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THE EFFECT OF SUPPLY CHAIN MANAGEMENT AND COMPETITIVE ADVANTAGE ON COMPANY PERFORMANCE AT PT AHLINDO PERKASA ALAM

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ABSTRACT

Supply chain management, especially in manufacturing companies, is very important as the companies rely on the raw materials needed for production. Moreover, the success of a company is also determined by how it could gain competitive advantage to compete in the industry. It is proven that a company with effective supply chain management and competitive advantage would perform better. The purpose of this research is to see the effect of supply chain management and competitive advantage on company performance conducted at PT Ahlindo Perkasa Alam. This research uses quantitative method with Census sampling of 32 employees working in the company. The test results show that Supply Chain Management and Competitive Advantage have a positive significant effect on Company Performance at PT Ahlindo Perkasa Alam as much as 76.1%.

***Keywords**: Supply Chain Management; Competitive Advantage; Company Performance*

INTRODUCTION

In today's business environment, more than ever before, businesses are fixating their focus to offer the best possible value at the lowest possible costs for customers. Thus, supply chain management has inevitably become an integral part of business to ensure its success and customer satisfaction. According to Christopher (2016), the objective managing the supply chain in a company is to reinforce the management of relationships in order to achieve a more profitable outcome. This can be done by matching customer requirements with the materials from suppliers to achieve balance of high customer service, effective inventory management, and low unit cost. As businesses face tough competition, owning a smooth running supply chain management will aid companies in achieving a sustainable competitive advantage. Competitive advantage allows companies to earn excess returns for its shareholders, by producing at a lower cost. Thus, creating a sustainable competitive advantage may be an important key goal of any company. "Competitive advantage is obtained when an organization develops or acquires a set of attributes (or executes actions) that allow it to outperform its competitors" (Wang, 2014, p. 1). This gives the company an upper hand over the others, such as lower cost or

differentiation advantage. By acquiring competitive advantage, a company expects to see its implication in improving the company performance. For a company to be long lasting in the industry, it has to maintain a substantial performance.

According to Selvam et al. (2016), the concept of performance is derived from the wider concept of organizational effectiveness. The organizational effectiveness talks about the functions of the organization. On the other hand, company performance is a subdivision of organizational effectiveness that encompasses both operational and financial outcomes.

Chiadamrong and Tham (2018) in their book entitled "Investigating Relationships Between Supply Chain Capabilities, Competitive Advantage, and Business Performance":

For a business to be successful, it requires that the firm effectively manages capabilities across the supply chain to enable increasing sustainable competitive advantages, which deliver value to their customers as well as differentiate firms among competitors. From this perspective, supply chain capabilities and competitive advantages have become key success factors for effective competing and improved company performance. (p. 478)

Quynh and Huy (2018) in the journal article entitled "Supply Chain Management Practices, Competitive Advantages and Firm Performance: A Case of Small and Medium Enterprises (SMEs) in Vietnam" have discovered that supply chain management, competitive advantage and company performance have a significant relationship.

PT Ahlindo Perkasa Alam is a manufacturing company, located at Medan, North Sumatera, which exports sawn timber, processed timber, veneer and furniture to neighboring countries such as Japan, China and Korea. Established in the year 1996, or in other words, operating for almost 23 years, the company is deemed to be continuously growing as it has managed to promote its products internationally and export them. In the past, the company's supply chain management may be a little overlooked causing it to face numerous difficulties revolving around its supply chain. For examples, dilemmas found in standardized amount of production, production time, production quality, number of operators needed, number of machines or tools needed, establishing distribution channels, and many more. However, over the years, the company has been focusing on rectifying its supply chain management resulting in a thoroughly cohesive supply chain system that can be maintained until the present day. Though not perfect, as the company still counters problem on its supplier such as delay on the delivery of raw materials, causing the company having to delay its export schedules. Despite all of that, the company's production capacity has grown over the decades to producing sawn timber as many as 16.000 m^3/year, veneer 5.000 m^3/year, processed timber & furniture 16.000 m^3/year.

Ultimately, company performance can be measured by its growth which is indicated by average sales. During the past two years, the company had made significant improvement on its sales as shown below:

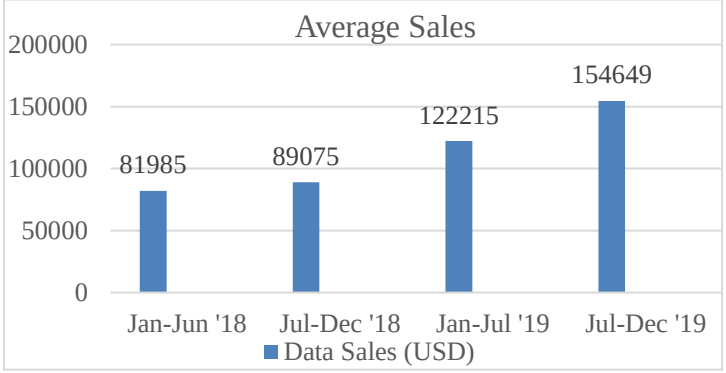

Figure 1 Average Sales of PT Ahlindo Perkasa Alam in 2018 and 2019

This study aims to examine the effect of supply chain management and competitive advantage on company performance at PT Ahlindo Perkasa Alam.

METHODS

This research uses quantitative method by having statistical data to evaluate the relationships between the variables. It is to examine specific population and sample in order to test predetermined hypothesis. Primary data is taken by conducting interview and survey, while secondary data is collected from various textbooks and other sources.

The population of PT Ahlindo Perkasa Alam in this research is 32 employees working in the head office of the company. Census sampling is used as sampling method, as suggested by Sugiyono (2018), where the number of population is relatively small, which is less than or up to 30 people. Thus, every member of population is taken as sample in this sampling method. Furthermore, descriptive statistics are used to organize and summarize data whether they come from studies of populations or samples.

RESULT AND DISCUSSION

Result

In doing the pre-test for this research, 30 employees of PT Putra Anugerah Setia were taken as respondents for validity and reliability test. PT Putra Anugerah Setia is a books and stationaries manufacturing company located at Jl. Metal No. 31, Medan. The pre-test was done online via Google form due to the COVID-19 situation and was completed on May 2020. The result of validity test done for a total of 18 questions with six questions representing variable X_1, six questions representing variable X_2, and six questions representing variable Y. For reliability test, the values of Cronbach's Alpha of variable Supply Chain Management, Competitive Advantage, and Company Performance are 0.925, 0.809, and 0.717 respectively, which all have greater value than 0.6 to show that all variables are deemed reliable.

Descriptive Statistics

Table 1 Descriptive Statistics

Statistics				
		Supply Chain Management	Competitive Advantage	Company performance
N	Valid	32	32	32
	Missing	0	0	0
Mean		23.00	22.72	23.94
Median		24.00	23.00	24.00
Mode		27	24	28
Std. Deviation		3.759	3.040	3.222
Variance		14.129	9.241	10.383

Classic

Assumption Test

Normality Test

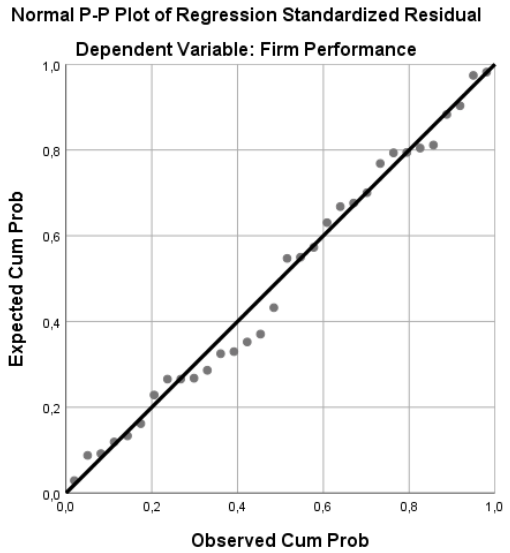

Figure 2 Normal P-Plot of Regression Standardized Residual

From the table above, it can be seen from the Normal P-Plot that the data points are clustered around a straight line that intersects the X-axis and Y-axis at the point (0,0). They spread around the diagonal line and follows the direction of the line. In other words, the points are reasonably close to the line with no indications of systematic deviations from the line. Thus, it can be concluded that the residual data is normally distributed.

Multicollinearity Test

Table 2 Multicollinearity Test

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.326	2.140		1.554	.131		
	Supply Chain Management	.379	.118	.443	3.210	.003	.406	2.463
	Competitive Advantage	.523	.146	.493	3.579	.001	.406	2.463
a. Dependent Variable: Company Performance								

According to the table above, it can be seen that the VIF value is 2.463 which is lower than 10. Moreover the level of tolerance is 0.406 which is higher than 0.10. Thus, there is no multicollinearity in this model

Heteroscedasticity Test

Table 3 Heteroscedasticity Test

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2,285	1,091		2,095	,045
	Supply Chain Management	,096	,060	,436	1,588	,123

	Competitive Advantage	-,142	,074	-,523	-1,905	,067

According to the table above, it is shown that the Sig.value for the Supply Chain Management is 0.123 and Sig. value for Competitive Advantage variable is 0.067, each of which is higher than 0.05. Thus, it can be concluded that there is no heteroscedasticity problem or any inequality of variance in one variable with the other variable.

Linearity Test

The linearity assumption for this research is fulfilled since the Deviation from Linearity Sig. result is 0.977 for variable X_1 and 0.182 for variable X_2, which indicate that both values are greater than 0.05.

Multilinear Regression

Table 4 Output Result of Multi Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.326	2.140		1.554	.131
	Supply Chain Management	.379	.118	.443	3.210	.003
	Competitive Advantage	.523	.146	.493	3.579	.001

It can be seen that supply chain management variable (X_1) has a linear relationship with company performance variable (Y) which means that the higher the supply chain management system, the company's performance will increase and conversely the lower the supply chain management, the company's performance will decrease. This also indicates that competitive advantage (X_2) has a linear relationship with company performance variable (Y) which means that the higher the competitive advantage, the company's performance will increase and conversely the lower the competitive advantage, the company's performance will decrease.

Coefficient of Determination

Coefficient of Determination is a number that states the contribution between variables or how well does a model explain and predict outcomes. In other words, it is used as a guideline to measure the accuracy of the model.

Table 5 Coefficient of Determination Test Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,881[a]	,776	,761	1,576	1,208

Supply chain management and competitive advantage generate 76.1% of contribution towards company performance at PT Ahlindo Perkasa Alam while the remaining 23.9% is affected by other factors.

Hypothesis Testing

T Test

Hypothesis test is done to find out the level of significance of the hypothesis. X_1 has a significant effect on Y (company performance) and X_2 also has a significant effect on Y.

Table 6 T Test Result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.326	2.140		1.554	.131
	Supply Chain Management	.379	.118	.443	3.210	.003
	Competitive Advantage	.523	.146	.493	3.579	.001

F Test

The purpose of conducting F-test is to tell if a group of variables are simultaneously significant towards the dependent variable. Thus, it can be concluded that X_1 and X_2 simultaneously have effect on Y.

Table 7 F Test Result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	249,819	2	124,909	50,272	,000[b]
	Residual	72,056	29	2,485		
	Total	321,875	31			
a. Dependent Variable: Company Performance						
b. Predictors: (Constant), Competitive Advantage, Supply Chain Management						

Discussion

The value of Adjusted R^2 which is 0.761, which means that both supply chain management and competitive advantage have 76.1% effect towards company performance at PT Ahlindo Perkasa Alam while the remaining 23.9% is affected by other factors. As for individual contribution of each independent variable, the effective and relative contribution of supply chain management variable are 36.5% and 47% respectively. On the other hand, the effective and relative contributions of competitive advantage variable are 41.1% and 53% respectively. The sum total of effective contributions equals to its coefficient of determination (R^2) which is 77.6%.

From the T-test result, it can be seen that the Sig. value for supply chain management is 0.003 while for competitive advantage is 0.001, both lower than 0.5. Thus, it can be concluded that supply chain management has a significant effect towards company performance and so is competitive advantage towards company performance at PT Ahlindo Perkasa Alam.

From the F-test table, it can be seen that the Sig. value for supply chain management and competitive advantage is 0.000 which is less than 0.05. Thus, it can be concluded that supply chain management and competitive advantage simultaneously effect company performance at PT. Ahlindo Perkasa Alam.

Based on the data analysis results, the findings of this research are consistent with that of Chiadamrong & Tham (2018), in which the independent variables, supply chain management and competitive advantage indeed have a significant effect towards the dependent variable, company performance.

CONCLUSION

Based on the discussions above, it can be concluded that supply chain management and competitive advantage have significant effect on company performance at PT Ahlindo Perkasa Alam. Moreover, the correlation between supply chain management and competitive advantage towards company performance at PT Ahlindo Perkasa Alam is a strong positive correlation which indicates that the more the supply chain management and competitive advantage are enhanced at PT Ahlindo Perkasa Alam, the higher the company performance will be. Supply chain management and competitive advantage are also some of the factors that can determine company performance at PT Ahlindo Perkasa Alam as they both have 76.1% effect on company performance while the rest is impacted by other factors.

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