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## THE OPTIMIZATION OF EMPLOYEE STOCK OPTION PLAN IN ACHIEVING FINANCIAL PERFORMANCE

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### ABSTRACT

This study aimed to examine the effects of Intellectual Capital proxied by Human Capital (HC), Structural Capital (SC), and Customer Capital (CC) on the company's financial performance. It also investigated stock-based compensation's impact through employees' stock options programs and Intellectual Capital on the company's economic performance. The research samples were 36 companies that implemented the Employee Stock Option Plans as a compensation scheme during the 2016-2019 period. There were 144 observations. The partial test used multiple regression, while the moderating variable test applied residual analysis by examining the effect of deviation from a model. As a result, this study indicated that Human Capital partially influenced its financial performance. Stock-based compensation impacts the effect of Human Capital on financial performance. The shares ownership of employees with competencies, knowledge, skills, and behavior will support organizational structures' optimization in achieving work performance. Human capital is the source of innovation and knowledge that can solve a company's problems. The implication of this research is that information about intellectual capital (Human Capital, Structural Capital, and Employee Capital) is needed by the company to determine the effectiveness of implementing the employee stock option plan in achieving better wealth in the future.

**KEYWORDS:** Customer Capital; Financial Performance; Human Capital; Stock-Based Compensation; Structural Capital.

## INTRODUCTION

The company's fierce competition is getting more extensive as its demand continues growing and developing. such as research conducted by (Ozkan et al., 2017) which measures intellectual capital performance using the Value Added Intellectual Capital (VAIC) methodology, testing Capital Employee Efficiency (CEE) and Human Capital Efficiency (HCE) have a positive effect on financial performance. A survey conducted by (Cardon et al., 2019) of 167 managers in Taiwan also stated that intellectual capital affects the relationship between organizational capabilities and organizational performance. Research by Sardo et al., (2018); Mahaputra et al., (2021); Owais, (2021);Thakolwiroj & Sithipolvanichgul, (2021) also states that components of intellectual capital such as human capital, structural capital, and relational capital have a significant effect on financial performance. It requires implementing a well-planned business strategy to run a company. One of the policies is related to the ability of human resources to manage the company. Human resources that meet the requirements are perceived to increase their value and ultimately impact an increasing market reaction. Current developments emphasize human resources' ability to strengthen competency qualifications, i.e., intellectual capital, whose concept is intangible assets. Employees' mental capacity involves plans, information, knowledge, expertise, and commitment. Implementing employees' intellectual can contribute their ideas to the company's management process. It will increase stakeholder satisfaction and subsequently increase assets' ability to obtain profits in the company (Bontis et al., 2018). Therefore, the focus of the management is not only generating financial gain, but also non-financial profit.

Referring to previous researches, many factors, including intellectual capital, develop the success of multinational companies. Employee Stock Options (ESOP) are a means of retaining the company's loyal and talented employees. The ESOP program spread to many Indian companies and companies started to implement ESOP as a tool to retain employees after the SEBI ESOS & ESPP Guidelines 1999. The sociological importance of employee share ownership is expected to change the traditional pattern of wealth distribution, which is then followed by an increased market reaction which is a signal good (Ramchandani & Pandya). According to Mention & Bontis (2013), intellectual capital can be from human capital and structural capital. However, other empirical studies revealed the different effects of intellectual capital on market performance (Vishnu & Gupta, 2014; Pal & Soriya, 2012; Dzenopoljac et al., 2017; Handayani & Yurniwati (2020). Another study also indicates no impact of intellectual capital on market performance by using Tobin's Q measurement to 19 public companies in the Tehran Stock Exchange during the 2010-2012 observation period (Vazifehdoust et al., 2013).

Moreover, research on the role of intellectual capital on earnings management is done by Sarea & Alansari (2016). They investigated 158 companies with a total observation of 948 in the Tehran Stock Exchange for six years. The results showed that IC and human capital components positively impacted earnings quality (proxied by discretionary accruals). Likewise, Rachmawati (2020) argued that earnings management and IC were significantly interrelated. Compensation is given to employees to retain loyal employees with an adequate standard of living. The provision of payment demonstrates human resources' strategic functions that impact other human resource functions (Sudarno et al., 2016). Compensation policies, subsequently, can increase employee motivation and improve performance. Each individual's satisfaction varies according to the value system that applies to him. Indeed, employees will give their best to the company if the results align with their expectations.

This research examines stock-based compensation that arguably increases efficient performance, namely the employee stock option plans (ESOP). This compensation is a form of payment provided to employees, especially executive employees, to reward employees for the company's long-term service. Stock-based compensation is reimbursement provided to management in the form of share ownership or option rights to shares. Based on agency theory, two parties are involved in the company, namely agents (management) and principals (shareholders). The relationship conceptualizes a separation between ownership and control in the company to impact agency problems (Boshkoska, 2014). Stock-based compensation is also a critical mechanism in aligning interests between management and shareholders in the long run. The improvement of employee performance continues to be carried out by the company to achieve a competitive advantage. One of the efforts is through appropriate compensation designs. The company's compensation system to employees, employees' morale, discipline, and accuracy will achieve maximum performance, focus, and control (Damayanti et al., 2013).

Indicators of employee performance rely on how much the employees can contribute, including the quantity of output produced, the quality of the products, the duration of work completion, the work attendance level, and each assignment's cooperative attitude. Therefore, this study aimed to observe the effect of Intellectual Capital proxied by Human Capital, Structural Capital, and Customer Capital on the company's financial performance and examine the impact of stock-based compensation through employee stock options programs on the effect of Intellectual Capital on the company's economic performance.

A company's success is due to efforts to develop its resources, including tangible resources, intangible resources, and human resources (Montaseb et al., 2018). The company distinction is from ownership and control of strategic tangible and intangible assets as a resource concept. Its primary focus is resource ownership in achieving company performance. Human resources, especially those with scarce expertise, are very important for the company in improving company performance, especially to increase the company's profit and position in the market (Batarliené et al., 2017).

The concept of intellectual capital involves resources with high-value assets and economic benefits for a company in the future. According to Andreeva & Garanina (2016), there are three components of intellectual capital. The first is human capital (HC) that refers to employees' skills and competencies in producing goods, producing services, and having good relations with customers, supported by education, experience, skills, creativity, and appropriate attitude. The second is structural capital (SC) that promotes human capital infrastructure, e.g., employees' work, technology systems, company operational systems, organizational culture, and intellectual property forms. The third is relational capital (RC) or customer capital (CC) or capital employed (CE) about the network that a company has established with partners (suppliers, customers, government, and the public).

Employee Stock Option Program (ESOP) is a form of long-term compensation provided to company management (Asyik, 2013). The concept of share option compensation provides management with the right to purchase company shares, following the provisions of future General Meeting of Shareholders (GMS) at the determined price (Cueto, 2017). Furthermore, the management will continue to improve performance, especially long-term performance, compared to short-term performance. The company's management having shares will bring out their encouragement in deciding risky projects to obtain higher compensation.

Gap research was found in the empirical test of the effect of the intellectual capital component on company performance. Research by Vishnu & Gupta (2014), Dzenopoljac et al. (2017), Maharani & Faisal (2019), and Astari & Darsono (2020) show the results of research that the components of intellectual capital (human capital, structural capital, and employee capital) have an influence on company performance. This is in accordance with The Knowledge-Based View (KBV) which states that the formulation of the company's strategy is determined by the employees, it becomes the basis for increasing human capital in supporting the company's operational activities. The knowledge capital of the organization is not only supported by qualified employees, but also supported by the information technology. But, research conducted by Bontis et al. (2018) and Andreeva & Garanina (2016) show contradictory results, namely only employee capital and humal capital that affect company performance, while structural capital does not affect company performance. While research by Silvia & Maftukhah (2018) shows contradictory results, namely human capital and employee capital affect financial performance, but the intellectual capital structural capital component does not support the hypothesis.

The inconsistency of the results was also found in the test of the effect of ESOP implementation on company performance. Ramchandani & Pandya (2019) shows that the success of ESOP companies in countries such as the United States, Japan and the UK supports improving company performance and employee productivity. However, research conducted by Laudya & Handoko (2019) showed contradictory results because the ESOP program did not support the company's financial performance. Table 1 presents research gaps in this study that affect company performance:

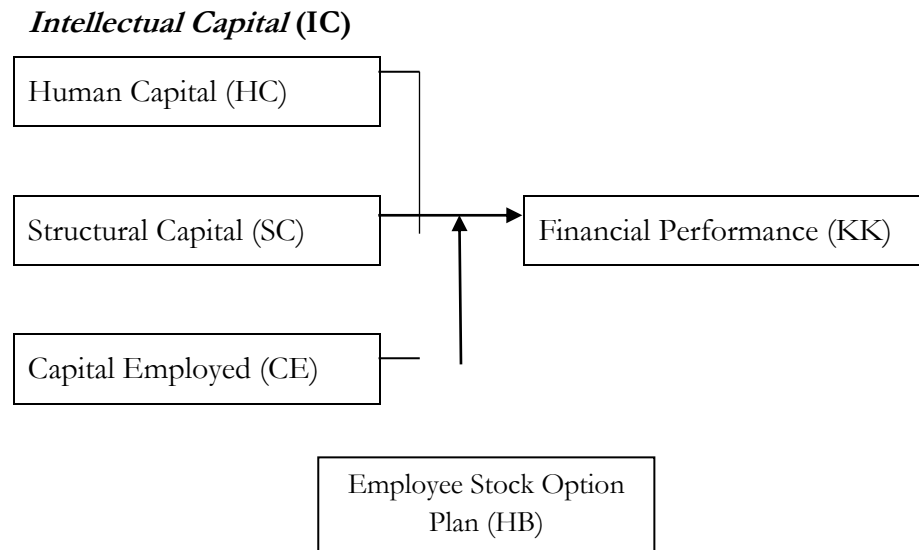
No	Author(s)	HC	SC	CE	ESOP
1	Vishnu & Gupta (2014)	$\sqrt{\text{Sig (+)}}$	$\sqrt{\text{Sig (+)}}$	$\sqrt{\text{Sig (+)}}$	-
2	Andreeva & Garanina (2016)	$\sqrt{\text{Sig}}$	$\sqrt{\text{Sig}}$	$\sqrt{\text{Not sig}}$	-
3	Dzenopoljac et al. (2017)	$\sqrt{\text{Sig}}$	$\sqrt{\text{Sig}}$	$\sqrt{\text{Sig}}$	-
4	Bontis et al. (2018)	$\sqrt{\text{Sig}}$	$\sqrt{\text{Sig}}$	$\sqrt{\text{Not sig}}$	-
5	Silvia & Maftukhah (2018)	$\sqrt{\text{Sig}}$	$\sqrt{\text{Not sig}}$	$\sqrt{\text{Sig}}$	-
6	Ramchandani & Pandya (2019)	-	-	-	$\sqrt{\text{Sig}}$
7	Laudya & Handoko (2019)	-	-	-	$\sqrt{\text{Not sig}}$
8	Astari & Darsono (2020)	$\sqrt{\text{Sig (-)}}$	$\sqrt{\text{Sig (+)}}$	$\sqrt{\text{Sig (+)}}$	-

Note: HC = Human Capital, SC = Structural Capital, CE = Capital Employee (Physical Capital), ESOP (Employee Stock Option Plan)

**Table 1.**  
Research Gaps  
that Affect  
Company  
Performance

The novelty of this research is based on the main challenge of this research, namely developing more comprehensive, objective, and reliable research by considering the moderating variable is the implementation of long-term stock-based compensation especially employee stock options which will be able to support the influence of intellectual capital on company performance.

The conceptual framework of this study is based on the following Figure 1:



**Figure 1.**  
Conceptual Framework

The concept of intellectual capital is based on “Resource Based Theory (RBT)” and “Value Creation”. The resource based theory (RBT) examines the company in terms of the resources owned by the company compared only in terms of the products produced by the company. RBT has been used in various studies in order to understand the relationship between intellectual capital and company performance (Kamaluddin and Rahman, 2013). RBT also views intellectual capital as a strategic resource owned by the company to increase its competitive advantage and create value that can be used to improve the company's performance. Therefore, value creation shows the value creation process carried out by the company efficiently to generate profits. In addition, the emergence of the theory of "Knowledge-Based Economy" in the twentieth century focused knowledge and intellectual capital as the main production factors responsible for the economy and financial prosperity of the country and became the main drivers of sustainable competition for companies with the aim of making a profit (Castro et al., 2019). Thus, intellectual capital management becomes an important task of key management.

Bontis et al. (2018) disclose intellectual capital as an intangible asset to increase company value and competitiveness. In general, intellectual capital includes three main components: human capital (HC), structural capital (SC), and customer capital (CC). Besides that the regression results used by Vishnu & Gupta (2014) show a positive impact between intellectual capital and its components and financial performance. The result is true when the financial performance variable is ROA. The conclusion shows that to examine the impact of the IC component on the financial performance of pharmaceutical firms in India, ROA (Return on Assets) should be preferred rather than ROS (Return on Sales).

**11.2** Therefore, the operational hypotheses were as follows:

*H<sub>1a</sub>: Human Capital (HC) had a positive effect on the company's financial performance*

*H<sub>1b</sub>: Structural Capital (SC) had a positive impact on the company's financial performance*

*H<sub>1c</sub>: Capital Employed (CE) had a positive effect on the company's financial performance*

Based on “**agency theory**”, agency problems arise when the principal does not have complete information that ensures that the agent carries out his responsibilities as agreed with the aim of maximizing the welfare of the principal. One mechanism to reduce agency problems is to align goals between principal and agent through the financial reporting, including increasing share ownership by management (Asyik, 2013). It is hoped that this ownership will unite the interests of management and investors. The Employee Stock Option Plan (ESOP) is an incentive given to executive employees to appreciate the company's long-term performance, which is an effective strategy to narrow and reduce the agency and agency cost problems through the alignment of interests of the executives with the shareholders (Laudya & Handoko, 2019). The ESOP program is predicted to be able to improve the company's performance, which will be reflected in the company's accounting profit.

Ray (2016) also stated that based on the theoretical “**equity-based compensation**”, management's expectations are not excessive because it indirectly values ownership of resources, so that in the long term the company will have employees who are generally qualified and hold proprietary concepts in carrying out the duties of the company.

Share-based compensation received by employees in the form of employee share options will form and ownership structure. The management, who is also the owner, will be motivated to escalate their professionalism to achieve company performance and value. The company having more company's shares means the higher the management's work motivation. Its power will maintain ownership, impacting improving corporate value management (Boshkoska, 2014). The existence of market liberalization requires Chinese regulators to implement the "Regulation of Equity Incentive Plans" and recommend companies to provide incentives for employees through the ESOP program (Fang et al., 2014). This research examines the impact of the ESOP program on company performance by comparing option-award firms with non-award matching firms. The research results show that the change in ROE for the option-award firms is significantly higher than the matching firms.

Therefore, the operational hypotheses were as follows:

*H<sub>2a</sub>: There was an impact of share-based compensation on the positive effect of Human Capital (HC) on the company's financial performance*

*H<sub>2b</sub>: There was an impact of share-based compensation on the positive influence of Structural Capital (SC) on the company's financial performance*

*H<sub>2c</sub>: There was an impact of share-based compensation on the positive influence of Capital Employed (CE) on the company's financial performance with interest rates as mediation variable*

## METHOD

This research is a quantitative study by using **secondary data**. Secondary data used are financial reports and annual report from companies listed in Indonesia Stock Exchange (BEI) for the 2016-2019 period, examining the effect of independent variables, namely intellectual capital (including human capital, structural capital, and customer capital) on the dependent variable, namely the company's financial performance, supported by a moderating variable stock-based compensation. The population of this study was all

companies listed on the Indonesia Stock Exchange (BEI). Not all companies that received stock options decided to take their rights to receive the stock option program.

The sampling method used purposive sampling by setting sample selection criteria. The criteria for selecting the sample are: (1) the company has implemented Employee Stock Option Plans as a compensation scheme, (2) the company has gone public before December 31, 2016 because the research period observed is stock option offerings starting in 2016, (3) issuers have included financial statements as of December 31, 2016, 2017, 2018, and 2019 because they are audited reports, (4) the company implements ESOP, (5) issuers are actively traded on the IDX. So the research samples were 36 companies in 144 observations. The companies had implemented the Employee Stock Option Plans as a compensation scheme for the 2016-2019 period.

**Independent Variable: Intellectual Capital**

The concept of intellectual capital according to Andreeva & Garanina (2016) shows resources in the form of knowledge owned by companies which are high-value assets and have economic benefits in the future. The components of intellectual capital include (Asyik, 2013): (1) Human Capital (HC), showing the expertise and competence of employees in producing goods, producing services, and having good relations with customers, supported by education, experience, skills, creativity, and ethical attitudes. (2) Structural Capital (SC), showing human capital supporting infrastructure in the form of infrastructure that supports employee work, and structural capital components include technology systems, company operational systems, organizational culture, and all forms of intellectual property, (3) Employee Capital (CE) related to the network established by the company with partners including suppliers, customers, government, and society that will add value to the company. Intellectual Capital/IC is measured based on value-added (VA) with the formula (Bontis et al., 2018):

$$\frac{\text{Value Added (VA)}}{\text{IN}} = \text{OUT} - \text{IN} \dots \dots \dots (1)$$

Notes: OUT = Total sales and other income and IN = Selling expenses and other expenses (other than employee salaries)

Human Capital (HC) shows the company's ability to obtain the best solution based on the employees' knowledge to add value to the company. Value Added Human Capital (VAHU) shows the number of VA generated using spent labor funds. The relationship between Value Added and Human Capital shows how HC can create value for the company (Asyik, 2013; Wuryani, 2020).

$$VAHC = \text{Value Added (VA)} / \text{Human Capital (HC)}, \text{ HC} = \text{Employee Expenses} \dots \dots (2)$$

Structural Capital (SC) is the company's infrastructure ownership that supports employees in producing optimum performance. Structural Capital Value Added (STVA) shows the Structural Capital (SC) contribution to value development. The STVA measures the amount of SC required for the production of 1 VA rupiah and is an indicator of SC's success in creating company value (Asyik, 2013; Wuryani, 2020). The formula calculates the determination of Structural Capital Value Added (SCVA):

$$\frac{\text{STVA}}{\text{HC}} = \text{Structural Capital (SC)} / \text{Value Added (VA)}, \text{ SC} = \text{VA} - \text{HC} \dots \dots \dots (3)$$



Capital Employed (CE) shows the contribution of each capital invested in the company. The formula calculates value Added Capital Employed (VACA):

$$VACA = \frac{Value\ Added\ (VA)}{Capital\ Employed\ (CE)} \dots \dots \dots (4)$$

Notes: CE = Funds available (equity and net income)

**Dependent Variable**

The company's financial performance shows a company's ability to manage its resources to generate profits (Pal & Soriya, 2012). The company's financial performance shows the ability of a company to manage its resources to generate profits for the company. Financial performance in this study uses the Return on Equity (ROE) ratio proxy because it is related to the purpose of this study to test whether stock ownership by management will better support intellectual capital in achieving maximum performance. In addition, the use of ROE as a proxy for performance is appropriate because ROE informs the relationship between net income and the rate of return on capital invested in the company. ROE measures how much profit the company can generate per rupiah of shareholder capital (Andriana, 2014).

$$Return\ On\ Equity\ (ROE) = \frac{Net\ Income}{Total\ Equity} \dots \dots \dots (4)$$

**Moderating Variable**

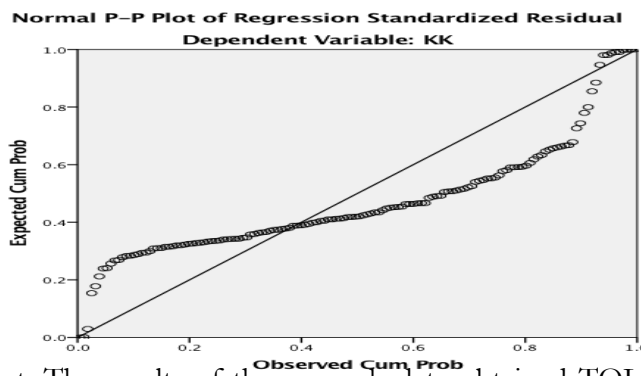
Stock-based compensation in the Employee Stock Option Plan (ESOP) category is a form of long-term compensation given to company management (Asyik, 2013). The concept of ESOP is to give management the right to buy company shares which were granted to management in the future at the price determined when the option was offered to management. Share-based compensation uses employee stock option compensation measuring the proportion of share options (HB<sub>it</sub>) that the company offers to employees. In other words, it is the proportion of options granted to employees during the event window. As Syariati et al. (2018), the ratio of employee stock options is the number of share options given to employees during the event window deflated by managerial ownership

**RESULTS AND DISCUSSION**

In this study, table 1 presented descriptive statistics on the variables that examine the impact of stock-based compensation on intellectual capital's effect on financial performance. Mean (average) and standard deviation data define fluctuations in expectations by adding and subtracting these means with their standard deviations. Furthermore, minimum data and maximum data were obtained in descriptive statistics to observe the normal range of data and avoid biased research results. Likewise, the standard deviation values are relatively small. The data demonstrated that the deviation for each variable of this study was not too large (not significant). Therefore, all data for all research variables were feasible to use.

Data Normality Test, The data normality test determined the distribution of data in a group of data (variables). It also selected whether or not the distribution of existing data shows a normal distribution. Testing data normality used the "Graphic Approach" (Sugiyono, 2011). If the data (points) is around the diagonal axis and follows the diagonal line's direction, the regression model meets the assumption of normality. The graphical approach is in Figure 2 below.





**Figure 2.**  
Scatter Plot  
Data Normality

Multicollinearity Test, The results of the research data obtained TOL and VIF values, as presented in table 2 below.

Variable	Tolerance	VIF
HC	0,81	1,24
SC	0,84	1,19
CE	0,92	1,09
Condition index		

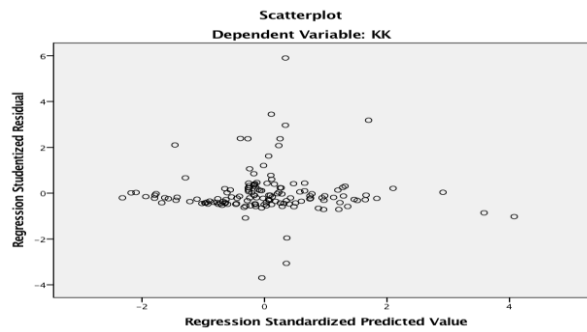
**Table 2.**  
TOL and VIF  
of Variable  
Value

The research model analysis results included all tolerance values above 0.10 and VIF values below 10—similarly. The condition index value (3.42) for research models was below 30. The results of the analysis indicated that the regression model in the study did not occur multicollinearity. Hence, the research model was valid to use as a basis for analysis. **Autocorrelation Test.** An autocorrelation test determined whether there was a correlation between variables in the prediction model and time change. If the assumption of autocorrelation occurred in a prediction model, the disturbance value was no longer an independent pair, but an autocorrelated team. The autocorrelation test performed using the Watson Durbin test, and the amount of the Durbin Watson study presented in table 3 below:

Model	Std. An error of the Estimate	Durbin-Watson
1	.30	1.60

**Table 3.**  
Durbin  
Watson's value

The value of  $dL = 1.6$  and the amount of  $DU. = 1.79$ , the Durbin Watson value was 1.6 and fulfilled the range  $1.6 \leq DW \leq 1,79$ . Thus, no autocorrelation (no autocorrelation) occurred. **Heteroscedasticity Test.** Heteroscedasticity occurs if all disturbance factors in the study do not have the same variant (a variant is not constant). Thus, this heteroscedasticity test assessed whether there was an unequal variance from the residuals for all observations in this study's linear regression model. The heteroscedasticity test uses the "Graphic Approach" and is presented in Figure 3 as follows:



**Figure 3.**  
Scatter Plot  
Heteroscedasticity Test

This study's residual data location did not form a pattern, and the heteroscedasticity did not occur, so the research model as a basis for estimation.

**Hypothesis Testing 1, 2, and 3 (Test Without Moderating Variables)**

The statistical test results of testing hypotheses 1, 2, and 3 of this study are in the following table 4:

Variable	Coefficient	t value	Sig.
Constant	0,15	3,31	0,00
HC	0,05	2,67	0,01
SC	-0,01	-0,56	0,57
CE	0,02	0,27	0,79
F Value	2,49		
Sig	0,06		
R Square	0,05		
Adjusted R Square	0,03		
Dependent Variable	Financial Performance (KK)		

**Table 4.**  
Hypothesis  
Testing 1, 2,  
and 3 (Test  
Without  
Moderating  
Variables)

Based on table 3, the following multiple linear regression equation obtained:

$$KK = 0.15 + 0.05HC - 0.01SC + 0.02CE + \epsilon \dots \dots \dots (6)$$

**Effect of Human Capital on Financial Performance (Hypothesis 1).** Based on the calculation results in table 4, this study stated that the regression coefficient for the Human Capital (HC) variable was 0.05. The t-value was 2.67, with a significance value of 0.01. The significance value was <0.05 ( $\alpha = 0.05$ ), supporting the hypothesis ( $H_1$ ). The results showed that Human Capital (HC) influenced financial performance.

**Effect of Structural Capital on Financial Performance (Hypothesis 2).** The statistical data processing results in table 4 conveyed the regression coefficient value for the Structural Capital (SC) variable of -0.01 and t-value of -0.56 with a significance value of

0.57. The significance value was > 0.05 ( $\alpha = 0.05$ ) that indicated rejecting the hypothesis (H<sub>2</sub>). The results showed that Structural Capital (HC) did not affect financial performance.

**The Influence of Capital Employees on Financial Performance (Hypothesis 3).** Suppose the statistics shown in table 4 obtained the regression coefficient results for the variable Capital Employee (CE) of 0.02 and at t-value of 0.27 with a significance value of 0.79. In that case, the significance value was > 0.05 ( $\alpha = 0.05$ ) that rejected the hypothesis (H<sub>3</sub>). The results showed that the Capital Employee (CE) did not affect financial performance.

**Hypothesis Testing 4, 5, and 6 (Test with Moderating Variables)**

**Hypothesis Testing 3** (Impact of Stock-Based Compensation on the Effects of Human Capital on Financial Performance). The result of the assumption testing 4 of this research is presented in Table 5 below:

Variable	Coefficient	t value	Sig.
Constant	0,32	11,70	0,00
KK	-0,23	-3,67	0,00
F value	0,03		
Sig	0,00		
R Square	0,07		
Adjusted R Square	0,06		
Dependent Variable	AbsRes_1 (HC)		

**Table 5.**  
Analysis of Multiple Linear Regression Hypothesis 4

Based on table 4, the multiple linear regression equation is as follows:

$$AbsRes_1 (HC) = 0.32 - 0.23KK + \mathcal{E} \dots \dots \dots (7)$$

The calculation results in table 5 informed the regression coefficient. The variable Financial Performance (KK) to the Absolute Residual Human Capital (HC) in Stock-Based Compensation Grants valued -0.23 and t-value of -3.67 with a significance value of 0.00. The significance value was <0.05 ( $\alpha = 0.05$ ) that supported the hypothesis (H<sub>4</sub>). The results showed that the Stock-Based Compensation Grant strengthened the Effects of Human Capital (HC) on financial performance.

**Hypothesis Testing 5** (Impact of Stock-Based Compensation on the Effect of Structural Capital on Financial Performance). The result of the interpretation hypothesis 5 is presented in table 6 as follows:

Variable	Coefficient	t value	Sig.
Constant	0,33	11,48	0,00
KK	-0,22	-2,85	0,01
F Value	8,09		
Sig	0,01		
R Square	0,05		
Adjusted R Square	0,05		
Dependent Variable	AbsRes_2 (SC)		

**Table 6.**  
Analysis of Multiple Linear Regression Hypothesis 5

Based on table 6, this study performed the following multiple linear regression equation:

$$AbsRes_2 (SC) = 0.33 - 0.22KK + \mathcal{E} \dots \dots \dots (8)$$

Based on the calculation results in table 5 above, the regression coefficient value for the variable Financial Performance (KK) against Absolute Residual Structural Capital (HC) in Stock-Based Compensation Grants of -0.22; and t-value of -2.85 with a significance value of 0.01. the significance value <0.05 ( $\alpha = 0.05$ ) such that support the hypothesis (H<sub>5</sub>). The results showed that Stock-Based Compensation Grants strengthened the Structural Capital (SC) Effect on financial performance. **Hypothesis Testing 6** (Impact of Stock-Based Compensation on the Effect of Employee Capital on Financial Performance). The result of the theory testing 6 of this research is presented in Table 7 as follows:

**Table 7.**  
Analysis of  
Multiple Linear  
Regression  
Hypothesis 6

Variable	Coefficient	t value	Sig.
Constant	0,28	6,26	0,00
KK	-0,05	-0,39	0,69
F value	0,16		
Sig	0,69		
R Square	0,00		
Adjusted R Square	-0,01		
Dependent Variable	AbsRes_3 (CE)		

Based on table 6 above, this study performed the multiple linear regression equation:

$$AbsRes\_3 (CE) = 0.28 - 0.05KK + \epsilon \dots \dots \dots (9)$$

Based on the calculation results in table 6, this study found the regression coefficient value for the variable Financial Performance (KK) to the Absolute Residual Capital Employee (CE) on Stock-Based Compensation Grants -0.05. The t-values were -0.39, with a significance value of 0.69. The significance value was > 0.05 ( $\alpha = 0.05$ ) that rejected the hypothesis (H<sub>0</sub>). The results showed that the Stock-Based Compensation Grant did not moderate Capital Employee (HC) effect on financial performance.

**Effect of Human Capital (HC) on Financial Performance (Hypothesis 1)**

In this study, Human Capital (HC) had a significant impact on financial performance. A regression coefficient value supported the variable Human Capital (HC) of 0.05 and t-value of 2.67 with a significance value of 0,01. HC. It had a positive effect on financial performance, meaning that the higher the HC, the higher the financial performance, and the lower the HC, the lower the business performance. Human capital is a source of innovation and a source of development for a company so that human capital can be an asset in intellectual capital. Human capital is also a source of knowledge, skills, and compensation that is very useful for companies. Human capital shows the ability of the company to get the best solution for the company's progress. Human Capital will increase if the company can use the knowledge possessed by employees appropriately and adequately. The ability of employees will affect the acquisition of company performance.

The result of this study is relevant to the theoretical concept of "resource based view of the firm" in relation to the point of view of the resources owned by the company which states that achievement is carried out through the development of company excellence and is supported by strategic ownership and control of tangible assets and intangible assets (Batarlienè et al., 2017). The main focus of the resource-based view is to emphasize the importance of resource ownership in achieving company performance. Research studies in RBT theory are in line with research by Bontis et al. (2018), which is to form the basis that builds the involvement of Human Capital (HC) in the company's routine activities, which is

achieved through increasing employee involvement in the formulation of the company's operational and long-term goals. Ownership of human capital represents individual knowledge of an organization including competence, commitment and loyalty of employees to the company, and will then be able to support the achievement of company performance.

The finding of this research supports Kamaluddin and Rahman (2013); Vishnu & Gupta (2014); Bontis et al. (2018); Castro et al. (2019), shows that there is a positive influence of intellectual capital and its components on the company's financial performance. The importance of human resource management lies not only in recruiting employees, maintaining social security or laying off employees. Human resource management is the deployment of employee resources that enable the company to achieve the company's strategic goals.

### **Effect of Structural Capital (HC) on Financial Performance (Hypothesis 2)**

In this study, Structural Capital (SC) did not affect financial performance. The regression coefficient for the Structural Capital (SC) variable was -0.01 and t-value of -0.56 with a significance value of 0.57, the significance value > 0.05. Structural capital shows the company's ability to carry out routine company activities, which is supported by its organizational structure. The company did not recommend structural capital since its organizational structure is always formed. In that structure, it will jointly produce the intellectual performance optimally achieved by the company. Furthermore, the organizational structure will support the company's operational system, manufacturing processes, corporate culture, management philosophy, and all-important intellectual property forms. The importance of structural capital shows how good a person's mental power is, so the intellectual capital will not achieve maximum performance without supporting ethical systems and procedures in a company.

Based on the theory of "knowledge-based economy", a science-based economy is a driver of economic growth, no longer big factories with thousands of workers, but mastery of science and technology (Castro et al., 2019), so that knowledge and Intellectual capital became an important factor in the economy and finance and became the main drivers of competitive advantage with the main goal of generating profit.

The inability to support the hypothesis is also due to the fulfillment of structural capital standards which include technology systems, company operational systems, organizational culture, and all forms of intellectual property have been fulfilled in publicly listed companies on the Indonesia Stock Exchange.

The result of this research supports Silvia & Maftukhah (2018), shows that there is not influence of intellectual capital especially structural capital on the company's financial performance. Structural capital owned by the company has fulfilled the routine processes and company structure so as to support the efforts of employees in producing optimal intellectual performance and overall business performance. Pramathana and Widarjo (2020) also show that intellectual capital has a positive effect on the company's financial performance, meaning that the higher the company's intellectual capital performance, the higher the company's financial performance will be. Structural Capital (SC) and Capital Employed (CE) have the strongest influence on the company's financial performance in the current period.

### **Effect of Capital Employee (CE) on Financial Performance (Hypothesis 3)**

Besides, Capital Employee (CE) did not affect financial performance. The value of the

regression coefficient for the variable Capital Employee (CE) of 0.02 and t-value of 0.27 with a significance value of 0.79; the significance value was  $> 0,05$ . Employee capital indicated intellectual capital components contributing to a tangible value related to a kind and harmonious relationship (association network) formed by the company. The employee capital did not affect financial performance since its partners have well established in collaboration. So the activities carried out by the company in its business are sustainable. Partners formed suppliers providing quality raw materials, with the company's obligations to pay taxes, with the community by carrying out social responsibility. All activities can improve company performance and add value to the company.

This condition is in line with stakeholder theory which is committed to reporting its activities including intellectual capital disclosure to stakeholders and aims to maintain a balance and sustainable value formation for all stakeholders (Kamaluddin and Rahman, 2013). Customer capital (CC) is the knowledge inherent in marketing channels and customer relationships where an organization develops it through business processes.

The finding of this research supports Andreeva & Garanina (2016) and Bontis et al. (2018), shows that there is not influence of intellectual capital especially capital employee on the company's financial performance. Based on the concept of capital employed, the company has made a number of capital investments required by the company to operate and has shown the activities of how the company uses its capital.

#### **Impact of Stock-Based Compensation on the Effect of Human Capital (HC) on Financial Performance (Hypothesis 4)**

Hypothesis 4 tested the moderating variable of stock-based compensation using residuals to deviate a model with a lack of fit obtained from the difference in the linear relationship between the independent variables. There was a lack of fit between human capital (HC) and stock-based compensation (HB), showing a high residual value if human capital (HC) and stock-based repayment (HB) were low. Then the financial performance (KK) was also down. Suppose the value of the coefficient of financial performance (CoW) was negative and significant. In that case, it showed the lack of fit between human capital (HC) and stock-based compensation (HB), causing financial performance to fall. Stock-based balance affected the effect of Human Capital (HE) on financial performance. The lack of fit with a regression coefficient was -0.23, the t-value was -3.67, and the significance value of 0.00. The significant amount was  $< 0.05$ . Accordingly, Silvia & Maftukhah (2018) emphasized that humans are a resource with new thinking that highlights more people as the most valuable assets for an organization.

In the past, the company's machinery and production equipment were valued more valuable than human value, but times have changed. The Human Resource management system currently developing in industrial reform has experienced a transformation that leads to the Human Capital (HC) approach in knowledge and information currently developing (Arora et al., 2018). In the past, humans are as resources. But nowadays, people are the company's most valuable assets. In other words, humans are essential assets in the information age. This knowledge is related to competencies that are measured by the performance in the company. Human competencies include knowledge, skills, and appropriate behaviors that support the job or position.

The existence of humans in a company is closely related to compensation, including stock-based payment. Employee ownership shows property and strives to increase the value of the purchase. Thus, the compensation system is the employees' main reason to achieve

and improve their financial performance.

### **Impact of Stock-Based Compensation on the Effect of Structural Capital (SC) on Financial Performance (Hypothesis 5)**

In hypothesis 5, a stock-based compensation variable moderating test used a residual test to examine the research model's deviation with a lack of fit originating from the linear relationship variation between the independent variables. Lack of fit between structural capital (SC) and stock-based compensation (HB) showed a high residual value. If the fundamental money (SC) and stock-based compensation (HB) was low, then the financial performance (KK) was also down. Suppose the value of the coefficient financial performance (CoW) was significant and negative. It indicates the lack of fit between human capital (HC) and stock-based compensation (HB) so that the resulting financial performance also falls. The stock-based settlement has an impact on the effect of structural capital (SC) on financial performance. It showed the fulfillment of lack of fit and the regression coefficient value of -0.22 with a t value of -2.85 and a significance value of 0.01 ( $<0,05$ ).

According to Wijayanto (2019), structural capital (SC) shows the company's knowledge that provides its ability to fulfill routine processes. The organizational structure offers optimal support to the employee in developing academic performance and overall business performance. The employees will have a high level of intellectuality if their companies have adequate systems and procedures. Intellectual Capital (IC) cannot achieve optimal performance, and its potential cannot be maximally utilized (Silvia & Maftukhah, 2018).

The share-based compensation program is related to management's efforts by basing on 2 (two) measurement patterns based on net income and market price. Regarding the compensation program as a form of company reward to management, this program can increase employee teamwork in the organizational structure to improve company performance. The concept supports research, which shows that a stock-based compensation program can increase its value by improving company performance (Fang et al., 2015).

### **Impact of Stock-Based Compensation on the Effect of Capital Employee (CE) on Financial Performance (Hypothesis 6)**

Hypothesis 6 aimed to examine moderating variables, i.e., stock-based compensation with residual tests in the model deviation test framework. This model established the lack of fit over the nonconformity of the linear relationship between independent variables. The coefficient of financial performance (CoW) was negative, but not significant. There was no lack of fit between Capital Employee (CE) and stock-based compensation (HB). The regression coefficient was -0.05 and t-value was -0.39 (the significance value of  $0.69 > 0.05$ ). Capital employee (CE) or physical capital, indicated a harmonious partnership between the company and its business partners, including suppliers, customers, government, and the surrounding community. Capital Employed (CE) related to financial capital (financial capital) owned by the company includes monetary capital and physical capital. Proper management of company resources in capital assets (capital assets) will improve company performance, further increasing its market value.

Stock-based compensation had an impact on the effect of structural capital (HE) on financial performance. The fulfillment of lack of fit and the regression coefficient value was -0.22 with a t value of -2.85 and a significance value of 0.01 ( $<0,05$ ). Thus, Wijayanto (2019) suggest that Structural Capital (SC) shows its knowledge providing the company's



ability to fulfill routine processes. The organizational structure offers optimal support and effort by the employee in producing academic performance and overall business performance. The employees still have a high intellectual level, even though their company has inadequate systems and procedures that cannot follow the company's needs. Therefore, Intellectual Capital (IC) cannot achieve optimal performance, and its potential cannot be maximally utilized (Silvia & Maftukhah, 2018). The share-based compensation program is related to management's efforts on two measurement patterns based on net income and market price.

Regarding the compensation program as a form of company reward to management, this study proved that this program could increase employees' teamwork in the organizational structure to improve company performance (Laudya & Handoko, 2019). The concept supports Fang et al. (2015) that a stock-based compensation program can increase its value by improving company performance. The unsupported impact of capital employed on performance was due to the partnership established too long between the company and partners for being an excellent management system. A system of collaboration resulted in stock-based compensation of the company that did not increase the performance. However, potentiality improves the company's performance from the ownership of the company's resources.

## CONCLUSION

Studies about intellectual capital are required by the company to determine its future prosperous Human Capital (HC). In turn, it has a significant impact on financial performance. Human resources will use their knowledge to provide solutions and make innovation for the company's progress. The capabilities will support company performance achievement, whereas Structural Capital (SC) and Capital Employee (CE) do not affect financial performance. It shows that structural capital support is related to organizational structure and supported by operational systems manufacturing processes, corporate culture, management philosophy, and the presence of intellectual property to achieve company performance optimization. Likewise, the company should develop a collaboration of each component regularly. It is currently in a continuous improvement phase, such as improving the quality of raw materials with suppliers, allowing company compliance to meet tax requirements, and paying attention to social obligations that can add value to the company.

Moreover, stock-based compensation impacts the effect of Human Capital (HC) on financial performance. The shares ownership of employees with competencies, knowledge, skills, and behavior will support organizational structures' optimization in achieving work performance. The presence of a flexible compensation system increases cohesiveness in teamwork to improve company performance. Stock-based compensation impacts the effect of structural capital (HE) on financial performance. The organizational structure is increasingly optimal with the implemented stock compensation system. The employees' optimal business support can produce academic performance and business performance. Meanwhile, the absence of stock-based compensation impact on the influence of employee capital (CE) on financial performance was due to partnership relations' customary conditions for a relatively long time to become systemic. Hence, the application of stock compensation does not support the achievement of performance.

The research implications include: (1) Theoretical implications of supporting Resource Based Theory which views resources as the main factor for companies that must continue

to be developed so that they can achieve intellectual capital that is beneficial to the company and (2) Practical implications of being a source of information for investors related to intellectual capital that owned by the company so that it is able to support the prospect of the company's success in the future so that investors have confidence in investing in the company, this is further supported by the implementation of long-term compensation ESOP.

The limitation of the study is that the company implementing the Employee Stock Option Plan (ESOP) program is not implemented in the same period, and because this study establishes the sampling criteria for implementing the ESOP in the 2016 to 2019 period, the number of samples that meet the requirements is relatively small, a total of 36.

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