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Intellectual Capital and Profitability in Manufacturing Companies Listed in Indonesia Stock Exchange

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Abstract---*The purpose of this research is to determine the effect of value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA) on return on assets (ROA) in manufacturing companies listed on the Indonesia Stock Exchange in 2014-2019. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. The population in this study was 161 manufacturing companies based on the basic industrial and chemical sectors, the consumer goods industry, and various industries. The sampling technique is done through the method of purposive sampling, the number of samples of 25 manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. The results of the analysis show that value-added capital employed (VACA) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. Value-added human capital (VAHU) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. Structural capital value-added (STVA) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. For company management to achieve the desired financial performance, it should focus more on managing intellectual capital. For investors and potential investors to pay more attention to the company's intellectual capital as a consideration in investing.*

Keywords---*intellectual capital, investing, investors, return on asset, stock exchange.*

Introduction

Manufacturing companies are one of the knowledge-based industrial sectors which can certainly produce innovation in the business world. The Ministry of Industry in the Republic of Indonesia clearly describes that the manufacturing sector grew by 28%. This achievement is the second-highest of the ten other sectors (Ministry of Industry, 2020). Therefore, the authors take manufacturing companies in Indonesia in the 2014-2019 range, as the object of research. Because intellectual capital (IC) has begun to be applied to most manufacturing companies, to provide added value to the company. Besides, it is the same as the competitive advantage needed by the company, so it is expected to achieve financial performance optimally. The data used in the study are data of manufacturing companies listed on the Indonesia Stock Exchange (IDX).

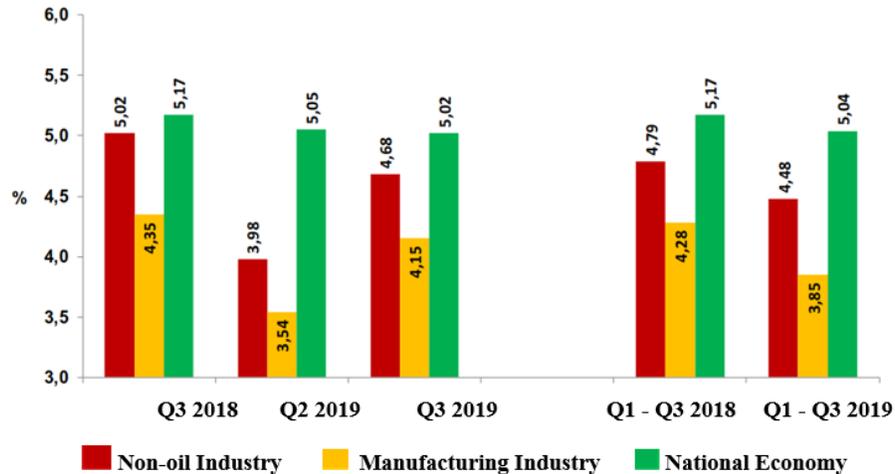


Figure 1. Non Oil and Gas Industry Growth, Manufacturing Industry and National Economic Growth (Percent)
Data Source: www.bps.go.id, 2020

Based on the data in Figure 1, in the third quarter of 2019, the growth of the non-oil and gas industry was recorded at 4.68% (yoy). As in the total Manufacturing Industry (oil and gas and non-oil / gas), the growth rate of the non-oil and gas industry in the third quarter of 2019 was also higher than the growth in the second quarter of 2019 of 3.98% (yoy), but lower than the growth in the third quarter of 2018 which recorded at 5.02% (yoy). Thus cumulatively over the first three quarters of 2019 (Quarter I s / d Quarter III 2019) growth in the non-oil industry which reached 4.48% (c to c), also lower than the growth of 4.79% (c to c) in the same period in 2018.

As was the case in the previous quarters (except for the first quarter and the second quarter of 2016), in the third quarter of 2019 the growth of the non-oil and gas industry was higher than the growth of the Manufacturing Industry sector as a whole (oil and gas and non-oil and gas), which was 4.15% (yoy). This is due to the recurrence of growth in the coal industry and oil and gas refinery in the third quarter of 2019, which amounted to 0.74% (yoy), whereas in the first quarter and second quarter of 2019 each industry also experienced a contraction of 4.19% (yoy) and 0.25% (yoy).

Even though the growth of the Non-oil and gas industry in the third quarter of 2019 was better than the growth in the second quarter of 2019, this growth remained below the national economic growth, which in the third quarter of 2019 reached 5.02% (yoy). If the growth rate of the non-oil and gas industry is low compared to national economic growth, it will show that the growth of this sector is below the average growth of all economic sectors in the Gross Domestic Product (GDP). This has had an impact on the reduced role of the Manufacturing Industry Sector in Gross Domestic Product, which is feared to have implications for the reduced employment absorption in the manufacturing industry sector. The reduced role of the Manufacturing Industry in GDP will reduce the sector's impetus for overall economic growth (Chwalowski, 1997; Harvey & Lusch, 1999; Bukh *et al.*, 2001). The growth of the non-oil and gas industry in the third quarter of 2019 is better than the growth in the second quarter of 2019 supported by the growth of several industry groups that experienced high growth and also by industry groups that experienced increased growth. However, some industries also experienced a slowdown in growth and even experienced a decline (contraction). Growth contraction was experienced by, among others, the Motor Vehicle Industry Group, Trailers and Semi-Trailers; Machinery and Equipment Industry; Tobacco Processing Industry; and Rubber Industry, Rubber and Plastics Products (Abdullah & Sofian, 2012; Sumedrea, 2013; Mouritsen & Roslender, 2009).



Figure 2. Industries experiencing high growth in the third quarter of 2018-2019 y on y (Percent)

Data Source: www.kemenperin.go.id, 2020

Based on the data in Figure 2, the higher growth of the non-oil and gas industry in the third quarter of 2019 compared to the second quarter of 2019 was supported by the high growth of several industry groups. The highest growth was achieved by the Printing and Reproduction Media Industry group, which in the third quarter of 2019 was recorded at 24.56% (yoy). Then followed by the beverage industry group which grew by 23.69% (yoy). Then the apparel industry group grew by 19.27% (yoy).

The high growth achieved by the Printing and Reproduction Media Industry group, which in the third quarter of 2019 was recorded at 24.56% (yoy) was an increase from the growth of 22.70% (yoy) in the second quarter of 2019. In the third quarter of 2018, this industry has recorded quite high growth, which is equal to 7.10% (yoy). The high growth in the Printing and Reproductive Industry of the Recording Media is in line with the increase in IBS production of this industry which was recorded at 19.59% (yoy) in the third quarter of 2019, and also on IMK production which was recorded at 16.23% (yoy). This high growth in IBS and IMK production in the industry is estimated not only to be related to an increase in domestic consumption but also to be supported by an increase in exports. In the third quarter of 2019, the volume of industrial exports increased by 14.17% (yoy), while in the first quarter of 2019 the volume of industrial exports increased by 12.36% (yoy), and in the second quarter of 2019, it decreased by 15.25% (yoy).

Relatively high growth also occurred in the garment industry, which in the third quarter 2019 amounted to 19.27% (yoy). However, this growth is slowing from a growth of 25.79% (yoy) in the second quarter of 2019. Since the beginning of 2018, the industry tends to increase growth significantly and recorded its highest growth in the second quarter of 2019. For the whole of 2018, the garment industry recorded a growth of 11.02%, far higher than the growth in 2017 amounted to 4.48%.

In line with this significant increase, the growth of large and medium industrial production (IBS) in the apparel industry also experienced high growth in the third quarter of 2019, which amounted to 15.29% (yoy). This increase in production has affected the growth of the added value of these two industries in GDP because the growth of micro and small industrial production (IMK) in the Apparel Industry was only recorded at 3.67% (yoy). The high growth of the Garment Industry in the third quarter of 2019 as well it was not in line with the conditions of this industrial export, which was recorded as experiencing a decrease. In the third quarter of 2019, the export volume of the Apparel industry was recorded to have decreased by 5.36% (yoy), and the value of exports decreased by 5.02% (yoy). This condition could indicate that there has been an increase in domestic consumption, but it seems more due to the increase in orders from abroad, the shipment of which will be carried out in the fourth quarter of 2019. With the improvement in the growth of the apparel industry in the third quarter of 2019, then cumulatively in the first three quarters of the year 2019 (January-September 2019), this industry experienced a growth of 22.74% (c to c), which showed a far better performance of the industry compared to its performance in the same period in 2018, which recorded growth of 10.63% (c to c).

Industries that Experienced Growth in the Third Quarter of 2019 (yoy,%)

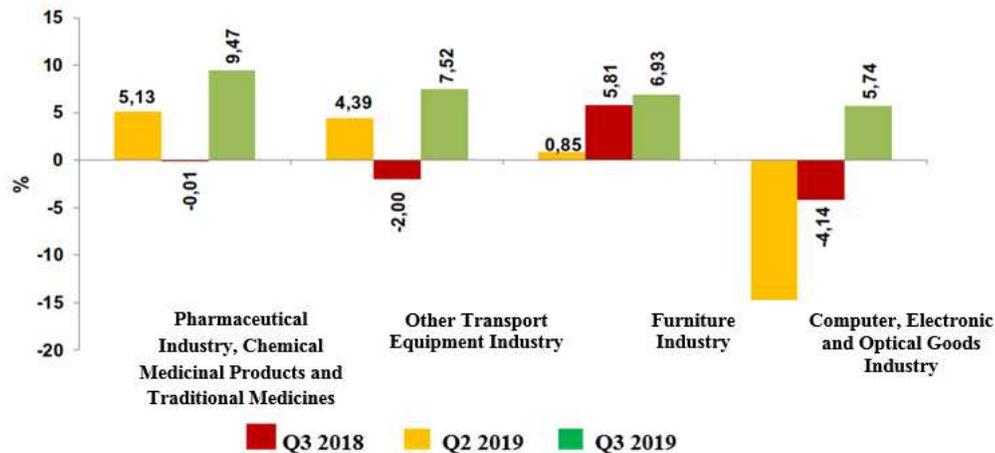


Figure 3. Industries that Increase Growth in Quarter III 2018-2019 y on y (Percent)

Data Source www.kemenperin.go.id, 2020

In Figure 3, the most significant increase in growth was experienced by the Pharmaceutical Industry, Chemical Drug Products and Traditional Medicines which in the third quarter of 2019 grew by 9.47% (yoy). This growth was achieved after in the second quarter of 2019 the industry experienced a decrease of minus 0.01%. Besides being supported by the high growth of the three industries above, the higher growth of non-oil and gas industries in the third quarter of 2019 against the second quarter of 2019 was also caused by an increase in growth in several industries. The industries that experienced an increase in growth include the Pharmaceutical Industry, Chemical Drug Products, and Traditional Medicines; Other Transport Equipment Industry; Furniture Industry; and the Computer, Electronic, and Optical Industry. The most significant increase in growth experienced by the Pharmaceutical Industry, Chemical Medicinal Products, and Traditional Medicine in the third quarter of 2019 grew by 9.47% (yoy). The growth achieved in the second quarter of 2019 after the industry experienced a decline (a contraction of growth) amounted to minus 0.01%.

The second-largest increase in growth was achieved by the Other Transport Equipment Industry. In the third quarter 2019, this industry grew by 7.52% (yoy), far better than growth in the second quarter of 2019 experienced a growth contraction of 2.00%(yoy), and also higher than the growth of 4.39% (yoy) in the third quarter of 2018. The increase in industrial exports was one of the causes of the increase in growth in the third quarter of 2019. In the third quarter of 2019, the value of industrial exports recorded an increase of 38.18% and the volume of exports rose by 56.97% (yoy).

In terms of volume, the biggest increase in exports occurred in ships and similar commodities which rose by 369.36% (yoy) in the third quarter of 2019. The large increase in export volume also occurred in Locomotives and Train Cars and their Equipment, which recorded 129.27% (yoy). While judging by the value of exports, the highest increase in exports occurred in a locomotive and railroad car commodities and their accessories, which reached 419.74% (yoy). However, the increase in exports in the Other Transport industry and also the increase in the value of its GDP are not in line with the increase in production at IBS, and also in its IMK. In the third quarter of 2019 IBS production in Other Transport industry recorded a contraction of growth of 1.54% (yoy), its IMK production also decreased by 2.1%. (yoy).

The Furniture Industry is one of the industries that experienced an increase in growth in the third quarter of 2019. After experiencing a slowdown in growth in 2018, since the first quarter of 2019, the Furniture Industry has experienced relatively high growth. In the third quarter of 2019, this industry recorded growth of 6.93%, higher than the growth of 5.81% (yoy) in the second quarter of 2019, but far lower than the growth in the same period in 2018, which amounted to 12.89% (yoy).

The increase in industrial growth is in line with the increase in IBS (Medium Large Industry) production growth in this industry, and also its IMK production. If in the second quarter of 2019 the growth of IBS Furniture production was recorded at 1.59% (yoy), then in the third quarter of 2019 the industrial IBS production growth was recorded at

4.06% (yoy). However, in the third quarter of 2019, the growth of IMK Furniture production decreased significantly, namely from growth of 7.07 % (yoy) in the second quarter of 2019 to 5.51% (yoy) in the third quarter of 2019.

The increase in productivity growth in the furniture industry was also followed by a significant increase in exports. In the third quarter of 2019, the export volume of the Furniture industry increased by 21.45% (yoy) where the value of exports increased by 19.37% (yoy). The increase in export value was mainly contributed by exports of Other Furniture and Furniture from Wood, whose export values each increased by 337.53% (yoy) and 2.84% (yoy).

Increased growth also occurred in the Leather Industry, Leather Goods, and Footwear. After experiencing a contraction of growth of 6.42% (yoy) in the second quarter of 2019, the Leather, Leather Goods and Footwear industry in the third quarter of 2019 experienced a significant increase in growth, which amounted to 5.94% (yoy). However, the growth achieved in the third quarter of 2019 was far lower than the growth in the same quarter of 2018, which reached 8.83% (yoy). The increasing growth of the Leather, Leather Goods and Footwear industry in GDP is in line with the increasing growth of its IBS production. If in the second quarter of 2019 the IBS production of the Leather, Leather Goods and Footwear industries experienced a contraction of growth of 14.0% (yoy), then in the third quarter of 2019 it reached a positive growth of 1.83% (yoy). But it is not in line with its IMK production, which experienced a sharp decline, namely from a negative growth of 1.21% (yoy) in the second quarter of 2019 to a negative growth of 6.3% (yoy) in the third quarter of 2019. Meanwhile the volume of industrial exports Leather, Leather Goods, and Footwear also experienced a significant decrease. If in the second quarter of 2019 the volume of industrial exports fell by 9.47% (yoy), then in the third quarter of 2019 it fell even more, namely by 11.58% (yoy). This decrease was mainly due to a decrease in exports of field engineering shoes / industrial use and also exports of sports shoes. From the decline in export volume of 11.58% (yoy), the export volume of field engineering / industrial needs shoes fell by 21.15% (yoy) and the value of exports fell by 22.06% (yoy). In the same period, the decline in the volume of sport shoe exports was recorded at 9.29% (yoy) with the value of exports also falling by 9.67% (yoy).

Based on the resource-based theory it is concluded that intellectual capital (IC) meets the criteria as a unique resource that is able to create competitive advantage so that the company can create value for the company, and can be used to develop and implement strategies to improve company performance for the better. The important role of intellectual capital (IC) in realizing competitive advantage and growing awareness of companies in Indonesia in managing intellectual capital (IC) properly to improve financial performance is the reason for the importance of this research. Companies that have good intellectual capital (IC), the company will be able to manage their assets effectively and efficiently so that financial performance will increase. intellectual capital (IC) has a large impact on the company's financial performance in creating value (value creation), then intellectual capital (IC) must get sufficient attention (Ulum *et al.*, 2013).

Problem Formulation

- 1) What is the effect of value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA) on return on assets (ROA) in manufacturing companies listed on the Indonesia Stock Exchange in 2014-2019?
- 2) Which variables among value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA) have a dominant influence on return on assets (ROA) for manufacturing companies listed on the Indonesia Stock Exchange in 2014- 2019?

Purpose

- 1) To find out and analyze the effect of value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA) on return on assets (ROA) in manufacturing companies listed on the Indonesia Stock Exchange in 2014- 2019.
- 2) To find out and analyze which variables among value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA) which have a dominant influence on return on assets (ROA) in manufacturing companies listed on the Stock Exchange Indonesia in 2014-2019.

Literature Review

Intellectual Capital (IC)

Intellectual capital was originally introduced by Galbraith in 1969, Galbrant stated that intellectual capital is not just pure intelligence in terms of abilities that have been possessed from the start, but an intellectual act that continues to be sharpened at all times to develop (Bontis, 1998). Intellectual capital is a material that has been compiled, captured, and used to produce higher asset values (Ulum *et al.*, 2013). According to Baroroh (2013), there are three components in measuring intellectual capital, namely as follows:

- 1) Value Added Capital Employed (VACA)
- 2) Value Added Human Capital (VAHU)
- 3) Structural Capital Value Added (STVA)

Return On Asset (ROA)

ROA shows the company's ability to use all assets owned to generate profits after tax. This ratio is important for management to evaluate the effectiveness and efficiency of company management in managing all company assets. The greater ROA, means more efficient use of company assets or in other words with the same amount of assets can generate greater profits and vice versa ROA can be calculated using the following formula:

$$\text{Return On Asset (ROA)} = \frac{\text{Earning After Taxes}}{\text{Total Asset}}$$

Research Methods

The type of data that will be used in this research is quantitative data in the form of ratio data. The data source used in this study is secondary data on manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019. The population in this study was 161 manufacturing companies based on the basic industrial and chemical sectors, the consumer goods industry, and various industries. In this study, the type of sample used was purposive sampling. The sampling technique is done through a purposive sampling method to get samples that are following the research objectives.

Tabel 1
Sample research

Criteria Sample	Total
Manufacturing companies operating and listed on the Indonesia Stock Exchange during 2014-2019	161
Consumption sector manufacturing companies that are the consumption sector manufacturing companies that publish financial statements for the period 2014-2019	25
Manufacturing company that provided all the data needed during the 2014-2019 period	25
Number of Companies that Enter Criteria	25

Data Source: Secondary data were processed, 2020

Based on the above criteria, a total of 25 manufacturing companies were listed on the Indonesia Stock Exchange in the 2014-2019 period. The number of samples in the study is minimal (n = 30). So the number of observations in this study in manufacturing companies was 150 observational data.

Result and Discussion

Result

Table 2
The descriptive data analysis result

	N	Minimum	Maximum	Mean	Std. Deviation
VACA	144	.065	.807	.31281	.146238
VAHU	144	.213	14.221	3.28682	2.436585
STVA	144	.067	1.564	.58259	.237396
ROA	144	.002	.432	.13969	.110894
Valid N (listwise)	144				

Data Source: Secondary data were processed, 2020

Based on all manufacturing companies listed on the Indonesia Stock Exchange during the period 2014-2019, in general, all variables studied showed that the standard deviation of each variable has a value that is smaller than the mean. The standard deviation of VACA is 0.14 which is much smaller than the mean value of 0.31. VAHU shows the standard deviation of 2.43 which is smaller than the mean value of 3.28. STVA shows the standard deviation of 0.23 which is smaller than the mean value of 0.58. ROA shows the standard deviation of 0.11 which is smaller than the mean value of 0.13.

Table 3
Result Autocorrelation Test

Model Summary ^b					
Model	R	R. Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.909	.826	.823	.046719	2.229

Data Source: Secondary data were processed, 2020

Based on the results of the regression analysis, the value of Durbin Watson (DW) was 2.222. While the size of DW-table: dL (outer boundary) = 1.685; dU (inner limit) = 1,770; 4-dL = 2,315; and 4-dU = 2,230. Thus, it can be concluded that DW-test is located in the test area.

Table 4
The result of Multiple Linear Regression Analysis

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.145	.014		-10.645	.000
	VACA	.466	.027	.615	17.105	.000
	VAHU	.016	.002	.348	7.112	.000
	STVA	.149	.023	.318	6.497	.000

Data Source: Secondary data were processed, 2020

Multiple linear regression analysis is used to test the effect of two or more independent variables on one dependent variable. The regression equation can be seen from the table of coefficients test results. In the coefficients table that is read is the value in column B, the first row shows the constant (a) and the next row shows the constant of the independent variable. Based on the table above, the regression model used is as follows:

$$ROA = -0,145 + 0,466VACA + 0,016VAHU + 0,149STVA$$

- 1) The equation of multiple linear regression above is known to have a constant of 0.145 with a negative sign. So the constant magnitude shows that if the independent variables (VACA, VAHU, STVA) are assumed to be constant, then the dependent variable, namely financial performance, will decrease by 0.145%.
- 2) The coefficient of variable VACA = 0.466 means that each increase in VACA of 1% will cause financial performance to increase by 0.466%.
- 3) VAHU variable coefficient = 0.016 means that each increase in VAHU of 1% will cause an increase in the financial performance of 0.016%.
- 4) STVA variable coefficient = 0.149 means that every 1% increase in STVA will cause an increase in the financial performance of 0.149%.

Table 5
Result of The Feasibility of The Model

ANOVA		Sum Of Square	df	Mean Square	F	Sig.
1	Regression	1.453	3	.484	221.893	.000
	Residual	.306	140	.002		
	Total	1.759	143			

Data Source: Secondary data were processed, 2020

The test results show a significance value of 0,000. The significance value is smaller than 0.05, it shows that the independent variables jointly influence the dependent variable so that the proposed hypothesis that VACA, VAHU, STVA jointly influence the financial performance can be accepted.

Table 6
Test the significance of individual parameters

Coefficients		Unstandardized Coefficients			Standardized Coefficients	
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.145	.014		-10.645	.000
	VACA	.466	.027	.615	17.105	.000
	VAHU	.016	.002	.348	7.112	.000
	STVA	.149	.023	.318	6.497	.000

- 1) VACA variable has a beta value of 0.466 with a significant value of 0.000 which is smaller than 0.05. This means that individually the VACA variable has a positive and significant effect on financial performance.
- 2) VAHU variable has a beta value of 0.016 with a significant value of 0,000 which is smaller than 0.05. This means that individually the VAHU variable has a positive and significant effect on financial performance.
- 3) Variable STVA has a beta value of 0.149 with a significant value of 0,000 which is smaller than 0.05. This means that individually the STVA variable has a positive and significant influence on financial performance.

Discussion

1) The Effect of Value Added Capital Employed (VACA) on Financial Performance

Value-added capital employed (VACA) has a positive and significant effect on financial performance. Based on the results of the study obtained the coefficient for the variable value-added capital employed (VACA) of 0.466 with a significant value of 0.000 where this value is significant at the 0.05 significance level because it is smaller than 0.05. Thus, that value-added capital employed (VACA) has a positive and significant effect on financial performance.

Value-added capital employed (VACA) is used to calculate the efficiency of using physical capital in creating value. Physical capital is managed efficiently will increase the added value which drives financial performance. The higher the efficiency value of employed capital, the higher the level of profitability or return on assets (Ramadhani et al., 2014). Utilizing the efficiency of employed capital can increase ROA as a measure of a company's financial performance because the capital used is the value of assets that contribute to

the company's ability to generate revenue. If the company is able to generate revenue, it is also expected that the company will be able to achieve financial performance.

The results of this study are in line with the results of research from [Ahmad & Sri \(2019\)](#); [Poppy \(2019\)](#); [Indra & Basuki \(2018\)](#); [Muzakar \(2018\)](#); [Nurhasanah et al. \(2017\)](#); [Gunawan & Putranto \(2017\)](#); [Wijayani \(2017\)](#); [Tarigan & Septiani \(2017\)](#); [Siti \(2017\)](#); [Pratiwi \(2017\)](#); [Qaharuna \(2016\)](#); [Riyan \(2016\)](#); [Santi \(2012\)](#) found the results that value-added capital employed (VACA) had a positive and significant effect on financial performance.

2) *The Effect of Value Added Human Capital (VAHU) on Financial Performance*

Value-added human capital (VAHU) has a positive and significant effect on financial performance. Based on the research results obtained coefficient for the variable value-added human capital (VAHU) of 0.016 with a significant value of 0.000 where this value is significant at the 0.05 significance level because it is smaller than 0.05. Thus, that value-added human capital (VAHU) has a positive and significant effect on financial performance.

VAHU indicates the ability of the workforce to produce value for the company from the funds spent on the workforce. The more value-added generated by the company shows that the company has managed its human resources to its full potential to produce a quality workforce that will ultimately improve the company's financial performance.

The results of this study are in line with the results of research from [Ahmad & Sri \(2019\)](#); [Poppy \(2019\)](#); [Indra & Basuki \(2018\)](#); [Muzakar \(2018\)](#); [Nurhasanah et al. \(2017\)](#); [Gunawan & Putranto \(2017\)](#); [Tarigan & Septiani \(2017\)](#); [Lestari \(2017\)](#); [Rendra \(2017\)](#); [Siti \(2017\)](#); [Pratiwi \(2017\)](#); [Qaharuna \(2016\)](#); [Riyan \(2016\)](#); [Santi \(2012\)](#) found the results that value-added human capital (VAHU) had a positive and significant effect on financial performance.

3) *The Effect of Structural Capital Value Added (STVA) on Financial Performance*

Structural capital value-added (STVA) has a positive and significant effect on financial performance. Based on the results of the study obtained the coefficient value for the structural capital value-added (STVA) variable of 0.149 with a significant value of 0.000 where this value is significant at the 0.05 significance level because it is smaller than 0.05. Thus, the structural capital value-added (STVA) has a positive and significant effect on financial performance.

Structural capital value-added (STVA) if processed effectively will certainly create its value for the company so that it has a competitive advantage. The use of these resources will maximize company performance through increased returns. [Ramadhani et al. \(2014\)](#) concluded that structural capital efficiency has a positive and significant effect on financial performance through increased profitability.

The results of this study are in line with the results of research from [Ahmad & Sri \(2019\)](#); [Poppy \(2019\)](#); [Muzakar \(2018\)](#); [Nurhasanah et al. \(2017\)](#); [Gunawan & Putranto \(2017\)](#); [Wijayani \(2017\)](#); [Tarigan & Septiani \(2017\)](#); [Rendra \(2017\)](#); [Qaharuna \(2016\)](#); [Riyan \(2016\)](#); [Santi \(2012\)](#) found that structural capital value-added (STVA) had a positive and significant effect on financial performance.

Conclusion

- 1) Value-added capital employed (VACA) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019.
- 2) Value-added human capital (VAHU) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019.
- 3) Structural capital value-added (STVA) has a positive and significant effect on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2019.

Suggestion

Based on the results of the research, discussion, and conclusions above, several suggestions can be submitted in order to get better results as follows:

- 1) Share the Company

For company management to achieve the desired financial performance, it should focus more on managing intellectual capital.

- 2) For investors
For investors and potential investors to pay more attention to the company's intellectual capital as a consideration in investing.
- 3) For Further Researchers
 - a) It is recommended to increase the number of samples in the study so that the results obtained are better.
 - b) It is recommended to measure the company's financial performance by using other indicators such as return on equity (ROE), net profit margin (NPM), and earnings per share.

References

- Abdullah, D. F., & Sofian, S. (2012). The relationship between intellectual capital and corporate performance. *Procedia-Social and Behavioral Sciences*, 40, 537-541. <https://doi.org/10.1016/j.sbspro.2012.03.227>
- Ahmad F. K. & Sri. (2019). Pengaruh Intellectual Capital Terhadap Profitabilitas Perusahaan (Studi pada Sektor Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia Periode 2015-2017). *Jurnal Administrasi Bisnis (JAB)*, 72(2).
- Baroroh, N. (2013). Analisis pengaruh modal intelektual terhadap kinerja keuangan perusahaan manufaktur di Indonesia. *Jurnal Dinamika Akuntansi*, 5(2).
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models, *Management Decision*, 36(2), 63-76. <https://doi.org/10.1108/00251749810204142>
- Bukh, P. N., Larsen, H. T., & Mouritsen, J. (2001). Constructing intellectual capital statements. *Scandinavian journal of management*, 17(1), 87-108. [https://doi.org/10.1016/S0956-5221\(00\)00034-8](https://doi.org/10.1016/S0956-5221(00)00034-8)
- Chwalowski, M. (1997). Intellectual capital matters!. *The Electricity Journal*, 10(10), 88-93. [https://doi.org/10.1016/S1040-6190\(97\)80323-5](https://doi.org/10.1016/S1040-6190(97)80323-5)
- Ester S. T., Aditya. 2017. Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Perusahaan Sektor Keuangan yang Terdaftar di Bursa Efek Indonesia Tahun 2013-2015. *Diponegoro Journal of Accounting*. Vol. 6 No. 3. Hal. 1-15. ISSN (Online): 2337-3806.
- Gunawan, A., & Putranto, Y. A. (2017). Pengaruh intellectual capital terhadap kinerja keuangan dengan barriers to entry sebagai variabel mediasi. *Nominal: Barometer Riset Akuntansi dan Manajemen*, 6(2), 48-63.
- Harvey, M. G., & Lusch, R. F. (1999). Balancing the intellectual capital books: intangible liabilities. *European management journal*, 17(1), 85-92. [https://doi.org/10.1016/S0263-2373\(98\)00065-6](https://doi.org/10.1016/S0263-2373(98)00065-6)
- Indra G. S. & Basuki, D. (2018). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Pada Perusahaan Property dan Real Estate. *Jurnal Ekonomika*.
- Lestari, H. S. (2017). Pengaruh intellectual capital terhadap kinerja perusahaan asuransi di indonesia. *Jurnal Manajemen*, 21(3), 491-509. <http://dx.doi.org/10.24912/jm.v21i3.264>
- Ministry of Industry and Information Technology of China. (2017). Strategies of industrial green development (2016–2020).
- Mouritsen, J., & Roslender, R. (2009). Critical intellectual capital. *Critical Perspectives on Accounting*, 20(7), 801-803. <https://doi.org/10.1016/j.cpa.2009.08.004>
- Muzakar, I. (2018). Analisis Intellectual Capital Terhadap Financial Performance Dengan Competitive Advantage Sebagai Variabel Intervening. *Jurnal Manajemen dan Bisnis*, (3)2, 31-38.
- Nurhasanah, A., Suzan, L., & Muslih, M. (2017). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Perusahaan (studi Pada Sub Sektor Perdagangan Besar Yang Listing Di Bursa Efek Indonesia Periode 2012-2016). *eProceedings of Management*, 4(3).
- Poppy S. A. (2019). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan (Studi Pada Perusahaan Sub Sektor Perdagangan Besar Barang Produksi Yang Terdaftar Di Bursa Efek Indonesia Periode 2016-2018). *Jurnal Administrasi Bisnis (JAB)*, 72(2).
- Pratiwi, T. R. (2017). Pengaruh Intellectual Capital dan Corporate Governance Terhadap Kinerja Keuangan Perbankan di Indonesia. *Jurnal Akuntansi dan keuangan*, 8(1), 85-97.
- Qaharuna A. S. (2016). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan (Studi Pada Perusahaan Non Keuangan yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2012 – 2014). *Jurnal Universitas Diponegoro*.

- Ramadhani, H. O., Bartlett, J. A., Thielman, N. M., Pence, B. W., Kimani, S. M., Maro, V. P., ... & Lirhunde, E. S. (2014, September). Association of first-line and second-line antiretroviral therapy adherence. In *Open forum infectious diseases* (Vol. 1, No. 2, p. ofu079). Oxford University Press. <https://doi.org/10.1093/ofid/ofu079>
- Rendra M. K. (2017). Pengaruh Intellectual Capital Terhadap Financial Performance (Studi pada Perusahaan Sektor Perbankan yang Terdaftar di Bursa Efek Indonesia Periode tahun 2013-2015). *Jurnal Administrasi Bisnis (JAB)*, 47(1).
- Riyan, R. (2016). Pengaruh Intellectual Capital Terhadap Kinerja Perusahaan (Studi pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2011-2014). *Jurnal Universitas Diponegoro*.
- Santi D. L. (2012). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Perbankan Syariah di Indonesia. *Jurnal Dinamika Akuntansi*, (4)1.
- Siti, N. (2017). Analisa Pengaruh Intellectual Capital Terhadap Kinerja Pasar Dan Kinerja Keuangan Pada Perusahaan LQ45 Yang Terdaftar Di Bursa Efek Indonesia Periode Tahun 2010-2013. *Jurnal Aset (Akuntansi Riset)*, (9)1.
- Sumedrea, S. (2013). Intellectual capital and firm performance: A dynamic relationship in crisis time. *Procedia Economics and Finance*, 6, 137-144. [https://doi.org/10.1016/S2212-5671\(13\)00125-1](https://doi.org/10.1016/S2212-5671(13)00125-1)
- Tarigan, E. S., & Septiani, A. (2017). Pengaruh Intellectual Capital terhadap Kinerja Keuangan Perusahaan Sektor Keuangan yang Terdaftar Di Bursa Efek Indonesia Tahun 2013-2015. *Diponegoro Journal of Accounting*, 6(3), 693-717.
- Ulum, S., Holmes, N., Barr, M., Kilcoyne, A. D., Gong, B. B., Zhou, X., ... & Dastoor, P. (2013). The role of miscibility in polymer: fullerene nanoparticulate organic photovoltaic devices. *Nano Energy*, 2(5), 897-905. <https://doi.org/10.1016/j.nanoen.2013.03.009>
- Wijayani, D. R. (2017). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Perusahaan Publik Di Indonesia (Studi Empiris Pada Perusahaan Manufaktur di BEI 2012-2014). *Jurnal Riset Akuntansi dan Bisnis Airlangga*, 2(1). <http://dx.doi.org/10.31093/jraba.v2i1.23>