The Effect of Supply Chain Integration and Competitive Advantage on Supermarket Operational Performance in Ambon City

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Abstract

This study aims to analyze the effect of supply chain integration on operational performance, and also to analyze the effect of competitive advantage on operational performance. The sample used in this study were 42 managers/heads of the supermarket production division in Ambon City. The data analysis technique used is Partial Least Square (PLS). The results show that supply chain integration has a positive effect on operational performance, the results also show that competitive advantage has a positive effect on operational performance.

Keywords: supply chain integration, competitive advantage, operational performance

1. Introduction

The challenges faced by the industrial world today require performance improvement and improvement in order to survive and win the business competition and continue to run it. The effect of modern business competition on the changing focus of competition between companies, companies independently respond to competition among business networks such as supply chains. Global market competition has a major impact on local and international business activities.

One of the keys to successful global business competition is supply chain operations. This statement is also supported by research which states: "Supply chain management is a very basic principle that needs to be applied by companies. In business processes related to corporate profits and cooperation.

Many companies can achieve competitive advantage by implementing supply chain management and gain an edge. To be competitive, the supply chain must be managed properly. In addition to the concept of supply chain management that can increase competitive advantage and company performance, other studies proposed by (Deming, 1986) and (Juran, 1992) show that quality management is the key to improving performance.

SCM practices cannot increase their own efficiency individually, because efficiency can be achieved through the interaction of various supply chains (Dawe, 1994 in Kim, 2006). One of them is supply chain integration. Supply chain integration means that all elements involved in the SCM series are in a cohesive whole and are aware of their interdependence (Said, 2006). If a company has implemented SCM Practices, it will definitely be very beneficial for the company and will have a positive impact, because the elements involved in the company will relate to each other from upstream to downstream and are interdependent. This relationship cannot be broken and will always be sustainable, so that it will improve the capabilities and performance of the company. The supply chain integration process should experience an increase from internal integration which includes cross-functional integration to external integration with suppliers and customers. This integration can be achieved by automation and

standardization of every internal logistics function, introduction of new technologies, and continuous performance control under a formal and centralized organizational structure (Bowersox, 1989 in Kim, n.d.).

SCM practices that run well from upstream to downstream can have a positive impact on a company, such as increasing performance and increasing the company's competitive capabilities (Kim, 2006).. In addition, competitive capabilities also help SCM practices increase their efficiency. The better the competitive capability of a company, the better the company's performance and will have a positive impact on the company, so that SCM practices can run and are well integrated. Competitive capability is the ability to gain greater attention compared to other parties who manage similar activities by competing. SCM practices implemented to achieve superior supply chain performance require internal cross-functional integration within the company and external integration with suppliers or customers to be successful (Narasimhan, R., Jayaram, J., 1998) (Narasimhan dan Carter, 1998) suggested that SCM and purchasing practices related to a firm's competitive ability may have a more significant effect on firm performance, suggesting that, depending on advertising, level of competition, product pricing and positioning, and level of innovation within the product line, SCM factors influence on overall performance. and the success of the company can be different.

(Day, G.S., 1988) suggests that a firm's strategy is to require some form of strategy. Competitive advantage is a company's strategy to achieve its goals in the form of performance to produce the greatest advantage. Successful performance in order to compete with other companies is the output produced as a measure of performance.

Supply chain management seeks to improve performance by integrating the organization's internal functions related to external operations, namely: suppliers, customers, and supply chain members. The theory shows that various integrations between variables are very complicated, and the goal is to improve performance, so this will be a very special decision-making management tool.

2. Literature Review

2.1. Supply Chain Integration

Philosophically, supply chain management uses a systematic approach to view the supply chain as an integrated whole, not as a collection of elements that work independently (Mentzer et al, 2001).. In other words, the supply chain management philosophy extends the concept of multi-enterprise integration to manage the total flow of goods from suppliers to key customers. Therefore, supply chain integration is a set of beliefs that each company in the supply chain directly or indirectly affects the performance of all other supply chain members and ultimately affects supply chain efficiency. productivity of the entire supply chain. This set of beliefs is also understood as supply chain orientation (Mentzer et al, 2001); (Storer et. al, 2014).

According to Heizer and Render (2005) in (Storer et. al, 2014) there are several supply chain integrations, namely:

1. Internal integration, in an enterprise this integration can replace the structural and administrative roles of SC capabilities which have an interactive relationship with cost leadership capabilities for performance improvement. Internal integration includes cross-functional integration consisting of the purchasing function, marketing function, and sales

function.

2. External Integration, in relation to suppliers and customers this integration can replace the role of SC technology and logistics capabilities that interact with innovative marketing, differentiation, and customer service capabilities for performance improvement.

In addition, according to (Heizer, 2005) there is also vertical integration, where companies develop their production gradually forward and backward, namely by buying finished products and buying raw materials from suppliers in building synergies.

Supply chain integration is a benchmark for a company in the integration and synergy between business lines, both operational and strategic capacities to be used as a competitive force and to encourage innovation in the face of competition for a wide market share. Langley and Holcomb in (Mentzer et al, 2001), conclude that the pinnacle of supply chain management is customer value through synchronizing supply chain activities.

Thus, supply chain management shows that the boundaries of supply chain management include not only the flow of goods, but also all other functions within and between enterprises in the supply chain, for value creation and customer satisfaction. In other words, supply chain management encourages supply chain members to create synchronous and systematic integration.

2.2. Competitive Advantage

According to Godfrey and Hill (1995) in (Storer et. al, 2014) asserts that excellence is the company's ability to use resources in conjunction with strategies to achieve the desired end goal. The capacity that affects the supply chain and industrial output is, by default, greater and superior to normal business processes (Zokaei K., 2007). Simply put, excellence is the strategic ability of the supply chain to combine capabilities such as integrated information exchange, system-level coordination, integration of activities between companies and supply chains.

According to Hitt et. al. (2001) in (Storer et. al, 2014), competition or competitiveness is a condition of rapidly increasing competition based on the quality-price position, competition to create or attack existing geographic products or markets, and competition based on the number of funds. and create even bigger fund alliances.

Competitive advantage is also the ability to attract superior attention compared to competitors who carry out similar activities. This must be adjusted to the functions that exist within the company, such as the production function, marketing function, manufacturing function, and human resource function which must be able to synergize in an integrated and integrated manner to support the company's goals in winning the market competition (Storer et. al, 2014).

2.3. Operational Performance

Performance or performance is the result of output and something resulting from the process of products and services that can be evaluated and compared relatively with goals, standards, past results, and other organizations (Tom Hertz, 2007). Performance is a description of the level of achievement of the implementation of an organization's tasks in an effort to realize the goals, objectives, mission & vision of the organization. Is an organization's operational performance conceptualized along the dimensions of cost, quality, flexibility and delivery (Priyady & Gunawan, 2013)

These operational performance indicators include:

- 1) Ordering fee
- 2) Quality
- 3) Reliability of purchased materials/components
- 4) Order cycle time and
- 5) Ability to sense and respond to poor supplier performance.

According to (Rani, 2017) is the result of work functions or activities that exist in the company that are influenced by internal and external factors of the organization in achieving the goals that have been set for a certain period of time. The description of operational performance variables in this study takes two aspects from the balanced scorecard approach, namely the internal business process perspective and the customer perspective such as availability of goods, inventory costs, repurchases, quality of goods, level of complaints, and customer satisfaction. (T.M. & R., 2005) describes three criteria in measuring operational performance in the supply chain taken from research results (Ramdas, K. & Spekman, 2000), including fulfillment, inventory, and responsiveness. Fulfillment serves to identify the extent to which the company's collaborative practices in the supply chain network are able to fulfill requests to consumers which include the percentage of on time delivery of goods or even before the promised time, the accuracy of the specifications of the goods requested, and the suitability of the quantity of goods requested. .

According to (Slack et al. in Yaqoub, 2012), the measurement of a company's supply chain performance based on an operations strategy perspective includes performance measurement in the domain of resources, operational capabilities, and operational processes. Referring to this definition, Simatupang & Sridharan proposed three dimensions of operational performance measurement in the context of supply chain based on the operational strategy perspective, namely fulfillment, inventory performance, and responsiveness. Inventory serves to identify the extent to which the company's collaborative practice in the supply chain network is able to manage inventory, which includes inventory turnover, inventory reduction, and inventory cost reduction.

Furthermore, responsiveness serves to identify the extent to which the company's collaborative practices in the supply chain network are able to respond to consumer demands which include the level of reduction in waiting times, flexibility in accommodating requests, and sensitivity to consumer demands.

2.4. Relationship Between Variables

The better the integration of a company, the company's performance will increase and will have a positive impact. This is supported by research conducted by (Storer et. al, 2014).

Hypothesis 1: The supply chain integration process has a positive effect on operational performance.

The better the competitive advantage of a company, the company's performance will increase and will have a positive impact. This is supported by research conducted by (Storer et. al, 2014).

Hypothesis 2: Competitive advantage has a positive effect on operational performance.

2.5. Framework

3. Research Method

3.1. Types of research

The type of research used is a qualitative research method. Where in this study is used to examine a natural object where the researcher is the key instrument. Natural objects are objects that are as they are or in accordance with the reality in the field, not manipulated by the researcher so that the conditions when the researcher is in the object and after leaving the object are relatively unchanged. This research is intended to bring up a number of criteria in supplier selection and to test whether there is a difference of interest in the priority of supply chain performance criteria.

3.2. Population and Research Sample

According to (Rahmasari, 2011) population is a combination of all elements in the form of events, things or people who have similar characteristics and become the center of attention of a researcher because they are seen as a research universe. The population in this study is all supermarkets in Ambon City.

The sample is part of the number and characteristics possessed by the population. (Rahmasari, 2011) said that the sample is a subset of the population consisting of several population members. This subset was taken because in many cases it is impossible for us to examine all members of the population, therefore it is necessary to form a representative of the population called the sample. The number of samples is determined based on Roscoe (1975) in (Ghozali, 2016) providing a reference in taking the number of samples, namely the sample size of more than 20 and less than 500 is appropriate for most studies.

The technique of determining the sample is by non-probability sampling method. The type of non-probability sampling method used is purposive sampling. The criteria used in the selection of this sample are: business age of more than two years on the grounds that business age at that age already has a strong supply chain network.

3.3. Analysis Method

Method of analysis in this study using PLS. PLS is a powerful analytical model because it can be used on any type of data scale (nominal, ordinal, interval and ratio) as well as more flexible assumption requirements. The PLS approach is distribution free and the sample size is flexible. The main focus of PLS is to maximize the variance of endogenous constructs that can be explained by exogenous constructs or identify constructs that are able to maximize the predictive power of the model. (Waters, 2009) mentions that PLS can also be used for confirmation purposes (such as hypothesis testing) and exploratory purposes.

4. Findings and Discussions

4.1 Reliability and Validity Test Results

Data quality test includes reliability and validity test. The reliability test was carried out by looking at the composite reliability value generated by the PLS calculation for each construct. The value of a construct is said to be reliable if it gives a composite reliability value > 0.70 (Werts et al. 1974 in (Ghozali, 2016)). The results of the reliability test are presented in table 1.

Table 1. Reliability Test Results

Latent variable	Cronbach's alpha	Composite Reliability
Supply Chain Integration	0,893	0,919
Competitive Advantage	0,825	0,874
Operational Performance	0,825	0,874

Source: Primary data processed, 2019.

Based on the reliability test results above, all questions about supply chain integration, competitive advantage, and operational performance are reliable. Furthermore, the validity test is carried out using the evaluation of the measurement model (outer), namely by using convergent validity. Convergent validity of the measurement model with reflexive indicators can be seen from the correlation between each indicator score and its construct score (Ghozali, 2016).

Table 2. Convergent Validity Test Results

	Supply Chain Integration	Competitive Advantage	Operational Performance
IRP1	0.753	0.766	0.762
IRP2	0.591	0.668	0.654
IRP3	0.892	0.825	0.846
IRP4	0.875	0.785	0.800
IRP5	0.622	0.647	0.649
IRP6	0.912	0.836	0.857
IRP7	0.814	0.719	0.737
KB1	0.753	0.766	0.762
KB2	0.591	0.668	0.654
KB3	0.892	0.825	0.846
KB4	0.441	0.633	0.606
KB5	0.622	0.647	0.649
KB6	0.912	0.836	0.857
KO1	0.753	0.766	0.762
KO2	0.591	0.668	0.654

KO3	0.892	0.825	0.846
KO4	0.441	0.633	0.606
KO5	0.622	0.647	0.649
KO6	0.912	0.836	0.857

Source: Primary data processed, 2019.

All indicators used to measure the constructs of supply chain management practices have a correlation range greater than the recommended number (0.500), this indicates that the statement about supply chain management practices to measure the constructs of supply chain management practices can be said to be valid.

4.2 Hypothesis Testing

The significance of the estimated parameters provides very useful information regarding the relationship between the research constructs. The limit for rejecting and accepting the proposed hypothesis is ± 1.661 , where if the t value is in the range of values -1.661, and 1.661 then the hypothesis will be rejected or in other words accept the null hypothesis (H0). The table below provides the estimated output for testing the structural model.

The first hypothesis (H1) states that supply chain integration has a positive effect on operational performance. Table 10 below shows that supply chain integration has a positive effect on operational performance. The effect of supply chain integration is positive at 0.139 and significant at 0.001.

Table 3. Inner Weights (Supply Chain Integration) Results

Latent variable	Value	Pr > t
Supply Chain Integration	0,139	0,000

Source: Output XLSTAT PLS PM.

The second hypothesis (H2) states that competitive advantage has a positive effect on operational performance. Table 4 below shows competitive advantage has a positive effect on operational performance. The effect of supply chain integration is positive 0.872 and significant at 0.001.

Table 4. Inner Weights (Competitive Advantage) Results

Latent variable	Value	Pr > t
Competitive Advantage	0,872	0,001

Source: Output XLSTAT PLS PM.

4.3. Discussion

Based on the results of statistical calculations, it can be concluded that the supply chain integration construct has a direct effect on operational performance. In this study, it can be seen from the respondents' answers that in their supermarkets, it shows that integration between lines and between members of the supply chain systematically will increase the speed of information flow, crop yields as well as payment and ordering systems that are effective in improving company performance, both product sales, and sales. distributor of goods to be supplied. The results of this study support previous research conducted by (Storer

et. al, 2014) that coordinated and systematic supply chain integration will realize operational effectiveness as a competitive advantage that affects performance improvement.

Based on the results of statistical calculations, it can be concluded that the competitive advantage construct has a direct effect on operational performance. In this study, it can be seen from the respondents' answers that in their supermarkets, the company's production growth compared to the industry average at the supermarket went well to support the company's operational performance in supply chain management, the company's sales growth compared to the industry average went well in supermarkets support the company's growth in the company's operational performance, the increase in company profits compared to the industry average goes well, especially in carrying out the company's operational performance, market share growth in supermarkets is going well so that it is useful for making decisions related to the company's product or business unit performance, as well as increasing the speed of production in supermarkets, this is done so that the company can improve the company's production operational performance. In addition, the efficiency of raw materials in supermarkets in their company's operational performance must be able to work optimally in order to be more efficient in making raw materials in their company. The level of reduction in the loss ratio of goods in supermarkets must be able to maintain their goods and products in order to reduce the level of loss to the company by managing production quality so that the products produced are good.

The results of this study support the results of previous studies where competitive advantage has a significant influence on the performance of a company (Storer et. al, 2014), which shows that when agribusiness actors are able to maximize production functions, marketing functions, manufacturing functions and human resource functions and integrate them With integrated and overall supply chain management, it will be an advantage to support the company's goals in winning market competition.

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