

EMPIRICAL ANALYSIS OF FIRM RESOURCES IN THE BANKING INDUSTRY IN INDONESIA: A RESOURCE-BASED VIEW

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ABSTRACT

Firm resources have been considered to be firm strategic assets and have an important role in gaining a competitive advantage. The purpose of this paper is to investigate the role of internal resources that leads to bank competitiveness in Indonesia. To this end, this study adopts a resource-based view concept to identify the firm resources that influence bank competitiveness. A regression analysis is built on balanced panel data set comprising 30 observations of top 10 Indonesia commercial banks (key players) ranging from 2013 to 2015. All data were collected from secondary sources. The analysis reveals that capital adequacy ratio (CAR), branch network, and brand value are significantly related to bank competitiveness, which is measured by return on asset (ROA) and return on equity (ROE). Specifically, branch network and brand value are positively correlated, while CAR and training has found negatively correlated with ROA and ROE. Furthermore, training is the only indicator that found insignificant in this study.

Keywords: Resource-based view; Strategy; Competitiveness; Bank; Firm resources; Competitive advantage.

1. INTRODUCTION

According to Global Competitiveness Report 2015–2016, bank soundness in Indonesia is ranked 74 out of 140 countries (Schwab, 2015). This result indicates that Indonesian banking industry is not competitive and it needs some improvement to compete in the global market. In order to strengthen and enhance the efficiency of the banking system in Indonesia, Bank of Indonesia (BI) and The Financial Services Authority (OJK), as a central bank and monetary authorities in Indonesia, suggest Indonesian banking industry to conduct merger and acquisition (M&A). Nevertheless, the consolidation process, which is done through M&A, tends to increase market concentration in Indonesian banking industry. In the one hand, this high market concentration could indicate a stable and strong Indonesian banking industry. However, on the other hand, a high market concentration could also be a threat, not only to the banking sector, but also to the country's macroeconomics, if not managed properly. According to Banerjee, a bank failure has a significant impact on a nation's financial condition (Zulkaflī & Samad, 2015). It is because, in highly concentrated market, banks failure could trigger financial crisis due to their spill over of failure

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from one bank to the other (contagion effects). Furthermore, systemically important banks (SIB), which are generally dominated by the largest banks, have a bigger impact to nation's economy. Considering a bank's important role as a financial intermediary to support a nation's economy, banking industry has to manage and formulate their strategy properly in order to help maintain an economic stability that is expected.

According to Edith Penrose, a firm can be viewed as a bundle of resources with a great potential to make itself superior than other competitors through resource utilization and exploitation of new resources (Cui, Liu, Wang, & Sun, 2013). Clearly, the firm resources play a crucial role in order to achieve a sustainable competitive advantage (Darabos & Dvorski, 2014). Therefore, firms need to allocate their resources effectively to exploit the opportunity in the market. On the other hand, an external environment, which is very dynamic, tends to make an uncertainty in a business world. Hence, this external environment is not enough to be a basis for strategy formulation because the strategy is actually a combination of internal environment (resources and capabilities) with its external factor (Grant, 2010; Rothaermel, 2008). Furthermore, according to Amit and Schoemaker, firm resources and capabilities may vary across industry as a part to create a superior performance (in Mann & Dutta, 2013). It means that strategic resources and capability of one industry might be differ from other industries.

The application of Resource-Based View (RBV) in Indonesia, especially in the banking industry has been sparse. Even though RBV is a firm internal based approach, it doesn't mean RBV is only applicable in firm-level context. RBV is also applicable in industry context. There are a great number of researchers, who used a RBV approach to analyze a resource in an industry context, such as: pharmaceutical industry in India (Mann & Dutta, 2013), manufacture industry in United Kingdom (Karami, Analoui, & Cusworth, 2004), food and beverages industry in Italy, Spain, and United Kingdom (Alonso, Bressan, & Sakellarios, 2016), biotechnology industry in Malaysia (Ahn & York, 2011), call center industry in United States (Jack, Bedics, & McCary, 2006), bank and financial services industry in India (Panda & Reddy, 2016) and Australia (Clulow, Gerstman, & Barry, 2003), and in other industries all over the world (Wilk & Fensterseifer, 2003). Accordingly, the purpose of this research is to investigate the role of internal resources that leads to bank competitiveness in Indonesia.

2. LITERATURE REVIEW

According to Friend and Zehle (2009), competitive advantage can only be achieved if the firm possesses resources that could fulfill the demand in the business world. This statement also supports the concept of "*strategic fit*" (Hamel & Prahalad, 1993). It means, the resource audit is an essential prerequisite for strategy formulation, because resource audit enables us to identify resources that could lead a firm to gain a competitive advantage (Friend & Zehle, 2009). However, as Hamel and Prahalad (1993) said, strategic fit alone is still unbalanced in gaining a competitive advantage. To make it balanced, Hamel and Prahalad (1993) suggest a strategic stretch concept as a complementary concept of strategic fit.

2.1. Resource-Based View

RBV has a basic principle which concerns about firm internal resources as a source of competitive advantage. It is because a firm internal environment (resources and capabilities) is assumed to have much more stable bases than their external environment (industry structure) as a foundation for strategy formulation (David, 2011; Grant, 2010). Hence, firms are demanded to formulate their strategy, which is based on the acquisition of strategic resources in order to exploit the opportunity in the market and achieve a competitive advantage. Basic assumption that underlies resource-based theory is a resource heterogeneity and immobility (Barney & Hesterly, 2008). With these heterogeneity and immobility resources, a firm has a unique characteristic, which is difficult to imitate by others that lead a firm to gain a sustainable competitive advantage (Barney & Hesterly, 2008). Resource heterogeneity refer to differentiation for a bundle of productive resources in the firm (Barney & Hesterly, 2008). Furthermore, resource immobility is defined as difficulty in moving resources and capabilities from one firm to another, so that their heterogeneity can be long lasting (Barney & Hesterly, 2008).

Barney and Hesterly (2008) identified a framework for analyzing the firm resources and capabilities to achieve a sustainable competitive advantage. This framework called VRIO, which is the abbreviation of Valuable, Rare, Inimitability, and Organization. Valuable means that the firm resources and capabilities are able to exploit opportunity and neutralize a threat in the firm's environment. However, valuable resources only lead a firm to gain a competitive parity. It means, valuable resource still isn't enough to achieve a competitive advantage. Hence, firms are demanded to strengthen their resources to achieve a competitive advantage through a combination of firm resources, which is rare and difficult to imitate by competitors. Furthermore, firms must be organized to exploit their resources effectively to maximize their potential and take advantage from the resources they possess (Friend & Zehle, 2009).

2.2. Firm Competitiveness

A firm competitiveness could be measured from firm performance (Ajitabh & Momaya, 2004). According to Barney (2007), a firm performance could be reflected from firm's profitability ratio. It is because, a firm needs a financial strength to make an investment decision. In this research, a firm competitiveness is measured by profitability ratio that is ROA and ROE.

2.3. Firm Resources

In general, firm resources could be classified as tangibles and intangibles resources. Specifically, Barney (2007) classified firm resources in four major categories, which are financial capital, physical capital, human capital, and organizational capital. Financial capital resource is all resources, in the form of money that can be used by a firm to design and implement their strategy, which can be measured by capital (Barney, 2007; Johnson, Scholes, & Whittington, 2005). Furthermore, physical capital resources are physical assets that owned by a firm or organization, which can be measured by a branch network (Henry, 2008; Friend & Zehle, 2009). Human capital resources are individual's attributes, which very concern about knowledge and skills (knowledge-based) and can be measured by training expenditure (Barney & Hesterly, 2008; Henry, 2008). Organizational capital resources refer to intellectual capital which is related with brands, patents, and reputation (Henry, 2008).

2.4. Financial Capital Resources (CAR)

Bank's capital could be used as a measurement to analyze the bank's financial strength (Menicucci & Paolucci, 2016). Furthermore, according to Rose & Hudgins (2013), bank's capital plays a significant role to their daily operations and their long-term viability. In this research, financial capital resources are measured by CAR.

H₁: Financial capital resources significantly and positively correlated with firm competitiveness

2.5. Physical Capital Resources (Branch)

Branch network is the way for a bank to attract and retain their customers. According to Lamarque (2005), branch network plays a crucial role as a distribution channel for banks products or services (saving, deposits, credit, etc.). Moreover, branch network could also be a firm infrastructure to support fund raising activities. In this research, physical capital resources are measured by branch network in unit (Σ Branch).

H₂: Physical capital resources significantly and positively correlated with firm competitiveness

2.6. Human Capital Resources (Training Ratio)

Human capital resources with its concern about knowledge is a part of a firm strategic resources, which needs to developed and trained over time to improve the firm productivity (Hatch & Dyer, 2004). Furthermore, according to Friend and Zehle (2009), skills could be improved with training. In this research, human capital resources are measured by training cost per employee.

H₃: Human capital resources significantly and positively correlated with firm competitiveness

2.7. Organizational Capital Resources (Brand Value)

As a business of trust, banks have to maintain their reputation in order to preserve the customer's trust (Hartanto, 2009). Reputation often associated with corporate brands, because brands is a form of reputational assets (Grant, 2010). In this research, organizational capital resources are measured by Brand Value.

H₄: Organizational capital resources significantly and positively correlated with firm competitiveness

3. METHODOLOGY

The population that used in this research consists of 43 banks on banking sub-sectors listed in Indonesia Stock Exchange (IDX). Purposive sampling technique has been used for sample selection in this research. Banks have to meet the following requirement to be included in the sample. First, have a core capital above five trillion rupiah (classified as BOOK 3 and 4). Second, have a total asset above 150 trillion rupiah at the end 2015. The top 10 key player Indonesian banks

have been selected to be our sample in this research. These sample also accounted for around 65 percent of total Indonesian banking assets at the end 2015.

This research included secondary sources of information, which are collected from annual reports and other reports from reputable organization (BI, OJK, and Brand Finance). Our balanced panel data set covers a three-year period, ranging from 2013 to 2015 for top 10 key players in Indonesian banking industry. Data regarding CAR, Branch, and Training were obtained from the individual bank annual reports. Whereas, data regarding brand value was obtained from brand finance (2013–2015) published by SWA Magazine.

In general, linear regression equation could be constructed as follows: $Y_{it} = \alpha + \beta_i X_{it} + e_{it}$. Where Y_{it} reflects the competitiveness of bank i at time t , which is measured by ROA and ROE. The term α is the constant and e_{it} is the error term for regression. The term β_i is the regression coefficient of each independent variable. X_{it} is independent variables or firm resources, i.e. financial capital resources (CAR), physical capital resources (Branch), human capital resources (Training), and organizational capital resources (BrandValue). The extending regression equation is formulated as follows:

$$Y_{(\text{ROA})it} = \alpha + \beta_i X_{it} + e_{it} \quad (1)$$

$$Y_{(\text{ROE})it} = \alpha + \beta_i X_{it} + e_{it} \quad (2)$$

Panel regression has been used to analyze the influence of firm resources toward firm competitiveness. We ran Chow (F) test, Hausman test, and Lagrange-Multiplier (LM) test to choose the best estimator for respective equations. Equation (1) is estimated through random effects regression analysis, based on Hausman test. Furthermore, based on Chow (F) test, equation (2) is estimated through common effects regression analysis, this results also verified by LM test, which suggest pooled/common effects as the best estimator for equation (2).

4. THE EMPIRICAL RESULTS

As Table 1, financial capital resources, which is measured by CAR is found significant and negatively correlated with firm competitiveness, which is measured by ROA ($\beta = -0.254012$, $p = 0.0039$) and ROE ($\beta = -1.786967$, $p = 0.0114$). Thus, H_1 is rejected.

Table 1: Regression Analysis

Variables (Indicators)	ROA (Random Effects -- GLS)		ROE (Common Effects/Pooled -- OLS)	
	Coefficient	Sig.	Coefficient	Sig.
Coefficient	5.707975	0.0008	36.50084	0.0053
CAR	-0.254012	0.0039	-1.786967	0.0114
Branch	0.000212	0.0148	0.001502	0.0008
Training	-0.071671	0.2547	-0.030212	0.9298
Brand Value	0.001917	0.0009	0.012382	0.0001
	Cross-section <i>F</i> (Chow) = 0.0149		Cross-section <i>F</i> (Chow) = 0.0525	
	Cross-section random (Hausman) = 0.1791		Cross-section random (Hausman) = 0.3158	
	<i>Adjusted R</i> ² = 0.522371		Breusch-Pagan (LM) = 0.1754	
	<i>Prob. F</i> Statistic = 0.000127		<i>Adjusted R</i> ² = 0.700020	
			<i>Prob. F</i> Statistic = 0.000000	

$$ROA_{it} = 5.707975 - 0.254012 CAR_{it} + 0.000212 Branch_{it} - 0.071671 Training_{it} + 0.001917 BrandValue_{it} + e_{it}$$

$$ROE_{it} = 36.50084 - 1.786967 CAR_{it} + 0.001502 Branch_{it} - 0.030212 Training_{it} + 0.012382 BrandValue_{it} + e_{it}$$

Physical capital resources, which is measured by *Branch* (in unit) is found significant and positively correlated with firm competitiveness, which is measured by ROA ($\beta = 0.000212$, $p = 0.0148$) and ROE ($\beta = 0.001502$, $p = 0.0008$). Thus, H_2 is accepted.

Human capital resources, which is measured by training cost per employee (*Training*) is found insignificant and negatively correlated with firm competitiveness, which is measured by ROA ($\beta = -0.071671$, $p = 0.2547$) and ROE ($\beta = -0.030212$, $p = 0.9298$). Thus, H_3 is rejected.

Organizational capital resources, which is measured by Brand Value is found significant and positively correlated with firm competitiveness, which is measured by ROA ($\beta = 0.001917$, $p = 0.0009$) and ROE ($\beta = 0.012382$, $p = 0.0001$). Thus, H_4 is accepted.

This research reveals that financial capital resources, which is measured by CAR has a significant impact on firm competitiveness. In the one hand, higher CAR could indicate a lower failure risk that faced by banks. However, on the other hand, an excessively high CAR even could indicate banks operate over cautiously and risk averse (Hoffmann, 2011). It means, the banks are not able to take advantage of their capital strength to enhance their competitiveness. According to BBVA Research (2015), Indonesian banking industry has the strongest capitalization in ASEAN, which is reflected by the highest CAR among ASEAN banking industries (Deorukhar & Xia, 2015). This result is in line with risk-return assumption that indicates a trade-off between the risk and the potential return. It means, higher risk is associated with greater potential return. This result also implies that well-capitalized banks tend to operate conservatively and avoid potential profitable investment (Hoffmann, 2011). This result is also consistent with similar research, such as Hoffmann (2011) and Ali, Akhhtar, & Ahmed (2011), that shows a negative influence between capital ratio toward ROA and ROE. It can be concluded that bank with low CAR are able to be more profitable.

This research also finds that physical capital resource, which is measured by branch network (*Branch*), is a significant determinant of firm competitiveness. This result is very reasonable because having the more branch networks means the wider market reach and easier to distribute the bank's product. However, a low banking penetration is a serious problem for Indonesia. According to Findex, at the end 2014, Indonesia is home of 6 % of the world's unbanked population (Demirguc-Kunt, Klapper, Singer, & Oudheusden, 2015). Specifically, there are only 36 % banked population in Indonesia (Deloitte, see Mehrotra *et al.*, 2015, p. 4). It means more than a half of Indonesian adult population still doesn't have a formal access in financial system. This result is consistent with the research of Chen (1999) that found branch network is the critical success factor in United States banking industry. This result, in consonance with the findings of Dick (Hirtle, 2007), finds that a local branch density and geographic reach are considered by the depositors when selecting a bank. According to Berger *et al.* (Hirtle, 2007), a branch network is inefficient from the perspective of minimizing cost, but a branch network is found to be effective to generate revenue.

Human capital resources, which are measured by training cost per employee (*Training*), show a negative influence and insignificant with firm competitiveness. This surprising result doesn't mean that training doesn't have any positive impact on the bank performance. According to Tharenou and Burke (2002), there are indirect influence between training and financial performance, which is measured by ROA and ROE. Moreover, there is also a delay effect between training and its impact on firm performance. Training is also found to improve internal business process, such as communication, cooperation, customer services, and improve product quality (Tharenou & Burke, 2002). This result is also consonance with the previous research of Delery and Doty; Wright, *et al.*; Meschi and Metais that shows no relationships or negative influence between training and firm financial performance (Tharenou & Burke, 2002, p. 122).

Organizational capital resources, which is measured by Brand Value was observed to be a determinant of firm competitiveness. It means, bankers have to pay attention to their brands because a bank is a "business of trust" (Hartanto, 2009). Hence, banks are demanded to concern about their brands through maintain continually their reputation or goodwill to build and gain customer trust. This result also consistent with the previous research of Chen (1999), Ohnemus (in Panda & Reddy, 2016), Panda and Reddy (2016) that found brand value is an essential critical success factor in the banking industry.

5. CONCLUSION

Indonesian banking industry is needed to know and maintain their strategic resources properly in order to gain a competitive advantage. In this research, CAR, Branch, and Brand Value is found to have a significant impact toward Indonesian bank competitiveness. Although this study has found training is insignificant with bank competitiveness, it doesn't mean training is unimportant in the banking industry. The bankers should consider the importance of training as an investment in their human capital resources to improve business internal process in order to give a better service to the customer. Therefore, a firm that could maintain and exploit the benefit from these resources will be able to achieve a sustainable competitive advantage.

According to Teng and Cummings and Priem and Butler (in Hitt, Ireland, & Hoskisson, 2007, p. 85), resource acquisition couldn't be able to achieve a sustainable competitive advantage without

capabilities to take advantage from their resources. By considering the firm resources and capabilities as a foundation for strategy formulation (Resource-Based View), banks will have a much more stable bases for their strategy, so henceforth Indonesian banking industry could be more competitive in global market and gain a sustainable competitive advantage.

To gain more insight, we suggest researchers to conduct similar research and include more variables such as market share, capital expenditure, asset utilization, employee productivity, organizational culture, etc. Moreover, we also suggest future researchers to increase the sample size and longer period in order to increase the power of test.

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