

Dinamic Capabilities

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Dynamic Capabilities Based on Quadruple Helix Synergy to Create Competitive Advantages Post Pandemi

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Abstract

This study aims to analyze the effect of environmental strategy on dynamic capabilities consisting of the role of the government, academic entrepreneurs and community quadruple helix, as well as its effect on competitive advantage in freshwater fish farming in Tapin district, South Kalimantan after the covid19 pandemic. Environmental strategy with indicators environmental friendly, little waste and without conflict. Then the endogenous variables of quadruple helix are government with regulation and policy indicators, business with network and management indicators, academic with research technology and training socialization indicators and society with product use and culture indicators. Competitive advantage with indicators of cost product, effective and efficiency, good quality and smooth distribution. This study uses the SEM analysis technique on freshwater fish farming entrepreneurs in 2021. Based on the results of the study, it shows that environmental strategies have an effect on the government, academics, entrepreneurs and the community. Dynamic capabilities consisting of the government, academics, entrepreneurs and the community affect the competitive advantage of freshwater fish farming in Tapin district after the COVID-19 pandemic.

Keywords—Environmental strategy, dynamic capability, quadruple helix, competitive advantage

Introduction

The world since the end of 2019 has experienced the covid-19 pandemic which first appeared in the city of Wuhan, China. The covid-19 outbreak caused by the corona virus (Lee, 2020; Zhu et al., 2020). Data from the WHO shows that more than 200 countries have experienced the covid-19 outbreak, including Indonesia. Since March 2020, the Corona virus outbreak has hit all parts of Indonesia in 34 provinces and 412 districts/cities, so the government has also declared it a covid-19 pandemic in Indonesia. The impact is felt on all Indonesian people's lives such as health, economy, education, social and culture. This policy was taken by the government to be able to overcome this covid-19 pandemic. Especially for the economy, which

has been severely affected by the covid-19 pandemic, where all sectors of the economy have experienced a decline. Fisheries as one of the sectors that support the economy in Indonesia are also feeling the pressure due to the covid-19 pandemic, especially the fisheries cultivator sub-system caused by direct market closures such as conventional fish markets, restaurants, hotels so that the fish supply chain is disrupted. However, this condition has undergone a change which shows an increase in the purchasing power of both the people who are involved in fish cultivating activities such as fish seeds, fish feed, facilities and other supporting tools.

Freshwater fish farming business is increasingly showing this increase based on data from the

United Nations Food Agency in 2021 the amount of fish consumption in the world reaches 19.6 kg per year where the consumption of freshwater fish is able to overtake the consumption of seawater fish due to the reduced number and difficulty in getting water fish. Therefore, it is necessary to cultivate freshwater fish as a substitute for marine fish. Indonesia with a large population can be a potential market for fishery products, despite the fact that the level of fish consumption Indonesia's population is still low compared to the consumption level of the population in other countries. One way to increase the level of the economy through the fisheries sector, the government through the Ministry of Maritime Affairs and Fisheries implements the love to eat fish movement and this business is quite successful with increasing fish consumption rates.

This increase in freshwater fish production continues to increase every year, this shows that people are starting to be interested in developing freshwater aquaculture businesses which are followed by increasing the number of market demands that continue to increase both on the island of Java and outside Java. Types of freshwater fish that are cultivated include catfish, goldfish, catfish, gourami, tilapia and other types that are adapted to regional characteristics and local potential such as papuyu and haruan or cork fish such as those on the island of Borneo. One of aquaculture fisheries is freshwater fishery which is divided into four types of cultivation, namely pond cultivation, cage cultivation, floating nets and rice cultivation. Aquaculture is an activity or activity to maintain and breed certain types of fish to get good results. more useful. Usually there are two types of fish that are cultivated, including ornamental fish and fish that are suitable for consumption, including the following: catfish, mujahir fish, goldfish, tilapia, carp, and others.

Quadruple helix is the development of the triple helix which is a collaboration between government, academics and entrepreneurs (Etzkowitz & Leydesdorff, 1998), where this collaboration can increase creativity and innovation. Later, the quadruple helix model was developed which is a policy and practice from government, universities, and industry to be able to interact with each other in a smart, efficient and effective way (Carayannis & Campbell, 2009). Quadruple helix can increase the development of innovation in the food industry sector (Hasche et al., 2020). Then, the quadruple helix model is an additional perspective that can understand innovation in the 21st century (Park, 2014). The model of quadruple helix model is a framework which is a collaboration of universities, industry, government, and the community who have their respective roles and identities that can be distinguished based on the goal of increasing innovation and competitiveness (Hudani & Dhewanto, 2015).

Based on the concept of the quadruple helix, a method can be developed to increase the freshwater fish farming business through the roles of each of the four pillars of the quadruple helix, namely the government, academics, entrepreneurs and the community, especially those in the regions. One of them is the cultivation of freshwater fish carried out by the community in Tapin Regency, South Kalimantan. Tapin Regency is one of the regencies in South Kalimantan. The capital of this district is Rantau as part of the North Tapin sub-district. Tapin Regency has an area of 2,174.95 km² with a population of 189,277 people in 2020. with a population density of 87 people/km² The administrative area of Tapin Regency consists of 12 sub-districts where according to statistical data each sub-district has an area that is almost the same or evenly distributed, except for the North Tapin sub-district which has a relatively smaller area than

other sub-districts. The location of the altitude above sea level is at an altitude of 0-7 m above sea level or 67.34% of the area, while the area with an altitude of more than 500 m above sea level is only 1.21% of the total area. Tapin Regency has regional potential, namely in the agricultural sector, livestock plantations, tourism, industry and trade with the largest sector being agriculture, which is 5637%.

Based on data from the Tapin District Fisheries Service, in the fishery sector in 2020 the total production of fish cultivation is 299,420 (kg) with a total of Rp. 7,307,640,000. compared to 2019 the amount of fish farming production was 298,963 (kg), from this data it can be seen that there was an increase of 457 (kg). This could be due to the increasing number of freshwater fish farming businesses run by the community with a system of ponds, ponds, cages and rice fields.

That the potential of freshwater fish farming in Tapin district is quite good and needs to be improved again, so it needs the role of the quadruple helix to be able to encourage and support the success of the freshwater fish farming business. Support from the quadruple helix is also expected to bring competitive advantage in the freshwater fish farming business in Tapin district by increasing the ability or capability and being able to create added value for freshwater fish farming entrepreneurs. Dynamic capabilities are expected to accelerate the growth of freshwater fish farming and compete. Several studies state that dynamic capabilities will be able to improve company or industry performance (Chien & Tsai, 2012; Chowdhury & Quaddus, 2017; Ferdinand et al., 2004; Helfat et al., 2007; Ko & Liu, 2016; Wu, 2007), show that dynamic capabilities will be able to achieve competitive advantage and are in accordance with the RBV concept from Barney (1991).

Furthermore, it can be seen whether the role of each quadruple helix can support the

development of freshwater fish farming, especially those related to environmental development for the sustainability of freshwater fish farming and those around it. This opinion suggests that proactive environmental management can act as a very important dynamic capacity for organizations (J. Alberto Aragón Correa & Sharma, 2003). Business activities and environmental issues are often a problem as the relevance of corporate social responsibility (J Alberto Aragon Correa & Mandojana, 2016). The environmental strategy is the company's long-term orientation to manage the environment so that it is in accordance with the interests of those around it, especially in the post-pandemic period. Based on this environmental strategy, it is interesting to study and prove the dynamic capabilities of the quadruple helix approach in freshwater fish farming in Tapin district as the novelty of this research.

Literature Review

Dynamic Capabilities, Quadruple Helix, Competitive Advantage, Environmental Strategy

Dynamic capabilities were first introduced by Teece and Pisano that dynamic capabilities are the potential of an organization or to be creative, repeat, reshape so that it can survive with dynamic conditions with other words in order to be able to achieve competitive advantage and be able to maintain it (Teece & Pisano, 1994). Dynamic capability is the company's ability to intentionally create, expand, or modify its resource base so as to achieve alignment with the changing business environment. Furthermore, serviceability is the company's ability to mobilize its resources and capabilities and dynamically align them with changing opportunities in the environment which is critical as the company continues to innovate to

survive and create its own competitive advantage (Liao et al., 2009).

Dynamic capabilities can be related to the achievement of competitive advantage, several studies have proven this relationship. Dynamic progress will support in achieving competitive advantage, especially with the knowledge and learning of (Chien & Tsai, 2012). Dynamic capabilities are related to the company's performance, especially in the face of competition in the industry (Zott, 2003).

Quadruple helix is the development of the triple helix which is a collaboration between government, academics and entrepreneurs (Etzkowitz & Leydesdorff, 1998), where this collaboration can increase creativity and innovation. Then it was further developed stating that the quadruple helix model is a policy and practice of government, universities, and industry to be able to interact with each other in a smart, efficient and effective way (Carayannis & Campbell, 2009). Quadruple helix can increase the development of innovation in the food industry sector (Hasche et al., 2020). Then, the quadruple helix is an additional perspective that can understand innovation in the 21st century (Park, 2014). The model of quadruple helix is a framework which is a collaboration of universities, industry, government, and the community who have their respective roles and identities that can be distinguished based on the goal of increasing innovation and competitiveness (Hudani & Dhewanto, 2015). The quadruple helix as an innovation model reflects in many ways some features common to new thinking in the innovation and innovation process. Innovation policies have recently been faced with a lot of pressure to change. Some of this comes from external developments, some from internal policy issues.

Competitive advantage is an advantage over competitors that is obtained by delivering greater customer value, through lower prices or

by providing more benefits that match higher prices (Porter, 1985). The company's potential competitive advantage depends on the value, scarcity, and imitation of its resources and capabilities (J. B. Barney, 1995). Competitive advantage is defined as the company's ability to create more economic value than competitors (Sigalas et al., 2013). Basically, competitive advantage arises from the value a company creates for its customers, not from the costs the company uses to create it (Meutia & Ismail, 2012). Competitive advantage can be defined as the aggregation of various items that differentiate SMEs from their competitors and provide a unique and superior position in the market (Udriyah et al., 2019). If a company has resources and capabilities that are superior to competitors, adopts a strategy that utilizes these resources and capabilities effectively, then the company builds a competitive advantage (Agha et al., 2011).

Proactive environmental strategy as a capability that enables organizations to maintain a dynamic general business alignment with their environment (J. Alberto Aragón Correa & Sharma, 2003). Environmental strategy is a company's long-term orientation on how to manage environmental practices and develop environmental resources and capabilities to achieve stakeholder expectations (J Alberto Aragón Correa & Mandojana, 2016).

Hypothesis

Dynamic capabilities are related to firm performance (Ko & Liu, 2016; Zott, 2003). Competitive advantage affects the business performance of Batik Small and Medium Enterprises (SMEs) (Meutia & Ismail, 2012). Dynamic capabilities relate to the company's ability to mobilize its resources and capabilities and dynamically align with changes in the environment which is very important because companies continue to innovate to survive and

create its own competitive advantage (Liao et al., 2009).

The dynamic capability, and natural resource-based view of the company to propose how the dimensions of the general competitive environment of a business will affect the development of a dynamic and proactive corporate strategy for managing the natural-business environment (J. Alberto Aragón Correa & Sharma, 2003). The environmental strategies of small and medium enterprises (SMEs) contribute to competitive advantage (Ko & Liu, 2016). A proactive environmental strategy can generate leading competitive capabilities to improve financial results. Companies with high capacity for product innovation and better implementation processes with good environmental practices (Christmann, 2000).

Quadruple helix innovation theory is a collaboration of four sectors, namely: government, business, academics and civil society which play a role in encouraging the growth of innovation. Triple helix is a field that can move people to increase creativity, ideas and skills (Dzisah & Etkowitz, 2008). Intellectuals as a driver of creativity, innovation and technology for creative industries. The university (intellectuals) has made significant efforts to promote the evolution of the triple helix to address issues of trade, industry and work culture. University as a provider of human resources and knowledge for critical socio-economic development (Dzisah & Etkowitz, 2008). Quadruple helix: academia and technology infrastructure, innovation enterprises, government and civil society. The importance of an emerging, dynamically adaptive and transdisciplinary knowledge and innovation ecosystem for economic growth. Higher levels of economic growth are obtained as a result of increased synergies and complementarity between different productive units, or increased productive government

spending (Oscar et al., 2010). Quadruple helix can increase the development of innovation in the food industry sector (Hasche et al., 2020).

Another opinion about the quadruple helix concept is that business performance that has excellence in the creative industry is to produce a combination of very good creative power and is supported by very good contributions and interactions between universities, business, government and civil society in the quadruple helix model. requires an open-minded character and an attitude to be able to share knowledge that is sustainable so that it can lead to the power of creativity for new products and services that are new, which have advantages and competitive power. The existence of a synergy from quadruple helix in the development of an industry, both large, medium and small, is needed which can be linked to a SWOT analysis to produce a turn around strategy by taking into account internal and external conditions (Juniar & Rahmawati, 2018).

Expanding the RBV of competitive advantage by examining the relative magnitude of the importance placed on organizational resources towards competitive advantage and improving firm performance (Rose et al., 2010). Core competencies have a strong and positive impact on competitive advantage. Then, organizational capability is related to competitive advantage, that competitive advantage is related to performance, and that competitive advantage mediates the relationship between organizational capability and performance (Tuan & Takahashi, 2010). Furthermore, competitive advantage also has a significant impact on organizational performance. The results confirm the importance of various core competency dimensions on competitive advantage and organizational performance (Agha et al., 2011).

Based on the results of these studies, the hypotheses developed in this study are:

H1: Environmental Strategy has an effect on Government

H2: Environmental Strategy has an effect on Academics

H3 : Environmental Strategy has an effect on Business

H4 : Environmental Strategy has an effect on Society

H5: Government has an effect on competitive advantage

H6: Academics have a significant effect on competitive advantage

H7: Business has a significant effect on competitive advantage

H8: Society has a significant effect on competitive advantage

Methodology

This research was conducted in Tapin Regency, South Kalimantan Province, which carries out freshwater fish farming. This research was conducted on fish farming production households in all 11 sub-districts as many as 300 people in Tapin Regency, South Kalimantan using the mina padi, pond, and cage systems in 2021. The sampling technique was stratified random sampling with 200 people used as sample. The research model can be seen in the following figure:

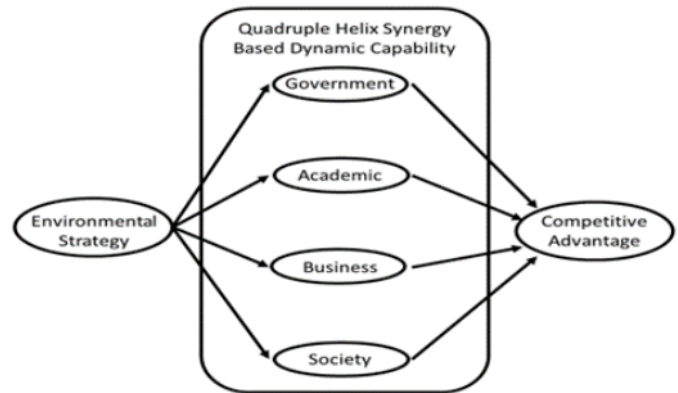


Figure 1. Research Model

The variables of this study consisted of exogenous variables, namely environmental strategy (ES) with indicators of environmental friendly (EF), little waste (LW) and without conflict (WC). Then the endogenous variables of quadruple helix are government (GO) with regulation (R) and policy (P) indicators, business (BU) with network (N) and management (M) indicators, academic (AC) with research technology (RT) and training socialization (TS) indicators and society (SC) with use product (UP) and culture (C) indicators. Competitive advantage (CA) with indicators of cost product (CP), effective and efficiency (EE), good quality (GQ) and smooth distribution (SD).

Result and Discussion

The research model after being entered into the SEM-Amos software is as follows:

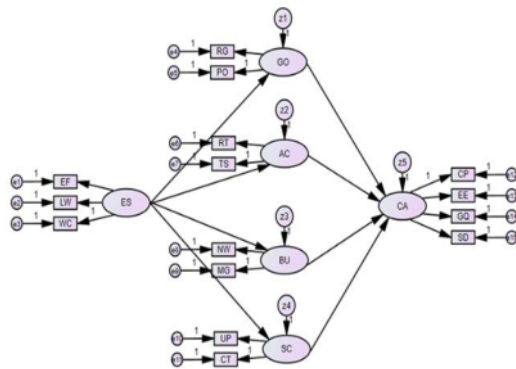


Figure 2. SEM-Amos model

Based on the structural model that has been built, test the validity and reliability of the data and test the validity and reliability of the model. Based on the results of data analysis, the total item correlation value of all indicators of the variable value is greater than 0.3 so that the data is declared valid. The results of the reliability test by looking at the cronbach alpha value greater than 0.6. After testing the validity and reliability of the data, the following are the results of the validity and reliability test of the structural model:

Table 1.

Test Results of Structural Model Validity and Reliability

Variable	Indicator	Loading Faktor	P Value	Result	GFI	CR	Result
ES	EF	0.761	0.000	Valid	0,924 (Valid)	0.778	Reliable
	LW	0.718	0.000	Valid			
	WC	0.724	0.000	Valid			
GO	R	0.744	0.000	Valid	0.759	Reliable	
	P	0.819	0.000	Valid			
AC	RT	0.853	0.000	Valid	0.837	Reliable	
	TS	0,843	0.000	Valid			
BU	N	0.740	0.000	Valid	0.800	Reliable	
	M	0.889	0.000	Valid			
SC	UP	0.707	0.000	Valid	0.764	Reliable	
	C	0,861	0.000	Valid			
CA	CP	0853	0.000	Valid	0.920	Reliable	
	EE	0,843	0.000	Valid			
	GQ	0,858	0.000	Valid			
	SD	0892	0.000	Valid			

Based on the results of the SEM-Amos output in the calculation of the loading factor value, all indicators have a value greater than 0.5 and a p value less than 0.05, the GFI value of 0.924 means that it is valid so that all indicators can be used in the research model. The results of the reliability test based on the value of construct reliability (CR) were greater than 0.7 so that the model was declared reliable.

After testing the validity and reliability of the model and all of them meet the requirements, the next step is to test the assumptions of the SEM model, namely normality test, multicollinearity test and outliers test. The results of the normality test of the critical ratio value of the assessment of normality of 1.306 are located between the values of -1.96 to 1.96. The results of the multicollinearity test by looking at the determinant of the sample covariance matrix

value of 52.841 away from the value 0. The mahalanobis distance value which is calculated based on the degrees of freedom (instruments and variables) and the chi-square value at a significance level of 0.005 is 33,924 (based on the distribution table χ^2 df 22) and the outliers test results do not exceed this value. Based on the results of normality, multicollinearity and outliers tests, the model has met the requirements.

The stage after testing the assumptions of the SEM model is testing the suitability of the

model (Goodness of Fit). The test results are as follows: chi-square value 58.550 (expected small), probability value 0.652 0.05, RMSEA value 0.62 0.80, GFI value 0.932 0.90, AGFI value 0.912 0.90, CMIN/DF value 1.23 2.00, TLI value 0.982 0.95, CFI value 0.989 0.95. Based on the results of the model suitability test, all of them have met the requirements. The last stage is hypothesis testing. The following are the results of the research hypothesis test:

Table 2.

Hypothesis Test Results

Hypothesis	Variable	Coefficient value	P values	Information
1	ES - GO	0,443	0,000	Significant
2	ES - AC	0,236	0,008	Significant
3	ES - BU	0,210	0,004	Significant
4	ES - SC	0,232	0,000	Significant
5	GO - CA	0,125	0,000	Significant
6	AC - CA	0,243	0,000	Significant
7	BU - CA	0,110	0,008	Significant
8	SC - CA	0,225	0,000	Significant

The results of the analysis of the first hypothesis test show that the environmental strategy has a significant effect on the government with a unidirectional relationship, meaning that if the environmental strategy can be implemented properly, such as being environmentally friendly, with less waste and reducing conflicts in the surrounding environment, the government will find it easier to form regulations and policies, especially those that are environmentally friendly. related to environmental strategy. The results of this study support the results of the study (J. Alberto Aragón Correa & Sharma, 2003; J Alberto Aragón Correa & Mandojana, 2016; Rose et al., 2010). The results of the analysis of the second hypothesis test indicate that the environmental

strategy has a significant effect on academics with a unidirectional relationship, meaning that if the environmental strategy can be implemented properly, it will be easier for academics to conduct research on appropriate technologies for freshwater fish farming and conduct training for the dissemination of research results and technology. The results of this study support the results of research (Agha et al., 2011; J Alberto Aragón Correa & Mandojana, 2016).

The results of the analysis of the third hypothesis test indicate that the environmental strategy has a significant effect on business with a unidirectional relationship, meaning that if the environmental strategy can be executed properly, it will be easier for businesses to

network with partners in freshwater fish farming and conduct more effective business management in their business. The results of this study support the research results of (Christmann, 2000; J. Alberto Aragón Correa & Sharma, 2003; Rose et al., 2010). The results of the analysis of the fourth hypothesis test indicate that the environmental strategy has a significant effect on the community with a unidirectional relationship, meaning that if the environmental strategy can be implemented properly, the community will find it easier to network with partners in freshwater fish farming and conduct more effective business management in their business. increasing the use or consumption of freshwater fish and fostering a culture of fondness for eating fish in the daily diet for their families. The results of this study support the research results of (Christmann, 2000; J. Alberto Aragón Correa & Sharma, 2003; J Alberto Aragon Correa & Mandojana, 2016).

The results of the analysis of the fifth hypothesis test indicate that the government has a significant effect on competitive advantage with a unidirectional relationship, meaning that if the government through the fisheries service can make regulations and policies related to freshwater fish farming, competitive advantage will be more easily achieved by the implementers of freshwater fish farming, such as counseling and supervision in feeding fish seeds and land processing methods for freshwater fish farming. The results of this study support the results of (Ko & Liu, 2016; Rose et al., 2010; Tuan & Takahashi, 2010). The results of the analysis of the sixth hypothesis test indicate that academics have a significant effect on competitive advantage with a unidirectional relationship, meaning that if academics can conduct research, especially in the use of technology on how to get good fish seeds for freshwater fish farming, competitive advantage will be more easily achieved by fish farming business implementers. fresh water The results

of this study support the results of this study. The results of this study support the results of the research of (Ferdinand *et al.*, 2004; Helfat *et al.*, 2007; Wu, 2007; Dzisah and Etzkowitz, 2008; Oscar, Sara and Maria, 2010; Chien and Tsai, 2012; Ko and Liu, 2016; Chowdhury and Quaddus, 2017; Hasche, Höglund and Linton, 2020).

The results of the analysis of the seventh hypothesis test indicate that entrepreneurs have a significant effect on competitive advantage with a unidirectional relationship, meaning that if entrepreneurs expand their network of partners related to freshwater fish farming and carry out good business management, competitive advantage will also increase with a broad network and business management. good, competitive advantage will be more easily achieved by the implementers of freshwater fish farming. The results of this study support the research results. The results of this study support (Chien & Tsai, 2012; Christmann, 2000; Hasche et al., 2020; Ko & Liu, 2016; Oscar et al., 2010). The results of the analysis of the eighth hypothesis test show that the community has a significant effect on competitive advantage with a unidirectional relationship, meaning that if people want to use or consume freshwater fish farming fish products in the family diet and make it a culture to like to eat freshwater fish culture, the competitive advantage is also will increase. The results of this study support the results of this study. The results of this study support the results of (Agha et al., 2011; Chowdhury & Quaddus, 2017; Juniar & Rahmawati, 2018; Ko & Liu, 2016; Rose et al., 2010; Tuan & Takahashi, 2010).

Conclusion

The results of this study indicate that the environmental strategy consisting of environmental friendly, little waste and without conflict has an effect on dynamic capabilities

based on the quadruple helix namely government, academics, entrepreneurs and society. Then quadruple helix namely government with regulation and policy, business with network and management, academic with research technology and training socialization and society with product use and culture that affect competitive advantage with product cost, effective and efficiency, good quality and smooth distribution. This shows that to be able to achieve success in freshwater fish farming in Tapin district, South Kalimantan, it is necessary to synergize environmental strategies, dynamic capabilities through the quadruple helix, namely between the government, academics, entrepreneurs and the community together to achieve competitive advantage, especially in post current pandemic (Chien & Tsai, 2012; Chowdhury & Quaddus, 2017; J. Alberto Aragón Correa & Sharma, 2003; J Alberto Aragon Correa & Mandojana, 2016; Ferdinand et al., 2004; Helfat et al., 2007; Ko & Liu, 2016; Rose et al., 2010; Wu, 2007). The achievement of competitive advantage in business will show the achievement of good performance (Agha et al., 2011; Juniar & Rahmawati, 2018; Rose et al., 2010; Tuan & Takahashi, 2010) especially during post-mortem. pandemic.

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Reference

- [1] Agha, S., Alrubaiee, L., & Jamhour, M. (2011). Effect of Core Competence on Competitive Advantage and Organizational Performance. *International Journal of Business and Management*, 7(1), 192–205. <https://doi.org/10.5539/ijbm.v7n1p192>
- [2] Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1).
- [3] Barney, J. B. (1995). Looking inside for Competitive Advantage. *The Academy of Management Executive*, 9(4), 49–61.
- [4] Carayannis, E. G., & Campbell, D. F. J. (2009). “Mode 3” and “Quadruple Helix”: Toward a 21st century fractal innovation ecosystem. *International Journal of Technology Management*, 46(3–4), 201–234. <https://doi.org/10.1504/ijtm.2009.023374>
- [5] Chien, S. Y., & Tsai, C. H. (2012). Dynamic capability, knowledge, learning, and firm performance. *Journal of Organizational Change Management*, 25(3), 434–444. <https://doi.org/10.1108/09534811211228148>
- [6] Chowdhury, M. M. H., & Quaddus, M. (2017). Supply chain resilience: Conceptualization and scale development using dynamic capability theory. *International Journal of Production Economics*, 188, 185–204. <https://doi.org/10.1016/j.ijpe.2017.03.020>
- [7] Christmann, P. (2000). Effects of “Best Practices” of Environmental Management on Cost Advantage: The Role of Complementary Assets. *Academy of Management Journal*, 43(4), 663–680. <https://doi.org/10.5465/1556360>
- [8] Correa, J. Alberto Aragón, & Sharma, S. (2003). A Contingent Resource-Based View of Proactive Corporate Environmental Strategy. *The Academy of Management Review*, 28(1), 71. <https://doi.org/10.2307/30040690>
- [9] Correa, J Alberto Aragon, & Mandojana, N. O.-. (2016). The Palgrave Encyclopedia of Strategic Management. *The Palgrave Encyclopedia of Strategic Management*, October 2018. <https://doi.org/10.1057/978-1-349-94848-2>
- [10] Dzisah, J., & Etkowitz, H. (2008). Triple helix circulation: the heart of innovation and development. *International Journal of Technology Management and Sustainable Development*, 7(2), 101–115. https://doi.org/10.1386/ijtm.7.2.101_1
- [11] Etkowitz, H., & Leydesdorff, L. (1998). A Triple Helix of University—Industry—Government Relations: Introduction. *Industry and Higher Education*, 12(4), 197–201. <https://doi.org/10.1177/095042229801200402>

- [12] Ferdinand, J., Graca, M., Antonacopoulo, E., & Smith-Easterby, M. (2004). Dynamic Capability: Tracking the Development of a Concept. *Proceedings of the Fifth European Conference on Organizational Knowledge, Learning and Capabilities*.
- [13] Hasche, N., Höglund, L., & Linton, G. (2020). Quadruple helix as a network of relationships: creating value within a Swedish regional innovation system. *Journal of Small Business and Entrepreneurship*, 32(6), 523–544. <https://doi.org/10.1080/08276331.2019.1643134>
- [14] Helfat, C. ., Finkelstein, S., Mitchell, W., Peteraf, M. ., H, S., Teece, D. ., & Winter, S. . (2007). *Dynamic Capabilities Understanding Strategic Change In Organizations*. Blackwell Publishing. https://doi.org/10.1007/978-3-658-01094-2_4
- [15] Hudani, H., & Dhewanto, W. (2015). Quadruple Helix Mapping Collaboration for Fashion Small Medium. *Journal of Business and Management*, 4(3), 394–406. https://scholar.google.com/scholar?hl=id&as_sdt=0%2C5&q=Quadruple+Helix+Mapping+Collaboration+for+Fashion+Small+Medium&btnG=
- [16] Juniar, A., & Rahmawati, R. (2018). Synergy of Quadruple Helix in The Development of Small Industries Processing Fisheries in Banjar District. *International Journal of Scientific Development and Research (IJS DR)*, 3(11), 392–399. <http://www.ijedr.org/papers/IJS DR1811069.pdf>
- [17] Ko, W. W., & Liu, G. (2016). Environmental Strategy and Competitive Advantage: The Role of Small- and Medium-Sized enterprises' Dynamic Capabilities. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.1938>
- [18] Lee, A. (2020). Wuhan Novel coronavirus (COVID-19): why global is challenging? *Public Health*, 179. <https://pubmed.ncbi.nlm.nih.gov/32111295/>
- [19] Liao, J., Kickul, J. R., & Ma, H. (2009). Organizational dynamic capability and innovation: An empirical examination of internet firms. *Journal of Small Business Management*, 47(3), 263–286. <https://doi.org/10.1111/j.1540-627X.2009.00271.x>
- [20] Meutia, & Ismail, T. (2012). The Development of Entrepreneurial Social Competence and Business Network to Improve Competitive Advantage and Business Performance of Small Medium Sized Enterprises: A Case Study of Batik Industry in Indonesia. *Procedia - Social and Behavioral Sciences*, 65(ICIBSoS), 46–51. <https://doi.org/10.1016/j.sbspro.2012.11.089>
- [21] Oscar, A., Sara, M., & Maria, T. (2010). A Growth Model for the Quadruple Helix Innovation Theory. In *Working Paper Series*.
- [22] Park, H. W. (2014). Transition from the Triple Helix to N-Tuple Helices? An interview with Elias G. Carayannis and David F. J. Campbell. *Scientometrics*, 99(1), 203–207. <https://doi.org/10.1007/s11192-013-1124-3>
- [23] Porter, M. E. (1985). *Competitive Advantage creative and sustaining superior performance*. The Free Press.
- [24] Rose, R. ., Abdullah, H., & Ismad, A. . (2010). A review on the relationship between organizational systems and performance. *The Journal of International Social Research*, 3(11). <https://doi.org/10.3923/ibm.2012.286.293>
- [25] Setyanti, S. W. L. H. (2018). Peran Quadruple Helix Untuk Meningkatkan Kreatifitas dan Kinerja Inovasi Industri Kreatif Indonesia. *Seminar Nasional Manajemen Dan Bisnis Ke-3*, 244–251. <https://jurnal.unej.ac.id/index.php/prosiding/article/download/9169/6136>
- [26] Sigalas, C., Economou, V. P., & Georgopoulos, N. . (2013). Developing a Measure of Competitive Advantage. *Journal of Strategy and Management*, 6(4). <https://doi.org/10.1108/JSMA>
- [27] Teece, D., & Pisano, G. (1994). The Dynamic Capabilities of Firms: An Introduction. In *Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis*. [https://doi.org/10.1016/0027-5107\(94\)90319-0](https://doi.org/10.1016/0027-5107(94)90319-0)

- [28] Tuan, N. P., & Takahashi, Y. (2010). Organisational Capabilities, Competitive Advantage and Performance in Supporting Industries in Vietnam. *Asian Academy of Management Journal*, 15(1), 1–21.
- [29] Udriyah, Tham, J., & Azam, S. M. F. (2019). The effects of market orientation and innovation on competitive advantage and business performance of textile smes. *Management Science Letters*, 9(9), 1419–1428.
<https://doi.org/10.5267/j.msl.2019.5.009>
- [30] Wu, L. Y. (2007). Entrepreneurial resources, dynamic capabilities and start-up performance of Taiwan's high-tech firms. *Journal of Business Research*, 60(5), 549–555.
<https://doi.org/10.1016/j.jbusres.2007.01.007>
- [31] Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., Gao, G. F., & Tan, W. (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. *New England Journal of Medicine*, 382(8), 727–733.
<https://doi.org/10.1056/nejmoa2001017>
- [32] Zott, C. (2003). Dynamic capabilities and the emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal*, 24(2), 97–125.
<https://doi.org/10.1002/smj.288>

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