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Analysis of Improving Competitive Advantage for Startup Business in Indonesia

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Abstract

This study aims to analyze how startup businesses make decisions related to strategic management in improving competitive advantage. The data analysis method used in this study is the Structural Equation Model (SEM) based on Partial Least Square (PLS) to test all hypotheses. The object of this research is 164 startup businesses operating in Sumatra based on the Mapping Database Startup Indonesia in 2021. The results show that the dimensions of the resource-based view consisting of resource integration and resource reconfiguration have a significant positive effect on competitive advantage. Then knowledge management also has a significant positive influence on improving competitive advantage. The research model, which is tested empirically in this study, can provide a comprehensive understanding for practitioners and academics in analyzing the topic of competitive advantage.

Keywords: resource-based view, knowledge management, competitive advantage.

1. Introduction

The contribution of its industrial sector strongly influences the national economy of a country. So that the government's strategy is always to encourage the development of new industrial sectors so that they do not only focus on traditional industries, which mainly refer to labour-intensive, manufacturing, and processing industries. Developing industries can be grouped into seven industries: energy-saving and environmental protection, new-generation information technology, biology or biotechnology, high-end equipment manufacturing, new energy, new materials, and new energy vehicles (Prud'homme, 2016).

The technology-based startup business is a developing industry strategy implemented by the Government of Indonesia to face the Industrial Revolution 4.0. The Indonesian government has explicitly stated its drive to make Indonesia one of the countries with the largest digital industrial power, with a vision of Indonesia as The Digital Energy of Asia. Based on MIKTI and Teknoprenuer Indonesia (MIKTI dan Teknopreneur Indonesia, 2021) in 2021, Indonesia's number of startup businesses grew from 992 startup businesses in 2018 to 1,190 startup

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businesses in 2021. This positive development was accompanied by the Covid-19 pandemic worldwide, which has provided a big blow to all sectors of life. As a result, many activities have shifted to utilizing digital technology, ranging from online education, online commerce, and online health services to online entertainment.

Startup businesses, including emerging industries, have more resource use and integration challenges due to the characteristics of short technology upgrade cycles, unclear market structures, and uncertain customer demands. It is fundamentally different from traditional industries with relatively stable technology and markets. In addition, startup businesses also face more resource constraints such as a lack of information resources, knowledge resources, technical resources, and human resources. Therefore, resource constraints in developing industries have challenged the traditional classical resource management theory, namely the resource-based view (Ma, Sun, Gao, & Gao, 2019).

Resource-based view as a classical resource management theory tends to pay more attention to gaining a competitive advantage through effective resource management to achieve sustainability in the economy, environment, and society (Bergman, Bergman, & Berger, 2017). A resource-based view is an approach with capabilities and resources as the primary source of a company's competitive position in the industry in which it competes. The approach is in the form of different grouping assets, both tangible and intangible, and the capabilities that determine the efficiency and effectiveness of the company's activities. The resource-based view perspective states that companies in an industry can develop different resources and capabilities to generate competitive advantages that enable the development and improvement of company performance in the short and long term (Ferreira & Fernandes, 2017). The company's resource management strategy has also begun to emphasize the importance of integrating resources from the external environment in the theory of resource-based view (Ma et al., 2019).

Knowledge is also an essential element to achieve a competitive advantage. Knowledge to identify the determination of assets for competitive advantage in the organization is very important. Knowledge is a resource that lies at the core of the organization, and knowledge management is essential as a source of wealth for organizations in dealing with critical issues related to organizational adaptation, survival, and competitiveness in the face of environmental changes that are increasingly difficult to predict (Torres, Ferraz, & Santos-Rodrigues, 2018). The organizational theory also pays attention to change. It emphasizes the formation of new resource structures to gain competitive advantages, such as the transformation of dominant operating processes leading to new international standards or the cultivation of an implicit cultural atmosphere that influences new behaviour by employees (Fonseca, 2015). In the process of organizational change, organizational learning always affects the efficiency of resource integration and the effectiveness of the new resource structure (Ma et al., 2019). So it is essential to explore the relationship between resource-based view and knowledge management with a competitive advantage for startup businesses in Indonesia.

2. Literature Review and Hypothesis Development

The resource-based view comes from strategic management proposed by Wernefelt and refined by Barney in 1994 and later became the most classic theory in resource management (Ma et al.,

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2019). The resource-based view theory emphasizes that resources from competitive advantage are characteristics characterized by four key elements of resources: valuable, rarity, inimitability, and non-substitutability called VRIN (Ferreira & Fernandes, 2017). In 2002, Barney proposed an alternative to the VRIN framework with the VRIO framework. The resource-based view with the VRIO framework characterizes strategic resources as valuable, rare, inimitable organizational support (Mahdi, Nassar, & Almsafir, 2019).

Competitive advantage is realized through the full utilization of information and data combined by utilizing employees' skills, ideas, commitment, and motivation (Puryantini & Arfati, 2017). Competitive advantage will increase when knowledge management and intellectual capital are both in the organization. Knowledge management on intellectual capital is an activity that can facilitate an organization to generate income by using critical resources. Information systems are also part of knowledge management to support sharing or sharing. Knowledge management is also a strategy needed to identify, develop, and update strategies relevant to the company's knowledge through internal and external processes (Torres et al., 2018).

The Effect of Resource-Based View on Competitive Advantage

Resource-based views with information systems can be used to build a competitive advantage (Gupta, Tan, Ee, & Phang, 2018). Sources (reflected in the economy) and outcomes (reflected in past performance and sustainable market share) are closely related to competitive advantage (Maury, 2018). Resources that meet the four VRIN demands are core competencies to generate competitive advantage (Pearson, Pitfield, & Ryley, 2015). Specific indicators for integrated measurement of eco-innovation projects in business from a resource-based view enable optimization of natural resources to increase competitiveness (Portillo-Tarragona, Scarpellini, Moneva, Valero-Gil, & Aranda-Uson, 2018). Resource and capability as resource-based view indicators simultaneously affect competitive advantage (Holdford, 2018). Resources are an important driving force for companies to gain a competitive advantage (Davcik & Sharma, 2016). Competitive advantage is significantly influenced by the resource-based view as measured by strategic management of brands, communication, and competition (Costa, Costa, Angelo, & Moraes, 2018). The company's intangible resources, capabilities, and core competencies generate competitive advantages with a strategic management approach. The success of competitive advantage depends on the company's ability to explore unique resources (resource integration) and the ability to explore the core competencies of competitors (Makhloufi, Yaacob, & Yamin, 2018). The effectiveness of the resource-based view theory with two resource management methods, namely resource reintegration and resource reconfiguration, have a significant positive effect on competitive advantage (Ma et al., 2019). Based on the results of previous studies, the following hypotheses can be formulated:

H_1: resource integration has a significant positive effect on competitive advantage.

H_2: resource reconfiguration has a significant positive effect on competitive advantage.

The Effect of Knowledge Management on Competitive Advantage

The knowledge management process will assist the organization in making future decisions and how to compete with competitors so that it has a significant relationship with competitive

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advantage (Mahdi et al., 2019). Knowledge management strategies in developing and selling products can increase competitive advantage (Wang, Han, & Liu, 2018). Knowledge management has a significant positive effect on competitive advantage (Lee, Foo, Leong, & Ooi, 2016). Knowledge management with the dimensions of human capital, information system, and processes has a significant effect on competitive advantage (Torres et al., 2018; Wee & Chua, 2013). Knowledge management can help companies find competitive advantages based on strategies (Sudaryati & Juliasih, 2018). The realization of a knowledge strategy increases the company's activities, resulting in a competitive advantage (Orga, Nnadi, & Chioma, 2018). Based on the results of previous studies, the following hypotheses can be formulated:

H_3: Knowledge management has a significant positive effect on competitive advantage.

Figure 1 below is a chart of the conceptual framework of this research. This conceptual framework illustrates the influence of the independent variable on the dependent variable with a sample of startup businesses in Indonesia.

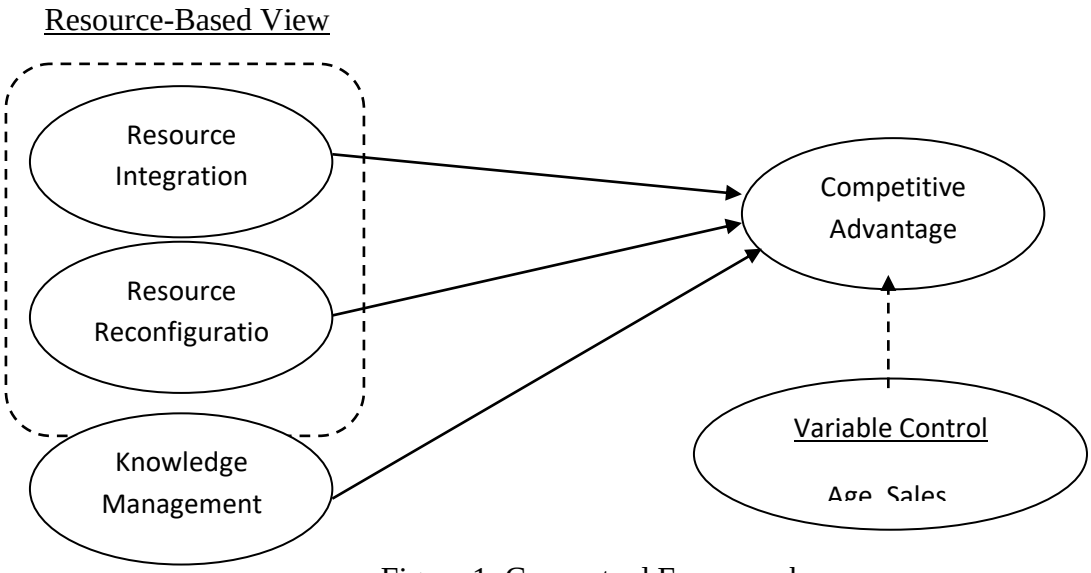

Figure 1. Conceptual Framework

3. Research Methodology

This study uses hypothesis testing to explain the nature of certain relationships between variables or test the level of significance of the relationship between two or more variables (Sekaran & Bougie, 2016). In this study, hypothesis testing was conducted to examine the effect of resource integration, resource reconfiguration, and knowledge management on competitive advantage. The population of this research is startup businesses in Sumatra based on data from Mapping and the Indonesian Startup Database in 2021. The sample collection in this study uses a non-probability or non-random sample selection method. The following variables will be explained operationally in this study, among others:

- Competitive advantage is operationalized through management's perception of its success compared to its main competitors, according to the following dimensions: market reaction,

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product quality, production efficiency, level of innovation, and customer satisfaction (Ma et al., 2019).

- Resource integration is operationalized through management's perception of the company's emphasis on using different resources (Ma et al., 2019).
- Resource reconfiguration is operationalized through management's perception of the development of organizational routines on the resource structure, according to the following dimensions: improvement and creation (Ma et al., 2019).
- Knowledge management is operationalized through management's perception of resource management with the following dimensions: intellectual capital, information systems, and processes (Torres et al., 2018).

The analytical method used is Structural Equation Modeling (SEM) based on Partial Least Square (PLS). The PLS-SEM model can be evaluated by assessing the outer and inner models.

4. Results and Discussions

The population in this study were all startup business leaders in Sumatra in 2021, totalling 180 questionnaires. The questionnaires that were received back amounted to 164 questionnaires with a response rate of 91.11%. The results of the validity test after the indicators that do not meet the requirements are obtained, the indicators tested are valid and meet the requirements because the loading factor numbers are all above 0.60 and the AVE are all above 0.50, it can be concluded that the questionnaire questions used in this study are valid. Based on the results obtained, it can be concluded that the tested variables are reliable because all-composite reliability values are above 0.60, and Cronbach's alpha value is above 0.60. Based on the results of descriptive analysis, respondents' data based on domicile, type of business entity, class, age of business, sales, number of employees, gender, age, and different educational levels are as follows:

Table 1. Descriptive Analysis

Distributed Questionnaire			**Number of Respondents**
Distributed questionnaire			180
Questionnaire that doest not return			16
Questionnaire used in the analysis			**164**
Respondent data based on domicile:	**Domicile**	**Amount**	**Percentage**
	Medan	49	29.88%
	Pekanbaru	46	28.05%
	Banda Aceh	32	19.51%
	Padang	16	9.76%
	Palembang	14	8.54%
	Batam	5	3.05%
	Bengkulu	1	0.61%
	Jambi	1	0.61%
	Total	**164**	**100.00%**
Respondent data based on the type of business entity:	**Type of Business Entity**	**Amount**	**Percentage**
	Corporate	68	41.46%
	Partnership	12	7.32%
	Private	84	51.22%
	Total	**164**	**100.00%**

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Respondent data based on businees sector:	**Business Sector**	**Amount**	**Percentage**
	E-Commerce	24	14.63%
	Content Creator	20	12.20%
	Edutech	16	9.76%
	Media	13	7.93%
	Digital Logistic	8	4.88%
	Fintech	7	4.27%
	Healthtech	7	4.27%
	Game Developer	6	3.66%
	Digital Tourism	5	3.05%
	Agrotech	3	1.83%
	General	55	33.54%
	Total	**164**	**100.00%**
Respondent data based on business age:	**Business Age**	**Amount**	**Percentage**
	Less than 1 year	95	57.93%
	1 to 2 years	52	31.71%
	2 to 3 years	12	7.32%
	More than 3 years	5	3.05%
	Total	**164**	**100.00%**
Respondent data based on sales:	**Sales**	**Amount**	**Percentage**
	Less than IDR 300 million	38	23.17%
	IDR 300 million to IDR 2.5 billion	97	59.15%
	More than IDR 2.5 billion	29	17.68%
	Total	**164**	**100.00%**
Respondent data based on number of employees:	**Employees**	**Amount**	**Percentage**
	Less than 5 people	38	23.17%
	5 people to 15 people	97	59.15%
	More than 15 people	29	17.68%
	Total	**164**	**100.00%**
Respondent data by gender:	**Gender**	**Amount**	**Percentage**
	Male	154	93.90%
	Female	10	6.10%
	Total	**164**	**100.00%**
Respondent data by age:	**Age**	**Amount**	**Percentage**
	21 to 30 years old	3	1.83%
	31 to 40 years old	148	90.24%
	41 to 50 years old	13	7.93%
	51 to 60 years old	-	0.00%
	Over 60 years old	-	0.00%
	Total	**164**	**100.00%**
Respondent data based on education level:	**Education Level**	**Amount**	**Percentage**
	Senior High School	2	1.22%
	Diploma	-	0.00%
	Bachelor	151	92.07%
	Master	10	6.10%
	Doctor	-	0.00%
	Other	1	0.61%
	Total	**164**	**100.00%**

Variable Characteristics:	**Variable**	**Dimension**	**Mean**	**Std. Deviation**
	Resource Integration		4.281	0.917
	Resource Reconfiguration		4.166	0.844
		Improvement	4.244	0.682
		Creation	4.140	0.898
	Knowledge Management		4.289	0.768
		Intellectual Capital	4.218	0.776
		Information Systems	4.278	0.763
		Processes	4.409	0.762
	Competitive Advantage		4.271	0.801

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Based on the Goodness of Fit Model test results, the competitive advantage has a moderate model where the Adjusted R-Square value is 0.584. The results of the path coefficients and P-Values obtained through the bootstrapping process are as follows:

Table 2. Hypothesis Test Results

Variable	Coefficient	P-Value	Result	Conclusion
Resource Integration	0.159	0.026	Significant	H_1: Accepted
Resource Reconfiguration	0.212	0.003	Significant	H_2: Accepted
Knowledge management	0.496	0.000	Significant	H_3: Accepted

Based on the results of hypothesis testing in Table 2 above shows that hypothesis one (H_1), hypothesis two (H_2), hypothesis three (H_3) can be accepted. These results can also be concluded that the dimensions of resource-based view with resource integration, reconfiguration, and knowledge management have a significant positive effect on competitive advantage. These results are consistent with Costa et al., (2018), Holdford, (2018), Lee et al., (2016), Ma et al., (2019), Mahdi et al., (2019), Makhloufi et al., (2018), Maury, (2018), Portillo-Tarragona et al., (2018), Sudaryati & Juliasih, (2018), Torres et al., (2018), Wang et al., (2018).

5. Conclusion and Implications

Applying a resource-based view and knowledge management in a startup business will generate a competitive advantage so that a startup business can develop and survive in the very tight competition in the technology industry. The study results show that applying the resource integration and resource reconfiguration methods in a resource-based view shows that the startup business has a significant positive effect on competitive advantage. Furthermore, knowledge management also has a significant positive influence on generating competitive advantage.

The implication is that if a startup business is to create or increase its competitive advantage, it can be done by integrating external and internal resources. Integration of external resources can be in the form of assistance from Government policies with funding providers and the startup community to share experiences of successful startup founders. In addition, startup businesses can also provide opportunities for employee participation in the organization to make it easier to generate a competitive advantage because young people who join are easier to interact with. Finally, considering startup businesses need new ideas that competitors have not realized or carried out.

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