity refers to a company's capacity to both investigate and exploit innovation at the same time. [14]. [14].

Further research is necessary to determine the organizational resilience of digital startup enterprises, as the COVID-19 pandemic has had a severe impact on these businesses in Indonesia, as previously documented. [1]. In the field of organizational resilience research, antecedents are still not extensively studied. [6] so that additional study on the variables influencing organizational resilience is required. Furthermore, as indicated by the findings of the literature review [10], there are currently not many empirical studies that look at organizational resilience, particularly when using the survey approach. Accordingly, [11] recommended expanding the use of survey-based methods in organizational resilience research. The aim of this research is to investigate the relationship between dynamic management skill and organizational resilience, as well as the mediating role that innovation ambidexterity plays in this relationship.

2 Literature Review

2.1 Dynamic Capability Theory

A substitute strategy to address some of the shortcomings of resource-based view (RBV) theory is dynamic capacity theory. [15]. RBV theory is primarily focused on identifying the company's internal resources and making them valuable, uncommon, unique, and non-subtitutable. [16]. On the other hand, an organization must constantly adapt to the dynamics of its surroundings. As a result, dynamic capabilities are available to meet the requirement that an organization build dynamic resources in response to changing circumstances at any point in time [17]. [17]. The ability of a business to develop, integrate, and reconfigure internal and external skills in order to adapt to a quickly changing environment is known as its dynamic capabilities [18]. [18].

Significant contributions [19] to the notion of dynamic capacities through writing about the three aspects of sensing, which involves identifying and evaluating possibilities, scrambling, which involves mobilizing resources to take advantage of opportunities and capture value, and transformation, which involves ongoing renewal. Organizations with dynamic capacities are able to quickly identify and respond to opportunities and threats, as well as reconstitute actual and intangible assets as needed. [19]. Understanding competitive advantage is necessary to recognize dynamic skills, particularly in forward-thinking firms like technology startups.

Dynamic capabilities cover every necessity necessary for a startup to survive. For digital companies, having dynamic capabilities is essential to enabling quick resource development or reconfiguration for value creation as a long-term survival strategy [20]. [20] Effectively handling the factors that impact startup sustainability is contingent upon these businesses' ability to leverage their dynamic capacities in order to optimize both physical and immaterial assets.

2.2 Dynamic Managerial Capabilities

The ability of managers to develop, expand, or alter how the organization looks for opportunities through adjustments to organizational capabilities and resources is known as dynamic management capability. [13]. This capacity is viewed as a means of achieving coherence between the expertise of the company and the dynamic surroundings. [21]. Environmental scanning is a tool used by managers to spot emerging trends and chances to incorporate fresh concepts and expertise into the company's current competencies. [22]. [22]. Developing and implementing organizational-level dynamic capabilities can have an impact on the external environment as well as the internal business through dynamic managerial capabilities. The ability of managers to make sure that learning, integration, and reconfiguration are all focused on identifying and seizing opportunities as the market changes is emphasized by dynamic managerial qualities, which are crucial. [23].

The development of dynamic managerial competencies is contingent upon the organizational environment. These skills make managers better prepared to recognize and respond to sudden and erratic developments in the market. [24]. Three fundamental elements provide rise to dynamic managing capabilities: managerial cognition, social capital, and human capital. [25]. Managers' actions about strategy and operations are influenced by these elements, both individually and collectively, according to [25]. This study employs the definition of [26], which states that a manager can utilize overall dynamic managing skill to their advantage when adjusting to a change process. The strategic and operational decisions made by managers are influenced by three elements, both individually and in combination. Among the three are:

The first definition of human capital is the managerial skill acquired from training, education, and experience. [25] that allow managers to implement modifications. These abilities include information and skills that people acquire from education, training, and experience in addition to other abilities (personality, values, and interests) and cognitive psychological traits. Individual managers can learn new things from human capital, which also helps them come up with and implement the best ideas. In the end, human capital will help the business change its resources. [27].

Social capital is the next component that underlies dynamic management capacities. By enabling the required conditions and being interconnected, social capital can explain how managers carry out their tasks more successfully and efficiently. [28] Additionally, social capital is a catalyst for the development of cooperative and trustworthy relationships that foster a culture that values collectivity. This capital comes from relationships between persons rather than from individuals themselves, and its existence gives the relationship's players more resources. The final component is cognitive capital, which is defined as the mental models and managerial schemas that support decision-making [29]. [29]. [30] states that human brain processes involved in gathering and analyzing information comprise managerial cognition and is strongly tied to personal knowledge and ideas.

2.3 Innovation Ambidexterity

A company's capacity to both investigate and exploit invention at the same time is known as innovation ambidexterity. [14]. Innovation ambidexterity, according to [31], is the capacity to engage in two diametrically opposed types of innovation: exploitation innovation and exploratory innovation. In order to compete in mature technologies and markets, businesses might use exploitation innovation by concentrating on enhancing the market position of their current products or increasing efficiency and other little improvements [23]. [23]. Targeting new product market areas or engaging in flexible, independent, and experimental actions to compete in emerging technologies and marketplaces are examples of exploratory innovation [31]. On the other hand, exploitation describes the modification of already-existing goods and business models with an emphasis on efficiency, effectiveness, and selection.

Businesses that can both investigate and exploit innovation at the same time will fare better than those that can only do one or the other. [23]. While exploration can help a company keep its knowledge base up to date, it can also get in the way of finding new business prospects. On the other hand, a singular concentration on exploitation could boost performance in the short run, but it can also put businesses in a competency trap by making it harder for them to adapt to changes in the market and in technology. [32].

The two methods to ambidexterity are combined dimension (CD) and balance dimension (BD). Exploitation and exploration are operationalized as two opposites, although they are done concurrently, according to the theory behind the BD method. [33]. The problem with the BD method is that businesses run the risk of using up all of their available resources if they use them more than they explore. On the other hand, if a business places too much emphasis on discovery, it runs the risk of becoming mired in constant resource hunting and experimenting [23]. [23]. In contrast, the CD approach is exploratory, and the exploitative process can either proceed in a stepwise manner or alternate between exploration and exploitation on a regular basis. [33]. These two pursuits can aid or benefit from one another. Companies with high levels of exploitative efforts can use their own resources as first reserves to locate new external resources or conduct exploration. However, as the business expands its pool of fresh resources and skills, its capacity in the discovery process can support the exploitation effort and increase economies of scale. [23].

2.4 Organizational Resilience

The ability to bounce back is crucial to an organization's survival. The notion of resilience has surfaced across diverse scientific domains. There are numerous ways to characterize organizational resilience: as ability, capacity, trait, result, procedure, behavior, strategy or approach, performance, or any combination of these. [34]. Resilience has been conceptualized as a process on resilient outcomes in several studies. Originally, the term "organizational resilience" was used to refer to the ability of organizations to adapt quickly to changes in the business environment.

Organizations that are successful recognize the ever-changing nature of the business environment they operate in. [35]. Organizations must to take into account a variety of tactics and behaviors, including leadership, change management, integration, agility, and communication. When companies can comprehend the change process before the need for change becomes evident, there is a chance for success. There are always inventive ways to act in the face of uncertainty and quick change. [36].

Organizational resilience is the capacity to foresee, withstand, and recover from a tumultuous environment with the ability to return to its original or better state. This research employs operational terminology from [9]. Three key components make up resilience: sensing, anticipating, and adjusting. They all center on immunity, recuperation, and predictability. The first characteristic of a resilient organization is its capacity to foresee potential hazards. Gathering information on the tiniest disruptions at the organizational level is the first step in building anticipation, which is then strengthened by information from other companies to foresee future, bigger disturbances. [37].

The capacity to proactively develop risk management and be flexible in order to lessen the disruptive impact of a crisis is known as organizational robustness, or immunity to disruption. This brings us to our second point about resilience: organizational robustness. Recovery, or the organization's capacity to restore the system to its prior condition or to a better state, is the third resilience capability. [9].

3 Hypothesis Development

3.1 The Effect of Dynamic Managerial Capability on Innovation Ambidexterity

One mechanism that greatly depends on personal knowledge and cognition is dynamic capability. Financial capital and an entrepreneurial spirit are not enough for digital firms to succeed. A variety of resources are also necessary to guarantee the survival of startups. In this situation, entrepreneurs' interpersonal skills are crucial for obtaining supplementary resource requirements and for being able to reorganize already-existing resources. These assets are a component of flexible managerial skills.

Dynamic managerial capability is closely related to the ability to dynamically balance activities between exploration and exploitation. The dynamic managerial attributes of cognition, social capital and human capital empower managers to detect disruptions and this leads to the evaluation and formulation of shifting ambidexterity tendencies. [38] Dynamic managerial capabilities play an important role as antecedents to various strategic capabilities and actions through effective reconfiguration of resources [39]. [39]. The authors hypothesize that:

Hypothesis 1: Dynamic managerial capability has a positive effect on innovation ambidexterity.

3.2 The Effect of Innovation Ambidexterity on Organizational Resilience

Dynamic capability is a well-known idea for understanding innovation-based competitive advantage, especially in innovative businesses such as digital startups. Dynamic skills are linked to a company's ability to innovate and its ability to endure in challenging circumstances. Research reveals a substantial correlation between innovation ambidexterity and establishing organizational resilience on a number of firm performance metrics, including sales growth [40] and innovation and survival [41].

Ambidexterity in innovation is associated with the efficiency and alignment of both forms of innovation in corporate management, as well as the contemporary needs of organizations to be flexible in response to changing external conditions. Through the use of social networks, organizations can obtain resources from outside sources while also combining and balancing their abilities to innovate in the use of already-existing resources. 42]. For commercial organizations, a sustained competitive advantage comes from striking a healthy balance between exploratory and exploitative tactics. 33].
Hypothesis 2: Innovation ambidexterity affects organizational resilience

3.3 The Mediating Role of Innovation Ambidexterity on the Relationship between Dynamic Managerial Capability and Organizational Resilience

The resources possessed by businesses, such as their human, social, and cognitive capital—all components of dynamic managerial capabilities that contribute to the survival of startups—are explained by dynamic capabilities (Teixeira et al., 2021). But according to a study by [43], there is no direct correlation between dynamic managing capabilities and organizational performance; rather, high performance—in this case, organizational resilience—requires mediation of the dynamic managerial capability variable. However, [1] suggests using innovation ambidexterity characteristics in order to achieve organizational resilience. Furthermore, prior studies have demonstrated that ambidexterity in innovation has a moderating influence on organizational resilience. [12] [44].

4 Research Methods

Based on the literature review and hypothesis development previously described, this study proposes a research model that can be seen in figure 1. In the model, it can be seen that the dynamic managerial capability variable acts as an independent variable and organizational resilience as the dependent variable. In addition, the research model also contains a mediating variable, namely innovation ambidexterity. This research uses surveys as a data collection method. Surveys are used as a data collection method because surveys are appropriate for conducting cross-regional research. The advantage of the survey method is that it is not limited by geographical distance, and can provide access to participants who are difficult to reach. As in this study, which will examine the managers of digital startup companies that are not in just one region. This study uses a sample of the population of digital startup company managers where the digital startup company was established before the pandemic was present in Indonesia. The sample selection is not limited to certain cities or regions because employees of digital startup companies can work remotely without having to settle in a certain city where the company stands.

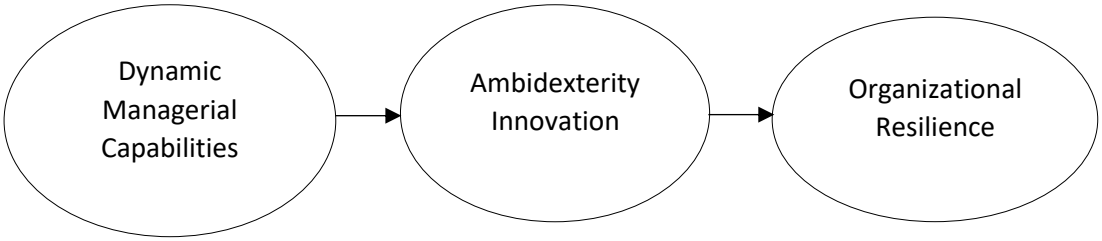

Fig 1. Research Model

In this study, the sample selection technique was carried out using non-probability sampling and purposive sampling techniques. The non-probability sampling technique was chosen because it was considered to be able to fulfill the sampling objectives, was not time consuming, and did not require a lot of money. In addition, purposive sampling technique was chosen because there are certain criteria that must be met by respondents. The criteria for respondents selected as samples are managers who have worked for at least one year in digital startup companies. This is done to ensure that managers have worked intensely enough in digital startup companies so that they can provide appropriate assessments. Hambrick & Mason [45] explained that the company is a reflection of top management because the characteristics of managers as decision makers greatly influence the company's strategic decisions. Based on this, this study uses managers as a representation of the organization to be studied, namely digital startup companies The data used in this study are primary data. Primary data is data that is directly collected by researchers for research purposes. [46]. Data collection in this study was carried out through distributing questionnaires. A questionnaire is a medium that contains a set of written questions that have been previously compiled by researchers with answer choices that have generally been determined, and respondents fill in the answers through this media.

The online questionnaire in this study was distributed via Instagram, WhatsApp, Twitter, Telegram. This research uses a database issued by Mikti [47] to find out the identity of digital startup companies spread throughout Indonesia. In addition, this research will collaborate with the Innovative Academy at Gadjah Mada University to provide data on digital startup founders who join the Innovative Academy. Furthermore, the distribution of physical questionnaires was delivered by visiting startup company offices, job fair agendas and meeting startup managers at community events in Yogyakarta.

5 Results

Data collection in this study was carried out online using google form and offline using a physical questionnaire. The questionnaire was distributed on various social media, namely WhatsaApp, telegram, twitter, instagram. Offline questionnaires were delivered by visiting startup offices and meeting startup managers at community events in Yogyakarta. The results of the research survey obtained 100 digital startup manager respondents who could be processed. Furthermore, hypothesis testing was carried out after all items used in the questionnaire were declared valid and reliable. The first stage of hypothesis testing was carried

out with WarpPLS 7.0 software. Based on the results of data processing, the following results were obtained.

Table.1 Primary data processed using WarpPLS 7.0

Path Coefficients	**DMC**	**AI**
DMC		
AI	0,618	
OR		0,396
P-Value	**DMC**	**AI**
DMC	<0,001	
AI		
OR		<0,001

Hypothesis testing in this study was carried out by looking at the significance value (p-value) of the test results. Hypotheses H1 and H2 will be accepted if the p-value is less than or equal to 0.05 ($p \leq 0.05$), so it can be said that there is a significant influence between the independent variable and the dependent. Based on the test results above, the resulting significance value (p-value) for hypothesis 1 is <0.001 where the value is below $P \leq 0.05$, which means that the results of hypothesis 1 testing are significant. Then the second hypothesis testing is aimed at testing and knowing the role of innovation ambidexterity on organizational resilience. Based on the table above, the significance value (p-value) is <0.001 where the value is below $P \leq 0.05$, which means that the results of hypothesis 2 testing are significant. Based on this, it can be said that hypothesis 2 is accepted. Furthermore, mediation testing is carried out with the direct effect and indirect effect values in the figure below.

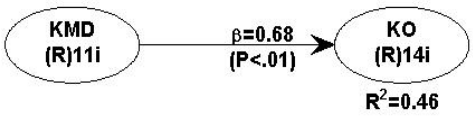

Fig.2 The *direct effect of* Dynamic Managerial Ability on Organizational Resilience

Based on the figure above, it can be seen that the direct test between dynamic managerial ability on organizational resilience has a result of $\beta = 0.68$ and is significant with a p value <0.01. The next stage estimates the indirect effect of dynamic managerial ability

variables on organizational resilience. The results of indirect effect testing can be seen in the following figure.

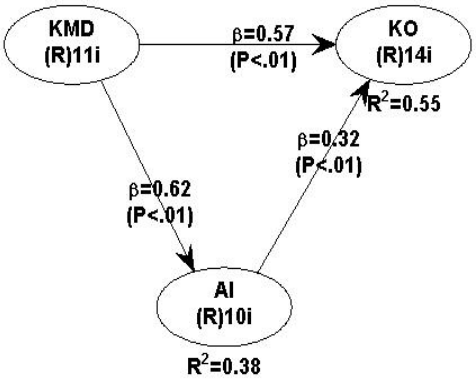

Fig.3 The indirect effect of Dynamic Managerial Ability on Organizational Resilience

The results of testing the indirect effect found that the result of $\beta = 0.57$ and significant with a value of $p < 0.01$. After testing the direct and indirect effects, a comparison is made, where it is found that the decrease between the direct effect = 0.68 and the indirect effect = 0.57. So it is found that both test results by looking at direct and indirect values produce the same conclusion, namely partial mediation.

Mediation testing in this study was also carried out using the SPSS macro PROCESS analysis tool to see the consistency of the results. This study uses model 4 of macro PROCESS to test the mediation relationship [48]. This mediation test can help confirm whether the proposed hypothesis is accepted or not accepted. The direct effect of the independent variable (dynamic managerial ability) on the mediating variable (innovation ambidexterity) will help determine the acceptance of hypothesis 1. In addition, the direct effect of the mediating variable on the dependent variable (organizational resilience) will help determine the acceptance of hypothesis 2. Meanwhile, the indirect effect (mediation) can help determine the results of hypothesis 3. The following are the results of mediation testing using model 4 of macro PROCESS.

Table 2. Mediation Testing Model 4 macro PROCESS

		coeff	**se**	**T**	**P**	**LLCI**	**ULCI**
Outcome Variable (AI)	constant	21,0452	41406	5,0827	,0000	12,8283	29,262
	DMC	,4443	,0857	5,1821	,0000	,2742	,6145
Outcome Variable (OR)	constant	-10,566	7,6917	-1,3737	,1727	-25,832	4,6998
	DMC	,8301	,1599	5,1902	,0000	,5127	1,1475
	AI	,5698	,1669	3,4135	,0009	,2385	,9011
Indirect effect(s)	X *on* Y	,2532	,1964	-	-	,0238	,7227

The third hypothesis aimed at testing the mediating role of the innovation ambidexterity variable on the relationship between dynamic managerial ability and organizational resilience, as shown in Table 4.10 there is a mediating (indirect) effect of 0.25. This mediating effect is significant because the range of LLCI (0.23) and ULCI (0.72) does not include the zero point. Based on this, it can be concluded that the innovation ambidexterity variable has a mediating role in the relationship between dynamic managerial capabilities and organizational resilience.

6 Conclusion

Hypothesis 1 in this study states that ambidexterity in invention is positively impacted by dynamic managerial competence. The results of hypothesis one support what Meer has said [38] and [39]. The capacity to dynamically balance operations between exploration and exploitation is highly associated with dynamic managing skills [38]. [38]. Managers are able to identify disruptions thanks to the dynamic management competence traits of cognition, social capital, and human capital. This allows for the assessment and development of innovative ambidexterity tendencies. The findings of this study corroborate and bolster the claims made by other researchers on the three elements that affect dynamic management capabilities [25] [49] [50]. The hypothesis's outcomes support the dynamic capacities theory as well. Research on dynamic capabilities emphasizes the significance of dynamic managerial qualities as a vital tool for spotting and seizing fresh chances in a changing business environment. These skills enable managers to better identify potential disruptions and adapt to the erratic fluctuations in the market. Businesses that possess dynamic managerial capabilities might adopt new tactics in response to shifting market dynamics. Reference 51. The result of all of this is ambidexterity, an innovative act.

Hypothesis 2 in this study states that innovation ambidexterity has a positive effect on organizational resilience. The results of this hypothesis support previous studies that examine the effect of innovation ambidexterity on organizational resilience such as Hill & Birkinshaw's research. [42] and research from [52]. The results of this test expand the results of the research of O'Reilly & Tushman [23] which explains that companies that are able to simultaneously exploit and explore innovation will have better performance when compared to companies that

only exploit or explore innovation. The results of hypothesis 2 testing also answer previous research gaps, such as research from [6] [11]. The test results on this hypothesis also support the statement from Mammassis & Kostopoulos [53] in their research states that adopting a dual orientation of exploration and exploitation contributes to long-term performance and organizational survival. As well as research from [54] that maintaining a balance between explorative and exploitative innovation is important for the survival of the company.

Hypothesis 3 proposed states thatThe positive correlation between dynamic management skill and organizational resilience is mediated by innovation ambidexterity. The findings of this hypothesis address research recommendations made by Helfat & Martin [13], who call for an investigation of the mechanisms—such as innovation ambidexterity—that lead to dynamic managerial talents having an impact on organizational resilience through strategic change mechanisms. The results of testing this hypothesis also support the findings of Permana et al. [55], who discovered that the impact of dynamic management skill on organizational performance resulted in an indirect link that needed to be mediated. Because there is a chance that the business would become stiff in the face of rapid change, it will be challenging to create a system that will yield higher performance. [56].

7 Research Contribution

The results of this study have several theoretical implications. The first implication is that this research is able to expand the literature on dynamic managerial capabilities, innovation ambidexterity, environmental dynamism and organizational resilience in digital *startup* companies in Indonesia. This research answers several gaps in the research problems. First, there is still very limited research that examines organizational resilience in digital *startup* companies. [1].

Second, digital *startups* are vulnerable businesses, the vulnerable and high-dependency condition of digital *startup* companies makes it necessary to take organizational actions to overcome the impact of crises and disasters. Digital *startup* companies need to build a widely used mechanism that can enable and guide effective crisis preparation. [4]. This research contributes to the literature regarding antecedent variables in the formation of organizational resilience in digital *startup* companies.

Third, there has not been much empirical research on organizational resilience, especially those that apply survey-based methods. The results of a *literature review* conducted by Saad *et al*. [10] shows that previous research in the field of organizational resilience uses more conceptual approaches and case studies. Case studies are the most widely used method in conducting organizational resilience research. Although research based on the case study method increases in-depth understanding, the method has limitations because the resulting insights cannot be generalized and cannot be applied outside the research context. Based on this, this research contributes in the form of filling the method gap that exists in organizational resilience research.

Fourth, research conducted by Permana & Ellitan [55], Kwalanda *et al*. [57]and Permana *et al*. [55] found inconsistent research results regarding the relationship between dynamic managerial skills and organizational resilience. This research contributes to being able to answer these inconsistencies. Empirically, this study proves that there is a role of mediating variables in influencing the relationship between dynamic managerial ability and organizational resilience.

8 Limitations and Future Research

The researcher has tried to design and conduct this research optimally, in accordance with good scientific research procedures. However, this study still has some research limitations that should be considered by future researchers. The first research limitation relates to sample size and questionnaire distribution. The sample size in this study is small, namely 100 respondents. Even though it meets the requirements of Hair et al. (2017) [58] regarding the minimum sample size. However, the use of a large sample size will further validate a study.

Second, this study only accommodates the variables of dynamic managerial ability, innovation ambidexterity and environmental dynamism as variables that can shape organizational resilience. Future research can include other variables that can be antecedents in realizing organizational resilience. Future research can also examine in more detail related to organizational resilience. Because there is still much that can be explored in organizational resilience variables.

Third, future research can expand research on companies other than digital startup companies. Researchers can conduct research on companies that have high vulnerability. In addition, future researchers can conduct research using different methods other than survey methods.

Reference

[1] L. Aldianto, G. Anggadwita, A. Permatasari, I. R. Mirzanti, and I. O. Williamson, "Toward a Business Resilience Framework for Startups," *J. Sustain.*, vol. 13, no. 3132, pp. 1–19, 2021.

[2] A. Sreenivasan, M. Suresh, J. Alfredo, and T. Panduro, "Modelling the resilience of start- ups during COVID-19 pandemic," *Benchmarking An Int. J.*, vol. 29, no. 10, pp. 1–25, 2021, doi: 10.1108/BIJ-09-2021-0530.

[3] P. P. Bachtiar, R. A. Diningrat, A. Z. D. Kusuma, R. Al Izzati, and A. Diandra, "Ekonomi Digital untuk Siapa? Menuju Ekonomi Digital yang Inklusif di Indonesia," Jakarta, 2020.

[4] Y. Jiang, B. W. Ritchie, and M. L. Verreynne, "Building tourism organizational resilience to crises and disasters : A dynamic capabilities view," *Int. J. Tour. Res.*, vol. 21, no. 6, pp. 1–19, 2019, doi: 10.1002/jtr.2312.

[5] R. B. S. M. Odeh, B. Y. Obeidat, M. O. Jaradat, R. Masa'deh, and M. T. Alshurideh, "The transformational leadership role in achieving organizational resilience through adaptive cultures : the case of Dubai service sector," *Int. J. Product. Perform. Manag.*, vol. 71, no. 8, pp. 1–29, 2021, doi: 10.1108/IJPPM-02-2021-0093.

[6] A. R. Sánchez, J. Guinot, R. Chiva, and Á. López-cabrales, "How to emerge stronger : Antecedents and consequences of organizational resilience," *J. Manag. Organ.*, vol. 27, no. 3, pp. 1–18, 2019, doi: 10.1017/jmo.2019.5.

[7] M. M. Weber, "The Relationship between Resilience and Sustainability in the Organizational Context—A Systematic Review," *Sustainability*, vol. 15, no. 22, p. 15970, 2023, doi: 10.3390/su152215970.

[8] M. Mehta, G. Pancholi, and A. Saxena, "Organizational resilience and sustainability: a bibliometric analysis," *Cogent Bus. Manag.*, vol. 11, no. 1, p., 2024, doi: 10.1080/23311975.2023.2294513.

[9] S. S. Rai, S. Rai, and N. K. Singh, "Organizational resilience and social-economic sustainability: COVID-19 perspective," *Environ. Dev. Sustain.*, vol. 23, no. 8, pp. 12006–12023, 2021, doi: 10.1007/s10668-020-01154-6.

[10] M. H. Saad, G. Hagelaar, G. van der Velde, and S. W. F. Omta, "Conceptualization of SMEs' business resilience: A systematic literature review," *Cogent Bus. Manag.*, vol. 8, no. 1, pp. 1–34, 2021, doi: 10.1080/23311975.2021.1938347.

[11] R. Bhamra, S. Dani, and K. Burnard, "Resilience : The Concept , a Literature Review and Future Directions," *Int. J. Prod. Res.*, vol. 49, no. 18, pp. 5375–5393, 2011, doi:

10.1080/00207543.2011.563826.
[12] Y. Chang and M. Hughes, "Drivers of Innovation Ambidexterity in Small- to Medium-Sized Firms Drivers of innovation ambidexterity in small- to Medium-sized Firms," *Eur. Manag. J.*, vol. 30, no. 1, pp. 1–17, 2012, doi: 10.1016/j.emj.2011.08.003.
[13] C. E. Helfat and J. A. Martin, "Dynamic Managerial Capabilities : Review and Assessment of Managerial Impact on Strategic Change," *J. Manage.*, vol. 41, no. 5, pp. 1281–1312, 2015, doi: https://doi.org/10.1002/mde.1059.
[14] J. J. P. Jansen, F. A. J. Van Den Bosch, and H. W. Volberda, "Exploratory Innovation , Exploitative Innovation , and Performance : Effects of Organizational Antecedents and Environmental Moderators," *J. Manag. Sci.*, vol. 52, no. 11, pp. 1661–1674, 2006, doi: 10.1287/mnsc.1060.0576.
[15] P. Galvin, J. L. Rice, and T.-S. Liao, "Appling a Darwinian Model to the Dynamic Capabilities View: Insights and Issues," *J. Manag. Organ.*, vol. 20, no. 02, pp. 250–263, 2014, doi: 10.1017/jmo.2014.34.
[16] J. Barney, "Firm Resources and Sustained Competitive Advantage," *J. Manage.*, vol. 17, no. 1, pp. 99–120, 1991, doi: https://doi.org/10.1177%2F014920639101700108.
[17] A. Sugiono, "Resource Based View in The Strategic Management Model Framework," *J. Pemikir. dan Penelit. Adm. Bisnis dan Kewirausahaan*, vol. 3, no. 3, pp. 195–205, 2018.
[18] D. J. Teece, G. Pisano, and A. Shuen, "Dynamic Capabilities and Strategic Management," *Strateg. Manag. J.*, vol. 18, no. 7, pp. 509–533, 1997, doi: https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z.
[19] D. J. Teece, "Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance," *Strateg. Manag. J.*, vol. 28, no. 13, pp. 1319–1350, 2007, doi: https://doi.org/10.1002/smj.640.
[20] A. Pigola, P. R. da Costa, N. van der Poel, and F. T. R. Yamaçake, "New perspectives for dynamic capabilities in meeting needs of startups' survival," *J. Entrep. Emerg. Econ.*, vol. 15, no. 5, pp. 1163–1193, 2023, doi: 10.1108/JEEE-06-2021-0258.
[21] M. Bergen and M. A. Peteraf, "Competitor Identification and Competitor Abnalysis: a Broad-Based Managerial Approach," *Manag. Decis. Econ.*, vol. 23, no. 4–5, pp. 157–169, 2002.
[22] Y. Y. Kor and A. Mesko, "Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic," *Strateg. Manag. J.*, vol. 34, no. 2, pp. 233–244, 2012, doi: https://doi.org/10.1002/smj.2000.
[23] C. A. O'Reilly and M. Tushman, "Organizational Ambidecterity: Past, Present and Future," *J. Acad. Manag. Perspect.*, no. 142, 2013.
[24] M. B. Fabregà, M. del M. A. Almeida, and L. B. Femenías, "Individual dynamic managerial capabilitiesInfluence over environmental and social commitment under a gender perspective," *J. Clean. Prod.*, vol. 151, pp. 371–379, 2017, doi: 10.1016/j.jclepro.2017.03.081.
[25] R. Adner and Helfat, "Corporate Effects and Dynamic Managerial Capabilities," *Strateg. Manag. J.*, vol. 24, no. 10, pp. 1011-1–25, 2003.
[26] S. Widianto, Y. Lestari, B. Adna, B. Sukoco, and M. Nasir, "Dynamic managerial capabilities , organisational capacity for change and organisational performance : the moderating effect of attitude towards change in a public service organisation," *J. Organ. Eff. People Perform.*, vol. 8, no. 1, pp. 149–172, 2021, doi: 10.1108/JOEPP-02-2020-0028.
[27] S. A. Snell and J. W. Dean, "Integrated Manufacturing and Human Resource Management : A Human Capital Perspective," *Acad. Manag. J.*, vol. 35, no. 3, pp. 467–504, 1992.
[28] R. S. Burt, "Brokerage and Closure : An Introduction to Social," *Adm. Sci. Q.*, vol. 52, no. 3, pp. 482–485, 2007.
[29] Prahalad and R. A. Bettis, "The Dominant Logic: A New Linkage between Diversity and Performance," *Strateg. Manag. J.*, vol. 7, no. 6, pp. 485–501, 1986.
[30] D. Lu, X. M. Miao, T. tian Shang, and T. ting Gu, "The journey of incumbents' sustainable business models: unveiling the role of cognitive processes in the evolution process of business models," *Technol. Anal. Strateg. Manag.*, vol. 34, no. 2, pp. 194–209, 2022, doi: 10.1080/09537325.2021.1893293.
[31] Z. He and P. K. Wong, "Exploration vs . Exploitation : An Empirical Test of the Ambidexterity

Hypothesis," *J. Organ. Sci.*, vol. 15, no. 4, pp. 481–494, 2013.
[32] J. Birkinshaw and C. Gibson, "Building ambidexterity into an organization," *MIT Sloan Manag. Rev.*, vol. 45, no. 4, pp. 47–55, 2004.
[33] Q. Cao, E. Gedajlovic, and H. Zhang, "Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects," *Organ. Sci.*, vol. 20, no. 4, pp. 781–796, 2009, doi: 10.1287/orsc.1090.0426.
[34] S. Duchek, "Organizational resilience : a capability-based conceptualization," *Bus. Res.*, vol. 13, no. 1, pp. 215–246, 2020, doi: 10.1007/s40685-019-0085-7.
[35] G. Hamel and L. Valikangas, "The Quest for Resilience," *Harv. Bus. Rev.*, vol. 81, no. 9, pp. 52–63, 2003.
[36] M. Morais-Storz and N. Nguyen, "The role of unlearning in metamorphosis and strategic resilience," *Learn. Organ.*, vol. 24, no. 2, pp. 93–106, 2017, doi: 10.1108/TLO-12-2016-0091.
[37] Y. Sheffi and J. B. Rice, "A supply chain view of the resilient enterprise," *MIT Sloan Manag. Rev.*, vol. 47, no. 1, pp. 41–48, 2005.
[38] K. Van Der Meer, "How Dynamic Managerial Capabilities Effectuate Dynamic Balancing of Exploration and Exploitation," Eramus University Rotterdam, 2020.
[39] M. I. Mostafiz, M. Sambasivan, and M. H. Shakil, "The Mediating Role of Innovation Capabilities in the Relationship between Dynamic Managerial Capability and Performance of Export-manufacturing Firms," *Int. Rev. Entrep.*, vol. 19, no. 2, pp. 1–33, 2021.
[40] J. Hillmann, *Disciplines of organizational resilience: contributions, critiques, and future research avenues*, vol. 15, no. 4. Springer Berlin Heidelberg, 2021. doi: 10.1007/s11846-020-00384-2.
[41] C. W. . Hill, C.-H. Wee, and K. Udayasankar, *Bisnis Internasional Perspektif Asia*. Jakarta: Salemba Empat, 2014.
[42] S. A. Hill and J. Birkinshaw, "Ambidexterity and Survival in Corporate Venture Units," *J. Manage.*, vol. 40, no. 7, pp. 1899–1931, 2014, doi: 10.1177/0149206312445925.
[43] A. Permana, A. Laksamana, and L. Ellitan, "The Effect of Enviromental Dynamism, Dynamic Managerial Capabilities, and Deliberate Organizational Learning on the SME Performance With Dynamic Capabilities As Mediator Variable (Case Study on Small and Medium Enterprise in Surabaya)," *Int. J. Adv. Res.*, vol. 5, no. 7, pp. 1–17, 2017.
[44] C. B.Gibson and J. Birkinshaw, "The Antecedents, Consequences, and Mediating Role of Organizational Ambidexterity," *Acad. Manag. J.*, vol. 47, no. 2, pp. 209–226, 2004, doi: https://doi.org/10.2307/20159573.
[45] O. Levy, S. Beechler, S. Taylor, and N. A. Boyacigiller, "What we talk about when we talk about 'global mindset': Managerial cognition in multinational corporations," *J. Int. Bus. Stud.*, vol. 38, no. 2, pp. 231–258, 2007, doi: 10.1057/palgrave.jibs.8400265.
[46] U. Sekaran and R. Bougie, *Research Methods for Business*. Wiley, 2016.
[47] Mikti, "Mapping & Database Startup Indonesia 2021," 2021. [Online]. Available: https://play.google.com/books/reader?id=-hJSEAAAQBAJ&pg=GBS.PA1&hl=en
[48] A. F. Hayes, *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach (Second Edition)*. New York: Guilford Press, 2018.
[49] M. Subramony, J. Segers, C. Chadwick, and A. Shyamsunder, "Leadership development practice bundles and organizational performance: The mediating role of human capital and social capital," *J. Bus. Res.*, vol. 83, no. February, pp. 120–129, 2018, doi: 10.1016/j.jbusres.2017.09.044.
[50] S. S. Levine, M. Bernard, and R. Nagel, "Strategic Intelligence: The Cognitive Capability to Anticipate Competitor Behavior," *Strateg. Manag. J.*, vol. 38, no. 12, pp. 2390–2423, 2017, doi: 10.1002/smj.2660.
[51] V. Ambrosini and C. Bowman, "What are Dynamic Capabilities and are They a Useful Construct in Strategic Management ?," *Int. J. Manag. Rev.*, vol. 11, no. 1, pp. 29–49, 2009, doi: 10.1111/j.1468-2370.2008.00251.x.
[52] O. Onwughalu and E. Amah, "Ambidexterity and Organizational Resilience of Telecommunication Firms in Port Harcourt, Rivers State," *Arch. Bus. Res.*, vol. 5, no. 11, pp. 1–9, 2017, doi: 10.14738/abr.511.3821.
[53] C. S. Mammassis and K. C. Kostopoulos, "CEO goal orientations , environmental dynamism and

organizational ambidexterity : An investigation in SMEs," *Eur. Manag. J.*, vol. 37, no. 5, pp. 577–588, 2019, doi: 10.1016/j.emj.2019.08.012.

[54] S. Majumder and D. Biswas, "COVID-19: impact on quality of work life in real estate sector," *Qual. Quant.*, no. March, 2021, doi: 10.1007/s11135-021-01136-4.

[55] A. Permana and L. Ellitan, "The Role of Dynamic Capability in Mediating The Effects of Environmental Dynamism and Managerial Capabilities on Firm Performance : A Preliminary Study," *J. Entrep. Bus.*, vol. 1, no. 2, pp. 70–83, 2020.

[56] C. Tsai, J. Horng, C. Liu, and D. Hu, "Work Environment and Atmosphere : The role of organizational support in the creativity performance of tourism and hospitality organizations," *Int. J. Hosp. Manag.*, vol. 46, pp. 26–28, 2015.

[57] J. W. Kwalanda, C. Mukanzi, and R. Onyango, "Effect of Dynamic Managerial Capabilities on Organizational Performance : A Survey of Western Kenya Sugar Industry," *J. Bus. Manag.*, vol. 19, no. 12, pp. 13–20, 2017, doi: 10.9790/487X-1912061320.

[58] Hair et.al (2017). *A primer on partial least squares structural equation modeling* (Second ed.). Thousand Oaks, CA: Sage Publications.