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Analysing the Factors that Impact Manufacturing Companies' Financial Performance in Indonesia

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ABSTRACT
This research was conducted with the aim of obtaining quantitative evidence of the component of intellectual capital, asset management, liquidity, firm size, and leverage on firm's financial performance. The population used in this research are manufacturing companies listed in Indonesia Stock Exchange for the period of 2017-2020, with a total of 197 companies. The sample in this research was selected using the purposive sampling method with a total sample used of 66 companies. The method of analysis in this research is using the multiple regression analysis which aims to determine the effect of each variable on the companies' financial performance. The result of this research show that value added capital employed, value added human capital, and asset turnover ratio have a significant effect on financial performance. On the other hand, the structural capital value added, current ratio, size, and debt to asset ratio do not have a significant effect on financial performance.

Keywords: *Intellectual capital, financial ratio, financial performance*

1. INTRODUCTION

In the new era of globalization, the financial performance of a company is one of the indicators to see whether the company has successfully managed its business activities [1]. Financial performance is also indicating company's achievement in realizing its vision, mission, and targeted goals [2]. One way to assess the company's financial performance is by determining the profit generated by the utilization of company's assets. Moreover, business model shifting from labour-based business to knowledge-based business requires companies to be able to carry out the ideal management of both its physical asset and intellectual capital. Utilizing these two main resources is intended so that the company can gain a higher competitive advantage than its rivals [3].

Strict competition as a by-product of implementing knowledge-based business has resulted in shocks on the efficiency and effectiveness of company's production capability method of compositional verification. To be able to face these challenges, companies must be able to utilize their intellectual capital, such as innovation, information system, know-how, brand, strategy, technology, professionalism, commitment, and competences [4].

Asset management measured by asset turnover is affecting how well is the company's performance to generate revenue. High asset turnover ratio mean that the assets owned has the ability to bring in huge increase of company's financial performance [5].

Liquidity is the ratio that show the company's ability to pay its short-term debt. The company's liquidity also used to valuate the working capital efficiency to sustain its operational activities [5].

Firm size is another factor that may affect the company's financial performance. Firm size indicates the amount of asset owned by a company and its market capitalization. Company with a big firm size also make it easier to get access on external funding [6].

Leverage or capital structure show the amount of the company's asset owned that is being funded by liabilities. A company often consider investing in new assets to increase the production efficiency,

with that being said leverage is one of a way to represent the proportion of debts and assets in company's financial performance [7].

1.1. Related Work

According to the introduction above we break down each variable to further explain their definition and concept. The following are the respective variable definition and concept:

1.1.1. Intellectual Capital

Value creation on a business should utilize both intellectual and capital assets to maximize their financial performance [8]. The connection between the main functions and a chance to develop will help business to manage their activities to be more efficient and effective. Industries require extremely specialized knowledge and skills and are subject to companies' implicit capabilities, so the endurance of the companies requires significant volumes of human resources and physical capital [3]. There is three main category that build intellectual capital, which is value added capital employed (VACA), value added human capital (VAHU), and structural capital value added (SCVA) [9].

1.1.1.1. Value added capital employed

Value added capital employed (VACA) refers to unit contribution that company obtain by making use of its physical asset [10]. VACA also gauge the efficiency of both physical capital and financial capital in the value creation process [4]. The higher the unit contribution from the usage of the capital, then the company's financial performance will tend to increase along the line. Manufacturing companies tend to have a large proportion of investment in their physical assets depending on their daily operation [11]. Additionally, VACA also indicate value added from net asset which is the company's capital to continue their operational activities [12].

1.1.1.2. Value added human capital.

Value added human capital (VAHU) refers to knowledge and experience to generate value added through other component in the company [13]. Human capital also includes competences, skills, and all the cost that is spent for the human capital's education, trainings, and courses to give a positive impact on company's financial performance [14]. Optimum operating process will also bring an optimum productivity. Value creation from human capital is used to fulfil company's goals and creating new opportunities to generate more profit [15]. Quite simply, human capital represents the individual knowledge and skills that enable one to change practices and to think of innovative solution to problems [16]

1.1.1.3. Structural capital value added

Structural capital value added (SCVA) consists of all the results of business activities form the use of company's infrastructure that facilitates human capital to generate value on financial performance [10]. Structural capital includes the ownership of buildings, hardware, process, patent, information systems, and database property rights [17]. The combinations of hardwares, softwares, patent, brand, information system, and database mentioned will create additional financial value for the company financial performance.

1.1.2. Asset Management

Asset management is used to measure how effective is the company's in managing its assets to generate revenue [18]. Utilization of both tangible and intangible assets were meant to achieve the company's goals, positive contributions will be generated as well if the company's managing its activity by controlling the production output and its invested capital. Total Asset Turnover (TATO) is

one of the common ratios to evaluate how efficient the assets owned to support selling activities and how effective a company make use of its assets [5].

1.1.3. Liquidity

Liquidity is a ratio that measure the company's capability to settle its short-term debt and to meet unexpected cash needs [18]. Current ratio is one of a way to indicate company's liquidity. The current ratio measures how the company settle its short-term liabilities by using its current asset, such as cash, inventory, and receivable. Moreover, the current ratio also shows the claim from short-term creditors for the debt they gave to the company that guaranteed with assets owned and the extent to which these assets can be converted into cash in the same period as the maturity of debt [19].

1.1.4. Firm Size

Firm size is a scale to measure how big the assets company owned, sales, and market capitalization. Those three variables are the main factors to determine the firm size [6]. The bigger the assets value means more capital invested and the company's capability will be higher to generate sales, and the more ample the market capitalization is, then public views on the company's will be better and the company will be much well-known [20]. Usually, the company with large scale size is more promising to generate a healthy financial performance. Additionally, the company's size also shows the experience and capability to manage investment risk and increasing stake holders' welfare [21].

1.1.5. Leverage

Leverage is a ratio that is used to measures the extent to which the company's assets are financed by debt. The higher the ratio, the more creditor funds the company uses to generate profits [7]. Having a huge amount of debt meant that the risk of failed payment will also increase and prevent company to reach its financial goals. To balance the high level of risk, management must carry out debt ratio analysis to significantly reduce the risk, calculate the return that will be paid, and manage it properly to make sure the funds raised will give positive contribution on company's financial performance [22].

1.1.6. Financial Performance

Financial performance can be regarded as a measure of the company's success in generating profits. Financial performance can help management to achieve company goals and the financial performance health is also one of the main factors that investors see before deciding to invest their funds [10]. The company's financial performance can be defined as description of the financial condition as well which reflects work performance in certain period. Return on asset (ROA) is a common ratio which financial analyst use to determine company's financial performance. ROA is a profitability ratio which measure the company's capability in earning profits by making use of its assets [23].

1.2. Our Contribution

This research is addressed to determine the comprehensive value of company's financial performance by considering the influence of both intellectual capital and physical assets to create value, as well as to reflects the condition of the company's financial performance. This research also intended to examine the influence of the variables mentioned above on financial performance.

1.3. Paper Structure

The rest of the paper is organized as follows. Section 2 describes the background of this paper. Section 3 presents the methods used to address the objectives of this paper. Section 4 presents the

findings and discussion of the present paper. Section 5 develops the findings and compare it with the research results of Surjandari et al. [6] and Damayanti et al. [19], this section also shows the multiple regression model formed from this research. Finally, section 6 concludes the paper and presents direction for future research.

2. BACKGROUND

Knowledge-based business and competitive environment make companies should be able to establish an optimal financial performance. To achieve that, the measurement and assessment of financial performance must not only be seen from the utilization of physical assets, but also from the intellectual capital aspect to reflect all values that is hidden in companies' financial performance.

3. METHODS

3.1. Research Design

The research design that will be used in this study is a descriptive research design. Descriptive research design relates to the study of phenomena in more detail and provides an overview of the phenomena studied.

3.2. Population and Sampling Technique

The population used in this research are all of manufacturing companies listed in Indonesia Stock Exchange (IDX) with a total of 197 companies. The sampling technique used is purposive sampling with the criteria: 1. manufacturing companies listed in IDX; 2. manufacturing companies that are not delisted in IDX; 3. manufacturing companies that present their complete financial statement data ending 31st of December; 4. manufacturing companies that did not experience any losses; 5. manufacturing companies that includes detail of their employee total salaries. All of the criteria mentioned is for the period of 2017-2020.

3.3. Data Analysis

The data Analysis was performed using Eviews 10. Specifically, the following statistical tool was used for: Chow test, Hausman test, multicollinearity test, heteroscedasticity test, ANOVA test, partial test, adjusted R^2 test and multiple regression analysis.

4. FINDINGS AND DISCUSSION

4.1. VACA

The mean for VACA from Table 1 is 0.418799 with standard deviation (SD) of 0.334361, as well as maximum and minimum value of 2.480164 and 0.079923 respectively. SD has a lower value than mean shows that the variable data distribution is low.

The result from Table 2 shows that capital employed as one of intellectual capital indicator has a significant effect and positive contribution on financial performance. The higher the VACA value is then production output will increase. Efficient production process of the company is also one of the keys in increasing the financial performance, this happen because the higher the production efficiency, the lower the cost to be borne by the company with the same amount of output. Moreover, VACA also show where the company stand financially, with that in mind the company will also more likely to be prepared in making a sound financial decision that align with its goals, be it short-term goals and its long-term goals. The positive contribution means that each capital assets that company owned is fully utilized that it increases the company's financial performance (Prob. 0.0003 < 0.05).

4.2. VAHU

The mean value for VAHU from Table 1 is 3.427466 and SD of 2.079876, as well as maximum and minimum value of 13.10887 and 1.204550 respectively. SD has a lower value than mean shows that the variable data distribution is low.

The result from Table 2 shows that human capital has a significant effect and positive contribution on financial performance. Human capital concept implies that not all labour force is equal, but the management team can help to improve that standard and quality by investing more to their employees. To do that the management team can hone their employees' competences through training, education, workshop. All of this will certainly increase the value of human capital in the company with a great contribution to the financial performance. Good quality and highly skilled human capital will generate more value and create a competitive advantage for the company in maximizing the financial performance. Well managed human capital also indicate that company is capable in making use of their worker competences to obtain profit (Prob. 0.0001 < 0.05).

4.3. SCVA

The mean for SCVA from Table 1 is 0.619747 and SD of 0.175278, as well as maximum and minimum value of 0.923716 and 0.169815 respectively. SD has a lower value than mean shows that the variable data distribution is low.

The result from Table 2 shows that structural capital that consists of information system, technology, and other infrastructures of the company had no significant effect on financial performance. Structural capital which is supposed to be a means of improving financial performance and keep productivity flowing will have minimal impact on company performance if it cannot be utilized optimally in the company's operational activities and work procedures. Additionally, one of the main reasons that structural capital did not bring any contribution to financial performance may be caused by the old infrastructure that is not properly maintained so that the production efficiency is decreased and has dissatisfactory impact on the contribution to company's financial performance (Prob. 0.3241 > 0.05).

4.4. Asset Management (Total Asset Turnover)

The mean for total asset turnover (TATO) from Table 1 is 1.075915 and SD of 0.765531, as well as maximum and minimum value of 6.332663 and 0.271940 respectively. SD has a lower value than mean shows that the variable data distribution is low.

The result from Table 2 shows that asset management have negative impact on financial performance. This is caused by the incapability to manage and utilize the assets owned. The high amount of asset will make the expenses to gradually increases and reducing ROA as the impact of high operating expenses of the company. This mean that the company is not using its assets efficiently to generate revenue even though they have the assets necessary to support its production capability (Prob. 0.0497 < 0.05).

4.5. Liquidity

The mean value for current ratio from Table 1 is 3.482283 and SD of 12.86634, as well as maximum and minimum value of 208.4446 and 0.633693 respectively. SD has a higher value than mean shows that the variable data distribution is high.

The result Table 2 shows that liquidity has no significant effect on financial performance. Liquidity that is being measured by current ratio to show company capability to pay their short-term debt did not guarantee the company to achieve productivity efficiency and effectiveness to minimize the cost. If a company has fair amount of liquid assets on hand, it could indicate that the company is not investing the excess funds decently. The excess funds that were being held means that the company is not effectively making use of its capital to expand the business that may be bringing more revenue and profit in the long-term period (Prob. 0.7586 > 0.05).

4.6. Firm Size

The mean for firm size from Table 1 is 28.83539 and SD of 1.688576, as well as maximum and minimum value of 33.49453 and 24.42133 respectively. SD has a lower value than mean shows that the variable data distribution is low. The result from Table 2 shows that firm size has no significant effect on financial performance. Firm size or the amount of asset owned, and market capitalization of the company is not a determinant on the increase of the company's financial performance, this happen because even though the company has huge amount of assets and large market capitalization, it is still not a factor that affect company financial performance. These results also indicate that firm size only reflect the value of assets owned by the company, not the company's ability to generate revenue and increasing profits (Prob. 0.7779 > 0.05).

4.7. Leverage

The mean for leverage from Table 1 is 0.410747 and SD of 0.187960, as well as maximum and minimum value of 0.844782 and 0.066532 respectively. SD has a lower value than mean shows that the variable data distribution is low.

The result from Table 2 shows that leverage has no significant effect on financial performance. Leverage which is measured using debt to total asset ratio (DAR) did not describe the company's ability to improve its financial performance. These results indicate that the level of leverage does not make the company competent in utilizing assets that is being financed by debt properly, which in turn only has a minimal impact on financial performance. Additionally, this also can mean that the funds received by the company is not being invested properly to gain more possible earning (Prob. 0.4265 > 0.05).

4.8. ANOVA

The ANOVA test result from Table 2 show that Prob(F-statistics) has a value of 0.000000 < 0.05. This result indicates that all variables (intellectual capital, assets management, liquidity, firm size, and leverage) in this research simultaneously affect the financial performance

4.9. Adjusted R^2

The adjusted R^2 test result from Table 2 has a value of 0.658736. This value indicates that 65.87% of the independent variables can be explained in this research, while the rest or 34.13% is explained through other variable outside of this research.

The explanation above is the findings developed and they show whether the independent variables affect the financial performance or not. Surjandari et al. [6] found out that SCVA and leverage has a significant effect on financial performance, while VACA, VAHU, and firm size did not have any significant effect that may cause companies' financial performance to be affected in a way that will bring companies to achieve competitive advantage on the market. Meanwhile, Damayanti et al. [19] found out that liquidity does not have any significant effect on financial performance, whereas the companies' asset management that is being measured by total asset turnover does have a significant effect on companies' financial performance.

Table 1 Descriptive Statistics

	ROA (Y)	VACA	VAHU	SCVA	TATO	CR	SIZE	DAR
Mean	0.080647	0.418799	3.427466	0.619747	1.075915	3.482283	28.83539	0.410747
Maximum	0.920997	2.480164	13.10887	0.923716	6.332663	208.4446	33.49453	0.844782
Minimum	0.000500	0.079923	1.204550	0.169815	0.271940	0.633693	24.42133	0.066532
Std. Dev.	0.102604	0.334361	2.079876	0.175278	0.765531	12.86634	1.688576	0.187960

4.10. Multiple Regression Analysis

From the result of Table 2 below, it can be made a multiple regression equation for the independent variables and financial performance. The following is the equation of the multiple regression model formed from this research:

$$\textbf{\textit{ROA}} = 0.225837 + 0.194797\ VACA + 0.027861\ VAHU - 0.090416\ SCVA - 0.046213\ TATO - 0.000110\ CR - 0.008461\ Size + 0.067837\ DAR + \varepsilon$$

The equation above shows how the value increase and decrease to influence the company's financial performance. The constant value of this research is 0.225837, which means that when all the independent variables is constant or zero, then the company's financial performance will be 0.225837. Incremental of each unit of the independent variables will either increasing the financial performance or decreasing the financial performance by the same amount mentioned on the multiple regression model above.

Table 2 Panel Data Regression

Variable	Coefficient	Prob.
C	0.225837	0.7914
VACA	0.194797	0.0003
VAHU	0.027861	0.0001
SCVA	-0.090416	0.3241
TATO	-0.046213	0.0497
CURRENT RATIO	-0.000110	0.7586
FIRM SIZE	-0.008461	0.7779
DAR	0.067837	0.4265
Adjusted R-squared	0.658736	
Prob(F-statistic)	0.000000	

5. CONCLUSIONS

This research was conducted to empirically examine the effect of intellectual capital, asset management, liquidity, firm size, and leverage as independent variables on financial performance of manufacturing companies listed on IDX during the period of 2017-2020. The result of this research show that value added capital employed, value added human capital, and asset management have a significant effect on financial performance. On the other hand, the structural capital value added, liquidity, firm size, and leverage did not have any significant effect on financial performance. Suggestions that can be used for future research area: a. adding other independent variables such as firm value, net working capital, cash holding, inventory turnover, net profit margin, earnings management, and so on, b. expand the research subject so that it is not only limited to one industrial sector to gain more relevant data to reflect the overall financial performance in Indonesia's industries. This research is expected to add insight and to explore the information about the influence of intellectual capital and financial ratio on financial performance. This research is also expected to be a source of information for manufacturing companies so that they can pay more attention to both the use of physical assets and intellectual capital to create additional value added on companies' financial performance and help investors to get detailed picture of the actual condition from the companies' financial performance before making any decision to invest their funds.

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