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INTELECTUAL CAPITAL PERFORMANCE DETERMINANTS AND THE ROLE OF PROFITABILITY AS MODERATING VARIABLE

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Abstract:
Based on the Statistics Data, the economy is measured based on the basis of prevailing prices reaching 15,833.9 trillion rupiah and GDP per capita of $4174.9. Economic growth in the fourth quarter of 2019 reached 5.02%, which is a decrease from 5.17% in 2018. This research aims to know and analyze the influence of employee *productivity,* Firm Size, *board size* on intellectual capital *performance* in companies that are incorporated in the LQ-45 index. The number of samples as many as 97 with purposive samples as a method of determining samples. The research method in this study is quantitative by analyzing the annual report of companies listed on the IDX. The result in this research proves that profitability is able to moderate the relationship of employee productivity, size of the company to intellectual capital performance. Profitability, is unable to moderate the relationship between the board's size and intellectual capital performance.

Keywords:
Employee Productivity, Company Size, Board Size, Profitability, Intellectual capital Performance

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INTRODUCTION

Companies that do not have going concerns are proven not to follow the development of technology and the development of science because it still uses old technology that is not well updated. With the arrival of the Internet, other mobile companies began to understand how data, and not just voice, would be useful for future communication. McBride et al., (2020) *mentions* that intellectual capital is a knowledge that provides information about the company's intangible assets including all the knowledge of employees, organizations and their ability to create added value of the company. *Resources based theory* views the company as a collection of resources and capabilities (Ousama et al., 2020).

The first factor that is expected to affect *intellectual capital performance* is employee *prductivity. Employee productivity* is a measure of employee productivity in a company (Alvino et al., 2021; P. Demartini & Paoloni, 2013). Employee productivity for a company is very important as a gauge of success in running a business, because the higher employee productivity means the profitability of the company and productivity

will increase (Saputra et al., 2020; Sara et al., 2021). Firm Size is a scale that shows the size of a company based on total assets, number of sales, average sales and average total assets (Chen & Zhu, 2004; M. C. Demartini & Beretta, 2020). The larger the size of the company, the more activity and the higher the utilization rate of all potential *intellectual capital* owned by both employees (human *capital*), physical assets (*phsyical capital)* and worker organizations (*structural capital*) (Kuo et al., 2020; Smriti & Das, 2018). B*oard size* or council *size. Board size* is the number of board of directors and commissioners in a company (Saputra & Kawisana, 2021). Larger numbers of boards will be more likely to increase the ability of companies to obtain and secure essential resources from their environment such as *intellectual capital performance* resources (Goebel, 2019; Jordão & Novas, 2017). This is because with a larger number of boards, with a variety of educational backgrounds and skills have better skills in opinion and can improve the quality of decision making and better represent the interests of *stake holders* and eliminate dominance (Sara et al., 2020). Profitability demonstrates the company's ability to make a profit through all its capabilities and resources (Jayawarsa et al., 2021; Saputra et al., 2019). Companies that obtain high profitability allow the company's leadership to conduct useful activities for the company by encouraging employees to innovate such as new products or services or improved business processes that will improve *intellectual capital performance* to gain a competitive advantage (Edvinsson, 1997; Saputra et al., 2018).

Resources based theory or also known as resource-based theory uses a resource-based approach in the analysis of competitive advantages. Adinehzadeh et al. (2018) suggests that the company's resources are heterogeneous, not homogeneous, productive services available derived from corporate resources that provide a unique character for each company. Based on the concept *of resources based theory,*if the company is able to manage resources effectively it will be able to create a competitive advantage over competitors. Whether or not a company succeeds will be largely determined by the strengths and weaknesses that exist in the company's resources. This is reinforced by the statement of Ousama et al. (2020) which says that the success of the company is largely determined by the resources it has and the capabilities of the company that is able to turn those resources into *economic benefits.*

Mahoney et al. (2013) stated that *signal* is an action taken by management that provides guidance to investors (investors) on how management will view the company's prospects for the future. Information is an important element for investors and businesses because information essentially presents a description, record or description for both the past, current and future circumstances for the survival of a company. Signal theory mentions that the company's encouragement to provide such information because there is asymmetry of information between the company *manager* and outside parties (Xu et al., 2019).

Profitability demonstrates the company's ability to make a profit through all its capabilities and resources. Companies that obtain high profitability allow the company's leaders to perform useful activities for the company by encouraging employees to innovate such as new products or services or improved business processes that will improve intellectual capital performance to gain a competitive advantage. Employee producitivty is expected to boost the company's productivity in generating profitability where this ratio utilizes the intellectual capital performance aspect of human resources (Saputra et al., 2018; Yun & Hyo, 2006).

H1. Profitability Able to moderate the relationship between Employee Productivity, Company Size and Board Size To Intellectual Capital Performance

In addition, large-scale companies are expected to encourage more and more activities in utilization of all potentials to generate profitability that will

improve *intellectual capital.* Research conducted by Saputra et al. (2018) stated that profitability is able to moderate the relationship between the size of the company to intellectual capital performance. Good management of all this potential will create added value (*value added)*for companies that can improve *intellectual capital performance.* Firer & Mitchell Williams (2003) also found an influence between the size of the company *and intellectual capital performance.*

H2. Profitability Able to moderate the relationship between Employee Productivity, Company Size and Board Size To Intellectual Capital Performance.

Board size is also expected to encourage the board to be able to improve the quality in decision making that better represents *the stake holder* who prioritizes the interests of the company to be able to achieve its goals in obtaining profitability so that intellectual capital *performance* will also increase with the role of the board members. Profitability in this case is projected with *Return on Equity* (ROE) because it can measure the effect of actions taken by management related to the company's equity better than ROA. In line with previous research that has been done by Molodchik et al. (2014) which also states that profitability can affect *intellectual capital performance.*

H3. Profitability Able to moderate the relationship between Employee Productivity, Company Size and Board Size To Intellectual Capital Performance

METHOD

This type of research is causal associative research. Causal associative research is research that identifies a causal relationship between one or more independent variables and dependent variables. The relationships tested in this study were the partial and simultaneous relationship between independent *variables of employee productivity,*the sizeof thecompany, and *the board size* of dependent variables of intellectual capital *performance* with profitability as moderating variables. where taking samples of financial statements for 3 years period from 2017-2019 with idx company objects ranked in LQ45.

RESULTS AND DISCUSSION

Descriptive statistics are statistics used to analyze data by describing or describing the collected data as it is without intending to make generally valid conclusions. This study looked at the overview *of employee productivity,* company size, *board size, intellectual capital performance* and profitability. Normality test is useful at an early stage in the method of selecting data analysis. Normality of data is necessary to obtain accuracy in hypothesis testing. Normality testing often used in research usually uses *kolmogorov-smirnov method and normal probability plots*. heteroscedasticity is a condition where residual variants are not the same in all observations in the regression model. The purpose of heteroscedasticity test is to test a regression model, whether variance occurs from residual observation to another observation. A good regression model does not occur heteroscedasticity. This research is a way to test heteroscedasticity is by testing plot charts. The plot graph test tests between the predicted value of the dependent variable ZPRED and its residual SRESID. There is no test of heteroscedasticity plot graphs when there is no clear pattern, as well as dots spreading above and below the number 0 on the Y axis. The autocorrelation test aims to test whether in the linear regression model there is a correlation between the bully's error in the t period and the bully's error in the t-1 period (previously). Autocorrelation is the relationship between errors that appear in the run time. How to test autocorrelation is by test durbin watson with provisions, if DW < DL then there is a

positive autocorrelation and if DW > DL then there is no positive autocorrelation and if DL < DW < DU then the test is not convincing or inconclusive.

The statistical scores from Watson's durbin test range from 0 to 4. Statistical scores from the durbin-watson test smaller than 1 or greater than 3 indicated autocorrelation problems occur. A coefficient of determination ($R^{2)}$ is a value that measures how much free variables are used in regression equations to apply variations of non-free variables. The F statistical test aims to show whether all independent variables included in the model have a mutual influence on dependent variables. F statistical test using analysis tool namely ANOVA (*Analysis of Variances*). Statistical test - t aims to show how far the influence of one independent variable individually in describing variations of dependent variables. The purpose of this analysis is to find out whether moderating variables reinforce or weaken the relationship between independent variables and dependent variables. This test was conducted using an interaction test also called *Moderated Regression Analysis* (MRA). *Moderated Regression Analysis* (MRA) is used to look for the influence of independent variables on dependent variables as well as to see if moderation variables affect the relationship between independent variables. *moderated regression analysis* (MRA) is a special application of linear multiple regression in which in the equation of regression contains elements of interaction (multiplication of 2 (two) or more independent variables).

Table 1. Hypothesis Testing Result

	Unstandardized Coefficients		Standardized Coefficients		
	b	Std. Error	beta	t	Sig
(Constant)	,918	2,468		,372	0,711
Employee Productivity	-1,237	0,483	-1,645	-2,563	0,012
Company size	1,380	0,497	2,021	2,777	0,007
Board of Commissioners Size	0,031	0,010	0,319	3,183	0,002
Profitability	0,021	0,009	0,222	2,236	0,028
Profitability Interaction with Employee Productivity (INTZX1)	2,517	0,934	2,666	2,694	0,008
Profitability Interaction to Company Size (INTZX2)	2,656	1,000	2,331	2,657	0,009
Profitability Interaction to Board Size (INTZX3)	0,212	0,362	0,109	0,586	0,559
R Square	0,538				
Adjusted R Square	0,289				
F Count	5,168				
Significance F	0,000				

Source: Data processed (2021)

Hypothetical test results showed that profitability interactions were able to moderate positively the influence of employee productivity on Intellectual capital performance of 0.317 with a significant level of 0.008. The significance value of 0.008 < 0.05 indicates that H1 which states that variable profitability is able to strengthen employee productivity relationship to intellectual capital performance is accepted. The results showed that the interaction of profitability is able to moderate positively the size of the

company to intellectual capital performance. The results can be seen from the significance value of 0.009 (with a significance value of 0.001). This indicates that H2 is accepted. The effect of profitability interaction on the relationship of board size and intellectual capital performance in Table 9 shows a significance value of 0.559. Therefore, H3 which states profitability is not able to moderate the relationship of the Board of Commissioners size to intellectual capital performance is rejected.

The results of moderation test prove that the interaction of variable profitability as a moderation, able to strengthen the relationship between employee productivity to intellectual capital performance (Alvino et al., 2021; Chowdhury et al., 2018). The greater profit generated by the company is proven to give a positive influence on the productivity of the company's employees so as to strengthen the intellectual model of a company (Alvino et al., 2021; Freeburg, 2018). The results prove that the interaction of variable profitability as a moderation, able to strengthen the relationship of the size of the company to intellectual capital performance (Kuo et al., 2020; Saputra et al., 2018). The greater the profit generated, proven to provide intake for the company to develop and multiply the company's assets. The existence of good profit, proven to strengthen the size of the company, so it is proven to give a positive influence proven to strengthen the intellectual model of a company (Edvinsson, 1997; Wang et al., 2019). The moderating test results prove that the interaction of variable profitability as a moderating, has no influence on the relationship between the size of the board to intellectual capital performance (Alipour, 2012; Mukherjee & Sen, 2019). The greater the profit generated by the company is not proven to affect the number of commissioners of the company to intellectual capital performance. In this case regardless of the number of boards in the company, and the amount of profit of the company will not change the intellectual model that a company has (Bontis et al., 2000; Dumay, 2009; Jayawarsa et al., 2021).

CONCLUSION

Profitability interaction can strengthen employee productivity relationship to intellectual Capital Performance in companies in IDX included in LQ45 period 2017-2019. Profitability interaction can strengthen the company's size relationship to Intelectual Capital Performance in companies in IDX included in LQ45 for the period 2017-2019. Profitability interaction is not able to moderate the board size relationship to intellectual Capital Performance on companies in IDX included in LQ45 for the period 2017-2019. Subsequent research can be done by increasing the number of samples and developing research models by adding research variables such as efficiency levels so that the results obtained are able to describe the actual state. For External Parties. This research is expected to be the basis of reference to start investing in the capital market. By monitoring companies that consistently rank in LQ45. Companies that consistently rank in the LQ45 rankings tend to have good financial statements and are trustworthy. Have strong internal management and consistency in developing.

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