CARICA CANDIED SUPPLY CHAIN PERFORMANCE THROUGH CV. YUASA FOOD BERKAH MAKMUR

Dewanti Risa Utami*)1, Any Suryantini**), Dwidjono Hadi Darwanto**)

*)Masters of Agribusiness Management, Agriculture Faculty, Universitas Gadjah Mada
Jl Flora No.1 Bulaksumur Yogyakarta 55281
**)Departement of Social Economic, Agriculture Faculty, Universitas Gadjah Mada
Jl Flora No.1 Bulaksumur Yogyakarta 55281

Abstract: Carica fruit as the main raw material for making candied carica is an endemic fruit which only grow in the Dieng Plateau of Wonosobo Regency. It causes the limitation of carica raw materials in the carica processing industry. The objective of this study is to analyze the performance of the carica candied supply chain passing through the company starting from the supply of raw materials to the carica candied products to consumers. The analytical method used is the Supply Chain Operation Reference (SCOR) model. Primary data used are based on direct observation and interviews with 20 farmers of supplier respondents, historical data of CV. Yuasa Food Berkah Makmur was in November 2018-October 2019 and 25 agents/retailers. The results of the analysis of the carica candied supply chain performance indicate the responsiveness and reliability attributes have achieved the best performance (superior). Supply chain performance values on the asset management attributes reach a good position (advantage), and the cost attribute in the Cost of Good Solds (COGS) metric reaches a good position (advantage) as well as the Total Supply Chain Management Cost (TSCMS) metric that has not yet achieved good performance (parity). There is a need to evaluate the cost of the carica candied supply chain activity to improve performance.

Keywords: Candied carica, performance, supply chain, SCOR

Abstrak: *Buah carica sebagai bahan baku utama pembuatan manisan carica merupakan buah endemic yang hanya dapat tumbuh di dataran tinggi Dieng Kabupaten Wonosobo. Hal ini menyebabkan adanya keterbatasan bahan baku carica di lingkungan industri pengolahan manisan carica. Tujuan penelitian ini adalah untuk menganalisis kinerja rantai pasok manisan carica yang melewati perusahaan mulai dari persediaan bahan baku hingga produk manisan carica sampai ke konsumen. Metode analisis yang digunakan adalah model Supply Chain Operation Reference (SCOR). Data primer yang digunakan berdasarkan observasi dan wawancara langsung kepada responden petani pemasok 20 orang, data historis CV. Yuasa Food Berkah Makmur bulan November 2018-Oktober 2019 dan 25 agen/ritel. Hasil analisis kinerja rantai pasok manisan carica menunjukkan atribut responsiveness dan reliability telah mencapai kinerja terbaik (superior). Nilai kinerja rantai pasok pada atribut asset management mencapai posisi baik (advantage), dan pada atribut cost pada metrik COGS (Cost of Good Sold) mencapai posisi baik (advantage) serta pada metrik TSCMC (Total Supply Chain Management Cost) masih belum mencapai kinerja yang baik (parity). Perlu adanya evaluasi biaya pada aktivitas rantai pasok manisan carica untuk memperbaiki kinerja.*

Kata kunci: *manisan carica, kinerja, rantai pasok, SCOR*

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[1] Corresponding author:
Email: dewantirisau@gmail.com

INTRODUCTION

Agroindustry is one part of the agribusiness subsystem which has a role in the agricultural sector towards agricultural development. The increasing market demand for argo-industrial products and the availability of natural resources provide hope that the argo-industry provides quite prospective hope and has the potential to create added value. Besides, the development of the agro-industry directly affects job creation and income distribution (Evalia, 2004). Wonosobo Regency is one of the regions in Central Java that has potential in developing agroindustry. One of the fruit processing industries that is quite developed and becoming a superior in Wonosobo Regency is the carica fruit processing industry to be preserved.

CV. Yuasa Food Berkah Makmur is a business entity that processes carica fruit into carica sweets. The production capacity of the company's carica candied processing is quite large, as many as 200 kg-500 kg carica fruit per day. Availability of raw materials for carica fruit which is very limited and highly dependent on the season will greatly affect the production of candied carica. The target market fulfillment will be reduced and product development will also weaken if the available carica raw materials are lacking.

In fulfilling the target market, consumer demand for carica candied products in CV. Yuasa Food Berkah Makmur makes a number of activities that consist of suppliers of raw materials and supporting materials, raw material processing companies into carica, and retail processed products or agents as suppliers of finished products to reach consumers who form a supply chain flow pattern. Supply chain flow patterns consist of material flow, financial flow, and information flow.

The assessment of carica candied supply chain performance that passes CV. Yuasa Food Berkah Makmur needs to be conducted by the company as an effort to identify potential problems that occur in the carica candied supply chain activities and provide the possibility of necessary corrective actions. Supply chain performance evaluations are also used to control the development and achievement of the carica candied supply chain that is adjusted to company goals. A good supply chain performance can help a company to reach its target market with cheap, high-quality, and appropriate products that can benefit of the company.

Several studies that examine supply chain performance, among others, research by Prasetya et al. (2019). The purpose of this study was to describe the potato chip supply chain and analyze the performance of the potato chip supply chain management in small industries in Batu City. The results showed that the institutions involved in the supply chain in the small potato chips industry in Batu City were suppliers, manufacturers, and retailers. The average value of SCM performance is 89.232 which is a good category (Prasetya, Retnoningsih, & Koestiono, 2019). Furthermore, second research conducted by Romdhon et al. (2019). The results showed that there are two supply chain flow patterns. Flow pattern I consists of companies - suppliers and farmers, and flow pattern II consists of companies - suppliers - farmers. The activities of each pattern are described in product, information, and financial flows (Romdhon, Nurshabrina, & Melli, 2019).

Septiana et al (2017) shows that the shallot supply chain actors in Brebes Regency consist of farmers - collectors - wholesalers - local retailers / local traditional traders. With the results of performance measurement with a score of 3.57 (in season) and a score of 328 (off season) (Septiana, Machfud, & Yuliasih, 2017). Research conducted Budiraharjo (2020) states that there are two major parts of the structure of the soybean supply chain, namely the long structure and the short structure, with the performance of the soybean supply chain being quite good (Budiraharjo, Nurfadillah, & Roessali, 2020). Furthermore, research conducted by Widisatriani et al (2015) shows that there are six kinds of supply chains at the Idep Foundation consisting of suppliers, distributors and retailers (Widisatriani, Widyantara, & Angreni, 2015). Furthermore, research conducted by Timisela (2014) shows that the supply chain mechanism of the sago agroindustry consists of the flow of raw materials, product flows, financial flows and information flows (Timisela, Masyhuri, Darwanto, & Hartono, 2014).

Supply chain is all activities or a business that involves all parties, both those that produce goods or services, starting from producers and/or suppliers of raw materials to end consumers. Supply chain itself is a system that involves the process of production, delivery, storage, distribution and sale of products in order to meet the demand for these products. In the supply chain, there are three types of flows that must be managed, which are the flow of goods that flows from

suppliers to consumers, the flow of money and others that flow from consumers to suppliers, and the flow of information that moves both directions along the chain (Pujawan, 2005).

Performance is about doing work and the results achieved from the work, or in other words, performance is about what is done and how to do it (Wibowo, 2014). Supply chain performance according to Vorst (2006, in Sari, 2014) is the level of supply chain ability to meet consumer needs by considering appropriate key performance indicators at a certain time and cost (Sari, Nurmalina, & Setiawan, 2014). Supply chain performance is the result of shared efforts made by each supply chain member to meet the ultimate goal of the supply chain, namely customer satisfaction. Research conducted by Ikhwan et al. (2021) states that supply chain performance is influenced by learning organization (Ikhwan, Rahardjo, & Ratnawati, 2021). Measurement of supply chain performance as a whole involves all components of the supply chain members from suppliers to consumers. Supply chain performance is measured by communicating organizational goals to functions in the supply chain to determine the direction of improvement to create competitive advantage. Performance measures in the supply chain are needed to determine the effectiveness of the existing system or to compare with other systems. This measure is also intended as an evaluation of activities that have been carried out by supply chain members. Effectiveness in the supply chain context indicates the extent to which supply chain objectives are achieved, while efficiency measures how well allocation of resources is used (Mentzer & Konrad, 1991).

The existing supply chain performance measurement model implemented in the field refers to supply chain activities in an organization which generally cover procurement activities, production planning, production, fulfillment of customer orders, and returns. Supply Chain Operation Reference (SCOR) method was chosen because the measurements in this method include the company's supply chain activities, from upstream to downstream, while the other methods only focus on the company's internal activities (Tanaka, 2018), (Solekhah & Tasya, 2018). SCOR is a reference model of supply chain operations (Pujawan, 2005).

Supply chain is one of the approaches used to solve the problem of agricultural commodities (Puarada, Gurning, & Harahap, 2020). The supply chain involves

the ongoing relationship of money and information (Assauri, 2011 in Nggili & Katayane 2017). A company's supply chain consists of facilities in a dispersed area, where raw materials, semi-finished products, or finished products are obtained, converted, stored, or sold and transportation network that connects facilities as long as the product flows (Makris, Zoupas, & Chryssolouris, 2011). There are six factors driving supply chain performance so that a company can improve efficiency and response speed, namely: 1) facilities, 2) inventory, 3) transportation, 4) information, 5) sourcing and 6) pricing (Liputra, Santoso, & Susanto, 2018).

Performance measurement systems are needed to monitor and control, communicate organizational goals to functions in the supply chain. The SCOR is a conceptual model developed by the Supply Chain Council (SCC), an independent non-profit organization, as an inter-industry standard. The aim of this standardization is to facilitate understanding of the supply chain as a first step in order to obtain an effective and efficient supply chain management in sustaining the company's strategy.

As one of the agro-industry companies processing carica fruit into several products, one of which is candied carica products with a large enough production capacity in Wonosobo Regency, CV. Yuasa Food Berkah Makmur is required to continue to meet consumer demand for processed carica sweets as a typical food product for Wonosobo Regency. The demand is uncertain, that is, it depends on the conditions that exist in the community such as the holiday season, *hari raya*, new year which makes demand usually very high, while the raw material for carica is very dependent on the season, if the dry season and rainy season occur continuously then the quality of the fruit Carica will be very low which causes the supply of raw materials for carica to be very limited.

In the process of fulfilling consumer demand for carica processed products in CV. Yuasa Food Berkah Makmur makes several activities that include suppliers of raw materials and supporting materials, companies that process raw materials into processed carica products and retail or agents as institutions distributing finished products to consumers. These activities give rise to a supply chain pattern in which there are several flows, namely material flows, financial flows, and information flows that explain what activities occur in the carica supply chain until it reaches consumers' hands.

Based on the existing problems, it is necessary to pay attention to the supply chain management of carica in CV. Yuasa Food Berkah Makmur, because the concept of supply chain management is able to integrate the management of various management functions in a relationship between organizations to form an integrated and mutually supportive system. The purpose of this study was to examine the supply chain performance of Carica sweets that passed through CV. Yuasa Food Berkah Makmur, Mojotengah District, Wonosobo Regency.

METHODS

This research was conducted at CV. Yuasa Food Berkah Makmur, one of the companies that process Carica fruit into sweets. This research was conducted from October to November 2019. Primary data used are based on direct observation and interviews with 20 farmers of supplier respondents, historical data of CV. Yuasa Food Berkah Makmur was in November 2018 to October 2019 and 25 agents/retailers. Data collection techniques used observation and interviews. The data processing method uses SCOR 9.0 version analysis tool, a performance measurement model issued by the SCC (2009). There are four attributes and five metrics used for measuring supply chain performance. Performance attributes used were reliability, responsiveness, costs and asset management. The parameters of the attributes used as performance metrics are as follows:

1. Perfect Order Fulfillment (POF)

This POF is a percentage of orders that are sent in full according to customer requests. Determination of POF value is as follows:

$$POF = \frac{\text{Total orders-Number of orders that have problems}}{\text{Total order}} \times 100\%$$

2. Order Fulfillment Cycle-Time (OFCT)

OFCT is used to calculate the amount of time (days) needed from the time the order is received until the product is received by the customer. Determination of the value of OFCT is measured by calculating the average number of days needed in shipping orders to customers, from customers ordering goods to goods reaching customers. Sooner or later the time required to fulfill orders from customers stated in units of days.

3. Total Supply Chain Management Cost (TSCMC)

TSCMC is the total post-harvest management and logistics costs as a percentage of revenue, expressed in percent. The total cost of the supply chain= procurement costs + processing costs + packaging costs + shipping costs + service costs.

4. Cost of Good Solds (COGS)

COGS is a direct cost for the material and wage costs incurred to make the product. COGS can be interpreted as the cost of goods sold, i.e. the costs of sales or the cost of production of goods sold which are then in percentage. Determination of COGS values is as follows:

$$COGS = \text{Variable costs} + \text{Labor costs} + \text{Fixed Costs}$$

5. Cash-to-Cash Cycle Time (CTCCT)

CTCCT is used to measure the speed of the supply chain to turn inventory into money. The shorter the time needed is, the better the supply chain will be. Good companies usually have a short cash-to-cash cycle. The CTCCT value is obtained by summing the results of the reduction in average accounts receivable and the average daily debt with the daily supply inventory. Determination of CTCCT values is as follows:

CTCCT = inventory days of supply + average days of account receivable-average days of account payable.

The determination of the value parameters that have been conducted is then entered into the supply chain metrics. Each actual supply chain performance matrix candied carica CV. Yuasafood Berkah Makmur which has been measured and calculated, then, the resulting values are compared with benchmarks set by the SCC (2008) for the food industry. The supply chain performance attributes and metrics are as follows (Table 1).

The hypotheses in this study are it is suspected that the supply chain performance of Carica sweets in CV. Yuasa Food Berkah Makmur has been effective. The framework of thought in this research can be seen in Figure 1.

Table 1. Supply chain performance attributes and metrics

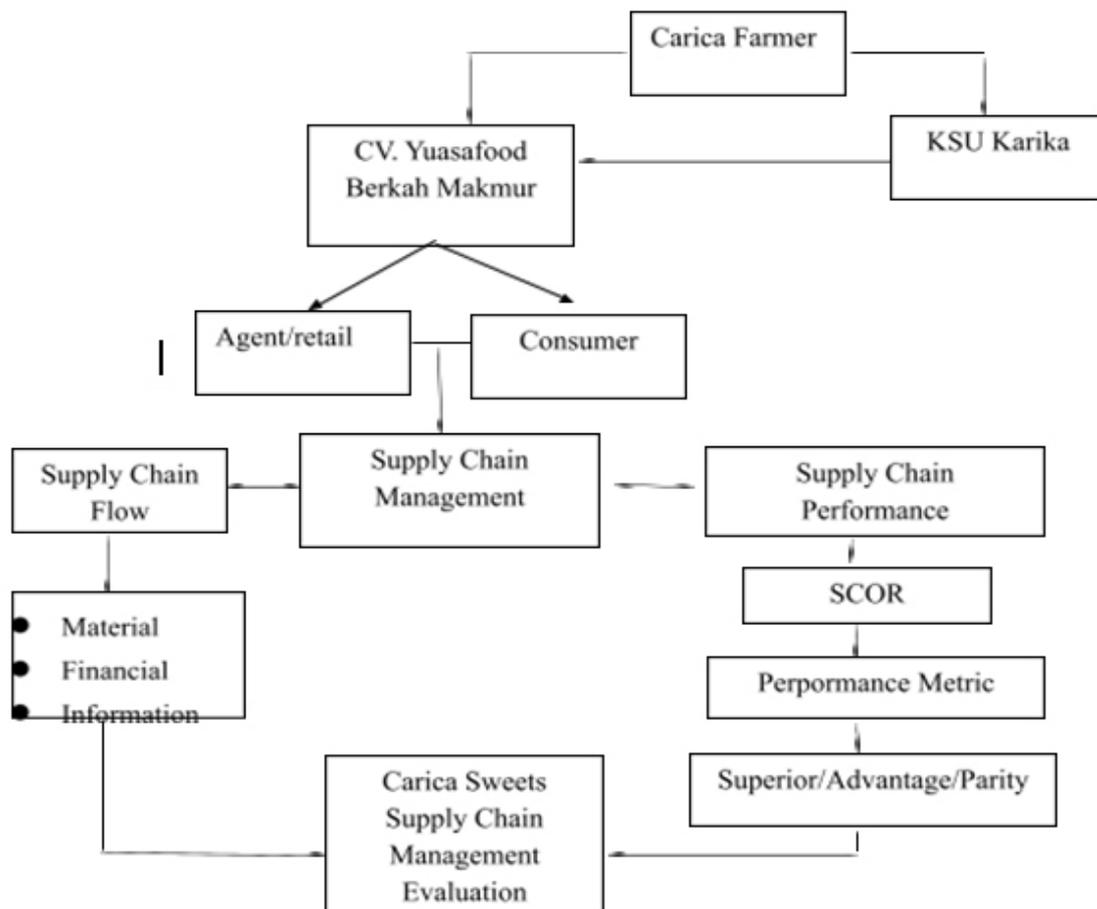| Performance attribute | Metric | Benchmark | | |
		Superior	Advantage	Parity
Reliability	POF	$\geq 90\%$	85 – 89 %	80 – 84 %
Responsiveness	OFCT	≤ 10 Days	26 – 11 Days	42 – 27 Days
Costs	COGS	53 %	61 %	69 %
	TSCMC	≤ 3 %	8 – 4 %	13 – 9 %
Asset Management	CTCCT	≤ 20 Days	33 – 21 Days	45 – 34 Days

Source: Bolstorff (2003)

Figure 1. Framework of thought

This processed carica product is one of the superior products in Wonosobo Regency, this is because carica is an endemic fruit that can only grow in Kejajar sub-district, Wonosobo Regency and becomes a souvenir of Wonosobo's special food. Processing of carica fruit is able to encourage several small and medium businesses to be creative in processed carica which can provide income for the local community. One of the large carica processing companies is CV. Yuasa Food Berkah Makmur. The increasing demand for carica processed products is sometimes not matched by the availability of abundant raw materials. Carica plants are still planted intercropping with other horticultural crops such as potatoes, cabbage and carrots, so that the yield is not too much. Weather factors also affect the yield of carica harvest if there is a prolonged dry season or when the rainy season arrives the quality of the fruit becomes less good. Therefore, it is necessary to carry out an assessment of the Carica supply chain at CV. Yuasa Food Berkah Makmur through information search and thorough investigation so that the company can fulfill customer demands and the flow of business can run better and profitable for the company.

RESULTS

In the carica candied, supply chain passing through the CV. Yuasafood Berkah Makmur is discussed descriptively covering three streams. The flow of goods is explained starting from the raw materials needed by the company, processing (company) and finished products that reach the hands of consumers. The information flow is explained in the form of information about the availability of carica raw materials in farmers, the availability of carica candied stock and the demand for carica candies from consumers. Financial flow (finance) explains about payments from downstream to upstream, which is from consumers to companies and then from companies to farmers (Figure 2).

In a supply chain, there are several supply chain actors, while the carica candied supply chain actors here consist of farmers, company (CV. Yuasafood Berkah Makmur), agents/retailers and consumers. Carica suppliers of raw materials in CV. Yuasa Food Berkah Makmur is a carica farmer who is a member of the Karika Multipurpose Cooperative (*Koperasi Serba Usaha/*KSU) under the auspices of CV. Yuasa Food Berkah Makmur.

Carica candied supply chain goods flow contains twochannels, which are the flow of goods in the form of raw materials (carica fruit), and finished products (candied carica). The fulfillment of the company's carica fruit supply is from farmers directly and from KSU Karika. In the finished product of carica candied, the flow of goods occurs from the CV. Yuasa Food Berkah Makmur goes directly to consumers and through agents/retailers first gets to consumers.

Flow of Goods in the Form of Raw Materials

Model 1 : Farmers→ CV. Yuasa Food Berkah Makmur

In model 1, Carica raw materials are obtained directly from farmers into the company's warehouse. Farmers here mean that the company will buy Carica raw materials from non-cooperative members of the cooperative who have become customers of the company.

Model 2 : Farmers → KSU Karika → CV. Yuasafood Berkah Makmur

In model 2, raw materials obtained from KSU Karika are from Carica farmers who are members of the Cooperative who routinely supply. The advantage of buying carica raw materials to KSU Karika is the carica fruit suppliers do not have an agreement in writing in black and white with CV. Yuasa Food Berkah Makmur, but each of them has a commitment to remain a priority in the delivery of raw materials considering the carica fruit which is quite rare.

Flow of Goods in the form of Finished Products

Model 1: CV. Yuasafood Berkah Makmur → Agents/ Retailers → Consumers

In the model 1 stream, carica candied product sales are sold to several agents/retailers throughout Indonesia, but more in the Java Island. There are around 25 agents/ retailers who continuously make repeat orders which finally reach the consumers.

Model 2: CV. Yuasa Food Berkah Makmur → Consumers

In the model 2 stream, other than through an agent/ retail CV. Yuasa Food Berkah Makmur sells carica candies directly to consumers by selling carica candied products directly in its shop in Wonosobo Regency, as many as four stores in Munggang, Kretek, Sendang Sari and Bugangan.
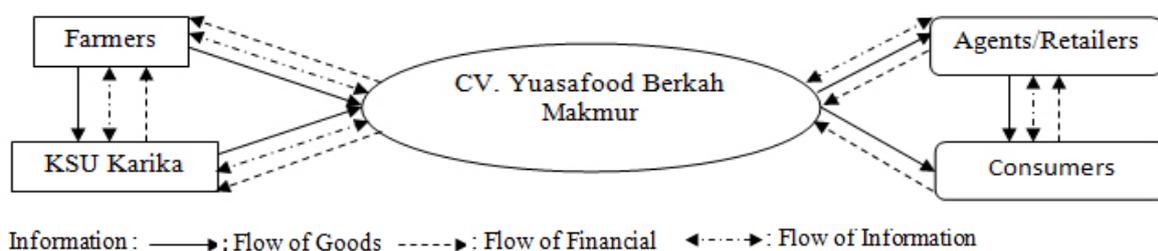

Figure 2. Carica candied supply chain flow passing through CV. Yuasafood Berkah Makmur

Carica's candied supply chain financial flow explains the existence of financial movement activities that occur among the actors of the supply chain starting from downstream to upstream. Financial flow flows from consumers directly to the company and through an agent/retailer first. The money that has been received by the company is then used to pay for the purchase of carica candied raw materials to farmers and to the Karika KSU. Carica candied financial flow that passes CV. Yuasa Food Berkah Makmur in the financial flow include four supply chain models written as follows.

Financial flow activities include the price of raw materials, prices of finished products, payment methods, payment terms, and product shipping costs. Supply chain actors involved are farmers, companies, agents/retailers and consumers. The financial flow that occurs in this financial flow is likened to flowing from downstream to upstream, because this relates to the fulfillment of payments to each supply chain actor for the smooth running of supply chain activities.

Model 1: Consumers → CV. Yuasa Food Berkah Makmur

Model 1 shows the financial flows that flow from consumers directly to the company

Model 2: Consumers → Agents/Retailers → CV. Yuasafood Berkah Makmur

Model 2 shows financial flow flows from consumers through agents/retailers first to the company.

Model 3: CV. Yuasafood Berkah Makmur → KSU Karika → Farmers

Model 3 shows the next financial supply chain flow activity carried out by CV. Yuasa Food Berkah Makmur towards KSU Karika which later the flow will flow to farmers and other raw material suppliers.

Model 4: CV. Yuasa Food Berkah Makmur → Farmers

Model 4 shows the financial flow that flows directly from the company to farmers. It is because during the process of purchasing raw materials, the company buys it directly to the farmers and pays on the spot without intermediaries.

Carica candied supply chain information flow is undeniably having a very important role, so that the smoothness of the entire supply chain flow from upstream to downstream or vice versa is highly considered because it concerns the smoothness of all other supply chain flows. Carica's candied supply chain information flow is two-ways; there are interrelationships between each of the supply chain actors. The flow of information that is woven from farmers with KSU and companies as well as from companies to agents/retailers and consumers are going very well and continuously.

This information flow has four models that describe the two-way information flows ranging from farmers to companies and companies to consumers and vice versa.

Model 1: Farmers ↔ CV. Yuasa Food Berkah Makmur
Model 2: Farmers ↔ KSU Karika ↔ CV. Yuasa Food Berkah Makmur
Model 3: CV. Yuasa Food Berkah Makmur ↔ Agents/Retailers ↔ Consumers
Model 4: CV. Yuasa Food Berkah Makmur ↔ Consumers

This information flow is very helpful in facilitating the sustainability of the carica candied business for the carica supply chain actors. Which is carica farmers as a source of raw material availability, the company as a carica candied processor and agents/retailers that depend on carica candies for their business activities. So that it is expected to increase the added value.

Carica Candied Supply Chain Performance

This supply chain performance measurement can be measured in the range of periods from three to six months or even a year. In this study, it examined the performance of the carica candied supply chain in CV. Yuasafood Berkah Makmur which was conducted on data for a period of one year, from November 2018 to October 2019. Supply chain performance measurements are conducted based on the SCOR matrix consisting of performance attributes which are Reliability, Responsiveness, Cost and Asset Management. Qualification of performance values in each attribute consists of three levels, which are parity, advantage and superior (Setiadi, Nurmalina, & Suharno, 2018). The average value of the carica supply chain performance attribute that passes through CV. Yuasa Food Berkah Makmur is as follows (Table 2).

Table 2. Results of performance analysis of the carica candied supply chain

Performance attribute	Metric	Actual Value of Performance	Benchmark		
			Superior	Advantage	Parity
Reliability	POF	98,77%	≥ 90%	85-89%	80-84%
Responsiveness	OFCT	2 days	≤ 10 days	26-11 days	42-27 days
Costs	COGS	62,8%	53%	61%	69%
	TSCMC	23%	≤ 3%	8-4%	13-9%
Asset Management	CTCCT	23 days	≤ 20 days	33-21 days	45-34 days

Measuring the performance of the carica candied supply chain in the CV. Yuasafood Berkah Makmur was conducted by comparing the average performance value of carica candied CV. Yuasa Food Berkah Makmur with the Benchmark value set by the SCC (2008) for the food industry. This comparison can be used as a target for determining supply chain performance in the next period. Comparison of the average actual performance of Carica sweets in CV. Yuasa Food Berkah Makmur on each performance attribute with the Benchmark value on each attribute can be explained as follows:

Reliability

This reliability performance attribute with the Perfect Order Fulfillment (POF) metric shows that how much conformity the product standard that reaches the consumer with the order is. POF is the percentage of orders that are fulfilled perfectly, that is, not late, not less in number, and no quality problems. Based on the average table performance carica candied supply chain that passes through the CV. Yuasa Food Berkah Makmur showed a value of 98.77% or in the position of the best classification (superior). The average value of supply chain performance attributes is closer to 100% more than better (Sari, Nurmala, & Rifin, 2015).

Responsiveness

This measurement of responsiveness performance attributes uses Order Fulfillment Cycle Time (OFCT) metric, which is the time of fulfillment of a customer's order that is calculated from the time the customer orders until the customer gets the goods ordered. This attribute calculates the amount of time (days) needed from the time the order is received to the product until it is received by the customer. Attribute performance on OFCT data metrics shows the fulfillment of orders CV. Yuasafood Berkah Makmur is 2 days (48 hours). It shows that the OFCT metric value is in the superior classification, which means that the attributes of the responsiveness supply chain performance analysis have reached excellent performance targets. Standard time of order fulfillment if ≤ 3 days is included in the superior criteria (Setiadi et al., 2018).

Costs

Costs are included in the type of supply chain internal performance attributes. Internal performance is a measurement of supply chain activity that involves more resources from within the company. This supply chain performance attribute is measured by the COGS and TSCMC metrics.

COGS is often interpreted as the cost of sales, or the cost of production of goods sold, or the cost of purchasing goods then resold. These costs are then calculated as business expenses, and reduce the turnover obtained from product sales. Based on the results of the calculation of performance attributes using the COGS metric shows a value of 62.8% and is in the classification of advantages. In the classification of advantages, which means the company is doing a good business operating budget, but it still needs to be upgraded to the best position (superior) so that the level of profits obtained by the company can be maximized. The TSCMC metric shows that the performance of the carica candied supply chain that passes CV. Yuasa Food Berkah Makmur has a value of 23% or more than 13%. Supply chain performance metrics CV. Yuasa Food Berkah Makmur is under parity which means that when viewed from the management side the cost is still not good. Improvement is needed in order to minimize supply chain costs that have the potential to cause waste of company fund allocations. Therefore, in the future, companies must be able to target the parity classification first. The smaller average value of TSCMC shows the supply chain performance a better position (Yolandika, 2016).

Asset Management

In this attribute the matrix used, is cash to cash cycle time (CTCCT). CTCCT is a matrix that calculates the speed of supply chains turning inventory into money. CTCCT integrates cycles that occur in three functions, which are purchasing, manufacturing and sales/distribution. The faster the time used to change inventory is, the better the achievement of supply chain performance will be (Pujawan, 2017).

Measurement of performance attributes using the metric CTCCT, which is the time from the payment of the material made until the money obtained from the sale of products produced by the material. The results of the analysis of the performance measurements of the carica candied supply chain in the CV. Yuasa Food Berkah Makmur, obtained CTCCT value for 23 days. CTCCT 23 days, meaning that the company has the ability to convert inventory into money requires an average of 23 days. Cash velocity at the company level is in the advantage classification; it is good but can still be targeted to achieve performance in the superior classification. Average agent/retailer payment time to CV. Yuasa Food Berkah Makmur is 27 days, while the payment time for CV. Yuasa Food Berkah Makmur to farmer suppliers is usually 22 days.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Candied carica supply chain flow has several supply chain flow patterns. There are two patterns of flow of goods, which are the flow of goods in the form of raw materials and finished products. Carica candied financial flow that passes CV. Yuasa Food Berkah Makmur includes four supply chain flow models. Meanwhile, carica candied information flow through CV. Yuasa Food Berkah Makmur consists of four supply chain flow models.

The results of the analysis using SCOR show the value of reliability and responsiveness which are in the best position, i.e. the performance attribute reliability of the POF metric indicates a value of 98.77% or is the best position (superior) and the responsiveness metric performance attribute OFCT shows the number 2 days (48 hours) in the best position (superior). Meanwhile, the Costs performance attributes with the COGS metric

indicates a value of 62.8% or in a position of advantage and TSCMC metrics show a performance value of 23% or in a position below parity

Recommendation

Suggestion that can be addressed to companies is to be able to further enhance good relations with farmers and agents/retailers (consumers) for the smooth flow of the carica candied supply chain. Companies must be able to minimize the cost of the supply chain to improve the performance of the carica candied supply chain using Enterprise Resource Planning (ERP) software. Better management and recording of company data can be conducted with more detailed evaluations, especially evaluations of the company's financial department.

REFERENCES

Budiraharjo K, Nurfadillah S, Roessali W. 2020. Kinerja rantai nilai kedelai di Kabupaten Grobogan. *Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis* 19(2):347–360. https://doi.org/10.31186/ jagrisep.19.2.347-360

Evalia NA. 2004. Strategi pengembangan agroindustri gula semut aren. *Jurnal Manajemen Dan Agribisnis* 12(1):57–67. https://doi.org/10.17358/ jma.12.1.57

Ikhwan K, Rahardjo B, Ratnawati S. 2021. Learning organization in determining supply chain performance. *Jurnal Manajemen dan Agribisnis* 18(2):205–214. https://doi. org/10.17358/jma.18.2.205

Liputra DT, Santoso S, Susanto NA. 2018. Pengukuran kinerja rantai pasok dengan model supply chain operations reference (SCOR) dan metode perbandingan berpasangan. *Jurnal Rekayasa Sistem Industri* 7(2):119. https://doi. org/10.26593/jrsi.v7i2.3033.119-125

Makris S, Zoupas P, Chryssolouris G. 2011. Supply chain control logic for enabling adaptability under uncertainty. *International Journal of Production Research* 49(1):121–137. https://doi. org/10.1080/00207543.2010.508940

Mentzer JT, Konrad BP. 1991. An efficiency/ effectiveness approach to logistics performance analysis. *Journal of Business Logistics* 12(1):33–61.

Nggili RA, Katayane RR. 2017. Supply chains

management batu mulia khas nusantara di Kotamadya Salatiga. *Jurnal Manajemen Teori dan Terapan | Journal of Theory and Applied Management* 10(2):169. https://doi.org/10.20473/jmtt.v10i2.3813

Prasetya A, Retnoningsih D, Koestiono D. 2019. Kinerja manajemen rantai pasok (supply chain management) keripik kentang di industri kecil Kota Batu. *Habitat* 30(2):44–53. https://doi.org/10.21776/ub.habitat.2019.030.2.6

Puarada SH, Gurning RNS, Harahap WU. 2020. Efisiensi teknis rantai pasok jagung tingkat petani dan pengumpul dengan metode data envelopment analysis (DEA) Kecamatan Batang Kuis, Deli Serdang, Sumatera Utara. *Agro Bali: Agricultural Journal* 3(2):234–245. https://doi.org/10.37637/ab.v3i2.629

Pujawan. 2005. *Supply Chain Management.* Ed. ke-1. Yogyakarta: Guna Wijaya.

Pujawan INM. 2017. *Supply Chain Management.* Ed. ke-3. Yogyakarta: Andi.

Romdhon MM, Nurshabrina A, Melli. 2019. Identification of milkfish supply chain in PT XYZ at Semarang City, Central Java Province. Indonesian *Journal of Agricultural Research* 2(2):18–25. https://doi.org/10.32734/injar.v2i2.1155

Sari PN, Nurmala P, Rifin A. 2015. Pengaruh relationship marketing terhadap kinerja rantai pasok beras organik bersertifikat di Kabupaten Bandung melalui integrasi [tesis]. Bogor: Program Sekolah Pascasarjana, Institut Pertanian Bogor.

Sari SW, Nurmalina R, Setiawan B. 2014. Efisiensi kinerja rantai pasok ikan lele di Indramayu. *Jurnal Manajemen & Agribisnis* 11(1):12–23.

Septiana LR, Machfud, Yuliasih I. 2017. Peningkatan kinerja rantai pasok bawang merah (studi kasus: Kabupaten Brebes). *Jurnal Teknologi Industri Pertanian* 27(2):125–140. https://doi.org/10.24961/j.tek.ind. pert.2017.27.2.125

Setiadi S, Nurmalina R, Suharno S. 2018. Analisis kinerja rantai pasok ikan nila pada bandar sriandoyo di Kecamatan Tugumulyo Kabupaten Musi Rawas. *Jurnal Ilmiah Manajemen* 8(1).

Solekhah U, Tasya A. 2018. Analisis efisiensi kinerja manajemen rantai pasok komoditas paprika di Desa Pasirlangu Cisarua Kabupaten Bandung Barat (studi kasus pada UKM Paprici Segar Barokah di Desa Pasirlangu Cisarua Kabupaten Bandung Barat). Prosiding Manajemen:188–196.

Tanaka D. 2018. Analisis kinerja supply chain management berbasis balanced scorecard pada PT. Alove Bali IND. *E-Jurnal Manajemen Unud* 7(7):3709–3736.

Timisela NR, Masyhuri, Darwanto DH, Hartono S. 2014. Manajemen rantai pasok dan kinerja agroindustri pangan lokal sagu di Propinsi Maluku: Suatu pendekatan model. *Journal Agritech* 34(2):184–193.

Wibowo. 2014. *Manajemen Kinerja.* Ed. ke-4. Jakarta: PT. Raja Grafindo Persada.

Widisatriani GA, Widyantara IW, Angreni IGAAL. 2015. Manjemen rantai pasok benih cabai rawit. *E-Jurnal Agribisnis dan Agrowisata* 4(4):23016523.

Yolandika C. 2016. Analisis supply chain management brokoli CV. Yan's Fruits and Vegetable di Kabupaten Bandung Barat [tesis]. Bogor: Program Sekolah Pascasarjana, Institut Pertanian Bogor.