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**ENTERPRISE RISK MANAGEMENT PRACTICE IN  
ENHANCING RURAL BANKS PERFORMANCE: ROLE OF  
DYNAMIC CAPABILITIES****Candy Candy, Farah Margaretha & Willy Arafah**

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**Abstract**

*The purpose of this paper is to identify the effect of enterprise risk management (ERM) on firm performance with dynamic capabilities as mediating variable. This research using questionnaire survey to gathering data from 21 Indonesia rural banks in Riau Island Province with 31 rural bank's director as respondents. Analysis method in this research is partial least square-structural equation modeling (PLS-SEM). The result showed that ERM and dynamic capabilities have a significant positive effect on the firm performance. The result also indicates that dynamic capabilities mediate the relationship between ERM and firm performance. ERM implementation able to create dynamic capabilities for improved firm performance. Rural banks are advised to implement ERM practices to gain dynamic capabilities to enhance firm performance. This paper is the first comprehensive empirical study that assesses the effect of dynamic capabilities as mediating variable in the relationship between ERM and firm performance.*

**Keywords:** Enterprise Risk Management, Dynamic Capabilities, Firm performance, Rural Banks

**Introduction**

The way to improve quality of risk management implementation can be done through enterprise risk management (ERM). ERM is a risk management that related to good corporate governance (GCG) and provides a holistic perspective in the firm's risk management process. ERM is an integral part of corporate governance and strategy (Bogodistov & Wohlgemuth, 2017). Firms that consider risk in the formulation of strategies and business objectives will be optimized by ERM in achieving firm objectives (COSO, 2017). Risk management activities of a firm can be seen from the level of risk management maturity which consists of ad hoc, initial, repeatable, managed, and leadership (Farrell & Gallagher, 2014). The national risk management survey conducted by Indonesia's Center For Risk Management Studies (2018), most firms in Indonesia have adopted the principles and risk management framework. High maturity level of risk management is dominated

by financial and insurance sector firms (Center For Risk Management Studies, 2017). Financial sector has strict regulations regarding risk management. Commercial banks, rural banks, and non-bank financial services institutions are required by the Indonesia Financial Services Authority to implement risk management. Commercial banks are required to implement risk management by managing credit risk, market risk, liquidity risk, operational risk, compliance risk, legal risk, reputation risk and strategic risk (Otoritas Jasa Keuangan, 2016). Rural banks are still given concessions in the application of risk management, where the application provisions are regulated based on the amount of core capital held (Otoritas Jasa Keuangan, 2015). Performance of firms can be improved through the implementation of ERM. ERM improves firm performance by ensuring that the availability of firm resources can be used in risk management systems (Salaudeen, Atoyebi, & Oyegbile, 2018). Annamalah, Raman, Marthandan, and Logeswaran (2018) shows that ERM implementation can reduce market risk, operational risk, political risk, health, safety and environmental risks, and improve firm performance.

### **Research Framework and Hypothesis**

ERM implementation is a strategic instrument that is able to assist in improving firm performance. A formal ERM practice also helps firm to achieve competitive positions and superior performance (Yang, Ishtiaq, & Anwar, 2018). ERM extends the focus of risk management from a protective position to a strategic one so as to enhance management's ability to manage risk. It will improve the performance of the firms (Rasid, Isa, & Ismail, 2014). ERM acts as a dynamic capabilities that enable firms to deal with changes by responding to downturn conditions (Nair, Rustambekov, McShane, & Fainshmidt, 2013). The ability of risk management is an integral part of dynamic capabilities that creates a risk resistance for firms to change the environment (Bogodistov & Wohlgemuth, 2017). These dynamic capabilities can improve firm performance (Pervan, Curak, & Kramaric, 2018; Kamariah, Rahman, & Kadir, 2017; Permana, Laksmana, & Ellitan, 2017).

### **Effect of ERM to Firm performance**

Yang *et al.* (2018) stated ERM practices help firms in achieve competitive positions and superior performance. ERM minimize financial distress cost, reduce income volatility, negative shocks in financial markets, and improve the decision-making process in investment opportunities. ERM practice also allows firms to reduce cost occurred in operational and non-operational activities of the firms. Firms with formal ERM practices have superior performance than firms without ERM. Firms with high level of maturity and index of ERM will have a better performance (Callahan and Soileau, 2017; Soliman and Adam, 2017). ERM practice can reduce various types of exposure and reduce risk exposure (Florio and Leoni, 2017). Based on previous research, hypothesis of this effect is:

*H<sub>1</sub>: ERM implementation increase rural banks performance*

### **Effect of ERM to Dynamic Capabilities**

ERM play a role in the view of RBV because ERM's frameworks, governance structures, standards and processes can be used to integrate, enhance and assist in knowledge management. These dynamic capabilities are the theory of RBV views that explain the ability to adapt in an environment full of uncertainty (Teoh, Lee, & Muthuveloo, 2017). Research by Krzakiewicz and Cyfert (2015) shows that reputation risk management is a component in the management process of dynamic capabilities. The risk management process allows firms to respond quickly to changes in the environment, lead to existing solutions, and the dominance of the bureaucratic approach. Nair *et al.* (2013) also stated that ERM is a capability that able responds to changes. This capability allows the firm to react effectively to downturn and enter the recovery phase until the upturn condition.

*H<sub>2</sub>: ERM implementation increase rural banks dynamic capabilities.*

### Effect of Dynamic Capabilities to Firm performance

Research by Pervan *et al.* (2018) shows that dynamic capabilities have a positive effect on firm performance. This study shows that the importance of firms in sensing opportunities and threats that contribute to the firm's prosperity and success. Superior firm performance is produced by firms that are able to identify opportunities and technological threats and markets, and take advantage of these opportunities. Firms can assess technological developments and responses from competitors, suppliers, customers and the development of other elements of the firm's competitive environment. The results of the same study were also shown by Kamariah *et al.* (2017) and Permana *et al.* (2017)

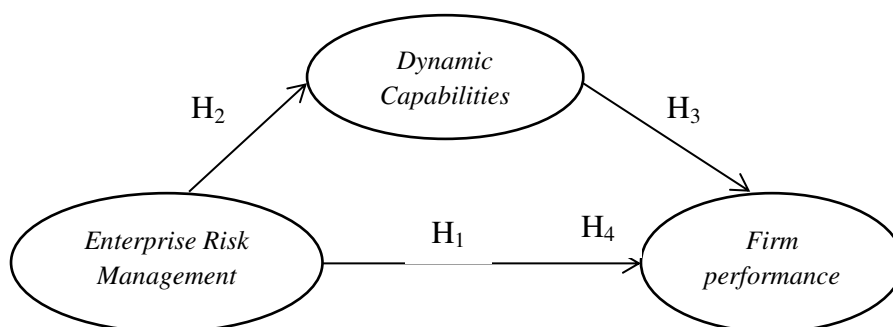
*H<sub>3</sub>: Dynamic capabilities increase rural banks performance*

### Effect of Dynamic Capabilities as Mediating Variable in Relationship of ERM to Firm performance

ERM can increase a firm's ability to anticipate and respond to changes. This capability helps firms identify risk factors and changes that can affect performance or changes in strategy (COSO, 2017). Nair *et al.* (2013) state that firms with ERM capability are able to deal with downturn conditions which can be seen from the stock price not decreasing too significantly and will get a higher level of profitability when upturn conditions. Dynamic capabilities improve the effectiveness, speed, and efficiency of a firm's response to environmental turbulence so that it can improve firm performance. Firms can take advantage of opportunities to increase revenue and reduce costs (Wilden, Gudergan, Nielsen, & Lings, 2013).

*H<sub>4</sub>: Dynamic capabilities have a mediation effect on the relationship between ERM and rural bank performance*

Based on previous research, the relationship between ERM, dynamic capabilities and firm performance were existed. Based on a previous literature review and research, conceptual framework can be illustrated in Figure 1.



**Figure 1: Conceptual Framework**

### Research Methodology

This research is a basic research with quantitative approach and hypothesis testing. Population in this study were rural banks in Riau Islands provinces. Sampling technique in this research is purposive sampling methods. The sampling criteria in this research is rural bank with core capital more than 50 billions. Respondents in this study were directors of rural banks because director has the highest responsibility in the risk management process (Center For Risk Management Studies, 2018). This study using both primary and secondary data. The method of primary data collection through questionnaires, while secondary data are using financial reports of rural banks. Questionnaires was distributed directly and sent by mail or electronically. The

population in this study were members of the board of directors of the rural banks in Riau Province and the Islands. 31 questionnaires were used in the analysis with partial least square-structural equation modeling (PLS-SEM) method. There were 3 main variables in this study, ERM, dynamic capabilities, and firm performance. Table 1 shows the measurements of each variable.

**Table 1: Measurement of Variables**

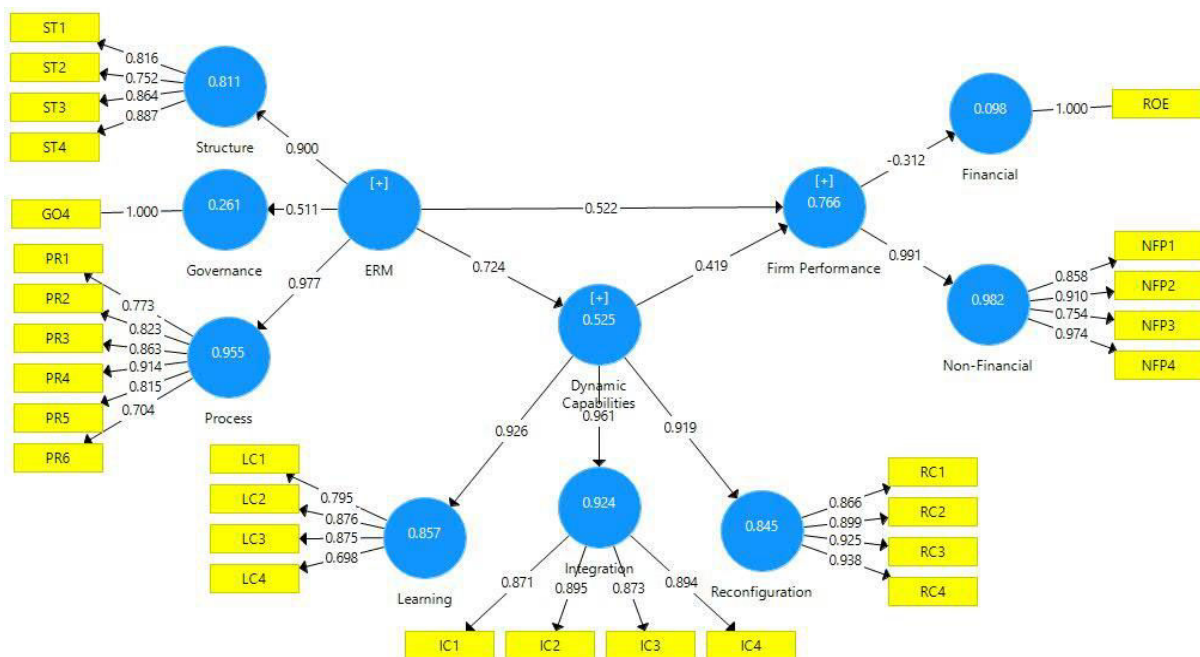
Variable	Dimension	Sources
ERM	Structure (4 indicators)	Teoh <i>et al.</i> (2017)
	Governance (4 indicators)	
	Process (6 indicators)	
Dynamic Capabilities	Learning Capabilities (4 indicators)	Singh and Rao (2017)
	Integration Capabilities (4 indicators)	
	Reconfiguration Capabilities (4 indicators)	
Firm performance	Financial Performance (1 indicators)	Khan, Ismail, Ali, Anjum, and Noman (2019)
	Non-Financial Performance (4 indicators)	

Dependent variables in this research using both financial performance and non-financial performance of rural banks. Rural banks financial performance measured by *return on equity* (ROE), while non-financial performance measured by quality, delivery of service, personnel development, and productivity with likert scale. Likert scales of 1 to 5 were used in the questionnaire for all indicators except financial performance. ROE as financial performance is using scale ratio.

**Result and Discussion**

**Validity and Reliability Test**

Validity and reliability test were used in evaluation of the measurement model (outer model). The PLS algorithm test for outer model have shown in Figure 2.



**Figure 2: PLS Algorithm**

Source: SmartPLS 3.0, 2019 Processed Data

The value of the loading factor for each indicator must exceed 0.7 and the average extracted variance (AVE) must exceed 0.5 in validity test. The value of Cronbach’s Alpha and Composite Reliability must exceed 0.7 in reliability test. Validity and reliability test result can be seen in Table 2.

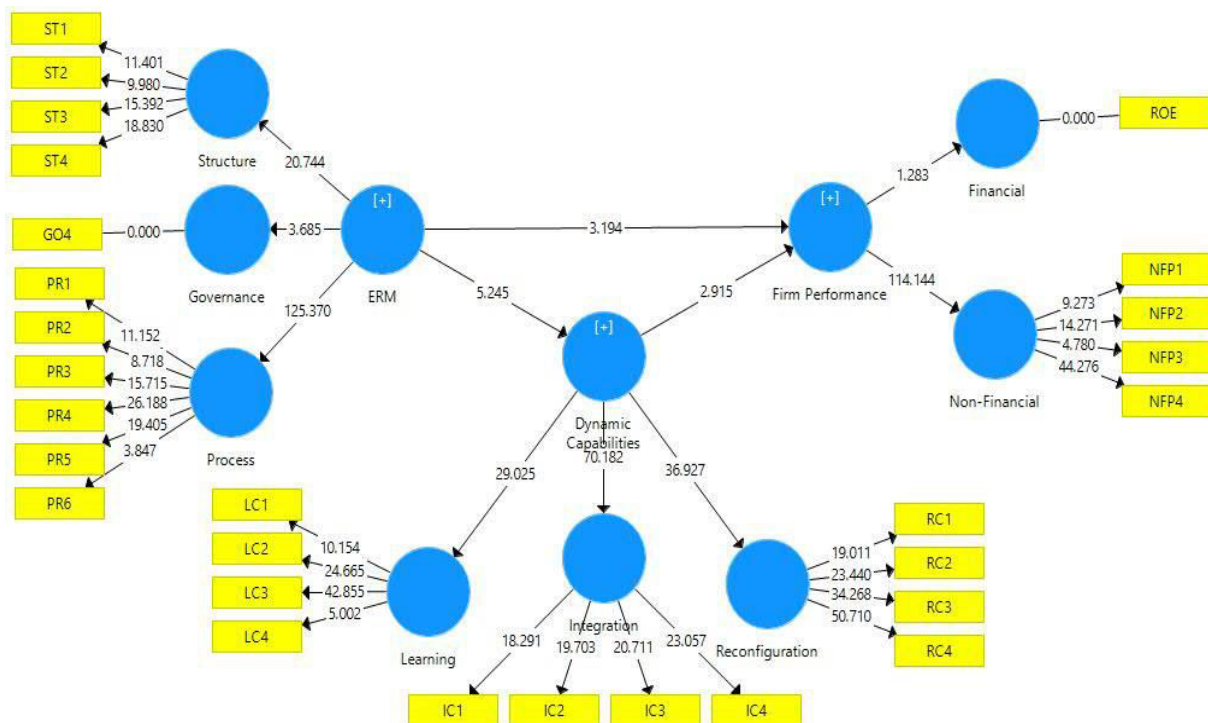
**Table 2: Validity and Reliability Test**

Variable	Dimension	AVE	Cronbach’s Alpha	Composite Reliability
Enterprise Risk Management	Structure	0,691	0,849	0,899
	Governance	1,000	1,000	1,000
	Process	0,669	0,899	0,923
Dynamic Capabilities	Learning	0,663	0,827	0,886
	Integration	0,781	0,906	0,934
	Reconfiguration	0,823	0,928	0,949
Firm performance	Financial Performance	1,000	1,000	1,000
	Non-Financial Performance	0,771	0,898	0,930

Source: SmartPLS 3.0, 2019 Processed Data

**Hypothesis Testing**

Bootstrapping test were used for evaluation of inner model. Figure 3 and Table 3 show the result of bootstrapping test.



**Figure 3: Bootstrapping**

Source: SmartPLS 3.0, 2019 Processed Data

**Table 3: Hypothesis Testing**

Hipotesis	Coefficients	P-Values	Result
H <sub>1</sub> : ERM implementation increase rural banks performance	0.522	0.001	Accepted
H <sub>2</sub> : ERM implementation increase rural banks dynamic capabilities	0.724	0.000	Accepted
H <sub>3</sub> : Dynamic capabilities increase rural banks performance	0.419	0.004	Accepted
H <sub>4</sub> : Dynamic capabilities have a mediation effect on the relationship between ERM and rural performance	0.304	0.040	Accepted

Source: SmartPLS 3.0, 2019 Processed Data

## Discussion

The first hypothesis show coefficients of 0.522 with significance value 0.001. This result indicates that hypothesis H<sub>1</sub> is accepted. ERM enhance firm's growth and improve performance. ERM increases the resilience of firms and ability to anticipate and respond changes by identifying risks (COSO, 2017). This result also consistent with Yang *et al.* (2018). ERM minimizes costs arising from financial difficulties, income volatility, and negative shocks to financial markets and increases ability in selecting investment opportunities. ERM plays a role in reducing various types of exposure and risk exposure. This study consistent with Callahan and Soileau (2017); Soliman and Adam (2017); and Florio and Leoni (2017).

The second hypothesis show coefficients of 0.724 with significance value 0.000. This result indicates that hypothesis H<sub>2</sub> is accepted. ERM is able to help firms identify risks that will occur and changes in dynamic environmental conditions by create a capability. ERM is an integral part of dynamic capabilities that can provide risk resistance for firms in turbulent environments and respond to changes (Bogodistov and Wohlgemuth, 2017; Nair *et al.*, 2013).

The third hypothesis show coefficients of 0.419 with significance value 0.004. This result indicates that hypothesis H<sub>3</sub> is accepted. Dynamic capabilities can solve problems that occur within the company and help in market-oriented decision making and provide innovative changes to resources. This company's capability will support the achievement of superior efficiency and performance (Fainshmidt, Pezeshkan, Lance Frazier, Nair, & Markowski, 2016). This study consistent with Pervan *et al.* (2018); Kamariah *et al.* (2017) and Permana *et al.* (2017).

The fourth hypothesis show coefficients of 0.304 with significance value 0.040. This result indicates that hypothesis H<sub>4</sub> is accepted. It show dynamic capabilities have a mediation effect in the relationship between ERM and firm performance. ERM able to create dynamic capabilities and increase the firm performance. This study consistent with Bogodistov and Wohlgemuth, (2017) and Nair *et al.* (2013) that showed ERM is an integral part of dynamic capabilities. This capability enable firms to have a superior performance by learning, integrating, and reconfiguring (Pervan *et al.*, 2018; Kamariah *et al.*, 2017; Permana *et al.*, 2017; Zhou *et al.*, 2017).

## Conclusion and Implications

This research identifies the effect of ERM on firm performance of rural banks with the mediation effect of dynamic capabilities. Result of this study show that ERM can increase the performance of rural banks and create dynamic capabilities. This research also indicated that dynamic capabilities have a mediation effect on the relationship between ERM and firm performance. ERM implementation able to create dynamic capabilities for improved firm performance. Rural banks are advised to implement ERM practices to gain dynamic capabilities to enhance firm performance. Results of this study give significant contribution to the literature of ERM and dynamic capabilities.

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