

THE ROLE OF BUSINESS INCUBATOR RESOURCES IN FACILITATING THE DEVELOPMENT OF NEW VENTURES: AN EMPIRICAL RESEARCH IN INDONESIA

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ABSTRACT

The purpose of this research is to highlight the role of business incubator resources in facilitating internal-external networking and entrepreneurial orientation towards new venture performance. This study employs an explanatory research design and a quantitative approach to elucidate the causal relationships between variables. The research sample consists of 96 founders or co-founders of startups affiliated with business incubators. Data analysis was conducted using SmartPLS-structural equation modeling (SEM). The findings of this study indicate that business incubator resources have a significant impact on internal and external networking, as well as entrepreneurial orientation. However, internal networking has a positive but non-significant effect on entrepreneurial orientation. On the other hand, entrepreneurial orientation significantly influences new venture performance. Therefore, this research also discusses the practical implications of the important role of business incubator resources in assisting new ventures to grow rapidly.

KEYWORDS

Business incubator resources, networking, entrepreneurial orientation, new venture performance

INTRODUCTION

The business incubation program has been widely regarded as a significant policy mechanism to support innovation and regional economies, particularly within the entrepreneurship and innovation ecosystems (Wonglimpiyarat, 2016; Lukeš et al., 2019). Business incubators serve as crucial platforms to support incubation programs (Baraldi and Havenvid, 2016; Xiao and North, 2018). Thus, the presence of business incubators constitutes effective organizations that facilitate and accelerate the success of new ventures, often referred to as "startups" (Theodorakopoulos et al., 2014). Business incubators assist new ventures not only in acquiring technical, professional, and financial support from external sources at lower costs (Bruneel et al., 2012) but also in enhancing their entrepreneurial capabilities through business networking (Phan et al., 2005). Business incubators not only provide a space for individuals to meet in unconventional settings for sharing and transferring knowledge but also attract venture capital, volunteers, and talented groups (Hecker et al., 2018). Business incubators are commonly seen as catalysts that enable the transfer of knowledge and commercialization of innovation through the provision of office space, equipment, mentoring services, connections with venture capitalists, and other administrative support for new entrepreneurs (Hillemane et al., 2019). The resources offered by incubators facilitate the ongoing growth and success of startups, focusing not only on designing business models but also on various aspects that contribute to business development, including problem-solution fit, product-market fit, business model fit, and market value.

However, in essence, business incubation seeks effective ways to connect technology, capital, and knowledge to enhance entrepreneurial capabilities, accelerate the development of new ventures, and thereby expedite technology exploitation. According to Grimaldi and Grandi (2005), incubators assist growing businesses by providing various facilities and supportive services such as assistance in developing business and marketing plans, building management teams, securing funding, and access to other specialized professional services. Additionally, incubators offer flexible workspace, shared equipment, and administrative support. The exploration of networking roles has become crucial for business incubators in recent decades (Eveleens et al., 2017). It is widely recognized that building network relationships within incubators is crucial for new ventures, as incubator networks can better fulfill the diverse needs of startups and provide benefits such as resource flows, lower transaction costs, and high-quality alliance partners, which help accelerate the growth of new ventures (Stayton and Mangematin, 2019). From the perspective of the entrepreneurial process, entrepreneurs discover and exchange resources through networks to transform entrepreneurial opportunities and ideas into organizations (Salamzadeh, 2015; Salamzadeh and Kirby, 2017). Both internal and external networks are valuable components that can be leveraged by startup actors in their business exploration process. Therefore, this study combines the correlation between the presence of business incubator resources and the internal and external networks in relation to the new venture performance of startups.

The presence of business incubators is not only observed in developed countries but also in Indonesia, a developing country that has embraced the concept of business incubation to support the growth and success of new entrepreneurs. Various incubator programs have been established by both the government (e.g., 1000 startup action) and private sector (e.g., Indigospace, ngalup.com, etc.). The success of business incubators can be seen in the emergence of successful Indonesian startups that have experienced consistent and increasing valuation growth. Based on the existing business incubators, Indonesia has produced startups that fall into the 'decacorn' category with valuations exceeding \$10 billion, such as GoTo and J&T Express (Burhan, 2021). Additionally, Indonesia has seen startups reaching 'unicorn' status with valuations exceeding \$1 billion, including Bukalapak, Traveloka, OVO, J&T Express, OnlinePajak, Ajaib, and Xendit (Burhan, 2021). This presents a positive economic outlook for a country as it implies that countries with the highest number of unicorns provide insights into the world's best startup ecosystems and boost economic activity. Furthermore, the emergence of additional startups indicates that Indonesia has experienced an increase in the number of new ventures/startups. It is expected that through the role of business incubators, these startups can be encouraged and supported to achieve success through the measurement of venture performance. Therefore, this research aims to investigate the role of Business Incubator Resources in relation to Internal and External Networking and its implications for Entrepreneurial Orientation and New Venture Performance.

LITERATURE REVIEW

Relevance of Business Incubator to Networking

The concept of business incubation refers to integrated and systematic efforts to nurture early-stage businesses within a controlled environment. As a dynamic process, business incubation offers a combination of infrastructure, developmental support processes, and expertise necessary to navigate through failures and steer businesses towards growth. Many studies view business

incubation as a tool for entrepreneurial development to build and support more successful startups through increased innovation and thinking capabilities (Dee et al., 2011; Lewis et al., 2011). Business incubation provides affordable office space for incubatees and various supportive services, both internally and through external affiliations. Specifically, while entrepreneurs typically possess the technical skills required for their business ideas, they often face challenges in managing rapid environmental changes and organizational dynamics. Certainly, the presence of business incubation can shape and train new entrepreneurs by providing them with foundational knowledge to enhance their capabilities. The role of business incubators involves experts offering training, coaching, and mentoring to new entrepreneurs to accelerate the learning curve and help gather the necessary knowledge resources to run their business (Mrkajic, 2017). Several literature sources indicate that nascent businesses face market failures and agility challenges, which disrupt and create barriers for new venture formation. Thus, business incubators strive to provide the appropriate structure and needed credibility to new businesses by managing controlled conditions to help navigate through vulnerable phases (Kiran & Bose, 2020). Various research studies have constructed components of business incubators (Aernoudt, 2004), such as workspace and meeting rooms, supportive services for business activities, and access to networks.

New ventures still experience high vulnerability, lack of skills, difficulty in accessing tangible/intangible resources, limited scientific knowledge, and insufficient management skills, which significantly impact newly established businesses (Kiran & Bose, 2020). Business incubators provide an appealing framework for new entrepreneurs and offer solutions to business models by providing services and facilities (Mrkajic, 2017; Theodorakopoulos et al., 2014; Morreira & Martins, 2009). Meanwhile, internal networking within a business incubator is formed among the startups within the same incubator (Soetanto and Jack, 2013). The interactions and collective efforts among startups within the same incubator are crucial in determining the outcomes of the incubation process, such as advice, knowledge sharing, and resource exchange, which further drive the development of new ventures by creating business value (Branstad and Saetre, 2016). According to the resource-based view, internal networks can provide resource support for the development of new ventures. Resources and information are fundamental elements for the survival and growth of new businesses. In addition to the relationships among startups within the same incubator, access to external networks and the organizational support provided by the incubator also play a significant role in the incubation outcomes (Rice, 2002). Incubators connect startups with external organizations, encouraging them to engage in collaborative production, entrepreneurial mentoring, technical support, and intermediary services. Through interactions with external organizations, startups can gain access to more external knowledge and accelerate the sharing of market information and industry technology, thereby enhancing resource exchange and innovation capacity for their products/services.

Relevance of Business Incubator to Entrepreneurial Orientation and New Venture Performance

Based on the resource-based view, entrepreneurially-oriented startups not only prioritize resources from within the business incubator but also actively acquire resources from external sources to ensure higher profits and faster development, as follows (Keh et al., 2007). Meanwhile, in conceptual terms, entrepreneurial orientation is a strategic formulation process that provides a foundation for decision-making and company actions (Wiklund and Shepherd, 2005).

Entrepreneurial orientation typically encompasses three dimensions: innovation, proactiveness, and risk-taking. Innovation refers to the culture, atmosphere, or orientation that reflects a startup's tendency to adopt and support creative processes (Martins, 2016). Proactiveness indicates a startup's inclination to take proactive actions and adopt cutting-edge strategies to achieve competitive advantage (Stayton and Mangematin, 2019). Lastly, risk-taking represents a startup's willingness to commit, support decisions that may fail, and take risks in new markets (Patton et al., 2009). Therefore, entrepreneurial orientation reflects the selection of competitive strategies when facing new opportunities (Wales, 2016). Hence, accessing more resources through the incubator network is crucial for promoting entrepreneurial orientation.

Furthermore, entrepreneurial orientation helps new ventures adapt their structures, balance organizational resources, and cultivate sustainable competitive advantages to achieve growth (Wiklund and Shepherd, 2011). Additionally, startups identify opportunities and innovative ideas by accessing different resources from other startups within the incubator and use them to develop and prioritize innovation (Martins, 2016). This process can foster the development of ideas and enhance entrepreneurial opportunities, assisting startups in facing competition and promoting innovation (Martins, 2016). Aligned with this, Incubator Management Activities are the primary activities aimed at creating value for new businesses, analogous to the framework developed by Porter (1985). However, in the context of the value chain, while the main value chain processes are relevant for creating products or services, incubator management activities represent value chain processes that are appropriate for transforming or transitioning new businesses into growing enterprises. Within this value chain, incubator management provides activities to support the value creation process as a means of supporting the growth of new businesses. Most studies consider business incubation as a tool for entrepreneurial development to build and foster more successful startups through increased innovation and thinking capabilities (Dee et al., 2011; Lewis et al., 2011).

RESEARCH METHODS

This study employs an explanatory research design and a quantitative approach. As Sukamolson (2007) suggests, quantitative methods involve several important elements. First, explaining phenomena is the main element of all research, whether quantitative or qualitative. Second, collecting numerical data is a key aspect of quantitative research, where data is gathered through questionnaire surveys and analyzed using mathematical methods. Third, using statistics to analyze data is essential in quantitative research, as statistical tests can determine whether hypotheses or theories are accepted or rejected. In this study, the characteristics related to the population and sample are defined as focusing on founders and co-founders of startup ventures currently undergoing business incubation. Therefore, non-probability sampling is identified as the research sampling technique using purposive sampling. Referring to Sekaran and Bougie (2016), the population refers to the entire group of people, events, or items of interest that researchers want to investigate. Based on this, a sample size of 96 respondents is determined using the Cochran formula. Regarding data analysis, this study employs Smart-PLS to analyze the data using the partial least squares (PLS) method.

RESULT AND DISCUSSION

Demographic of Respondents

The respondents in this study are founders/owners of startup businesses located in Malang City. The research was conducted by distributing questionnaires directly to the respondents. The total number of respondents in this study is 96 (See Table 1). The main challenges in collecting offline data were the high rate of refusal from various companies and the presence of businesses that had already ceased operations, which declined participation in the survey. Based on the questionnaires distributed to 96 respondents, 75 respondents were male, while 22 respondents were female. The age distribution of the respondents in this study is as follows: 12 respondents (12.50%) are aged 17-22 years, 45 respondents (46.88%) are aged 23-28 years, 28 respondents (29.17%) are aged 29-34 years, 10 respondents (10.42%) are aged 35-40 years, and 1 respondent (0.4%) is aged 41-46 years. Regarding educational attainment, 13 respondents (13.54%) have completed high school (SMA), 75 respondents (78.13%) have a Bachelor's degree, and 8 respondents (8.33%) have a postgraduate degree.

Table 1. Demography of Respondent

	Demographic	Frequency	Percent (%)
Gender	Male	75	78.13
	Female	22	21.88
Age	17-22	12	12.50
	23-28	45	46.88
	29-34	28	29.17
	35-40	10	10.42
	41-46	1	1.04
Educational	Senior high school	13	13.54
	Freshgraduate	75	78.13
	Postgraduate	8	8.33

Construct Measurement

In this study, the validity and reliability of the assumptions, which form the basis for the data's feasibility and validity in the quantitative approach, were also measured using Partial Least Squares Structural Equation Modeling (PLS-SEM) to confirm these assumptions. According to Hair et al. (2014), the use of PLS-SEM is recommended because composite reliability and Cronbach's alpha determine reliability, and all items should have values greater than 0.70. Therefore, the data in this study has been processed, and the results indicate that all variables have composite reliability values greater than 0.8: Business Incubation Resource (0.928), Internal Network (0.906), External Network (0.937), Entrepreneurial Orientation (0.967), and New Venture Performance (0.928). Furthermore, Cronbach's alpha values for all variables in this study exceed 0.7: Business Incubation Resource (0.926), Internal Network (0.900), External Network (0.937), Entrepreneurial Orientation (0.966), and New Venture Performance (0.917). Accordingly, all of these values are considered acceptable and ensure adequate reliability. However, this research must also ensure the validity of demonstrating that a set of indicators represent the same basic construct, which can be demonstrated through their unit dimensions. The validity of the discriminant variable is proven by calculating the average extraction value (AVE) and the values obtained between variables (Hair et al, 2019). In this study, it can be seen that the variable AVE value as a whole is greater than 0.6: Business Incubation Resource (0.947), Internal Network (0.930), External Network (0.955), Entrepreneurial Orientation (0.971), and New Venture Performance (0.939). According to Chin (1998), the Average Variance Extracted (AVE) serves as

a measure of the communality for each latent variable and indicates adequate results when all constructs exhibit values above 0.5. Therefore, based on the AVE values exceeding 0.5 for all variables in this study, the measurement of the constructs appears to be reliable.

Tabel 2. Construct Measurement

Variabel	Item	Mean	Cronbach α	Composite Reliability	Average Variance Extracted (AVE)
Business Incubation Resource	BIR1	4.375	0.926	0.928	0.947
	BIR2	3.958			
	BIR3	3.844			
	BIR4	3.771			
Internal Network	IN1	4.083	0.900	0.906	0.930
	IN2	3.750			
	IN3	3.771			
	IN4	4.094			
External Network	EN1	3.875	0.937	0.937	0.955
	EN2	4.240			
	EN3	4.021			
	EN4	3.854			
Entrepreneurial Orientation	EO1	4.333	0.966	0.967	0.971
	EO2	4.271			
	EO3	4.292			
	EO4	4.260			
	EO5	4.188			
	EO6	4.323			
	EO7	4.052			
	EO8	3.969			
	EO9	4.021			
New Venture Performance	NVP1	3.875	0.917	0.928	0.939
	NVP2	3.875			
	NVP3	3.875			
	NVP4	3.948			
	NVP5	3.969			

Hypotheses Testing

In this study, Smart-PLS 3.0 software was utilized to conduct a bootstrap analysis with PLS-SEM and test seven relevant hypotheses. Thus, it was possible to determine model fit and path coefficients as quantities used to ascertain the overall relationship effects within the model. Sequential partial least squares modeling was employed to conduct statistical analysis. Based on the analysis using Smart-PLS, this study yielded coefficient of determination (R^2) values of 0.810 for Internal Network, 0.816 for External Network, 0.886 for Entrepreneurial Orientation, and 0.875

for New Venture Performance. Regarding the results of the bootstrap analysis using Smart-PLS software, only the direct relationship effects were tested for the research hypotheses in this study. The results of hypothesis testing indicate that Business Incubation Resource has a positive and significant effect on Internal Network ($\beta=0.900$; p-value <0.05). Additionally, the direct effect of Business Incubation Resource on External Network shows a positive and significant influence ($\beta=0.903$; p-value <0.05). Furthermore, Business Incubation Resource has a positive and significant effect on Entrepreneurial Orientation ($\beta=0.612$; p-value <0.05), thus confirming H1, H2, and H3. However, the direct relationship between Internal Network and Entrepreneurial Orientation shows a positive but non-significant influence ($\beta=0.139$; p-value >0.05), leading to the rejection of H4. On the other hand, the direct relationship between External Network and Entrepreneurial Orientation demonstrates a positive and significant influence ($\beta=0.217$; p-value <0.05), confirming H5. Furthermore, the direct effect of Entrepreneurial Orientation on New Venture Performance reveals a positive and significant influence ($\beta=0.935$; p-value <0.05), supporting H6.

Table 3. Hypotheses Testing

Variable	Direct Effect (β)	T Score	Probability	Conclusion
BIR $\rightarrow$ IN	0.900	32.018	0.000	Accepted
BIR $\rightarrow$ EN	0.903	28.103	0.000	Accepted
BIR $\rightarrow$ EO	0.612	6.238	0.000	Accepted
IN $\rightarrow$ EO	0.139	1.528	0.127	Rejected
EN $\rightarrow$ EO	0.217	3.088	0.002	Accepted
EO $\rightarrow$ NVP	0.935	44.074	0.000	Accepted

N = 96

R² = IN (0.810); EN (0.816); EO (0.886); NVP (0.875)

*Sig. p-value < 0.10 ; **Sig. p-value < 0.05 ; ***Sig. p-value < 0.01

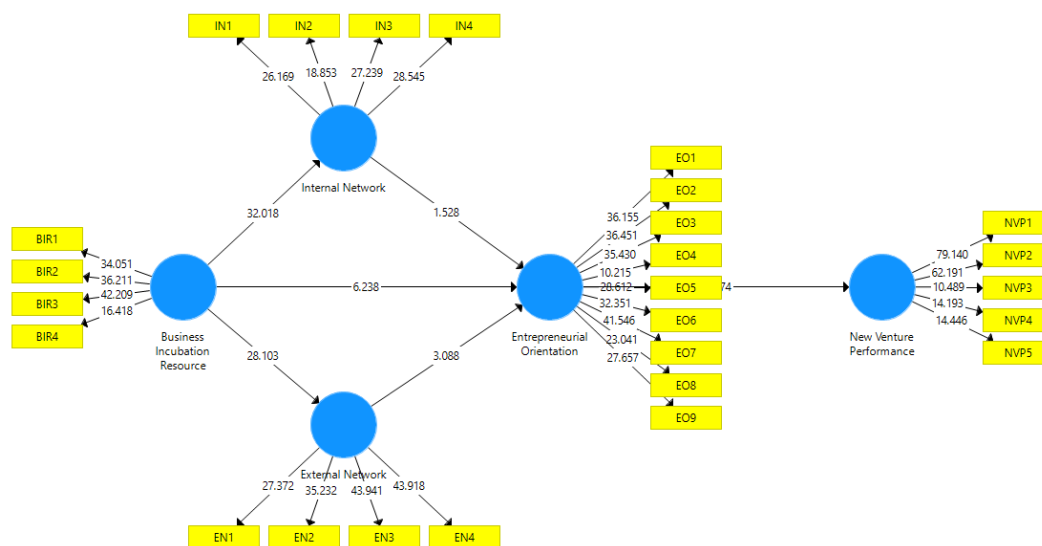


Figure 1. Research Model Output

Discussion

Business incubators are effective organizations that facilitate and accelerate the success of new ventures, but they are often vulnerable (Theodorakopoulos et al., 2014). They assist startups not only in obtaining technical, professional, and financial support from external sources at lower costs (Bruneel et al., 2012) but also in overcoming the "liability of newness" by supporting networking environments (Phan et al., 2005). Therefore, exploring the role of networks has become important for business incubators in recent decades (e.g., Eveleens et al., 2017). It is widely recognized that building network relationships within incubators is crucial for startups, as incubator networks can better fulfill the diverse needs of new ventures and provide benefits such as rich resource flows, lower transaction costs, and high-quality alliance partners. Furthermore, networking within incubators helps startups accelerate their growth. However, from a new venture perspective, it is essential to seek and exchange resources through established networks to transform business opportunities and ideas (Salamzadeh, 2015; Salamzadeh & Kirby, 2017). In particular, the networks provided by business incubators not only help new ventures enter the market quickly but also accelerate business growth and performance (Stayton & Mangematin, 2019). The findings of this research align with several previous studies that have analyzed the impact of networks within business incubators on business performance or explored the effects of internal-external networks within business incubators separately (Nijssen & van der Borgh, 2017; Valentina Adlešič & Slavec, 2012; Theodorakopoulos et al., 2014).

In addition, the identification of determining factors of the effect of business incubator networks on business performance has also been explored, such as entrepreneurial orientation. This study argues that for new ventures, it is important to explore the significance of entrepreneurial orientation in strengthening the ideation process and potential opportunities, which can subsequently impact sustainable business performance. Wu et al. (2020) have highlighted that entrepreneurial orientation is a determining factor shaped by business incubator networks that can enhance business performance. This indicates that entrepreneurial orientation serves as a long-term development orientation based on innovation, reflecting the proactive nature of new ventures and their willingness to take risks (Lumpkin & Dess, 2001). Once new ventures have launched their products in the market, they can promote entrepreneurial orientation by establishing relationships with suppliers, competitors, and customers (Boso et al., 2013). Furthermore, new ventures and networking can enhance entrepreneurial orientation through open communication, knowledge sharing, and long-term collaboration (Awang et al., 2016). Therefore, entrepreneurial orientation is crucial for new ventures to achieve competitive advantage and enables them to creatively integrate resources and exploit market opportunities (Kuratko, 2017). Thus, this is beneficial for new products and services that have been explored and are ready for product launch.

This study provides evidence of the interrelationship between business incubator resources, internal-external networks, entrepreneurial orientation, and new venture performance. By utilizing the facilities provided by business incubators, new ventures are given potential opportunities for rapid and dynamic growth (Wu et al., 2020). Moreover, the role of entrepreneurial orientation can enhance the innovation capabilities of new ventures (Xiao and North, 2018). This is based on the efforts of business incubators to assist new ventures in improving their capabilities and expanding their search for external knowledge (Yan and Li, 2010). With the limited resources available to new ventures, they can strategically create product innovation and service flexibility to achieve

competitive advantage. These determining factors need to be identified by business incubators in order to develop new ventures and guide them towards business success. Therefore, this study considers that business incubator resources and internal-external networks have a positive influence on entrepreneurial orientation, which in turn enhances new venture performance.

Implications of this research are valuable for incubator managers, new ventures, and policymakers. Firstly, incubator managers should focus on building both internal and external networks and leverage network ties to influence the performance of new ventures. By developing a diversified incubator network system, managers can fully utilize the networking resources of the incubator. This is particularly important for developing countries like Indonesia, where the innovation mechanisms and environment for new ventures may not be fully established. In such contexts, incubator networks become crucial for new ventures to access the necessary resources for development (Xiao and North, 2018). Indeed, incubator managers should pay specific attention to the characteristics of new ventures and their real needs in order to provide targeted services (Theodorakopoulos et al., 2014; Voisey et al., 2006). To accurately identify the current market situation and future development trends, incubator managers should also foster positive relationships with external organizations and focus on changes in market demand and the level of competition. Additionally, they should increase investment in scientific and technological innovation to assist new ventures in sharing the risk of technological innovation and enhance their willingness to innovate. For business incubators operating in developing markets like Indonesia, particular emphasis should be placed on assisting new ventures in adapting to the national institutional environment and addressing institutional failures (Dutt et al., 2016).

Secondly, to achieve growth, new ventures should focus on utilizing the resources provided by the internal and external networks of the business incubator to strengthen their entrepreneurial orientation. Being innovative can help them respond quickly and actively to market changes (Wiklund and Shepherd, 2011), thus increasing incentives for innovation. For example, new ventures can create an innovative atmosphere and actively participate in the innovation system, while proactiveness will help them build a competitive advantage ahead of competitors. Therefore, new ventures should pay attention to exchanging information and knowledge with other network members and enhance their sensitivity to market demand and competitive dynamics. Additionally, they should take risks and invest in high-risk projects and areas to improve innovation performance.

Thirdly, new ventures must fully consider the impact of the dynamic environment on the implementation of EO. For this purpose, they should continuously enhance their ability to adapt to the external environment and actively identify and exploit opportunities. In an increasingly competitive environment, new ventures, in particular, need to broaden and deepen their knowledge for more successful innovation (Shan et al., 2018). In a turbulent business environment, new ventures not only need to quickly adjust their strategies and behaviors but also strive to mitigate the risk of failure. Therefore, new ventures should actively respond to the dynamic environment with strong networking relationships and flexible strategies.

CONCLUSION

Based on this study, it is explained that the presence of a business incubator has had a significant impact on the sustainability of the business lifecycle. Moreover, the business incubator has played a role in building business networks, both in the internal and external networks, which can influence the entrepreneurial orientation of the startups that join the business incubator. Entrepreneurial orientation, both theoretically and practically, plays a crucial role as a strategic orientation in entrepreneurship. It stimulates new ventures to actively observe the environment and seek opportunities. Thus, this study highlights that the business incubator resources owned by incubators in Indonesia have influenced the internal and external networks of the startups that are involved. This study reveals the following findings: (1) The presence of a business incubator can shape and strengthen business networks, which can have an impact on the business lifecycle. (2) There is a positive but non-significant relationship between internal network and entrepreneurial orientation, while external network has a significant positive influence on entrepreneurial orientation. This suggests that the existence of an external network for startups influences their ability to explore and exploit knowledge, leading to a better understanding of problem-solution fit, product-market fit, and business model fit. (3) Business incubator resources have also been shown to influence the performance of new ventures through the intermediary of entrepreneurial orientation. Meanwhile, entrepreneurial orientation reflects the strategic orientation of competition when facing new opportunities, where it configures resources strategically. However, if it is not supported by adequate resources, its performance can be hindered.

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