The Influence of Environment Management Control System on Capital Structure Decisions and Their Implications on Company Performance

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Abstract. The study is aim to examine the effect of Environmental Management Control System (EMCS) to Capital Structure Decisions and Company Performance of coal mining industry in Indonesia. This study used quantitative research with sample size 35 company and PLS was used to measured hypothesis. Environmental Management Control Systems (EMCS) and Capital structure Decision have a direct and indirect influence on company performance. Performance improvement will be even better if the Environmental Management Control System (EMCS) is able to encourage sound capital structure decisions. This finding has implications for the management of the coal mining industry in Indonesia in order to improve company performance by encouraging Capital structure Decision through Environmental Management Control System (EMCS).

Keywords: Environmental management control system (EMCS), capital structure decision, coal mining

1 Introduction

Each company, in carrying out its activities requires a planning process to achieve the organization's goals. So good management control is required. The role of management control becomes very important for the company for all industries because of its functions which include coordination functions, Allocation of resources, motivation, and performance evaluation of the company's human, physical, and financial resources. If a company fails to exercise management control, it will result in huge financial losses, damage to the reputation of the company, and the end of it ending in the failure of the organization itself [2]. Management control does not mean that all actions must comply with a previously determined strategy.

The reason for the use of management control system for a company is the first important management control system for the formulation and impeachment of strategies [1]. In addition to the management control system, the company should also pay attention to the environmental management system which is the integrase of the organizational structure, authority and responsibility, mechanisms and procedures/processes, operational practices and resources for the implementation of environmental management [4].

The environmental management system includes five interconnected elements, namely environmental policy, planning, implementation and operation, inspection and correction measures as well as management assessment [3]. Coal is widely used for power generation. This coal-fired power plant supplies 41% of the global electricity needs. In Indonesia, 48% of the lighting source comes from coal. In such circumstances facing the coal mining industry this

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strategy will arise through the process of experimentation and processes arising outside the existing plan, which will be significantly affected by the company's management control system. The function that makes current control the basis for expanding a new strategy, is referred to as interactive development.

2 Method

This is a quantitative study in which the unit of analysis and observation is an explanatory survey. The analysis and observation unit is the management of Indonesia's coal mining industry. The observation is made across a cross section / one shoot time horizon, which means that the information or data is empirically collected at a single point in time (2020). The term "sample" refers to the subset of the population selected for study. The population of this study, in this interpretation, is the Indonesian coal mining industry.

The sample size is determined by analytical techniques used in the hypothesis test that is Partial Least Square (PLS). Chin states that the minimum sample size used by PLS-SEM is 30-100 sample size. In this case it can be said that the sample size is minimal used PLS-SEM smaller than SEM. The sample in this study was taken as many as 35 companies. The sampling technique used was simple random sampling using a list of registered population members as the sampling frame [5]. Hypothesis testing is carried out for direct and indirect effects (mediation test) with the sobel test.

3 Result and Discussion

3.1 Analysis of structural model (inner model)

Table 1 show the analysis of the inner model reveals the relationships between unobservable variables.

Table 1. Test of Outer and Inner Model

Variable	R Square	Cronbachs Alpha	Composite Reliability	Q square
Environmental Management Control System (EMCS)	-	0.957	0.960	0.466
Capital Structure Decisions	0.359	0.961	0.965	0.611
Company Performance	0.627	0.883	0.919	0.716

Based Table 1 were quantified using the R square on endogenous constructs and the Q square (Stone- Geisser's) describe Q square values of 0.02 (minor), 0.15 (medium), and 0.35 (large) were obtained and were used exclusively for the endogenous construct with reflective indicator. According to Chin (1998), the R square was 0.67 (strong), 0.33 (moderate), and 0.19. (weak). The R square values for capital structure decisions and firm performance as endogenous variables meet the strong criteria (> 0.33 is considered moderate), and the Q square values meet the large criteria, implying that the research model is supported by empirical evidence (fit).

3.2. Analysis of measurement model (outer model)

The outer model analysis reveals the relationships between observable variables (indicators) and unobservable variables. Validity and reliability tests are used to determine the unobservable variables and indicators used to construct the dimension. Cronbach's Alpha is used to determine the dimension's reliability when measuring variables. Cronbach's Alpha greater than 0.70 indicates that the dimensions and indicators have a high degree of measurement reliability. Composite reliability and Cronbach's Alpha > 0.70 indicated that all unobservable variables in the estimated model satisfy the discriminant validity criteria. Cronbach's Alpha is greater than 0.7 and Composite Reliability is greater than 0.7, indicating that all variables have reliable dimensions and indicators.

Table 2 summarizes the outer model's output for each indicator dimension. To place a second order. This research model explains the relationship between variables-dimensions and dimensions-indicators through the use of the obtained loading factor.

Table 2. Loading Factor of Latent Variable-Dimension-Indicator

Variable	Indicator-Dimension	Loading factor	SE	t-value
Environmental Management Control System (EMCS)	EMCS -> Formal	0,803	0,024	33,629
	EMCS1 <- Formal	0,854	0,024	35,243
	EMCS2 <- Formal	0,797	0,042	19,101
	EMCS3 <- Formal	0,779	0,043	18,003
	EMCS -> Informal	0,900	0,017	52,448
	EMCS4 <- Informal	0,920	0,020	46,939
	EMCS5 <- Informal	0,560	0,063	8,871
	EMCS6 <- Informal	0,745	0,055	13,508
	EMCS -> Regulation	0,940	0,010	92,726
	EMCS7 <- Regulation	0,713	0,084	8,460
	EMCS8 <- Regulation	0,808	0,030	26,549
	EMCS9 <- Regulation	0,905	0,012	76,931
	EMCS -> Cost	0,889	0,022	40,400
	EMCS10 <- Cost	0,743	0,041	17,909
	EMCS11 <- Cost	0,873	0,024	36,197
	EMCS12 <- Cost	0,911	0,018	52,046
	EMCS -> Stakeholder	0,929	0,011	87,982
	EMCS14 <- Stakeholder	0,834	0,030	28,130
	EMCS15 <- Stakeholder	0,775	0,042	18,615
	EMCS16 <- Stakeholder	0,857	0,030	28,123
	EMCS -> Environment	0,824	0,028	29,723
	EMCS18 <- Environment	0,861	0,031	27,675
	EMCS19 <- Environment	0,859	0,025	34,809
	EMCS20 <- Environment	0,926	0,014	68,169
	EMCS -> Ownership	0,910	0,013	72,576
	EMCS22 <- Ownership	0,910	0,009	101,081
	EMCS23 <- Ownership	0,734	0,076	9,700
	EMCS -> EMS	0,843	0,028	30,422
	EMCS24 <- EMS	0,723	0,055	13,115
	EMCS25 <- EMS	0,834	0,035	23,934
	EMCS26 <- EMS	0,843	0,028	29,789
	EMCS27 <- EMS	0,651	0,060	10,846

	EMCS28 <- EMS	0,725	0,043	17,005
Company Performance	Company Performance -> Financial	0,950	0,010	92,620
	KP1 <- Financial	0,930	0,012	75,980
	KP2 <- Financial	0,932	0,011	81,643
	Company Performance -> Environment	0,945	0,011	86,520
	KP3 <- Environment	0,874	0,022	40,413
	KP4 <- Environment	0,898	0,011	78,976
Capital Structure Decisions	Capital Structure Decisions -> Time	0,982	0,004	253,677
	KSM1 <- Time	0,866	0,024	36,596
	KSM2 <- Time	0,901	0,022	40,999
	KSM3 <- Time	0,760	0,034	22,623
	KSM4 <- Time	0,816	0,030	26,895
	Capital Structure Decisions -> Bank	0,980	0,004	235,511
	KSM5 <- Bank	0,911	0,015	59,857
	KSM6 <- Bank	0,741	0,046	16,057
	KSM7 <- Bank	0,774	0,042	18,489
	KSM8 <- Bank	0,849	0,022	38,992
	KSM9 <- Bank	0,850	0,015	56,875
	Capital Structure Decisions -> Mgmt. Perspective	0,945	0,013	75,535
	KSM10 <- Mgmt. Perspective	0,818	0,040	20,515
	KSM11 <- Mgmt. Perspective	0,798	0,027	29,148
	KSM12 <- Mgmt. Perspective	0,828	0,030	27,174
	Capital Structure Decisions -> Investment Choice	0,949	0,007	133,963
	KSM13 <- Investment Choice	0,932	0,010	94,249
	KSM14 <- Investment Choice	0,933	0,010	93,681

Source: SmartPLS 2.0

The loading factor of the outer model of dimensions as determined by its indicators indicates that the indicators are valid for values greater than 0.5 and t values greater than 2.01 (t table at = 0.05). The outcome of the measurement model for unobservable variables on their dimensions demonstrates the extent to which dimensions are valid when measuring variables. Figure 1 shows the Path Diagram of Research Model.

The obtained a structural model:

$$\mathbf{CSD = 0.599*EMCS + \zeta_1} \quad (1)$$

$$CP = 0.350*EMCS + 0.531*CSD + \zeta 2 \quad (2)$$

EMCS = Environmental Management Control System
CSD = Capital Structure Decisions
CP = Company Performance
ζ1 = Residual

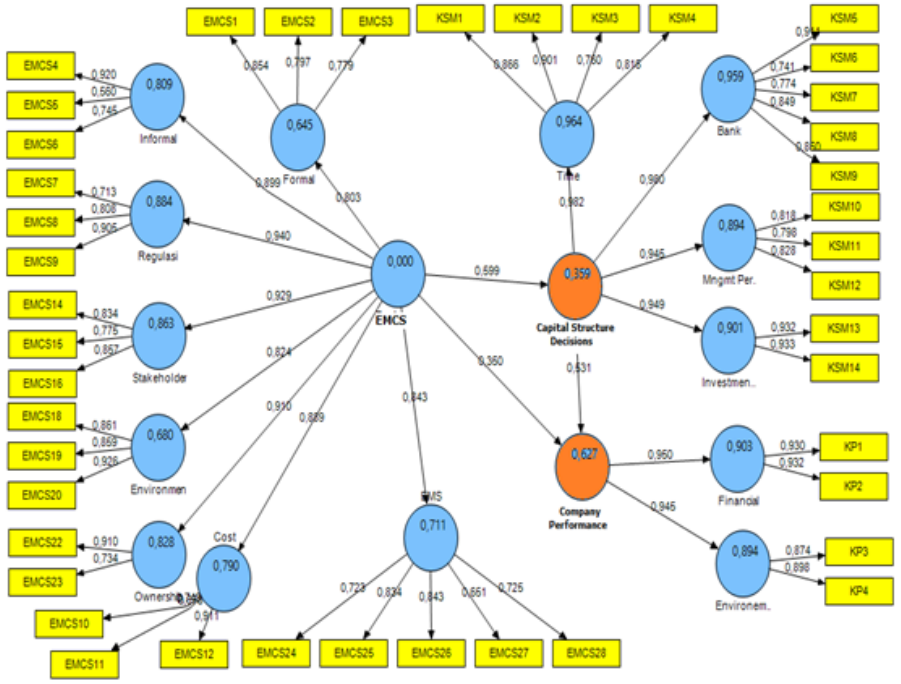

Fig.1. Path Diagram of Research Model

Table 3 is the result of hypothesis testing both simultaneous and partially.

Table 3. Hypothesis Testing

	Hypothesis	Coeff. Estimated	SE	t-value	R^2	Conclusion
1	EMCS -> Capital Structure Decisions	0,599*	0,059	10,171	0.359	Hypothesis accepted
2	EMCS -> Company Performance	0,350*	0,082	4,258	0.123	Hypothesis accepted
3	Capital Structure Decisions -> Company Performance	0,531*	0,070	7,555	0.282	Hypothesis accepted
4	EMCS -> Capital Structure Decisions -> Company Performance	0.318**	0.052	Z =6.077	0.318	Hypothesis accepted

* significant at α=0.05 (t table =2.01)
** Significant at $\propto = 0.05$ (z table = 1.96) with Sobel test
Source: Data Processing with SMARTPLS (2020)

- Environmental Management Control System (EMCS) have significantly direct effect to Capital Structure Decisions (R2 = 35.9 %)
- Environmental Management Control System (EMCS) have significantly direct effect to Company Performance (R2=12.3%).

- Capital Structure Decisions have significantly direct effect to Company Performance (R2=28.2%).
- Environmental Management Control System (EMCS) have significantly indirect effect to Company Performance through Capital Structure Decisions (R2=0.599*0.531 =0.318 =31.8%).

A research finding can be described as follows in Figure 2 based on the results of hypothesis testing:

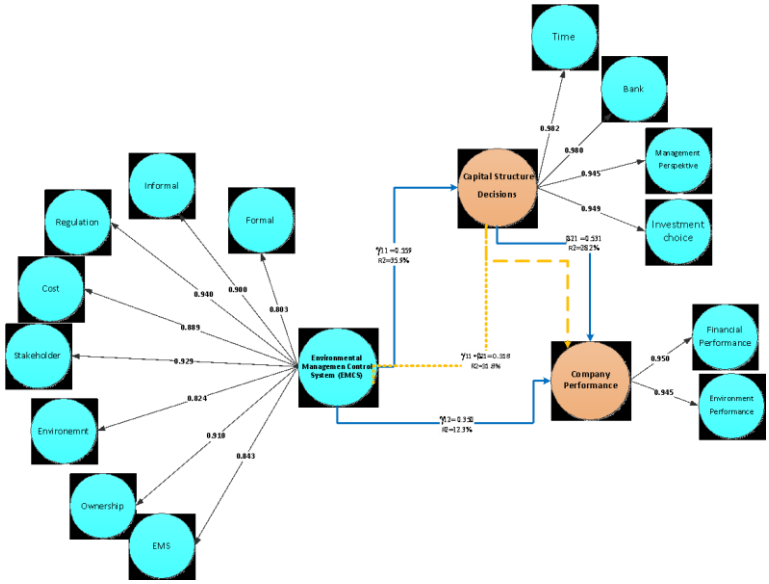

Fig. 2 Research Finding

4 Conclusion

The results of simultaneous influence hypothesis testing show that Management Control System (MCS) and Environmental Management Control System (EMCS) against Capital Structure Decisions simultaneously amounted to 41.7%. Partial test results showed that each exogenous variable influenced the Capital Structure Decision in which the Environmental Management Control System (EMCS) had a dominant influence of R2=0.250. These results support the hypothesis that the interaction between MCS and EMCS affects capital structure decisions. The positive direction indicates that the improvement of the capital structure is shown from the good interaction between MCS and EMCS.

The results of the simultaneous influence hypothesis testing indicate that the Management Control System (MCS) and the Environmental Management Control System (EMCS) have a combined effect of 15.5 percent on the company's performance. Only the Environmental Management Control System (EMCS) had a significant effect on the company's performance, with an R2 value of 0.108. These findings corroborate the hypothesis that the Environmental Management Control System (EMCS) has an effect on the financial performance of the

business. The upward trend indicates that the Environmental Management Control System (EMCS) is improving, as evidenced by the company's strong financial performance.

Only capital structure decisions, with an R2 of 0.237, have a significant effect on the company's performance, according to partial test results. These findings bolster the hypothesis that capital structure decisions have a material impact on a firm's performance.

Simultaneous influence hypothesis testing indicates that the Management Control System (MCS) and Environmental Management Control System (EMCS) have a 35 percent effect on the company's performance via concurrent capital structure decisions. The results of partial tests indicated that both the Management Control System (MCS) and the Environmental Management Control System (EMCS) had a significant effect on the company's performance, with the Environmental Management Control System (EMCS) having a dominant effect of R2= 0.203. These findings are consistent with the hypothesis that the Decision Management Control System (MCS) and Environmental Management Control System (EMCS) have an effect on the financial performance of the business. The positive direction indicates that the positive interaction between the management control system (MCS) and the environmental management control system (EMCS) demonstrates the improvement in the company's financial performance (EMCS).

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