

# Village Unit Cooperatives on Dynamic Capability and Creative Capability Adaptation to Innovation Performance: The Role of Competitive Advantage

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## Abstract

This study aims to examine the dynamic capability model and its implications for innovation performance in the context of competitive advantage. The research design used is causal quantitative research using survey methods. Respondents were 106 managers of village unit cooperatives in the Kediri and Madiun areas, East Java, Indonesia. The measurement variable uses seven Linkert scales. Partial Least Square (PLS) is used to test the causal relationship between constructs. Based on the results of the analysis, it shows that dynamic capabilities and adaptive creative capabilities do not have a positive effect on innovation performance, dynamic capabilities and adaptive creative capabilities have a positive effect on competitive advantage. Competitive advantage has a positive effect on innovation performance. Finally, the results provide support for the model of dynamic capabilities, adaptive creative capabilities, and the implications of innovation performance in the context of competitive advantage, therefore village unit cooperatives must increase the elements of competitive advantage by increasing dynamic capabilities and adaptive creative capabilities to managers.

**Keywords:** adaptive creative capabilities, dynamic capabilities, innovation performance, village unit cooperative

## 1. Introduction

Indonesia is an archipelagic country prone to various disasters, either natural or non-natural disasters (Isnaini, et al., 2022; Pandin, et al., 2022; Waloejo, et al., 2022) and the Covid-19 pandemic is one of the non-natural disasters the country suffered from (Pramukti, et al., 2020; Pramukti, et al., 2022). The global spread of the Covid-19 pandemic not only threatens people's health but also affects the education and economic sectors (Prakoeswa, et al., 2021; Ketut, et al., 2019; Rahim, et al., 2019; Munir, et al., 2022). The face-to-face meeting restriction, as one of the health protocols to address the spread of Covid-19, encouraged governments to make breakthroughs in the dynamic economic sector, especially three years after the Covid-19 Pandemic hit Indonesia (Hendratmi, et al., 2022; Sopiana, et al., 2022).

The Indonesian government encourages cooperatives to have innovative performance as a manifestation of dealing with non-natural disasters. According to data from the Ministry of Cooperatives and SMEs (Kemenkop UKM), in 2019 the number of cooperatives reached 152,174 units. Then, in 2018 it dropped to 126,343 units. The following year, 2019 also fell to 123,048 units with 22,463,738 members. Of that number, only 35,760 units have been registered or have a Cooperative Identification Number (NIK). There are only 45,490 cooperative units or 37% of cooperatives that hold routine annual member meetings (RAT). The asset ownership is estimated to be

close to IDR 152.11 trillion, with turnover reaching IDR 154.72 trillion and remaining operating results (SHU) of IDR 6.27 trillion, and cooperatives have succeeded in increasing the national GDP contribution from 1.71% in 2014 to 4.48% in 2017, and in 2019 to 5.1%. Most of the members of these cooperatives are people who have less education, including the poor (near poor), with a percentage of 63.1% stagnant business conditions, 23.5% decreased, with mediocre business income last year as many as 51.6% and even 31.4% of them are lacking. However, other studies state that cooperative development figures for 2018 cannot be obtained, either from the Ministry of Cooperatives and Small and Medium Enterprises. Its validity may meet the requirements but its reliability cannot be justified (Sularso, 2018).

In this position the majority of cooperatives have similar characteristics to Small and Medium Enterprises (SMEs) (Suharto, et al., 2022; Jasin & Firmansyah, 2023; Laila, et al., 2022; Latifah & Suwarno, 2023; Hadi, et al., 2020; Baridwan & Zaki, 2020; Arfamaini, 2020). The characteristics of SMEs that differ from large companies are based on the limited resources of SMEs and different managerial capabilities and practices (Cohen & Kaimenakis, 2007). SMEs that are organized efficiently and effectively can utilize skilled and innovative employees to achieve the best performance through innovation (McDowell et al., 2018).

*Law Number 25 of 1992 concerning Cooperatives in Chapter I Article 1, what is meant by a cooperative is a business entity consisting of individuals or a cooperative legal entity with its activities based on cooperative principles as well as a people's economic movement based on the principle of kinship. The ideal foundation of Indonesian cooperatives is Pancasila, the structural foundation of Indonesian cooperatives is the 1945 Constitution and the foundation for motion is Article 33 of the 1945 Constitution, the Cooperative Law no. 12 1967 and Cooperative Law no. 25 1992 and Mental Foundation, namely: "loyal friends and personal awareness" (solidarity and individuality).*

The number of active cooperatives in Indonesia fell again by 2.61% to 123,048 units in 2019. Meanwhile, the most active cooperatives were in East Java, namely 22,845 units. West Java and Central Java occupy the next position with the number of active cooperatives of 15,621 units and 10,270 units respectively. Meanwhile, North Kalimantan is the province with the least number of active cooperatives, namely 612 units. Above it is Bangka Belitung and West Papua with the number of active cooperatives of 711 units and 723 units respectively. Based on this phenomenon, the province of East Java was chosen because it has the largest number of active cooperatives in Indonesia.

One form of cooperative in Indonesia is the village unit cooperative (KUD) which was founded in 1973 but has experienced low sustainability in its development. Even though KUD has a strategic role in the Indonesian economy. Because Indonesia's majority of the population are farmers (agrarian society). KUD conditions are lack of member participation, lack of proactive management, lack of innovation to compete with other businesses, highly dependent on government infrastructure, unable to manage its assets effectively, has an inadequate internal control system, has not adopted information technology in managing its business, and so on (Riswan et al., 2017).

The COVID-19 pandemic resulted in 9,436 KUD in Indonesia experiencing the following conditions: 40 percent were healthy, 20 percent were almost closed, and 40 percent were in an unclear condition (<https://news.detik.com>, 22 May 2021). Based on data on the distribution of KUD in East Java until the end of 2020, there are 702 KUD in East Java. However, 15 percent of them experienced business closures ([www.surya.co.id](http://www.surya.co.id), date: 19/11/2020).

That this research was conducted in the province of East Java was chosen because it is the province in Indonesia with the largest number of cooperatives in Indonesia. Furthermore, the Mataraman area in East Java was chosen to focus on the research location.

The Mataraman area was chosen based on cultural observer and lecturer at Malang State University, Dwi Cahyono, in research on Javanese Mataraman, the Mataraman cultural area is divided into three, namely Mataraman Kulon (covering the Ngawi, Madiun, Magetan, Pacitan, and Ponorogo regions), Mataraman Wétan (covering the regions of Ngawi, Madiun, Magetan, Pacitan, and

Ponorogo), Mataraman Wétan (covering the the Kediri, Blitar, Nganjuk, Trenggalek, and Tulungagung regions), and the Coastal Mataraman (covering the Bojonegoro, Tuban, and western parts of Lamongan) in East Java. The following figure 1 is a map of the position of village unit cooperatives that were used as research locations, namely East Java Mataraman Kulon and Mataraman Wetan Provinces. This selection is due to the fact that the largest community in the province of East Java has relatively the same culture and social status in developing village unit cooperatives.



**Figure 1.** Map of the Research Locations

The term dynamic capability or *dynamic capability* is a very complex and vague term that depends on the point of view (Baía & Ferreira, 2019). On the other hand, dynamic capabilities are considered a prerequisite or basis for innovation performance (Breznik & Hisrich, 2014).

Creativity can be maintained if there is capability. Changes in the global business competition environment that are fast, highly unstable, uncertain, and complex have changed the key factors for competitive advantage and the long-term success of a business. This change triggers a change in business strategy activities. Strategy activities aim to identify the drivers of survival and growth of long-term companies (Baía & Ferreira, 2019; Laaksonen & Peltoniemi, 2018). On the other hand, superior business strategies are generally based on innovation (Hacklin et al., 2018).

Research that states dynamic capabilities has a significant relationship with innovation performance. Integrative capabilities are capabilities to recognize opportunities and to configure and deploy resources. The results of the study state that dynamic (integrative) capabilities have a significant positive effect on corporate innovation (Liao, 2009). Three dynamic sub-capabilities—knowledge acquisition capability is positively and significantly related to innovation performance; integrative capability has a positive effect on producing innovation performance; and knowledge combination capability has a positive effect on innovation performance (Zheng et al., 2011). State dynamic capabilities (ability to recognize and seize opportunities) and have a significant positive effect on innovation performance (H. Wu et al., 2016). Most of the dynamic capabilities literature always talks about the positive benefits of innovation performance, including studies that find dynamic capabilities have a positive effect on innovation performance (Baía & Ferreira, 2019).

The results of the study show that the effect of firm size is positive and significant on the capability of radical innovation (Mikalef et al., 2019). Another positive finding states that there is an

effect of dynamic capability (exploration and exploitation) which has a positive effect on innovation performance (Ferreira et al., 2020).

Adaptability refers to the ability to show the necessary responses and changes to existing or potential situations (Stasielowicz, 2020). According to (Kaur, 2020) that adaptive capabilities can increase the company's innovative capabilities. Creativity and innovation (Abualoush et al., 2018); Research using descriptive analysis methods, and correlation-regression with *organizational adaptability marketing capabilities variables*, new product development performance. The results of the study state that organizational adaptability, marketing capabilities affect the performance of new product development (Farhang et al., 2018) (Shafia et al., 2016). The achievement of the performance and survival of a business organization depends on the degree of adjustment and renewal capacity of the strategy process (Burgelman, 1991). The creative capability of adapting to new combinations of resources leads to innovation and the creation of economic value (Mahoney, 2004).

Dynamic capabilities are to explain sources of competitive advantage (Pisano, 2017; Teece et al., 1997) . Dynamic capabilities seem to give rise to the enviable ability to “always have a competitive advantage in an attractive industry” and continue to deliver superior financial performance regardless of external circumstances (Collis & Anand, 2019) . Dynamic capabilities seem to give rise to the enviable ability to “always have a competitive advantage in an attractive industry” and continue to deliver superior financial performance regardless of external circumstances (Collis & Anand, 2019) . In particular, exploitative dynamic capabilities have an important effect on short-term financial performance, and exploratory dynamic capabilities lead to significant long-term competitive advantages (Liu et al., 2019) .

Companies that have adaptability will be the most effective way to maintain business in the long term, in market conditions that have a fast pace of business change (Schilke et al., 2018) . And adaptation requires creative capability. However, the environment is experiencing changes in business competition globalization Which fast, very No stable, No Certain, And complex has change factor key superiority compete And success long term business. This change triggers a change in business strategy activities. Strategy activities aim to identify drivers of survival and long-term corporate growth (Baía & Ferreira, 2019; Laaksonen & Peltoniemi, 2018) . The relationship between creative adaptation and competitive advantage

Dynamic capabilities and adaptive creative capabilities, competitive advantage and innovation performance KUD are unique compared to companies in general. Because KUD is an organization that does not only use business but is social and business. This study aims to examine the relationship between each organizational behavior regarding personnel management components executives relate dynamic capabilities and competitive advantage to innovation performance. And adaptive creative capabilities and competitive advantage to innovation performance. This research makes an important contribution to the innovation performance literature by diagnosing gaps related to the role of dynamic capabilities, adaptation of creative capabilities and competitive advantage in building innovation performance. Research results can motivate managers to take corrective action in the management process. The findings of this study can stimulate interest in developing competitive advantage and broaden the scope of application of practices in KUD, particularly in Indonesia. The remainder of this paper is organized as follows. Section 2 presents a review of the relevant literature. Section 3 describes the methodology used in this study. Section 4 presents the results of the study, while Section 5 discusses these results in greater detail. Finally, section 6 presents conclusions based on the study results, outlines the limitations of the study, and provides recommendations for future research.

## Dynamic capabilities

Dynamic capabilities contain agility dynamics and *agility* (Teece et al., 2016), was developed to help guide decisions and actions in fast changing and complex environments (Teece, 2016). The term dynamic capability (DC) is a very complex and vague term that depends on the point of view (Baía & Ferreira, 2019). Conceptually, dynamic capability is a company's ability to integrate, build, and confirm internal and external competence creations to cope with a rapidly changing environment (Teece et al., 1997) or with the understanding that dynamic capability has three basic elements,

namely *sensing*, *seizing*, and *transforming*. *Sensing* is an activity to identify what is happening in the environment (*seizing*) which is then translated into routine activities (*seizing*), so that the organization is able to change or transform to complete the latest conditions (*transforming*).

### Adaptive Creative Capabilities

Capability is a capability possessed by an organization, which takes the form of: knowledge embodied in a team, organizational culture, organizational history, learning by doing, managerial skills (Clulow et al., 2003). Creativity is a model of product novelty, product feasibility, product synthesis and elaboration, process-related approaches (Gruszka & Tang, 2017). Adaptation is resistance related to the perspective of objects; related to external-internal analytical orientation; logic (mathematical/logic patterns) and soft theory (pattern recognition of awareness and active awareness); tangible (evidence) and intangible (cannot be measured directly; spirit); and finite complexity and general complexity. (Yolles, 2019a, 2019b). It can also be said that adaptive creative capability is the ability to survive creatively, through various adaptation breakthroughs related to organizational design: size, response, and adaptation results produce: motivated people, high category expertise, high skills in creative thinking, an environment that supports creativity that can accommodate changes quickly and easily.

The construction of adaptation *creative* capability is "the ability to strengthen conditions that determine success and most importantly by focusing on creating ideas related to adapting to new business environment conditions". Adaptive creative capability has 3 characteristics, namely active ability, ability to focus, and adaptation creative support capabilities.

Innovation performance is the result of novelty and meaningfulness of new products that are introduced to the market at the right time to compete with other products or companies because they have more consumptive benefits (Alpay et al., 2012). Product innovation performance variables are measured using an interval scale and adapting the measurement indicators developed (Hsu & Wang, 2012; Valaei et al., 2022; SH Wu et al., 2007).

Competitive advantage is defined as the company's ability to provide more value than its competitors (Porter, 1980). Then explained competitive advantage explained by Barney (1991) that competitor advantage is obtained from company ownership and resources, these resources are those that have valuable (valuable), rare (rare), cannot be imitated (imperfectly imitable) characteristics, and cannot be bound (imperfectly substitutable).

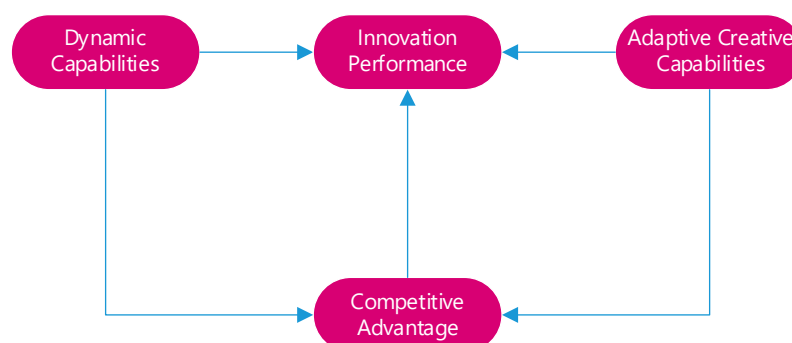


Figure 2. Conceptual Frameworks

### Hypothesis

#### Relationship between dynamic capabilities and innovation performance

Research that states dynamic capabilities have a significant relationship with innovation performance. Integrative capability is the ability to recognize opportunities and configure and deploy resources. The results of the study state that dynamic (integrative) capability has a significant positive effect on company innovation (Liao, 2009). Three dynamic sub-abilities—knowledge acquisition abilities are positively and significantly related to innovation performance; integrative capability has a positive effect in producing innovation performance; and knowledge combination capability has a

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The results of the study show that company size has a positive and significant effect on the capability of radical innovation (Mikalef et al., 2019). Other positive findings state that there is an influence of dynamic capabilities (exploration and exploitation) which have a positive effect on innovation performance (Ferreira et al., 2020). On the other hand, dynamic capabilities are considered a prerequisite or basis for innovation performance (Breznik & Hisrich, 2014) .

### **Relationship between adaptive creative capability and innovation performance**

Adaptability refers to the ability to show the necessary responses and changes to existing or potential situations (Stasielowicz, 2020). According to (Kaur, 2020) that adaptive capabilities can increase a company's innovative capabilities. Creativity and innovation (Abualoush et al., 2018); This research uses descriptive analysis method, and correlation-regression with *variable marketing capability, organizational adaptability*, new product development performance. The results of the study state that organizational adaptability, marketing capabilities affect the performance of new product development (Farhang et al., 2018) (Shafia et al., 2016). Achievement of the performance and survival of business organizations depends on the level of adjustment and renewal of strategic process capacity (Burgelman, 1991). Creative ability to adapt to new combinations of resources leads to innovation and creation of economic value (Mahoney, 2004).

### **Relationship between Dynamic Capabilities and Competitive Advantage**

Dynamic capabilities as “the ability to sense and then seize new opportunities, to reconfigure and protect knowledge assets, competencies, complementary assets and technology to achieve sustainable competitive advantage” (Teece, 1998) . Several research results have proven that dynamic capabilities have a positive effect on competitive advantage/performance/strategic performance (Fang & Zou, 2009; Gelhard et al., 2016; Li & Liu, 2014; Lin & Chen, 2017; Mikalef & Pateli, 2017; Schilke, 2014a, 2014b; Shafia et al., 2016; LY Wu, 2010) .

### **The relationship between adaptive creative capability and competitive advantage**

Companies with adaptability will be the most effective way to maintain business in the long term, in market conditions that have a fast pace of business change (Schilke et al., 2018) . And adaptation requires creative abilities. However, the environment that is experiencing changes in business competition, rapid globalization, is highly unstable, uncertain, and complex has changed the key factors for competitive advantage and long-term business success. These changes trigger changes in business strategy activities. Strategy activities aim to identify the long-term drivers of company survival and growth (Baía & Ferreira, 2019; Laaksonen & Peltoniemi, 2018).

### **The relationship between competitive advantage and innovation performance**

The concept for organizational innovation is still under construction and being debated (Alves et al., 2017) . Innovation is a response mechanism to a state of environmental activity to ensure organizational survival and resources that can inspire managerial choice and selection. (Gopalakrishnan & Damanpour, 1997) . “what are the characteristics of organizational innovation and “how does innovation affect organizational behaviour or outcomes” (organizational innovation performance) remain unanswered (Damanpour, 2017) . Innovation has a decisive and vital contribution to long-term success (Hombert & Matray, 2018).

Based on the previous explanations, the hypothesis proposed are: H1: dynamic capability has a positive effect on innovation performance; H2: capability creative adaptation has a positive effect on innovation performance; H3: dynamic capability has a positive effect on competitive advantage; H4:



capability creative adaptation has a positive effect on competitive advantage; and H5: Competitive advantage has a positive effect on innovation performance.

## 2. Material and Method

This study applied a type of deductive research approach based on theory to develop hypotheses, after compiling hypotheses then data collection and hypothesis testing are carried out. The type of research seen from the level of research conducted is inference research, which is research that draws conclusions by testing hypotheses. And this type of research is seen from the presence of the variables studied including ex post facto research, where research is carried out by studying events that have occurred with the aim of identifying the factors that caused these events to occur.

### Data Collection

The methods of data collection carried out using observation and surveys. Observation is collecting data by making direct observations of objects or research locations to get a clear picture of the object under study. In this study, researchers directly observed the physical condition of KUD in the Kediri and Madiun residencies of East Java (Mataraman) in the managers or leaders of each KUD business unit.

The next data collection technique is a questionnaire. The questionnaire was designed systematically with two types of statements, namely closed statements, and opening statements to obtain clearer information. This study used closed questionnaires in the form of data measurement intervals and closed questionnaires regarding 2 identities, namely: respondent's identity (name, status of manager or unit leader, year of birth, gender, last education, and length of work) and KUD identity (name, address, date of establishment, number of members, number of employees, name of the largest KUD unit). As well as open questionnaires, in the form of questions regarding dynamic capabilities, adaptive creative capabilities, competitive advantage, and innovation performance of the research sample.

This research data collection technique is based on the type of time dimension, namely the type of cross-sectional data, namely data collected at one point. The distribution of questionnaires will be carried out directly. Data collection will be carried out by researchers assisted by ten research assistants.

Based on field observations from August to September 2022, what is meant by one heterogeneous group in the sampling cluster of this study is because the Village Unit Cooperatives in the population have heterogeneous characteristics: the number and size of income of the business units that are running varies, the number of Village Unit Cooperatives members varies between one Village Unit Cooperatives and others, the size and shape of different building assets, the number of employees and managers between Village Unit Cooperatives is different, and so on.

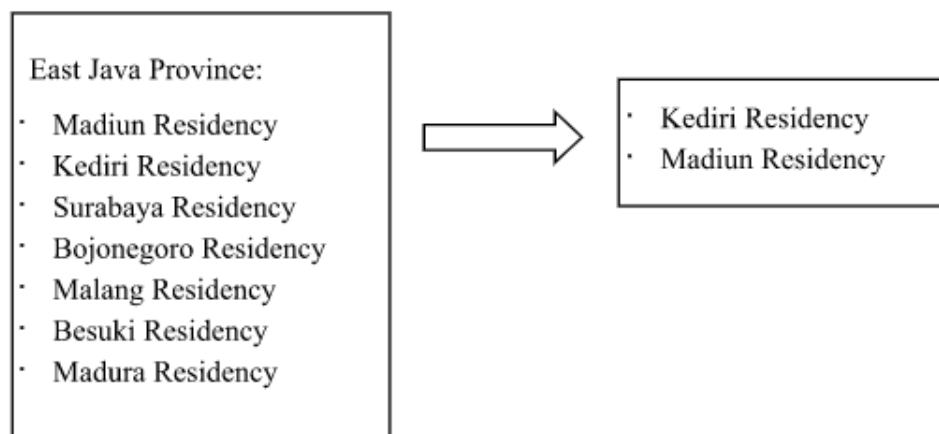


Figure 3. Picture of East Java Residency Classification

### Data Analysis

The models and hypotheses proposed in this study were tested using the Structural Equation Modeling Partial Least Square (SEM PLS) analysis tool. SEM-PLS analysis is carried out through 2 analyses, namely measurement model analysis (outer model) and structural model analysis (inner model). Data processing uses the SEM-PLS Smart PLS 3.0 application. The data that has been filled in by the respondent is made 1 in a Comma Separated Values (CSV) data tabulation. Testing the hypothesis between constructs, namely exogenous constructs on endogenous constructs and endogenous constructs on endogenous constructs, was carried out using the bootstrap resampling method. And the mediation test with the Variance Accounted For (VAF) method.

### 3. Results

The population in this study, namely managers or heads of KUD business units, totaled 140 people. Managers or heads of KUD business units who were still in office at the time the research was conducted. Regionally, the KUD in question is the KUD in the residential areas of Kediri and Madiun. Determination of the sample in this study using the Slovin formula. The sample obtained was 106 people.

Table 1. Demographic Characteristics of Respondents

Gender	Samples (n)	Percentage (%)
Man	66	62,3
Woman	40	37,7
Total	106	100
Age	Samples (n)	Percentage (%)
20 – 25 years	15	14,3
26 – 30 years	7	6,7
31 – 35 years	3	2,9
36 – 40 years	1	0,9
41 – 45 years	5	4,5
46 – 50 years	8	7,6
51 – 55 years	29	27,2
56 – 60 years	16	15
61 – 65 years	12	11,3
65 and above	10	9,6
Amount	106	100
Formal Education level	Samples (n)	Percentage (%)
Middle school/equivalent	1	0,9
High School/equivalent	74	70
D3	5	4,7
S1	25	23,5
S2	1	0,9
Amount	106	100
Year of Services	Samples (n)	Percentage (%)
under 2 years	8	7,5



25 years	23	21,6
6 – 10 years	12	11,3
11 – 15 years	7	6,6
16 – 20 years	8	7,5
21 – 25 years	9	8,5
26 – 30 years	17	16
over 30 years	22	21
Total	106	100

Table 2. Validity and Reliability

Variable	Cronbach's Alpha	Rho-A	Composite Reliability	Average Variance Extracted (AVE)
Adaptation Creative Capability	0.857	0.859	0.893	0.582
Competitive Advantage	0.914	0.923	0.933	0.701
Dynamic Capabilities	0.899	0.905	0.922	0.665
Innovation Performance	0.887	0.886	0.917	0.690

The validity and reliability in the table have been fulfilled, namely Convergent Parameter Validity, Average Variance Extracted (AVE) > 0.50 for Confirmatory and Explanatory Research and Reliability Parameters, Cronbach's Alpha 0.70 for Confirmatory, 0.60 is still acceptable for Explanatory Research.

Table 3. R Square, R Adjusted and Q-Square

Variables	R Square	R Square Adjusted
Competitive Advancement	0.521	0.512
Innovation Performance	0.602	0.590

In assessing the structural model with PLS, it can be started by looking at the *R Squares* for each endogenous latent variable as the predictive power of the structural model. Changes in the value of *R-Squares* can be used to explain the effect of certain exogenous latent variables on endogenous latent variables whether they have a substantive effect. *R-Squares* values 0.75, 0.50, 0.25 it can be concluded that the model is strong, moderate and weak. Competitive advantage and innovation performance are classified as more than the moderate model.

To test the causal relationship between constructs, Structural Equation Modeling with Partial Least Square (PLS) is used, with the following results:

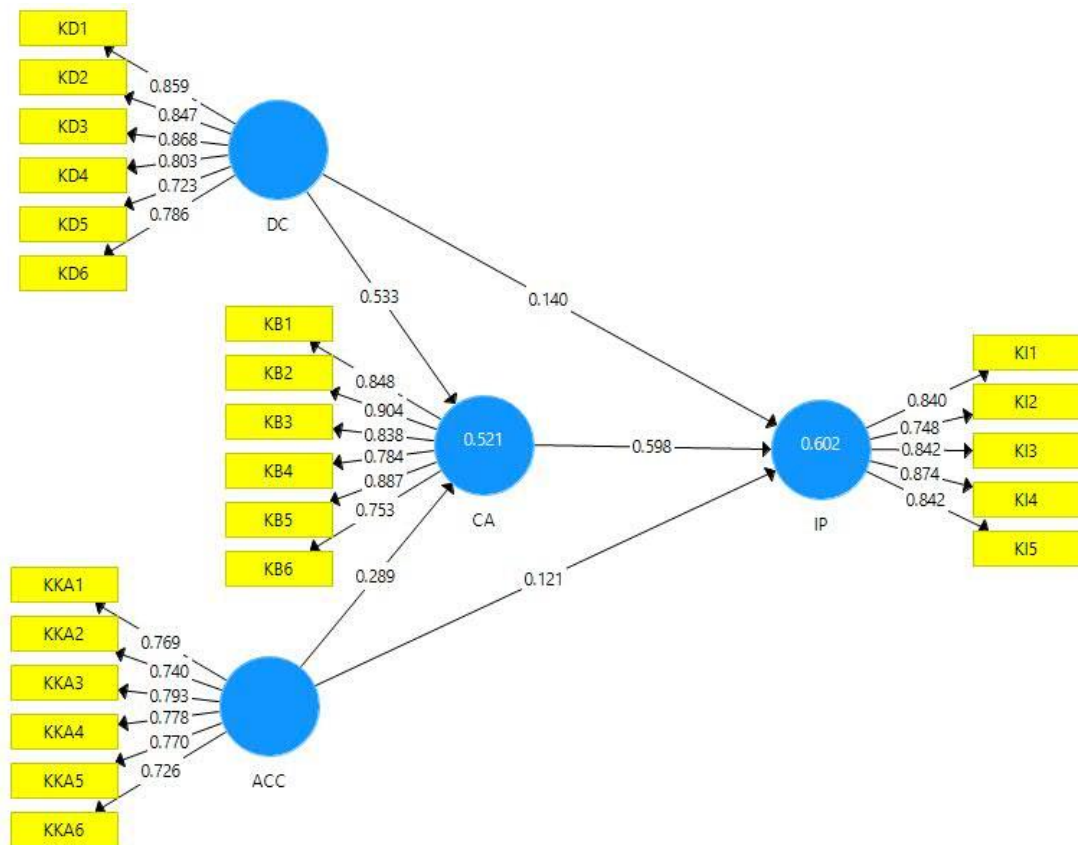
**Figure 4.** Construct and Indicator Relationship Model

Table 4. Hypothesis Test Results (Path Coefficient)

H	Independent variable	Dependent variable	Original Sample (O)	T Statistics ( O/STDEV )	P-value	Results
H1	Dynamic Capabilities	Innovation Performance	0.140	1,307	0.192	Rejected
H2	Adaptive Capabilities	Innovation Performance	0.121	1,640	0.102	Rejected
H3	Dynamic Capability	Competitive Advantage	0.533	8,969	0.000	Accepted
H4	Adaptive Capabilities	Competitive advantage	0.289	4.175	0.000	Accepted
H5	Competitive Advantage	Innovation Performance	0.598	6,298	0.000	Accepted

Table 5. Mediation of Hypothesis Test Results (Path Coefficient)

Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P value	Results
H6: Dynamic Capability, Competitive Advantage, and Innovation Performance.	0.319	5,286	0.000	Accepted

H7: Adaptive Creative Abilit,  
Competitive Advantage and  
Innovation Performance

0.173

3.134

0.002

Accepted

Source: results of analysis of primary data (2022)

Based on the path coefficient results, the hypotheses H3, H4, H5, H6 and H7 are accepted because the statistical T-value are more than 1.96 or the P-value are less than 0.05. Meanwhile the hypotheses of H1 and H2 were not accepted because the statistical T-value is above 1.96 or the P-value are more than 0.05.

#### 4. Discussion

This study failed to prove that dynamic capabilities have no positive effect on innovation performance. This is because the chairman/manager of KUD has categorized business management knowledge low, have categorical business process knowledge low category, has low category ability to develop knowledge about technology to support business, has low category ability to develop marketing knowledge, low category combines knowledge from internal and external organizations, and low category combines knowledge in technology and markets different. When connected with successfully developing new products/services for the market, improving existing products/services, redeveloping product/service designs, developing various raw materials for products/services and developing various product/service motifs (patterns). The results of this study contradict the results of previous studies conducted by (Breznik & Hisrich, 2014) , (H. Wu et al., 2016) , (Baía & Ferreira, 2019), (Mikalef et al., 2019), and (Ferreira et al., 2020).

Table 6. Dynamic Capability Variable Index Value

Dynamic Capability Variable Indicator	Strongly Disagree		Don't agree		Simply Disagree		Doubtful		Simply Agree		Agree		Strongly agreed		Total	Index Value	Level
	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S			
KD1	0.0	1.0	1.8	2.0	2.8	3.0	15.	4.0	12.	5.0	54.	6.0	13.	7.0	554.	79.2	Low
	0	0	9	0	3	0	09	0	26	0	72	0	21	0	72	5	
KD2	0.0	1.0	0.9	2.0	3.7	3.0	13.	4.0	19.	5.0	50.	6.0	11.	7.0	549.	78.5	Low
	0	0	4	0	7	0	21	0	81	0	94	0	32	0	96	7	
KD3	0.0	1.0	3.7	2.0	5.6	3.0	12.	4.0	16.	5.0	50.	6.0	11.	7.0	538.	76.9	Low
	0	0	7	0	6	0	26	0	04	0	94	0	32	0	64	5	
KD4	0.0	1.0	3.7	2.0	3.7	3.0	11.	4.0	19.	5.0	46.	6.0	15.	7.0	546.	78.0	Low
	0	0	7	0	7	0	32	0	81	0	23	0	09	0	19	3	
KD5	0.0	1.0	3.7	2.0	3.7	3.0	18.	4.0	16.	5.0	45.	6.0	12.	7.0	532.	76.0	Low
	0	0	7	0	7	0	87	0	04	0	28	0	26	0	03	0	
KD6	0.0	1.0	7.5	2.0	4.7	3.0	16.	4.0	22.	5.0	38.	6.0	10.	7.0	511.	73.0	Low
	0	0	5	0	2	0	04	0	64	0	68	0	38	0	36	5	

This study failed to prove that adaptive creative capability has no positive effect on innovation performance. This is because the KUD head/manager does not actively developing ideas/ideas/solutions related to business units in an effort to adjust the business environment , not always trying to work in a conducive atmosphere in an effort to adjust to the business environment, not always trying to find information in an effort to adjust the business environment, not always trying to be imaginative in trying to adjust the business environment, not always cooperating with other parties in an effort to adjust the business environment and not always providing financial support in an effort to adjust the business environment . When connected with successfully developing new products/services for the market, improving existing products/services, redeveloping product/service designs, developing various raw materials for products/services and developing various product/service motifs (patterns). The results of this study contradict the results of previous studies conducted by (Mahoney, 2004), (Shafia et al., 2016), (Abualoush et al., 2018), (Farhang et al., 2018) , (Stasielowicz, 2020), and (Kaur, 2020).

Table 7. Adaptation Creative Capability Variable Index Value

Adaptation Creative Capability Indicator	Strongly Disagree		Don't agree		Simply Disagree		Doubtful		Simply Agree		Agree		Strongly agreed		Total	Index Value	Level
	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S			
KKA1	3.7	1.0	2.8	2.0	9.4	3.0	19,	4.0	9.4	5.0	46,	6.0	8,4	7.0	500.	71.5	Low
	7	0	3	0	3	0	81	0	3	0	23	0	9	0	92	6	
KKA2	0.0	1.0	0.0	2.0	2.8	3.0	18.	4.0	4.7	5.0	52,	6.0	20.	7.0	569.	81.4	currently
	0	0	0	0	3	0	87	0	2	0	83	0	75	0	80	0	
KKA3	1.8	1.0	0.9	2.0	8.4	3.0	10.	4.0	5.6	5.0	49.	6.0	23.	7.0	558.	79,7	currently
	9	0	4	0	9	0	38	0	6	0	06	0	58	0	48	8	
KKA4	0.0	1.0	0.9	2.0	8,4	3.0	14,	4.0	11.	5.0	49.	6.0	16.	7.0	547,	78,1	Low
	0	0	4	0	9	0	15	0	32	0	06	0	04	0	19	7	
KKA5	1.8	1.0	0.0	2.0	6,6	3.0	14,	4.0	13,	5.0	39,	6.0	24.	7.0	553.	79,1	Low
	9	0	0	0	0	0	15	0	21	0	62	0	53	0	77	1	
KKA6	2.8	1.0	0.0	2.0	6,6	3.0	19,	4.0	8,4	5.0	43,	6.0	18.	7.0	536.	76,6	Low
	3	0	0	0	0	0	81	0	9	0	40	0	87	0	81	9	

Table 8. Competitive Advantage Variable Index Value

Competitive Advantage Indicators	Strongly Disagree		Don't agree		Simply Disagree		Doubtful		Simply Agree		Agree		Strongly agreed		Total	Index Value	Information
	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S			
K B 1	0.9	1.0	5,6	2.0	6,6	3.0	21.	4.0	16.	5.0	24.	6.0	23.	7.0	516.	73,7	Low
	4	0	6	0	0	0	70	0	98	0	53	0	58	0	00	1	
KB2	0.0	1.0	12,	2.0	9,4	3.0	31,	4.0	12,	5.0	19,	6.0	15.	7.0	463,	66,1	Low
	0	0	26	0	3	0	13	0	26	0	81	0	09	0	12	6	
KB3	0.9	1.0	15.	2.0	5,6	3.0	27,	4.0	14,	5.0	20.	6.0	16.	7.0	465.	66,4	Low
	4	0	09	0	6	0	36	0	15	0	75	0	04	0	07	4	
KB4	0.0	1.0	27,	2.0	10.	3.0	30,	4.0	10.	5.0	16.	6.0	5,6	7.0	394.	56,3	Low
	0	0	36	0	38	0	19	0	38	0	04	0	6	0	38	4	
KB5	0.0	1.0	6,6	2.0	9,4	3.0	33.	4.0	16.	5.0	19,	6.0	14,	7.0	476.	68.0	Low
	0	0	0	0	3	0	02	0	98	0	81	0	15	0	38	5	
KB6	1.8	1.0	20.	2.0	8,4	3.0	28.	4.0	20.	5.0	11.	6.0	8,4	7.0	413,	59.0	Low
	9	0	75	0	9	0	30	0	75	0	32	0	9	0	16	2	

Dynamic capability has a positive effect on competitive advantage. This is because the chairman/manager considers business management knowledge, has business process knowledge, has the ability to develop knowledge about technology to support business, has the ability to develop knowledge about marketing, combining knowledge derived from internal and external organizations, and in combining knowledge in different technology and market areas and will have an impact on producing superior quality products/services, producing products/services that are unique compared to competing products/services, producing various kinds of products/services (differentiation), producing products/services that are difficult to replace by other products/services, running processes business more efficiently and effectively than its competitors, and run business processes that are not easily imitated by competitors. This supports the results of previous research conducted by (Teece, 1998). Several research results have proven that dynamic capabilities have a positive effect on competitive advantage/performance/strategic performance (Fang & Zou, 2009; Gelhard et al., 2016; Li & Liu, 2014; Lin & Chen, 2017; Mikalef & Pateli, 2017; Schilke, 2014a, 2014b; Shafia et al., 2016; LY Wu, 2010).

Table 9. Innovation Performance Variable Index Value

Innovation Performance Indicators	Strongly Disagree		Don't agree		Simply Disagree		Doubtful		Simply Agree		Agree		Strongly agreed		Total	Index Value	Level
	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S	F %	S			
KI1	0.0	1.0	13,	2.0	7.5	3.0	19,	4.0	16.	5.0	33.	6.0	9,4	7.0	477,	68,1	Low
	0	0	21	0	5	0	81	0	98	0	02	0	3	0	34	9	
KI2	0.0	1.0	6,6	2.0	3.7	3.0	16.	4.0	16.	5.0	47,	6.0	9,4	7.0	521.	74,5	Low
	0	0	0	0	7	0	98	0	04	0	17	0	3	0	66	2	

KI3	0.9 4	1.0 0	9.4 3	2.0 0	7.5 5	3.0 0	23. 58	4.0 0	25. 47	5.0 0	27. 36	6.0 0	5.6 6	7.0 0	467. 90	66.8 4	Low
KI4	0.9 4	1.0 0	16. 98	2.0 0	8.4 9	3.0 0	24. 53	4.0 0	15. 09	5.0 0	30. 19	6.0 0	3.7 7	7.0 0	441. 47	63.0 7	Low
KI5	0.0 0	1.0 0	20. 75	2.0 0	5.6 6	3.0 0	24. 53	4.0 0	15. 09	5.0 0	30. 19	6.0 0	3.7 7	7.0 0	439. 58	62.8 0	Low

Adaptive creative capability has a positive effect on competitive advantage. This is because the chairman/manager of KUD produces superior quality products/services, produces products/services that are unique compared to competing products/services, produces various kinds of products/services (differentiation), produces products/services that are difficult to be replaced by other products/services. , run business processes more efficiently and effectively than its competitors, and run business processes that are not easily imitated by competitors. And will have an impact on producing superior quality products/services, producing products/services that are unique compared to competing products/services, producing various kinds of products/services (differentiation), producing products/services that are difficult to replace by other products/services, running processes business more efficiently and effectively than its competitors, and run business processes that are not easily imitated by competitors. This supports the results of previous research conducted by (Schilke et al., 2018; Baía & Ferreira, 2019; Laaksonen & Peltoniemi, 2018) .

Competitive advantage has a positive effect on innovation performance. This is because the chairman/manager of KUD produces superior quality products/services, produces products/services that are unique compared to competing products/services, produces various kinds of products/services (differentiation), produces products/services that are difficult to be replaced by other products/services run business processes more efficiently and effectively than its competitors, and run business processes that are not easily imitated by competitors. When connected with successfully developing new products/services for the market, improving existing products/services, redeveloping product/service designs, developing various raw materials for products/services and developing various product/service motifs (patterns). This supports the results of previous research conducted by (Alves et al., 2017; Damanpour, 2017; Hombert & Matray, 2018).

## 5. Conclusion

Based on the results of the study, it was concluded that competitive advantage is influenced by dynamic capabilities and adaptive creative capabilities, meanwhile competitive advantage affects innovation performance. Based on the results of hypothesis testing, the results of this study support the dynamic capability model in the context of competitive advantage and prove that the adaptive creative capability model has competitive advantage implications.

The dynamic capability and adaptive creative capability of KUD chairman/manager is very important for the success of competitive advantage. Dynamic capability and adaptive creative capability will increase if competitive advantage is able to improve innovation performance, while competitive advantage can be achieved by increasing dynamic capability and adaptive creative capability. dynamic capabilities can be enhanced by increasing business management knowledge, having business process knowledge, having the ability to develop knowledge about technology to support business, having the ability to develop knowledge about marketing, combining knowledge originating from internal and external organizations, and in combining knowledge in different technology fields and markets. Adaptive creative capability can be increased by actively developing ideas/ideas/solutions related to business units in an effort to adjust to a low category business environment, not always trying to work in a conducive atmosphere in an effort to adjust the business environment, not always trying to find information in an effort to adjust the business environment, not always trying to be imaginative in an effort to adapt to the business environment, not always cooperating with other parties in an effort to adapt the business environment and not always providing financial support in an effort to adapt the business environment. This limitation of learning is about time. There was a time lag between the visitor's last visit and the time of the research. Then, researchers could not conduct face-to-face interviews to dig up more in-depth information because of

the Covid-19 pandemic and the KUD working hours were only 3 hours a day. Future research should be carried out again when conditions are normal with the context of KUD areas and KUD business scales that are different, for example KUDs in the East Java region as a whole or areas that have different sociological characters and KUDs that have assets and turnover equivalent to large companies so that they can enrich the testing KUD-based capability model in various contexts and implications.

## References

- Abualoush, S., Masa'deh, R., Bataineh, K., & Alrowwad, A. (2018). The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organizational performance. *Interdisciplinary Journal of Information, Knowledge, and Management*, 13, 279–309. <https://doi.org/10.28945/4088>
- Alpay, G., Bodur, M., Yilmaz, C., & Büyükbacı, P. (2012). How does innovativeness yield superior firm performance? The role of marketing effectiveness. *Innovation: Management, Policy and Practice*, 14(1), 107–128. <https://doi.org/10.5172/impp.2012.14.1.107>
- Alves, AC, Barbieux, D., Reichert, FM, Tello-Gamarra, J., & Zawislak, PA (2017). Innovation and dynamic capabilities of the firm: Defining an assessment model. *RAE Revista de Administracao de Empresas*, 57(3), 232–244. <https://doi.org/10.1590/S0034-759020170304>
- Arfamaini, R. (2020). The Role of Supervisors in Implementing Internal Control of Lending at the East Java Republic of Indonesia Employee Cooperative Association. *Journal of Economics and Business Airlangga*, 29(2), 132–141. <https://doi.org/10.20473/jeba.V29I22019.132-141>
- Baía, EP, & Ferreira, JJM (2019). Dynamic capabilities and performance: How has the relationship been assessed? *Journal of Management and Organization*. <https://doi.org/10.1017/jmo.2019.88>
- Baridwan, I., & Zaki, I. (2020). The impact of lean practices and process innovation on the performance of small and medium sized enterprises: Mediating the role of supply chain management. *International Journal of Supply Chain Management*, 9(4), 405–411.
- Breznik, L., & Hisrich, RD (2014). Dynamic capabilities vs. innovation capability: are they related? *Journal of Small Business and Enterprise Development*, 21(3), 368–384. <https://doi.org/10.1108/JSBED-02-2014-0018>
- Burgelman, RA (1991). Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research. *Organization Science*, 2(3), 239–262. <https://doi.org/10.1287/orsc.2.3.239>
- Clulow, V., Gerstman, J., & Barry, C. (2003). The resource-based view and sustainable competitive advantage: The case of a financial services firm. *Journal of European Industrial Training*, 27(5), 220–232. <https://doi.org/10.1108/03090590310469605>
- Cohen, S., & Kaimenakis, N. (2007). Intellectual capital and corporate performance in knowledge-intensive SMEs. *Learning Organizations*, 14(3), 241–262. <https://doi.org/10.1108/09696470710739417>
- Collis, DJ, & Anand, BN (2019). The Limitations of Dynamic Capabilities. *Harvard Business School, Working Paper No-20-029*, 1–28.
- Damanpour, F. (2017). Innovation Organization. *Business and Management Oxford University Press*, 6 (August), 5–9. <https://doi.org/10.1093/acrefore/9780190224851.013.19>
- Djumeni, E. (2019). Priority for Future Indonesian Cooperative Innovations. *Kompas.com*.
- Fang, E., & Zou, S. (2009). Antecedents and consequences of marketing dynamic capabilities in international joint ventures. *Journal of International Business Studies*, 40 (5), 742–761. <https://doi.org/10.1057/jibs.2008.96>
- Farhang, HS, Abkenari, HA, & Fadaee, M. (2018). The Impact of Organizational Innovation on the Performance of Manufacturing Firms Through Innovation. 10(2), 75–80.
- Ferdinand, A. (2013). Management Research Methods. Research guide for Thesis (Doctoral dissertation, Thesis and Dissertation Management Science).
- Ferreira, J., Cardim, S., & Coelho, A. (2020). Dynamic Capabilities and Mediating Effects of Innovation on the Competitive Advantage and Firm's Performance : the Moderating Role of Organizational Learning Capability.
- Gelhard, C., von Delft, S., & Gudergan, SP (2016). Heterogeneity in dynamic capability configurations: Equifinality and strategic performance. *Journal of Business Research*, 69 (11), 5272–5279. <https://doi.org/10.1016/j.jbusres.2016.04.124>
- Gopalakrishnan, S., & Damanpour, F. (1997). *A Review of Innovation Research in Economics, Sociology and Technology Management*. 25 (I), 15–28.
- Gruszka, A., & Tang, M. (2017). The 4P's Creativity Model and its Application in Different Fields. *Handbook of the Management of Creativity and Innovation*, 51–71. [https://doi.org/10.1142/9789813141889\\_0003](https://doi.org/10.1142/9789813141889_0003)
- Hacklin, F., Björkdahl, J., & Wallin, MW (2018). Strategies for business model innovation: How firms reel in migrating value. *Long Range Planning*, 51(1), 82–110. <https://doi.org/10.1016/j.lrp.2017.06.009>
- Hadi, NH, Zaki, I., & Fatihin, MK (2020). The preferences and prospects of sugar needs in micro, small and medium enterprise industries of food and beverage in Surabaya City. *International Journal of Innovation, Creativity and Change*, 10(12), 339–351.

- Hendratmi, A., Agustina, TS, Sukmaningrum, PS, Widayanti, MA (2022). "Livelihood strategies of women entrepreneurs in Indonesia," *Heliyon*, vol. 8, no. 9, p. e10520. doi: 10.1016/j.heliyon.2022.e10520.
- Hombert, J., & Matray, A. (2018). Can Innovation Help US Manufacturing Firms Escape Import Competition from China? *Journal of Finance* , 73 (5), 2003–2039. <https://doi.org/10.1111/jofi.12691>
- Hsu, LC, & Wang, CH (2012). Clarifying the Effect of Intellectual Capital on Performance: The Mediating Role of Dynamic Capability. *British Journal of Management*, 23(2), 179–205. <https://doi.org/10.1111/j.1467-8551.2010.00718.x>
- Isnaini, R., Pandin, MGR, Waloejo, CS, Sunyowati, D., (2022). Landslide and Moving Ground Disasters in Sumurup Village, Trenggalek District, East Java, Indonesia: A Case Study. IOP Conference Series: Earth and Environmental Science, Volume 995, Sriwijaya Conference on Sustainable Environment, Agriculture and Farming System 29th September 2021, Palembang, Indonesia. sci. 995 012005 DOI 10.1088/1755-1315/995/1/012005
- Jasin, M., & Firmansyah, A. (2023). The role of service quality and marketing mix on customer satisfaction and repurchase intention of SMEs products. *Uncertain Supply Chain Management*, 11(1), 383-390. <https://doi.org/10.5267/j.uscm.2022.9.004>
- Kaur, V. (2020). Frugal Innovation : Knowledge-Based Dynamic Capabilities and Pandemic Response. *California Management Review*, 1–12. <https://cmr.berkeley.edu/2020/06/frugal-innovation/>
- Ketut Sudarsana, I., Putu, I., Putra, AW, Anam, F., Istianti, T., Pandin, MGR, Bhawika, GW, Listiawan, T., Saddhono, K., Abdullah, D., Cathrin, S., Hadjri, MI, & Laili, RN (2019). The Function of Technology and Device Laptop For Education Purpose. *Society, and Technology Journal of Physics: Conference Series*, 1363, 12062. <https://doi.org/10.1088/1742-6596/1363/1/012062>
- Khotijah, SN, Dwi Nugroho, SW, & Darmawati, D. (2022). The Role of Transformational Leadership, Competence, Readiness for Change in Achieving Performance during a Pandemic. *E-Journal of Business Economics and Accounting*, 9(2), 71. <https://doi.org/10.19184/ejeba.v9i2.34087>
- Laaksonen, O., & Peltoniemi, M. (2018). The Essence of Dynamic Capabilities and their Measurement. *International Journal of Management Reviews*, 20(2), 184–205. <https://doi.org/10.1111/ijmr.12122>
- Laila, N., Ratnasari, RT, Ismail, S., Mohd Hidzir, PA, & Mahphoth, MH (2022). The intention of small and medium enterprises' owners to participate in waqf: the case of Malaysia and Indonesia. *International Journal of Islamic and Middle Eastern Finance and Management*. <https://doi.org/10.1108/IMEFM-01-2022-0014>
- Latifah, SW, & Soewarno, N. (2023). The environmental accounting strategy and waste management to achieve MSME's sustainability performance. *Cogent Business and Management*, 10(1), [2176444]. <https://doi.org/10.1080/23311975.2023.2176444>
- Liao, J. (2009). Innovation: An Empirical Examination of Internet Firms. *Journal of Small Business Management*, 47(3), 263–286.
- Li, D. yuan, & Liu, J. (2014). Dynamic capabilities, environmental dynamism and competitive advantage: Evidence from China. *Journal of Business Research* , 67 (1), 2793–2799. <https://doi.org/10.1016/j.jbusres.2012.08.007>
- Lin, YH, & Chen, YS (2017). Determinants of green competitive advantage: the roles of green knowledge sharing, green dynamic capabilities, and green service innovation. *Quality and Quantity* , 51 (4), 1663–1685. <https://doi.org/10.1007/s11135-016-0358-6>
- Liu, L., Yu, B., & Wu, W. (2019). The formation and effects of exploitative dynamic capabilities and explorative dynamic capabilities: An empirical study. *Sustainability (Switzerland)* , 11 (9). <https://doi.org/10.3390/su11092581>
- Mahoney, YYK and JT (2004). Edith Penrose's (1959) Contributions to the Resource-based View of Strategic Management. *Journal of Management Studies*, 41(1), 183–191. [https://doi.org/10.1016/S0020-1693\(00\)94778-9](https://doi.org/10.1016/S0020-1693(00)94778-9)
- Markov, S. (2017). *Joy Paul Guilford - One of the founders of the Psychology of Creativity – Genvive* . <https://geniusrevive.com/en/joy-paul-guilford-one-of-the-founders-of-the-psychology-of-creativity/>
- McDowell, WC, Peake, WO, Coder, LA, & Harris, ML (2018). Building small firm performance through intellectual capital development: Exploring innovation as the "black box." *Journal of Business Research*, 88, 321–327. <https://doi.org/10.1016/j.jbusres.2018.01.025>
- Mikalef, P., Boura, M., Lekakos, G., & Krogstie, J. (2019). Big Data Analytics Capabilities and Innovation: The Mediating Role of Dynamic Capabilities and Moderating Effect of the Environment. *British Journal of Management*, 30(2), 272–298. <https://doi.org/10.1111/1467-8551.12343>
- Mikalef, P., & Pateli, A. (2017). Information technology-enabled dynamic capabilities and their indirect effect on competitive performance: Findings from PLS-SEM and fsQCA. *Journal of Business Research* , 70 , 1–16. <https://doi.org/10.1016/j.jbusres.2016.09.004>
- Monteiro, AP, Soares, AM, & Rua, OL (2019). export performance : The mediating effect of dynamic capabilities. *Suma de Negocios*, 1–9. <https://doi.org/10.1016/j.jik.2019.04.001>
- Munir, M., Amaliyah, & Pandin, MGR (2022). New Perspectives to Reduce Stress Through Digital Humor. *Airlangga Development Journal*, 6(1), 27–36. <https://doi.org/10.20473/adj.v6i1.37543>
- Novandari, W., Suliyanto, & Kartawan, M. (2018). Driving factors of open innovation adoption of MSMEs in Indonesia. *Opcion*, 34(Special Issue 14), 1636–1654.
- Ocasio, W. (1997). *Towards An Attention-Based View Of The Firm* . 18 , 187–206.



- Pandin, MGR, & Yanto, ES (2022). Exploratory Practice as Practitioner Research: A Review of Exploratory Practice for Continuing Professional Development: An Innovative Approach for Language Teachers. *Qualitative Report*, 27(8), 1547-1551. <https://doi.org/10.46743/2160-3715/2022.5809>
- Pandin, MGR, Waloejo, CS, Sunyowati, S, Rizkyah, I (2022). The Potential of Mocaf (Modified Cassava Flour) as Disaster Emergency Food. IOP Conference Series: Earth and Environmental Science, Volume 995, Sriwijaya Conference on Sustainable Environment, Agriculture and Farming System 29th September 2021, Palembang, Indonesia. sci. 995 012006 DOI 10.1088/1755-1315/995/1/012006
- Piórkowska, K. (2016). Behavioral strategy: Adaptability context. *Management* , 20 (1), 256–276. <https://doi.org/10.1515/manment-2015-0038>
- Pisano, GP (2017). Toward a prescriptive theory of dynamic capabilities: Connecting strategic choice, learning, and competition. *Industrial and Corporate Change* , 26 (5), 747–762. <https://doi.org/10.1093/icc/dtx026>
- Prakoewa, CRS, Endaryanto, A., Martanto, TW, Wahyuhadi, J., Rochmah, TN, & Pandin, MGR (2021). Mapping survey of community satisfaction at an academic hospital in Surabaya. *Malaysian Journal of Medicine and Health Sciences*, 17(April), 119-122.
- Pramukti I, Strong C, Chen IH, Yen CF, Rifai A, Ibrahim K, Pandin MGR, Subramaniam H, Griffiths MD, Lin CY, Ko NY. The Motors of COVID-19 Vaccination Acceptance Scale (MoVac-COVID19S): Measurement Invariant Evidence for Its Nine-Item Version in Taiwan, Indonesia, and Malaysia. *Psychol Res Behavior Management* (2022); 15:1617-1625. <https://doi.org/10.2147/PRBM.S363757>
- Pramukti, I., Strong, C., Sitthimongkol, Y., Setiawan, A., Pandin, MGR, & Lin, C. (2020). Anxiety and suicidal thoughts during the COVID-19 Pandemic: A cross-country comparison among Indonesian, Taiwanese, and Thai university students. *Journal of Medical Internet Research*, 0, 1-2. <https://doi.org/10.2196/24487>
- Rahim, R., Kurniasih, N., Daengs Gs, A., Saddhono, K., Riasti, BK, Rangka, IB, Kurniawan, DE, Permana, EP, Anam, F., Listiawan, T., Rumambo Pandin, MG, Gumono, G., Yensy, NAB, Chandra Wardhana, DE, Mustika, WP, & Rindawati, S. (2019). Random and match game for educational purposes with a learning technology system architecture model. *Journal of Physics: Conference Series*, 1179(1). <https://doi.org/10.1088/1742-6596/1179/1/012038>
- Republic, AN, & Indonesia. (2004). Image of East Java in Archives.
- Riswan, R., Suyono, E., Mafudi, M., Riswan, R., Suyono, E., & Mafudi, M. (2017). Revitalization Model for Village Unit Cooperative in Indonesia. In *European Research Studies Journal*: Vol. XX.
- Schilke, O. (2014a). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal* , 35 (2), 179–203. <https://doi.org/10.1002/smj.2099>
- Schilke, O. (2014b). Second-Order Dynamic Capabilities : *Academy of Management Perspectives* , 28 (4), 368–380.
- Schilke, O., Hu, S., & Helfat, CE (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, 12 (1), 390–439. <https://doi.org/10.5465/annals.2016.0014>
- Shafia, MA, Shavvalpour, S., Hosseini, M., & Hosseini, R. (2016). Mediating effect of technological innovation capabilities between dynamic capabilities and competitiveness of research and technology organizations. *Technology Analysis and Strategic Management*, 28(7), 811–826. <https://doi.org/10.1080/09537325.2016.1158404>
- Sopiana, Y., Mursinto, D., Sugiharti, L., (2022). “Convergence Analysis of Economic Growth In South,” *J. Dev. Econ.*, vol. 7, no. 1, pp. 127–141. doi: 10.20473/jde.v7i1.28632.
- Stasielowicz, L. (2020). How important is cognitive ability when adapting to changes? A meta-analysis of the performance adaptation literature. *Personality and Individual Differences*, 166(June), 110178. <https://doi.org/10.1016/j.paid.2020.110178>
- Suharto, Junaedi, WR, Muhdar, HM, Firmansyah, A., & Sarana (2022). Consumer loyalty of Indonesian e-commerce SMEs: The role of social media marketing and customer satisfaction. *International Journal of Data and Network Science*, 6(2), 383-390. <https://doi.org/10.5267/j.ijdns.2021.12.016>
- Sularso. (2018). Development of cooperatives at the end of 2018. <https://Bps.Go.Id>.
- Suliyanto. (2013). Financing model of coconut sugar micro small and medium enterprises (MSMEs) in Indonesia. In *International Business Management* (Vol. 7, Issue 5, pp. 410–413). <https://doi.org/10.3923/ibm.2013.410.413>
- Teece, DJ (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, 86, 202–216. <https://doi.org/10.1016/j.euroecorev.2015.11.006>
- Teece, DJ, Peteratd, M., & Leih, S. (2016). Dynamic capabilities and organizational agility. *California Management Review*, 58(4), 13–35.
- Teece, D. (1998). *Knowledge and the Firm Research Directions for Knowledge Management* . 40 (3), 289–292.
- Teece, DJ, Pisano, G., & Shuen, A. (1997). Dynamic Capabilities And Strategic Management. *Strategic Management Journal*, 18(March), 509–533.
- Valaei, N., Rezaei, S., Bressolles, G., & Dent, MM (2022). Indispensable components of creativity, innovation, and FMCG companies' competitive performance: a resource-based view (RBV) of the firm. *Asia-Pacific Journal of Business Administration*, 14(1), 1–26. <https://doi.org/10.1108/APJBA-11-2020-0420>

- Waloejo CS, Sulistiawan SS, Semedi BP, Dzakiyah AZ, Stella MA, Ikhromi N, Nahyani, Endriani E, Rahardjo E, Pandin MGR. The Anesthetic Techniques for Earthquake Victims in Indonesia. *Open Access Emerg Med.* (2022); 14:77-84. <https://doi.org/10.2147/OAEM.S331344>
- Wu, H., Chen, J., & Jiao, H. (2016). Dynamic capabilities as a mediator linking international diversification and innovation performance of firms in an emerging economy. *Journal of Business Research*, 69(8), 2678–2686. <https://doi.org/10.1016/j.jbusres.2015.11.003>
- Wu, LY (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. *Journal of Business Research*, 63 (1), 27–31. <https://doi.org/10.1016/j.jbusres.2009.01.007>
- Wu, SH, Lin, LY, & Hsu, MY (2007). Intellectual capital, dynamic capabilities, and innovative performance of organizations. *International Journal of Technology Management*, 39(3–4), 279–296. <https://doi.org/10.1504/IJTM.2007.013496>
- Yolles, M. (2019a). The complexity continuum, Part 1: hard and soft theories. *Kybernetes*, 48(6), 1330–1354. <https://doi.org/10.1108/K-06-2018-0337>
- Yolles, M. (2019b). The complexity continuum, part 2: modeling harmony. *Kybernetes*, 48(8), 1626–1652. <https://doi.org/10.1108/K-06-2018-0338>
- Zheng, S., Zhang, W., & du, J. (2011). Knowledge-based dynamic capabilities and innovation in networked environments. In *Journal of Knowledge Management* (Vol. 15, Issue 6, pp. 1035–1051). <https://doi.org/10.1108/13673271111179352>