

Growth Opportunity and Financial Performance: The Moderating Role of Intellectual Capital

Erlin Melani*, Andi Kusuma
Accounting Department
State Polytechnic of Malang
Malang, Indonesia
*erlinmelani13@gmail.com

Abstract—The aim of this study was to examine the role of intellectual capital in moderating the relationship between growth opportunities and financial performance. The study was conducted on banking companies listed on the Indonesia Stock Exchange for the period 2015-2017. Samples selected by purposive sampling technique. This study used is secondary data, namely the financial report for the financial year 2015 to 2017. Data is obtained from the Indonesian Capital Market Directory and the financial report available online at the site www.idx.co.id. The data collection method used is documentation techniques. Data analysis techniques using SEM-PLS. The research proves that intellectual capital moderating the relationship between growth opportunities and financial performance.

Keywords—intellectual capital, growth opportunities, financial performance

I. INTRODUCTION

The era of the industrial revolution 4.0 had a major impact on the world of industry and business. History has noted that the industrial revolution has taken its toll with the death of giant companies [1]. More than that, in this era of the fourth generation industry, the size of the company is not a guarantee, but the company's innovation is the key to achieving success quickly.

The industrial revolution created an era of knowledge-based economics that relied on intellectual capital, as a source for companies for growth opportunities, sources of innovation and competitive advantage [2]. Intellectual capital, such as knowledge, information and experience, is a wealth creation tool. According to Stewart, intellectual capital is the organization's new wealth [3]. Company value, in the era of knowledge-based economy today can be seen from the side of its intellectual capital such as information and knowledge, assets that are generally embodied in the form of human resources [4]. Based on the background above, this study intends to examine the effect of innovation on growth opportunities with intellectual capital as a moderating variable.

II. THEORETICAL FRAMEWORK

Intellectual capital includes all employees, organizations and their ability to create value added that is evaluated by the market [5]. Refer to Bontis, intellectual capital as the knowledge of individual workers and organizations that contribute to sustainable competitive advantage [6]. According to Bontis in general the researchers identified three main constructs of intellectual capital, namely human capital,

structural capital, and customer capital [7]. Structural capital is divided into 2 namely process capital and innovation capital [8-12].

Refers to Chen et al, the growth rate of a company can be assessed in a number of ways, including increasing assets, increasing sales, increasing profits, and increasing equity [13]. In a study conducted by Chen et al, intellectual capital plays an important role in increasing revenue growth (sales) [13]. According to Solikhah et al, intellectual capital has a significant positive effect on company growth [14]. Companies that are able to manage their intellectual resources to the maximum, will gain value added regularly and continuously so that the company is able to grow and survive. Intellectual capital also influences growth [15].

Some results from previous studies show a negative relationship between financial performance and corporate Innovation Opportunity Set/IOS [16-19]. For example, based on a sample of 269 Australian companies, Hutchinson found a negative relationship between financial performance and corporate IOS [18]. In another study, Hutchinson and Gul also found a negative relationship between financial performance and corporate IOS [19]. Different results shown by Muniandy and Hillier, using a sample of 151 South African Companies listed on the Johannesburg Stock Exchange, succeeded in identifying a positive relationship between growth opportunities and corporate financial performance [20]. According to Serrasqueiro et al, found a non-linear relationship between growth opportunities and profitability, using a sample of 39 companies listed on the Portuguese Stock Exchange. The results also suggest that companies with limited and high growth opportunities have greater profitability than companies with medium growth opportunities [21]. The hypothesis proposed is:

H1: Intellectual capital moderates the relationship between growth opportunities and financial performance

The conceptual framework is drawn as follows in figure 1:

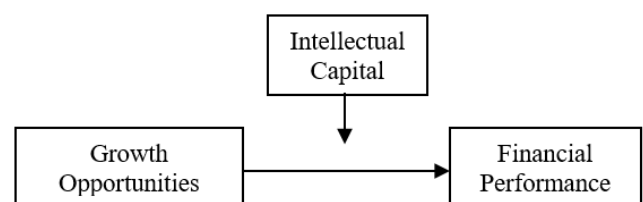


Fig. 1. Conceptual framework.

III. RESEARCH METHODS

The population used in this study are all banking companies listed on the Indonesia Stock Exchange with a observation period of 2015-2017. For samples selected based on purposive sampling. The population is 30 companies, and after purposive sampling 22 samples are obtained for one year of observation. Data analysis and hypothesis testing in this study using the SEM-PLS method.

This study uses secondary data, namely financial reports for the financial year 2015 to 2017. Data obtained from the Indonesian Capital Market Directory and financial reports are available online at the www.idx.co.id. The data collection method used is the documentation technique.

The endogenous variables are financial performance. According to Sucipto financial performance can measure the success of an organization or company in generating profits [22]. In this study the measure of financial performance used is the analysis of financial ratios.

The exogenous variables are intellectual capital and growth opportunities. Intellectual capital according to Firer and Mitchell, is information and knowledge that is applied in work to create value [23]. The measure of intellectual capital used in this study is MVAIC. Growth opportunity is also called an opportunity for a company to grow in the future [24]. The following table presents the measurement of each variable. The size of the variables used was adapted from several literatures related to IC measurements and determinants of company performance [3,8, 25-29].

In order to measure intellectual capital performance, the measurement model uses MVAIC as a new measure, the development of Pulic's VAIC model. ICE is Intellectual Capital Efficiency which has measure by the sum of Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Relational Capital Efficiency (RCE). CEE is Capital Employed Efficiency measured by Value added (VA) divided by capital employed (CE). SC is Structural Capital measured by VA-HC (HC : Human Capital measured by employees' salary and bonus and training cost). RC is Relational Capital measured by marketing cost. CE is Capital Employed measured by book value of total assets.

TABLE I. VARIABLES' MEASUREMENT

Variables	Measurement
Financial Performance	
Return on assets (K1)	EAT/Total asset
Adjusted return on assets (K2)	Operational Income/total asset
Return on stockholders' equity (K3)	Operational Income / outstanding ordinary shares
Adjusted return on stockholders' equity (K4)	(Operational Income – interest cost)/ outstanding ordinary shares
Operating income ratio (K5)	Operational Income /net sales
Stock price (K6)	Closing price of shares
Market value (K7)	Closing price of shares x outstanding ordinary shares
Growth Opportunity	
CTD (P1)	(Book value of asset t – Book value of asset t-1)/ depreciation
MTBE (P2)	(outstanding ordinary shares x closing price)/equity
Intellectual Capital (MVAIC)	$VA = OP + EC + D + A$ $ICE = HCE + SCE + RCE$ $HCE = VA / HC$ $SCE = SC / VA$ $RCE = RC / VA$ $CEE = VA / CE$ $MVAIC = HCE + SCE + RCE + CEE$

IV. RESULTS AND DISCUSSION

The results of the relationship model between variables in the first hypothesis, at the initial stage will be examined the value of the variance inflation factor (VIF) on the outer model in each variable. VIF values of more than 5 explain the presence of high multicollinearity, and the proxy must be excluded from the hypothesis model. Table 2 below explains that several proxies with high VIF values must be excluded from the hypothetical model, namely ROA (24,253), ROE (5,046), and operating income ratio (9,997).

TABLE II. VIF VALUE IN THE INITIAL HYPOTHESIS MODEL

Variable	Proxy	VIF Awal	VIF Setelah Evaluasi
Intellectual capital	MVAIC	1.000	1.000
Growth opportunities	CTDP1	1.034	1.034
	MTBEP2	1.034	1.034
Financial performance	ROAK1	24.253	-
	Adj.ROAK2	13.157	13.157
	ROEK3	5.046	5.046
	ADJ.ROEK4	1.795	-
	Op.RatioK5	9.997	-
	StockPriceK6	6.901	6.901
	MVK7	5.258	5.258

Source: data processes

Stronger growth opportunity variables are explained by MTBE (0.998), and financial performance variables are explained more by stock prices (0.700). Growth opportunities and intellectual capital contribute 50.6% in explaining financial performance. The coefficient marked negative on the financial performance of intellectual capital is -2,373 and the coefficient marked positive at 4.986 from the interaction of growth opportunities and intellectual capital illustrates that there is a different pattern of direction for financial performance. When intellectual capital is in a low condition low growth opportunities will actually have the potential to improve financial performance. While the opposite pattern occurs when a company has high intellectual capital, it is precisely in the condition of high growth opportunities that the company will have better financial performance.

In the three path coefficients of the relationship of intellectual capital and financial performance opportunities there are two significant tested coefficients.

TABLE III. PATH COEFFICIENT TEST RESULTS

	Coefficient	SE	T	P
Intellectual capital -> Financial Performance	-2.373	1.420	1.672	0.048
Moderating Effect Growth Opportunities x Intellectual Capital -> Financial Performance	4.986	3.000	1.662	0.049
Growth Opportunities -> Financial Performance	-0.109	0.404	0.269	0.394

Source: data processes

The stronger growth opportunity variable explained by MTBE (0.998), and financial performance variable is explained more by stock price (0.700). Growth opportunities and intellectual capital contribute 50.6% in explaining financial performance. The coefficient marked negative on the financial performance of intellectual capital is -2,373 and the coefficient

marked positive at 4.986 from the interaction of growth opportunities and intellectual capital illustrates that there is a different pattern of direction for financial performance. When intellectual capital is in a low condition low growth opportunities will actually have the potential to improve financial performance. While the opposite pattern occurs when a company has high intellectual capital, it is precisely in conditions of high growth opportunities that the company will have better financial performance.

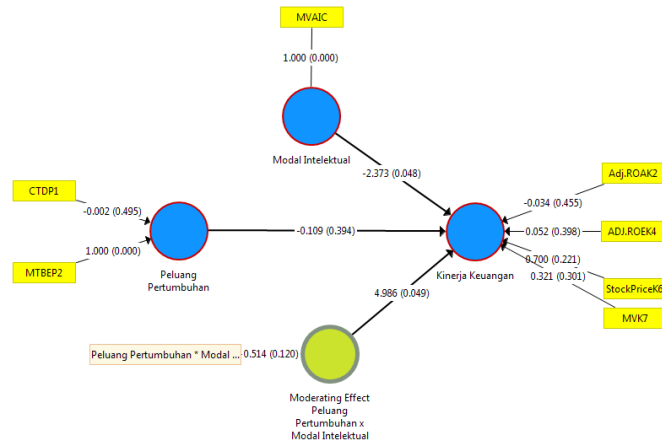


Fig. 2. Coefficient test results.

The coefficient on the interaction part of growth opportunities and intellectual capital on financial performance of 4.986 is significant. The hypothesis which states that intellectual capital moderates the relationship between growth opportunities and financial performance is proven.

Companies that are able to manage their intellectual resources to the maximum, will gain added value regularly and continuously so that the company is able to grow and continue to survive. Conditions that occur in the Indonesian banking industry, when intellectual capital is in a low condition and low growth opportunities, will actually have the potential to improve financial performance. While the opposite pattern occurs when a company has high intellectual capital, it is precisely in conditions of high growth opportunities that the company will have better financial performance. This can be caused, one of them, there are other factors that affect the company's financial performance in addition to growth opportunities, such as innovation factors.

V. CONCLUSION

The hypothesis model is to test the moderating effect of intellectual capital on the relationship of growth opportunities on financial performance. The coefficient on the interaction part of growth opportunities and intellectual capital on financial performance of 4.986 is significant. The hypothesis which states that intellectual capital moderates the relationship between growth opportunities and financial performance is proven.

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Employee costs are a key element in the measurement of intellectual capital using the MVAIC method. Conditions in Indonesia show that employee costs that are reported separately in the financial statements are only salary costs, while other costs such as training costs do not appear in a separate account so that it may affect the results of the study.

Future studies that use financial performance as the dependent variable should add company size (SIZE) as a control variable to the financial performance of large and small companies because it is feared that the company's financial performance is also influenced by company size.

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