

ANALYSIS OF FACTORS AFFECTING FIRM PERFORMANCE MODERATED BY COMPETITIVE STRATEGIES

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ABSTRACT

The purpose of this study is to obtain empirical evidence whether financial leverage and components of intellectual capital (human capital efficiency, structural capital efficiency, and capital employed efficiency) have an impact on company performance with competitive strategy as moderation. The sample for three years was selected using the cluster sampling method with a total of 27 manufacturing companies listed on the Indonesia Stock Exchange. Eviews is used as a method to perform data processing. The results of the study are that financial leverage, human capital efficiency, and structural capital efficiency have an impact on company performance, while capital employed efficiency and financial leverage moderated by competitive strategy have no impact on company performance.

Keywords: *Firm Performance; Financial Leverage; Intellectual Capital; Competitive Strategies*

ABSTRAK

Tujuan penelitian ialah mendapatkan bukti empiris apakah financial leverage dan komponen *intellectual capital* (*human capital efficiency*, *structural capital efficiency*, dan *capital employed efficiency*) memiliki dampak terhadap kinerja perusahaan dengan strategi kompetitif sebagai moderasi. Sampel selama tiga tahun diseleksi dengan menggunakan metode cluster sampling dengan total 27 perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. Eviews digunakan sebagai metode untuk melakukan olah data. Hasil penelitian ialah *financial leverage*, *human capital efficiency*, dan *structural capital efficiency* memiliki dampak terhadap kinerja perusahaan, sedangkan *capital employed efficiency* dan *financial leverage* yang dimoderasi oleh strategi kompetitif tidak memiliki dampak terhadap kinerja perusahaan.

Kata kunci: *Kinerja Perusahaan; Financial Leverage; Intellectual Capital; Strategi Kompetitif*

INTRODUCTION

In general, the company was founded to increase the value of shareholders, but along with the times, companies are required to have a competitive advantage in order to be able to face increasingly fierce business competition. According to Harjayanti (2017), the company's efforts in achieving company goals can be seen from the company's performance. Performance can be interpreted as a result of what the company has achieved related to the activities carried out during a certain period. Company performance is crucial for management to evaluate company's accomplishment and also determine company's policy, especially for companies going public. This is because the company's performance is a benchmark for investors before deciding to invest. There are several things that investors consider before they invest their funds in the company. First, the company's performance is considered good when the company can provide a high rate of return on investment that has been given. Second, investors also need to consider the level of efficiency the company has in utilizing its assets to earn profits.

According to Widyastuti et al. (2017) company performance is important to measure because it can detect the company's weaknesses so that improvements can be made in the future. If the company does not measure its performance, then there are several of things that can occur, namely, the company does not know what to develop, does not know how to allocate its resources, cannot compare its performance with other companies, does not know the company's performance is rising or falling and does not know which programs have been run correctly. Financial statements are usually used to measure company performance because they contain a summary of financial data and company's achievements over a period. Furthermore,

the financial statements are prepared by the company as a form of accountability and also for decision making, both for internal and external parties. Performance appraisals based on financial statements are often used because they are considered easier. This is because the company's performance can be measured using financial aspects in the form of financial ratios (such as liquidity ratios, solvency ratios, and profitability ratios). Measurement of company performance can also be done by combining both financial and non-financial aspects using the balanced scorecard.

According to Hansen and Mowen (2007) balanced scorecard is a strategic management system that translates the organization's mission and strategy into operational objectives and performance measures for four different perspectives, namely financial perspective, and non-financial perspective (customers, internal business processes, and learning and growth). Learning and growth's perspective is a stage where the company provides training so that employees become skilled. Trained employees can carry out the production process skillfully to reduce the error rate in the production process. This stage reflects the internal business process perspective. Reducing the error rate in the production process will reduce the number of defective products to increase customer satisfaction. This reflects the customer's perspective. When customer satisfaction increases, customers will be loyal to the company, so that company's sales can increase. If sales increase, company's profits also increase. This reflects a financial perspective. Therefore, it can be concluded that the four perspectives are interrelated in order to assess company performance.

Research on the factors that affect company performance has been done a lot but there are inconsistencies in the results of the study. This study replicates the research of Al-

Rdaydeh et al. (2018) which examines the impact of financial leverage on company performance with a competitive strategy as a moderating. This research adds intellectual capital from the research of Firmansyah and Iswajuni (2014). The difference with previous research is that this research was conducted in Indonesia during three years, while the Al-Rdaydeh et al. (2018) was carried out in Jordan during ten years. The above description becomes the background for doing the research again on what factors influence company performance. Based on the above description, this study attempts to answer (1). Does financial leverage affect firm performance? (2). Does human capital efficiency affect firm performance? (3). Does structural capital efficiency affect firm performance? (4). Does capital employed efficiency affect firm performance? (5) Can product differentiation strategy strengthen the impact of financial leverage on firm performance? (6) Can the cost leadership strategy strengthen the impact of financial leverage on firm performance?

THEORETICAL REVIEW

Pecking Order Theory

According to Jibrán et al. (2012) the concept of pecking order theory was developed in 1984 by Myers and Majluf. According to this theory, companies prefer to use internal funding sources in the form of retained earnings rather than external funding sources. External funding sources are seen based on the level of risk. First, companies will use debt, then issuing convertible debt, and the last option is equity. Pecking order theory assumes that corporate funding decisions are based on investors' logical preferences for the company's prospects, where management will be consistent with the company's goal of maximizing shareholder earnings. Therefore,

companies with high profitability tend to utilize internal funding sources (retained earnings) compared to external funding sources to finance their investments. The company will use debt as an external funding source if internal funding sources are insufficient. It means that if the profitability is low, company tends to use debt as a source of funding.

Resource-Based Theory

According to David and David (2017) the concept of resource-based view theory is that in achieving and maintaining competitive advantage, the company's internal resources are more important than external resources. Company performance is determined by internal resources which are grouped into three categories, namely human resources, physical resources, and organizational resources. Human resources include all employees, knowledge, training, skills, experience, intelligence, and ability. Physical resources include raw materials, fixed assets, technology, machinery, and location. Organizational resources include copyright, company structure, information systems, patents, databases, trademarks, and planning processes. These three resources are expected to help companies take advantage of existing opportunities and neutralize emerging threats. Resources are assumed to be valuable when they are difficult to imitate, scarce, and not easily replaceable. These three characteristics enable the company to implement strategies that can increase efficiency and effectiveness, and lead the company to a sustainable competitive advantage.

Michael Porter's Generic Strategies

Generic strategies according to Porter (1985) are general strategies that companies can choose to achieve above-average performance in an industry. Three generic strategies that

can be used are cost leadership, focus, and differentiation. Cost leadership is a strategy in which the company focuses more on producing products at a low per unit cost. Focus is a strategy by which a company produces a product or service to meet the needs of a small group of consumers. Differentiation is a strategy based on the belief that the company gives to customers that the products produced are superior to those offered by competitors. The cost leadership and focus strategy have two alternative types, namely low cost and best value. Low cost means that the company offers the product or service at the lowest price available in the market. Best value means that the company offers the product or service at the best price-value available in the market. This shows that companies that use the best value strategy, means the products or services offered may cost more but have good quality. Companies with large target market and greater access to resources usually use differentiation or cost leadership strategies, while companies with small target market usually use focus strategies.

Firm Performance

In financial terms, according to Bukit et al. (2017) firm performance is the result of management's achievements. According to Kristiana (2014) firm performance reflects how management regulates the company's operational activities in achieving profits. According to Purnamasari (2011) firm performance is the result of the company's achievement related to the use of its resources in its operational activities to achieve the goals set.

Financial Leverage

According to Iqbal and Usman (2018), financial leverage is a very important source of external funding, because company needs funds to purchase new assets so they can increase production or support the company's operations.

According to Rehman (2013), financial leverage is a measure of how much company uses liabilities to finance the company's assets to support the company's operational activities. When the use of debt increases, financial leverage also increases. Septiari and Nasution (2017) state that financial leverage is the use of source of funds with fixed financial costs. This means that the use of debt raises the obligation to pay interest regularly. High debt will increase the cost of debt, so this will affect the company's performance in terms of meeting its obligations both long-term and short-term.

Intellectual Capital

Dzenopoljac et al. (2017) define intellectual capital as company's value driver related to the conversion of raw materials into assets with increased values. This shows that intellectual capital has a role in establishing the company's competitive advantage. Nassar (2018) explains that intellectual capital is a hidden resource that is not included in financial statements, which is used by company in operational activities to provide value added and also can be used as a competitive advantage to maximize the value of the company. Intellectual capital that is managed properly can improve company's performance. Intellectual capital consists of three aspects: human capital efficiency, structural capital efficiency, and capital employed efficiency.

Human Capital Efficiency

Cifuentes and Leon (2015) explained that human capital includes individual experiences, employee competencies, creativity, ideas, attitudes, knowledge, and values. Human capital has a major contribution to the company because employees play a role in helping the company achieve its goals. According to Aritonang et al. (2016), human capital efficiency indicates the ability of human capital to create value for the

company. According to Nurhayati (2017), human capital efficiency shows how much value added is generated from funds incurred by company related to investments in its employees. The investment made by the company to employees aims to make employees more skilled, so they can improve company's performance. Based on this explanation, it can be said that human capital efficiency is an indicator to assess whether a company utilizes its human resources efficiently to create value added for the company.

Structural Capital Efficiency

According to Bontis et al. (2000), structural capital includes databases, organizational charts, manual processes, strategies, and company routines. According to Nassar (2018), structural capital includes trademarks, information technology, patents, and plans, which can be represented through software, databases, hardware, and organizational structures. Nurhayati (2017) explains that structural capital efficiency shows how companies utilize their structural capital to generate value added for the company. According to Aritonang et al. (2016), the higher the structural capital efficiency value indicates that structural capital has a high contribution in creating value added for the company. Based on this explanation, it can be concluded that structural capital efficiency is an indicator to measure how much structural capital contributes to provide value added to the company.

Capital Employed Efficiency

Nassar (2018) explains that capital employed is physical capital and financial assets owned by companies. Companies can use capital employed to provide value added to the company. Nurhayati (2017) explains that the value added generated by a company through capital employed can be seen through capital

employed efficiency. According to Aritonang et al. (2016) capital employed efficiency is a comparison between value-added and capital employed. The higher the value of capital employed efficiency means that companies are more effective in utilizing capital employed to earn income. Based on this explanation, it can be said that capital employed efficiency is an indicator that illustrates how much value added is generated by the company through the management of its capital employed.

Competitive Strategy

Dagnino (2012) states that competitive strategies are related to how a company can gain competitive advantage through a distinctive way of competing. The competitive strategy aims to place the company in a profitable and sustainable position to survive in industrial competition. There are 2 basic types of competitive strategies, which is product differentiation and cost leadership. According to Al-Rdaydeh et al. (2018) product differentiation strategy is a strategy that enables companies to gain competitive advantage through the creation of products or services that emphasize creativity and innovation, so that the products produced are unique and different from competitors. Mahfod et al. (2017) state that the cost leadership strategy is a strategy that allows companies to gain a competitive advantage through manufacturing products at a low costs.

Prior Research

Rahmah and Nanda (2019) researched a study on the effect of intellectual capital on the financial performance of PT Bank Aceh Syariah from July 2015 until December 2017. Financial performance was measured by return on assets. The results showed that human capital efficiency and capital employed efficiency had a positive impact on return on assets, while structural capital efficiency had a negative impact on the return on assets.

Al-Rdaydeh et al. (2018) researched the effect of financial leverage on firm performance with competitive strategies as a moderating role during 2007-2016. The sample used on the research was 61 manufacturing companies. The result showed that financial leverage negatively affected firm performance. The results also show that competitive strategies can strengthen the impact of financial leverage on firm performance. The negative effects of financial leverage were more significant for firms with product differentiation strategy compared to firms with the cost leadership strategy.

Gustina et al. (2018) conducted a study on the effect of value-added intellectual capital on the profitability (return on assets) of banking companies listed on Indonesia Stock Exchange during 2012-2016. The banking companies used are BNI, BRI, and BTN. Value-added intellectual capital consists of three components: human capital efficiency, structural capital efficiency, and capital employed efficiency. The results showed that human capital efficiency and structural capital efficiency had positive impact on return on assets, while capital employed efficiency did not impact on return on assets.

Hamdan (2018) researched the impact of intellectual capital on firm performance. The study was conducted in two countries: Saudi Arabia and Bahrain, and was conducted in 2014-2016. The sample used was 198 companies from two countries. Intellectual capital is measured using value-added intellectual capital consisting of three components: human capital efficiency, structural capital efficiency, and capital employed efficiency. The results of research in Saudi Arabia showed that human capital efficiency, structural capital efficiency, and capital employed efficiency have positive impact on firm performance. The results of the study in Bahrain showed that human capital efficiency and capital employed efficiency do

not impact firm performance, while structural capital efficiency had a positive impact on firm performance.

Muchtar et al. (2018) conducted a study on the impact of investment, leverage, and dividend policy on firm performance (return on assets and Tobin's Q) in 212 non-financial companies during 2003-2013. The results showed that investment has a negative effect on return on assets and Tobin's Q. Leverage has a negative impact on return on assets and a positive effect on Tobin's Q. Dividend policy has positive impact on return on assets and Tobin's Q.

Buallay (2017) researched the impact of intellectual capital on firm performance, where firm performance was measured by return on assets, return on equity and Tobin's Q. The sample used in the study was 171 companies and was conducted in 2012-2014. The results showed that human capital efficiency, structural capital efficiency, and capital employed efficiency do not impact on return on assets. Human capital efficiency has a positive effect on return on equity, while structural capital efficiency and capital employed efficiency do not impact return on equity. Human capital efficiency does not impact Tobin's Q, structural capital efficiency negatively affects Tobin's Q, and capital employed efficiency has a positive impact on Tobin's Q.

Bui (2017) researched the impact of financial leverage on firm performance (return on assets and return on equity) in 18 gas and oil companies during 2009-2014. Financial leverage is measured by the total debt ratio, short term debt ratio, and long term debt ratio. The results showed that the three ratios have a negative impact on firm performance (return on assets and return on equity).

Efendi and Wibowo (2017) conducted a research during 2013-2015 on the impact of debt to equity ratio and debt to asset ratio on firm

performance of 30 companies in the financial sector which were listed on the Indonesia Stock Exchange. Firm performance is measured by return on assets and return on equity. The results showed that debt to equity ratio has a negative impact on return on assets and return on equity, while debt to asset ratio has a positive impact on return on assets and return on equity.

Widiyanti and Elfina (2015) conducted a research during 2010-2013 on the impact of financial leverage on the profitability of 12 automotive and component sub-sector companies listed on the Indonesia Stock Exchange. Financial leverage is measured by debt to asset ratio, debt to equity ratio, and long term debt to equity ratio. Profitability is measured by return on assets. The results showed that financial leverage do not impact on return on assets.

Firmansyah and Iswajuni (2014) conducted a study during 2010-2011 on the impact of intellectual capital on return on assets, market value, growth, and actual return on 296 companies listed on the Indonesia Stock Exchange. The results showed that human capital efficiency do not impact on return on assets, whereas structural capital efficiency and capital employed efficiency have a positive impact on return on assets. Human capital efficiency does not affect market value, while structural capital efficiency and capital employed efficiency have a positive impact on market value. Human capital efficiency, structural capital efficiency, and capital employed efficiency do not impact growth. Human capital efficiency and structural capital efficiency do not impact on actual return, while capital employed efficiency has a positive impact on actual return.

Hypothesis Development. Financial Leverage and Firm Performance

Financial leverage is an important thing to consider in a company because it relates to

the use of external funding sources, namely, debt. Efendi and Wibowo's research (2017) showed that financial leverage has a positive impact on firm performance. This is because high debt will increase the cost of debt. Surely this will motivate managers to improve company performance in order to maximize profits, so it can fulfill their financial obligations, both long-term and short-term. Research by Bui (2017), Al-Rdaydeh et al. (2018), and Muchtar et al. (2018) showed that financial leverage has a negative impact on firm performance. The higher the level of financial leverage, the lower the company's performance. This is because the high use of debt can generate high-interest costs, which causes low retained earnings. Therefore, companies with high profitability prefer to use internal funding sources rather than external funding sources to finance their investments. This statement is in line with the pecking order theory. Besides, the use of debt as a source of funding raises obligations in the form of interest payments that can reduce taxes. In other words, the use of debt leads to tax savings. The high use of debt means that tax savings are also high, but that does not mean companies can use debt as much as possible. The high use of debt can increase the risk of financial distress, because there is concern that the company cannot fulfill its obligations. Hence, the high use of debt can deflate firm performance.

Human Capital Efficiency and Firm Performance

Human capital efficiency is an indicator to assess whether a company utilizes its human resources efficiently to create value added for the company. Research by Gustina et al. (2018), and Rahmah and Nanda (2019) showed that human capital efficiency has a positive impact on firm performance. The company's goal related to the investment in employee training

and development is to make employees become more skilled at doing their jobs. The more skilled employees can improve the firm performance.

Structural Capital Efficiency and Firm Performance

Structural capital efficiency is an indicator to measure the contribution of structural capital in providing value added to the company. Research by Firmansyah and Iswajuni (2014), Gustina et al. (2018), and Hamdan (2018) showed that structural capital efficiency has a positive impact on firm performance. Structural capital is one aspect of intellectual capital that includes infrastructure, technology, trademarks, patents, databases, research and development, and the company's ability to support employees productivity. Companies that conduct research and development can gain new knowledge, then can be transformed into innovations that can be protected in the form of patents or copyrights. Besides, companies with sophisticated technology can streamline the company's operational activities, thus encouraging firm performance. Good utilization of structural capital can expedite employees productivity and generate value added for the company, thereby it can increase firm performance. Rahmah and Nanda's research (2019) showed that structural capital efficiency has a negative effect on company performance. Poor utilization of structural capital can lead to uncontrolled management of assets and human resources. This matter will increase operational costs, which means cannot provide value added to the company and moreover can reduce firm performance.

Capital Employed Efficiency and Firm Performance

Capital employed efficiency is an indicator that illustrates how much value added

is generated by a company through managing capital employed. Research by Firmansyah and Iswajuni (2014), and Rahmah and Nanda (2019) showed that capital employed efficiency has a positive effect on firm performance. This is consistent with resource-based theory where intellectual capital needs to be supported by physical capital in improving firm performance. The biggest value-added owned by the company is generated from physical capital. The capital employed is physical capital and financial assets owned by the company. If the company can utilize and maximize its physical capital, the company's performance will increase.

Financial Leverage, Firm Performance, and Competitive Strategies

Along with the times, companies are required to have a competitive advantage to survive in increasingly fierce business competition. The company's competitive advantage can be seen from its strategy. Competitive strategies are classified into two: product differentiation and cost leadership. Research by Al-Rdaydeh et al. (2018) showed that the product differentiation strategy further strengthens the effect of financial leverage on firm performance compared to the cost leadership strategy. This is because companies with a product differentiation strategy tend to invest more in research and development activities to improve innovative capabilities and the ability to compete with competitors' innovations, so more costs are needed by utilizing external funding sources in the form of debt. The amount of debt used will have an impact on company performance, especially in terms of fulfilling both short-term and long-term obligations. Companies with a cost leadership strategy aim to produce products at the lowest possible cost so they can be sold at low price. Companies with this strategy need to control costs properly and

not spend too much on innovation. Companies with high debt levels, if using a cost leadership strategy will be profitable. This is because this strategy requires companies to save costs. Low expenses can create positive cash flow, which can later be used to pay both long-term and short-term obligations. Companies that can fulfill their obligations can be said that they have a good performance.

Framework and Hypothesis

The framework in this research can be seen in Figure 1. Based on the description above, the proposed hypothesis is as follows:

- H1: Financial leverage affects firm performance.
- H2a: Human capital efficiency influences firm performance.
- H2b: Structural capital efficiency influences firm performance.
- H2c: Capital employed efficiency influences firm performance.
- H3a: Product differentiation strategy can strengthen the effect of financial leverage on firm performance.
- H3b: The cost leadership strategy can strengthen the effect of financial leverage on firm performance.

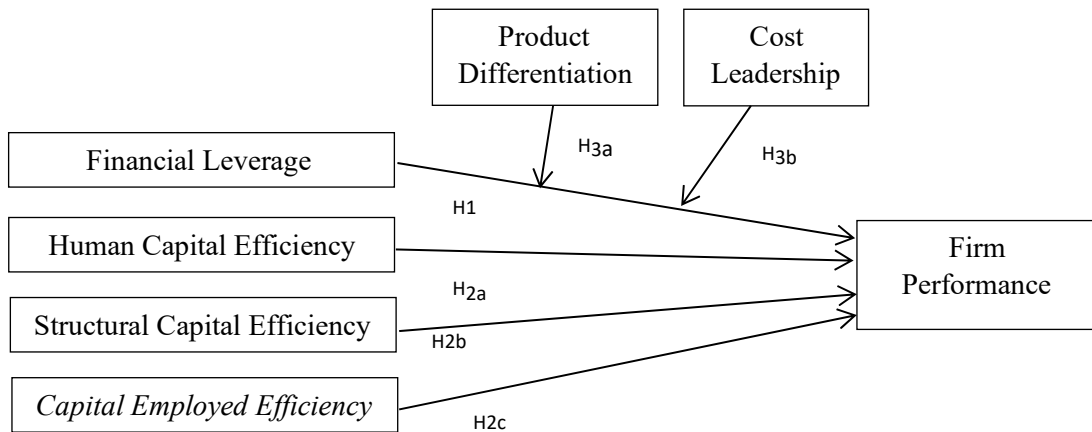


Figure 1. Research Framework

METHODS

Population and Sample

The population in this study were all manufacturing companies listed on the Indonesia Stock Exchange during three years. Before the regression analysis (to analyze the moderate effects of competitive strategies), selected companies are classified into product differentiation and cost leadership using cluster analysis. According to the research of Farooq et al. (2014) there are three significant classification variables: inventory turnover (IVT), asset utilization efficiency (AUE), and premium price

capability (PPC) which are used to classify these companies into two groups: companies that use product differentiation strategies and companies that use cost leadership strategy.

Variable Identification And Measurement

The dependent variable is firm performance, the independent variables in this research consist of financial leverage, human capital efficiency, structural capital efficiency, capital employed efficiency, while the moderating variables used are competitive strategies. The operationalization of each variable can be seen in Table 1.

Table 1. Operationalization of Variables

| Variable | Proxy | Scale | Source |
|-------------------------------|---|---------|--------------------------------|
| Firm Performance | $ROA = \frac{\text{Net Income}}{\text{Total Asset}}$ | Ratio | Al-Rdaydeh et al. (2018) |
| Financial Leverage | $FLEV = \frac{\text{Total Liabilities}}{\text{Total Asset}}$ | Ratio | Al-Rdaydeh et al. (2018) |
| Human Capital Efficiency | $HCE = \frac{\text{Value-Added}}{\text{Human Capital}}$ Which is: Value-added = Operating income - Employee expense Human capital = Employee expense | Ratio | Firmansyah dan Iswajuni (2014) |
| Structural Capital Efficiency | $SCE = \frac{\text{Structure Capital}}{\text{Value-Added}}$ Which is: Structure capital = Value-added - Human capital | Ratio | Firmansyah dan Iswajuni (2014) |
| Capital Employed Efficiency | $CEE = \frac{\text{Value-Added}}{\text{Capital Employed}}$ Which is: Capital employed = Total asset - Total liabilities | Ratio | Firmansyah dan Iswajuni (2014) |
| Competitive Strategy | $IVT = \frac{\text{Sales}}{\text{Inventory Sales}}$ $AUE = \frac{\text{Total Asset}}{\text{Gross margin}}$ $PPC = \frac{\text{Sales}}{\text{Sales}}$ | Nominal | Al-Rdaydeh et al. (2018) |

Data Collection and Processing Techniques

This study uses data collection techniques in the form of observing financial statements of companies listed on the Indonesia Stock Exchange during three years. The data processing technique is a Moderated Regression Analysis using Eviews software version 10. This study uses an error rate of 5%. Regression models in this study are:

$$ROA = a + b_1 FLEV + b_2 HCE + b_3 SCE + b_4 CEE + b_5 (FLEV * STR) + e, \text{ which is: } ROA = \text{Firm Performance, } FLEV = \text{Financial Leverage,}$$

HCE = Human Capital Efficiency, SCE = Structural Capital Efficiency, CEE = Capital Employed Efficiency, STR = Competitive Strategy, and e = Error.

RESULTS AND ANALYSIS

Sample Selection

This research was conducted to determine the impact of financial leverage, human capital efficiency, structural capital efficiency, capital

employed efficiency, financial leverage which is moderated by competitive strategies on firm performance. The sampling technique used was cluster sampling. The criteria that have been determined are as follows:

1. Companies with the consumer goods

sector which are listed on the Indonesia Stock Exchange during three years and 2. Companies with the consumer goods sector that have not suffered losses during three years. The sample selection process is as follows (Table 2).

Table 2. Sample Selection Process

| No. | Sample Selection Criteria | Company |
|-----|---|------------|
| 1 | The consumer goods manufacturing company registered on the Indonesia Stock Exchange | 38 |
| 2 | Consumer goods manufacturing companies who suffered losses | (11) 27 |

Based on Table 2 data processed in this research as much as 81 data from 27 samples of manufacturing companies.

According to Al-Rdaydeh et al. (2018) companies that use a product differentiation strategy show high inventory turnover (IVT) in a few days, low asset utilization efficiency (AUE), and high premium price capability (PPC). Conversely, companies that use cost leadership strategy show low inventory turnover (IVT) in a few days, high asset utilization efficiency (AUE), and low premium price capability (PPC). In this study, companies that use the product differentiation strategy are included in cluster 1, while companies that use the cost leadership strategy are included in cluster 2. In year 1 there were 3 companies included in cluster 1, while the remaining 24 companies included in cluster 2. In

year 2 there were 7 companies included in cluster 1, while the remaining 20 companies included in cluster 2. In year 3 there were 8 companies included in cluster 1, while the remaining 19 companies included in cluster 2.

Model Selection

After testing related to the selection of the best model between the common effect model, fixed-effect model, and random effect model, it was found that the best model to use in this study was the fixed-effect model. The fixed-effect model test results are carried out twice to find out whether there is a change in influence with the existence of moderation. Here are the results of the fixed effect model test without moderation (Table 3).

Table 3. Fixed Effect Model Test Results Without Moderation

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0,132883 | 0,079174 | 1,678363 | 0,0995 |
| FLEV | 0,879250 | 0,119025 | 7,387119 | 0,0000 |
| HCE | 0,039880 | 0,013212 | 3,018488 | 0,0040 |
| SCE | -0,626743 | 0,168400 | -3,721754 | 0,0005 |
| CEE | -0,204755 | 0,125247 | -1,634805 | 0,1084 |

Based on Table 3 the regression equation can be formulated as follows:

$$ROA = 0,132883 + 0,879250 \text{ FLEV} + 0,039880 \text{ HCE} - 0,626743 \text{ SCE} - 0,204755 \text{ CEE} + e$$

Modified fixed-effect model test results (Table 4).

Tabel 4. Fixed Effect Model Test Results with Moderation

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0,135882 | 0,078953 | 1,721052 | 0,0916 |
| FLEV | 0,965669 | 0,140230 | 6,886343 | 0,0000 |
| HCE | 0,037078 | 0,013389 | 2,769251 | 0,0079 |
| SCE | -0,658470 | 0,170068 | -3,871801 | 0,0003 |
| CEE | -0,163069 | 0,129936 | -1,254990 | 0,2154 |
| FLEV*STR | -0,085927 | 0,074353 | -1,155659 | 0,2534 |

Based on Table 4 the regression equation can be formulated as follows:

$$ROA = 0,135882 + 0,965669 \text{ FLEV} + 0,037078 \text{ HCE} - 0,658470 \text{ SCE} - 0,163069 \text{ CEE} - 0,085927 \text{ (FLEV*STR)} + e$$

The regression equation above shows the coefficient for the interaction between financial leverage and competitive strategies is -0,085927. A negative value indicates the opposite relationship between the interaction

of financial leverage and competitive strategies with firm performance. The test results show that overall there were no significant differences for the two equations. The changes that occur to the coefficient value are quite small and there is no change in direction in the regression.

Descriptive Statistics

Following are the descriptive statistical test results (Table 5).

Table 5. Descriptive Statistics Test Results

| | N | Maximum | Minimum | Mean | Std. Deviation |
|----------|----|----------|----------|----------|----------------|
| ROA | 81 | 0,921000 | 0,009000 | 0,131184 | 0,142076 |
| FLEV | 81 | 0,726400 | 0,076900 | 0,366704 | 0,165203 |
| HCE | 81 | 11,71070 | 1,231900 | 3,642281 | 2,537273 |
| SCE | 81 | 0,914600 | 0,188200 | 0,599330 | 0,212955 |
| CEE | 81 | 2,082400 | 0,102500 | 0,457884 | 0,423752 |
| FLEV*STR | 81 | 0,726400 | 0,000000 | 0,285765 | 0,209555 |

Based on Table 5 it can be concluded that the number studied is 81 data. Firm performance (ROA) has a maximum value of 0,921000, a minimum value of 0,009000, a mean value of 0,131184, and a standard deviation value of 0,142076. Financial leverage (FLEV) has a maximum value of 0,726400, a minimum value of 0,076900, a mean value of 0,366704, and a standard deviation value of 0,165203. Human

capital efficiency (HCE) has a maximum value of 11,71070, and a minimum value of 1,231900, a mean value of 3,642281, and a standard deviation value of 2,537273. Structural capital efficiency (SCE) has a maximum value of 0,914600, a minimum value of 0,188200, a mean value of 0,599330, and a standard deviation value of 0,212955. Capital employed efficiency (CEE) has a maximum value of 2,082400, a minimum

value of 0,102500, a value (mean) of 0,457884, and a standard deviation value of 0,423752. The interaction between moderated financial leverage and competitive strategies (FLEV*STR) has a maximum value of 0,726400, a minimum value of 0,000000, a mean value of 0,285765, and a standard deviation value of 0,209555.

In this research, the coefficient of determination test, F test, and t-test will be conducted. First of all, the coefficient of determination test is done first. The coefficient of determination test in this study was carried out twice: the coefficient of determination without moderation and the coefficient of determination with moderation.

Table 6. Determination Coefficient Test Results Without Moderation

| | |
|--------------------|----------|
| Adjusted R-Squared | 0,870302 |
|--------------------|----------|

Based on Table 6 Adjusted R-Squared value of 0,870302 or 87,0302% is obtained. This means that 87,0302% of variations in firm performance can be explained by variations in financial leverage, human capital efficiency, structural capital efficiency, and capital employed efficiency, while the remaining 12,9698% is explained by other variables outside the research model.

Table 7. Determination Coefficient Test Results with Moderation

| | |
|--------------------|----------|
| Adjusted R-Squared | 0,871167 |
|--------------------|----------|

Based on Table 7 Adjusted R-Squared value of 0,871167 or 87,1167% is obtained. This means that 87,1167% of the variation in firm performance can be explained by variations in financial leverage, human capital efficiency, structural capital efficiency, capital

employed efficiency, and interactions between financial leverage and competitive strategies, while the remaining 12,8833% is explained by variables other than the research model. It can be concluded that there is a slight difference between the Adjusted R-Squared value on the test results of the coefficient of determination without moderation and the results of the test of the coefficient of determination with moderation that is equal to 0,000865.

Furthermore, the F test will be carried out, which this test will also be carried out twice to know whether there is a difference between the F test without moderation and the F test with moderation. Here are the results of the F test without moderation (Table 8).

Table 8. F Test Results Without Moderation

| | |
|--------------------|----------|
| Prob (F-statistic) | 0,000000 |
|--------------------|----------|

Table 8 shows the probability value of 0,000000. This means that the regression model without moderation is an appropriate and feasible model to use. The results of the F test with moderation are as follows (Table 9).

Table 9. F Test Results With Moderation

| | |
|--------------------|----------|
| Prob (F-statistic) | 0,000000 |
|--------------------|----------|

Table 9 shows the probability value of 0,000000. This means that the moderated regression model is a model that is suitable and feasible to use. The last step is to do a t-test. A t-test is done twice to find out whether there is a difference between the t-test without moderation and the t-test with moderation. Here are the results of the t-test without moderation (Table 10).

Table 10. t-Test Results Without Moderation

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0,132883 | 0,079174 | 1,678363 | 0,0995 |
| FLEV | 0,879250 | 0,119025 | 7,387119 | 0,0000 |
| HCE | 0,039880 | 0,013212 | 3,018488 | 0,0040 |
| SCE | -0,626743 | 0,168400 | -3,721754 | 0,0005 |
| CEE | -0,204755 | 0,125247 | -1,634805 | 0,1084 |

Table 10 shows that financial leverage has a coefficient value of 0,879250 and a probability value of 0,0000 so that H1 is accepted, which means that financial leverage affects the company's performance. Human capital efficiency has a coefficient value of 0,039880 and a probability value of 0,0040 so that H2a is accepted, which means human capital efficiency affects company performance. Structural capital efficiency has

a coefficient of -0,626743 and a probability value of 0,0005 so that H2b is accepted, which means structural capital efficiency influences company performance. Capital employed efficiency has a coefficient value of -0,204755 and a probability value of 0,1084 so H2c is not accepted, which means capital employed efficiency does not affect on firm performance. The results of the t-test with moderation are as follows:

Table 11. t-Test Results With Moderation

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0,135882 | 0,078953 | 1,721052 | 0,0916 |
| FLEV | 0,965669 | 0,140230 | 6,886343 | 0,0000 |
| HCE | 0,037078 | 0,013389 | 2,769251 | 0,0079 |
| SCE | -0,658470 | 0,170068 | -3,871801 | 0,0003 |
| CEE | -0,163069 | 0,129936 | -1,254990 | 0,2154 |
| FLEV*STR | -0,085927 | 0,074353 | -1,155659 | 0,2534 |

Table 11 shows that financial leverage has a coefficient value of 0,965669 and a probability value of 0,0000 so that H1 is accepted, which means financial leverage impact the company's performance. The higher the financial leverage, the company's performance will increase. This is because high debt will increase the cost of debt. Surely this will motivate managers to improve company performance in order to maximize profits, so it can fulfill their financial obligations, both long-term and short-term.

Human capital efficiency has a coefficient value of 0,037078 and a probability value

of 0,0079 so that H2a is accepted, which means human capital efficiency impact firm performance. The higher the human capital efficiency will increase the firm performance. The results of this study are in line with the resource-based view theory, where the theory explains that companies that have a competitive advantage can optimize company's performance. Competitive advantages can be had when companies focus on internal resources compared to external resources. One of the company's internal resources is human resources (employees). The investment made by the company to employees

aims to make employees more skilled in doing their jobs. Skilled employees can support the company's operational activities, so company's performance can improve.

Structural capital efficiency has a coefficient of -0,658470 and a probability value of 0,0003 so that H2b is accepted, which means structural capital efficiency influences firm performance. The higher structural capital efficiency, decreases the firm performance. Structural capital is a tool that supports human capital in improving company performance. No matter how sophisticated the company's production system, if it is not supported by skilled human resources, it can reduce the company's performance. For example, a company has a computerized system related to production, but its human resources do not understand the system, so the costs incurred by the company related to the system are greater than the benefits obtained.

Capital employed efficiency has a coefficient value of -0,163069 and a probability value of 0,2154 so H2c is not accepted, which means capital employed efficiency does not affect firm performance. The existence of a negative influence can be interpreted that the high investment of companies related to physical capital and financial assets can reduce company performance. This is because manufacturing companies will usually invest more in physical capital, such as sophisticated machines to support operational activities, but if not supported by skilled employees, it can reduce company performance because the costs incurred by companies related to the purchase of machines are greater than the benefits which are obtained.

The interaction between financial leverage and competitive strategy has a probability value of 0,2534 so H3a and H3b are not accepted. This means that competitive strategies (both product

differentiation and cost leadership) cannot strengthen the effect of financial leverage on firm performance. Competitive strategies (both product differentiation and cost leadership) cannot moderate financial leverage with firm performance because the number of samples used in this study is relatively small, amounting to 27 companies during three years. In contrast to the research of Al-Rdaydeh et al. (2018) which used a sample of 61 companies during ten years.

CONCLUSION

Financial leverage affects the firm performance. The results of this study are consistent with the research of Efendi and Wibowo (2017), but inconsistent with the research of Widiyanti and Elfina (2015) which states that financial leverage does not impact on firm performance.

Human capital efficiency affects firm performance. The results of this study are consistent with the research of Gustina et al. (2018), Hamdan (2018), and Rahmah and Nanda (2019), but not consistent with the research of Firmansyah and Iswajuni (2014), and Buallay (2017) which states that human capital efficiency does not affect on firm performance.

Structural capital efficiency influences firm performance. The results of this study are consistent with Rahmah and Nanda's (2019) research, but they are not consistent with Buallay's research (2017) which states that structural capital efficiency does not affect firm performance.

Capital employed efficiency does not impact firm performance. The results of this study are consistent with the research of Buallay (2017), and Gustina et al. (2018), but inconsistent with the research of Firmansyah and Iswajuni (2014), and Rahmah and Nanda (2019)

which stated that capital employed efficiency influences firm performance.

The interaction between financial leverage and competitive strategies (both cost leadership and product differentiation) does not affect firm performance. The results of this study are not consistent with the research of Al-Rdaydeh et al. (2018) which states that competitive strategies (both cost leadership and product differentiation) can strengthen the effect of financial leverage on firm performance.

The limitation of this study is the use of relatively short observation years, and the sample of this study is limited, which only uses one sector of the three sectors in manufacturing companies. Future studies can use longer years of observation and research samples are expected to use all three sectors in manufacturing companies. Besides, although the competitive strategy (both product differentiation and cost leadership) in this study cannot moderate financial leverage with firm performance, manufacturing companies must still implement these strategies to have a competitive advantage so that they can survive in fierce competition.

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