

Intellectual Capital and Company Profile Effects on Supply Chain and Earning Per Share based on the Operational Management

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Abstract- The main objective of this study is to examine the effect of intellectual capital, debt policy, company size, supply chain and liquidity on earnings per share and dividends per share as intervening variables in companies registered in the LQ 45 stock market index that consists of 45 companies for the 2014-2016 period in Indonesia. Using a purposive sampling method obtained data (panels) of 60 observation data from 20 companies. Multiple regression analysis is used to analyze two models. Model 1 analyzes the influence of intellectual capital, debt policy, company size and liquidity on dividends per share and model 2 analyzes the effect of intellectual capital, debt policy, company size and liquidity on supply chain and consequently earnings per share by including dividend per share as an intervening variable. The first Analysis regression Model 1 found that supply chain, human capital efficiency, debt policy, company size, and liquidity, statistically significant affected dividend policy, other variables did not influence. The second analysis regression of Model 2 based on the operational management (through variable intervening) found that only dividends per share were statistically significantly affecting earnings per share (EPS). In model 1 the adjusted R square value is very low, this means that the independent variable cannot explain changes in the dependent variable whereas in model 2 it is very high, this means that the independent variable is able to explain changes in the dependent variable.

Keywords: *dividend per share, operational management, earning per share, Supply chain, Intellectual capital, debt policy, company size, liquidity.*

1. Introduction

Supply chain intelligence integration is defined as the acquisition and application of technological and market knowledge sourced from supply chain partners, including suppliers and customers. Earning per share (EPS) as an indicator of profitability is the hope of investors and shareholders on the number of shares owned because EPS can show how much information the benefits will be obtained. The greater the EPS becomes a measure of the company's success in attracting investors to invest their funds. Referring to Kumar's research about EPS in India

concluded that earning per share has found to be a very strong forecaster of market price of share, while price earnings ratio impact significantly on the prediction of market price of share of select companies of auto sector as whole [1]. Therefore EPS must be a concern of financial managers given its role in share price. This was found by Bhattarai who conducted his research in Nepal that revealed that earning per share and price-earnings ratio have the significant positive association with share price [2]. Many dividend theories have been propounded to give the explanation on how the dividend decisions are being undertaken and whether it has an influence on the value of the firm [3].

2. Literature review and hypotheses development

2.1. Earning per share and dividend per share

The most commonly used measure of profitability for public companies is Earnings per share (EPS) which tells ordinary shareholders how many shares they have available. Earnings per share is a very useful measure of profitability and will provide a very clear description and signal of the strength of profitability between similar companies. This opinion is similar to the statement that earnings per share (EPS) is considered an important accounting indicator of risk, entity. Sharif, Purohit, & Pillai's research on the Bahrain Stock Exchange revealed that market value of a share is significantly and positively affected by a high return on equity, increasing book value of shares, higher dividend per share and increased price earnings per share [4]. This means that there is a strong relationship between earnings per share and dividends per share. The expectation of investors to invest funds in stocks is the expected return that will be obtained in the form of stock dividends and indicated in dividends per share. Regarding the dividend per share (DPS) Mehta revealed. there are three different approaches in this regard. On the right, there is a conservative group that believes an increase in dividend payout increases the value of

the firm. On the left, there is a radical group that believes a higher dividend payout reduces the value of the firm. And, The third theoretical approach asserts that dividends should be irrelevant and all effort spent on the dividend decision is wasted [3]. Earnings per share as an indicator of company profitability have a relationship with dividends per share as a result of the chosen dividend policy. Research Yusof & Ismail in Malaysia has proven this. They revealed the five factors that are earnings, debt, size, investment and largest shareholder have a significant influence on dividend policy, with earnings, firm size and investment revealed to have a positive significant effect [5].

2.2. Intellectual capital on Earning per share

So far there is no universal definition for intellectual capital (IC) and influences the relationship with value creation, it is believed that IC can be used because it has an important role in the company's operations [6]. Even Huss and Britzemaier [7] revealed about the creation of market value that the difference between market capitalization and the book value of the equity was intellectual capital [7]. Indirectly IC is a measure of value added by the company's operating efficiency through Value Added Intellectual Coefficient (VAIC™) [8]. Value Added is the difference between the output and the input, namely all the expenses used in obtaining revenue. In this study the intellectual capital element uses the Human Capital Efficiency (HCE), Structure Capital Efficiency (SCE) and Capital Employed Efficiency (CEE). HC is the employee's burden, CE is the book value of the company's net assets and SC is the difference between the value added and the human capital. Jauhari found that intellectual capital significantly influence financial performance [9]. Haris et al., in their research cononcluded that there was a positive impact of IC performance on profitability [10]. Based on the reasons mentioned above the hypothesis developed as follows:

H₁: Intellectual capital has significant positive effect on earnings per share

2.3. Debt policy or Leverage and Earning per share

Debt policy in this study is proxied through funding policies or leverage, namely Debt to Equity Ratio (DER). DER level is an option

considering that own capital reflects the ability of the company to be able to operate relying on its own capital. Some results of research on the debt to equity ratio (DER) founded a negative relationship between both debt equity ratio and leverage ratio and profitability [11]. The same thing founded by Salim & Yadav on their research in Malaysian companies concluded that capital structure (Long Term Debt and Total Debt) has negative significant impact on firm's performance [12]. Referring to the explanation above the hypothesis formulated as follows:

H₂: debt to equity ratio has significant negative effect on earnings per share

2.4. Company Size on earning per share

The next factor that is thought to influence the value of the company proxied by EPS is the size of the company. The size of the company is generally indicated by the value of the company's assets. If it is associated with the ability to earn profits, the size of the company is one of the factors that determine the company's ability to generate profits. Another advantage of large size companies will be more attractive to investors in investing their funds through stocks than companies with small size. Most often, companies with big size and good cash flows offer higher dividends than the companies of small size [13]. Research of Srinivasan founded that size is being a significant factor in determining the share prices of all sectors under consideration except manufacturing [14]. the results of the research of Niresh and Velnamvy in Sri Lanka concluded that there was no indicative relationship between firm size and profitability of listed manufacturing firms [15]. [16] on their finding concluded that there was a positive and significant relationship between financial ratios and firm size with earnings per share [16]. Thus the following hypotheses is developed:

H₃: Company size has significant positive effect on earnings per share

2.5. Liquidity on Earning per share

The term liquidity is basically a technique which is used by an organization to convert its assets (current) into cash. Whenever a firm/organization needed to meet its financial obligations, it converts its current assets into cash form to pay the due liabilities at maturity date [17]. Therefore

Liquidity can be interpreted as the company's ability to fulfill current obligations and operations. The higher the level of liquidity of the company the stronger the company to pay short-term debt, meet the needs of daily operations such as the provision of raw materials, labor costs, pay interest on loans and other obligations that are short-term in nature. Company liquidity can be measured through current ratio. The current ratio (CR) becomes the proxy of liquidity on the grounds that the current ratio is the most complete measure of liquidity considering that the basis used as a comparison is the entire value of current assets owned by the company. [16] has examined the relationship between financial ratios (including liquidity) and The results indicate that there is a positive and significant relationship between financial ratios and firm size with earnings per share [16]. The following hypotheses is developed

H₄: Liquidity has significant positive effect on earning per share

3. Research methodology

Table 1. Research Variable Measurement

variables	Proxy	Measurement
Dividend policy [2]	DPS	the amount of dividends paid divided by the number of shares
Earning per share: EPS [18]	EPS	After-tax net income divided by the number of ordinary shares outstanding
intellectual capital [8] [7]	<i>HCE</i>	$HCE = VA / HC$
	<i>SCE</i>	$SCE = SC / VA$
	<i>CEE</i>	$CEE = VA / CE$
Debt policy: debt to equity ratio [11]	<i>DER</i>	Total Debt divided by Own Capital
Company size [2]	<i>Size</i>	Ln(Total Assets)
Liquidity: [19]	<i>CR</i>	Total current assets divided by Current Debt

4. Results and discussion

4.1. Regression analysis: Model 1

The output of the first regression analysis is statistically illustrated in the following table 2 and table

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Table 2. Regression Analysis: Model 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.390	5.827		1.268	.211
	HCE	-1.394	.623	-.426	-2.239	.030
	SCE	.747	.501	.281	1.490	.143

	CEE	.145	.236	.074	.614	.542
	DER	-1.974	.453	-.772	-4.356	.000
	SIZE	.527	.246	.263	2.147	.037
	CR	-1.935	.601	-.562	-3.217	.002
a. Dependent Variable: DPS						

Table 3. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.606 ^a	.367	.288	1.63685
a. Predictors: HCE, SCE, CEE, DER, SIZE, CR				
b. Dependent Variable: DPS				

Referring to table 2, the regression coefficient (Beta) used is unstandardized Coefficients, so the model 1 equation is empirically obtained as follows:

$$DPS_{i,t} = 7.390 - 1,394HCE + 0,747SCE + 0,145CEE - 1,974DER + 0,527IZE - 1,935CR + \varepsilon_{i,t}$$

In general, the empirical equation can be interpreted, the DPS value will be 7,390 when all independent variables are zero. The positive β coefficient indicates that DPS will increase by the value of β if there is a one unit increase in each independent variable, ceteris paribus. Conversely, DPS will decrease when the β coefficient is negative.

In the same table, Human Capital Efficiency (HCE), debt policy (DER), and liquidity (CR) have negative significant influence on dividend

policy (DPS), respectively, while the company size has a significant positive effect. This is indicated by the sig value which is smaller than alpha 0.05. Structure capital efficiency (SCE) and capital employed efficiency (CEE) do not have significant effect on dividend policy.

In table 3 the Model Summary can be seen that the adjusted R Square value is 0.288 or 28.8%. This shows that the variable variation in the model can explain 28.8% of the variability of the DPS variable, while the remaining 71.2% is explained by other variables outside the model.

4.2. Regression Analysis: Model 2

This analysis is intended to analyze as well as to determine the effect of independent variables on the dependent variable through the DPS variable.

The regression model 2 empirically is as follows:

Table 4. Regression Analysis: Model 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.065	2.160		.030	.976		
	HCE	.034	.234	.014	.147	.884	.331	3.021
	SCE	.131	.183	.067	.717	.477	.356	2.809
	CEE	-.082	.085	-.057	-.966	.339	.894	1.119
	DER	.266	.191	.141	1.391	.171	.304	3.294
	SIZE	.061	.093	.041	.653	.517	.804	1.244
	CR	.211	.238	.083	.888	.379	.356	2.811
	DPS	.705	.052	.952	13.667	.000	.639	1.566
a. Dependent Variable: EPS								

Table 5. Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 ^a	.858	.836	.58423
a. Predictors: (Constant), HCE, SCE, CEE, DER, SIZE, CR, DPS				
b. Dependent Variable: EPS				

Referring to table 4, the regression coefficient (Beta) used is unstandardized Coefficients, so the model 2 equation is empirically obtained as follows:

$$EPS_{i,t} = 0,065 + 0,034HCE + 0,131SCE - 0,082CEE + 0,266DER + 0,061SIZE + 0,211CR + 0,705DPS \varepsilon_{i,t}$$

The way to interpret model 2 is the same as the interpretation of model 1 according to positive or negative Beta values. Table 4 also shows that only the dividend policy variable (DPS) has a significant positive effect on earnings per share as evidenced by the sig value smaller than 0.05. In other words, other independent variables have no significant influence.

In table 5 the Model Summary can be seen that the adjusted R Square value is 0.836 or 83.6%. This shows that variable variations in the model can explain 83.6% of the variability of EPS variables, while the remaining 16.4% is explained by other variables outside the model (residual).

5. Discussion

This study contributes to the literature of IC and supply chain knowledge management, and provides managerial implications to practitioners. The research findings highlight the distinctive role of individual IC components in promoting SC. The results of model 1 analysis found that human capital efficiency (HCE) had a significant negative effect on dividend policy. Whereas structure capital efficiency (SCE) and capital employed efficiency (CEE) have no significant effect. This result is not in line with the results of the Nielsen and Farooq study which stated that firms with high ICDs not only have high payout ratios, but also have a greater likelihood to pay dividends [20]. So the firms with higher intellectual capital disclosure not only have high payout ratios, but also have a greater likelihood of increasing and paying dividends.. This study also found that debt policy (DER) had a significant negative effect on dividend policy. This finding does not support the research conducted [13], who researched in Pakistan found that leverage, firm size and profitability, have a significant positive effect on dividend payout ratio in the nonfinancial companies listed in the Karachi stock exchange (KSE). Another finding is that company size

significantly influences dividend policy (DPS). This finding supports the research of Yusof and Ismail in Malaysia, which concluded firm size and investment had a positive significant effect [5]. Likewise the results of Al-Najjar's research in Jordan also also revealed there was evidence of strong significant positive relationship between firm size and dividend payment [21]. Similar conclusions by [22] and [23]. Finally, the liquidity variable (Current ratio) is found to have a significant negative effect on dividend per share (DPS). This result supports research of Ahmad and Wardani that liquidity and leverage correlates negative significantly with dividend policy [24], but this result is contrary to the research of Ahmed and Murtaza, which concluded that liquidity, earning per share, leverage, firm size and profitability effected positively dividend payout ratio in the nonfinancial companies enlisted in the Karachi stock exchange (KSE) [13]. The results of model 2 analysis by entering the DPS variable in model 1, found the fact that only the dividend policy variable (DPS) significantly affects EPS indicated by a sig value smaller than 0.05 while the other variables have no effect. In other words variabel intellectual capital, debt policy, company size and liquidity terhadap earning per share via dividend per share have no significant effect on earning per share. This finding supports the results of A'layi's study which stated that Intellectual capital did not have a significant effect on EPS [25]. Regarding the debt policy this finding supports Alrussi and Alhaderi which revealed that there was negative relationships between debt equity ratio and leverage ratio and profitability [11]. The same thing also findings regarding company size do not support the results of Ehikioya [26] research. In his research found that the size and leverage of the firm have a positive impact on firm performance [26]. Different results were also found in the study Yusniliyana Yusof and Suhaiza Ismail [5] they revealed that firm size and large shareholders were found to have a positive significant influence on dividend policy.

6. Conclusion

The purpose of this paper is to explore the role of intellectual capital in supply chain intelligence integration and the interrelationships of the three components of IC (i.e. human capital, structural capital and relational capital) in the supply chain context. Using purposive sampling method obtained data (panels) of 60 observation data obtained conclusions as follows:

In regression model 1 analysis, Human Capital Efficiency (HCE), debt policy (DER), and liquidity (CR) have negative significant influence on dividend policy (DPS), respectively, while the company size has a significant positive effect. Structure capital efficiency and capital employed efficiency do not have significant effect on dividend policy. The results for the goodness of fit test are indicated by the very low adjusted R Square value. In other words, the variability of dividend policy cannot be explained properly by the variables used in the model 1 regression equation. In other words the contribution of the variables contained in the model is very weak.

In regression model 2 analysis, when a dividend per share as a variable intervening is added to the model, surprising facts found namely none (except dividend policy) of the independent variable significantly influences earning per share as an independent variable. This indicates that the dividend per share failed to be intervening. However, the inclusion of dividends per share can boost the adjusted R square value so that the variables in the regression equation are able to provide an explanation for changes in the independent variable EPS.

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