

A STUDY OF SUPPLY CHAIN MANAGEMENT IN INDONESIAN MODERN FOOD RETAILING CHAINS FOR FRESH VEGETABLE (CASE STUDY: FARM PRODUCER COMPANY, PT. SAUNG MIRWAN, BOGOR, INDONESIA)

Yanti Nuraeni Muflikh¹

¹Departemen Agribisnis, Fakultas Ekonomi dan Manajemen IPB

ABSTRACT

Supply Chain Management (SCM) forces business practitioners to focus more on ultimate consumers' needs. The purpose of this study was to examine the management issues against the six key principles of supply chain management (SCM). Electronic mails and phone interviews with management of PT Saung Mirwan were used to collect primary data about the dimensions of supply chains associated with the six key principles of SCM. This paper shows that the firm has tried to apply the six key principles of SCM although for several aspects the realization was still ineffective and inefficient. Perhaps main limitation of this was its narrow focus on one agribusiness company, thus precluding the generalization of findings to other sectors. Moreover, this study did not involve the company's partners directly to result in the more accurate data. The findings reinforce the important of developing and maintaining closer relationship with chain's partners in response to the change in business environments and serving better their end users.

Keywords : *supply chain management, the six key principles, PT. Saung Mirwan*

INTRODUCTION

A continual growth in Indonesian economic sector since recent years has resulted in increasing in gross domestic product, although it was interrupted by economics crisis from 1997 to 2000. The Indonesian GDP growth has moderately increased from 4.9 % in 2001 to 5.9 % in 2005 (IMF, 2005) and predicted to continuously increase to about 6.2 % per year (Kompas, 2005). As a result, Indonesian income per capita also rose and middle class people in Indonesia has rose to about 70 million (Coyle, 2006) and most of them live in urban areas. An increase in income per capita, the shift of life style to urbanized behavior and the awareness of food safety and health lead to acceleration in modern retailers especially in urban areas. At present, modern retailers gain 26.3 % of total food retailers in Indonesia (Sinar Harapan, 2007). This is because modern chain retailers have high potency to offer greater convenience, quality

and safer food through highly efficient procurement and distribution than traditional ones (Coyle, 2006; Chowdhury, et. al., 2005).

In response to the consolidation of modern food retailer procurements, preferred suppliers, which enable to deliver higher and more consistent quality and supply and innovative produces are needed. This condition challenges agribusiness producers includes horticultural producers to increase their awareness of business to shift from production based to consumer focus. However, only big producers enable to respond to this change and serve for modern food chains, while most small-scale farmers still serve for a long traditional supply chain. One of reputable horticultural producers, specialty for fresh vegetable is PT. Saung Mirwan, which also has a well dedication to support small-scale farmers.

Using a case study and a qualitative approach, this study is aimed to identify the management issues associated with five

dimensions of fresh vegetable supply chain and analyze the relationship between the chain's participants, in this case the relationship between PT. Saung Mirwan and its customers and small-growers as its suppliers. The primary data collection was conducted through electronic mails and phone interviews with its marketing staff, Chike Sumarna, while the secondary data was collected from several relevant references.

This paper focuses on a fresh vegetable supply chain for modern retailers, not all firm's products nor all market segments that the company serves. Moreover, this project did not involve directly its customers and its suppliers as its respondents due to time and cost limitation.

This paper is organized through several main parts. The first part explains the supply chain management concepts that are applied in this study including the approach of analysis. The second part describes the company profile and management issues associated with the dimensions of supply chain. The other part analyzes the application of six key principles of supply chain management in enhancing the chain's competitive edges. The last part is conclusion and recommendation to improve the performance of its vegetable supply chain.

A REVIEW OF SUPPLY CHAIN MANAGEMENT CONCEPTS

Definitions

For over a decade, the concept of supply chain management has been a topic of interest and debate among both the business and academic sectors. This interest has been particularly evident in developed countries. Boehlje (1999) states that in today's agribusiness environment, the competition occurs between supply chains, and according to Spekman et al. (1998), the success of companies depends on the strength of their weakest supply chain participants. Given these views, supply chain management is required (Dunne, 2001).

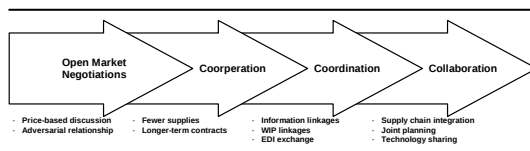
Supply chain management (SCM) is defined in many ways but the goals are generally aligned to ensuring effective and efficient supply chains to achieve competitive advantages. Beers et al. (1998) argue that the definition of SCM depends on the problem to be addressed and the disciplinary views of author. However, Lambert and Cooper (2000, p.66) define SCM as an integration of key business processes from ultimate consumers through to original suppliers that offer products, services and information that add value for customers and other stakeholders.

Supply chain management should not only be defined in terms of logistical management because, according to Dunne (2001), achieving an efficient logistics system is only one aspect of supply chain management, and this fails to recognize that SCM is also concerned with the creation of value and achieving competitive advantage. Therefore, Gifford et al. (1997, p.2) define SCM as 'an integrative approach that aims to satisfy the expectations of consumers, through continual improvement of processes and relationships that support the efficient development and flow of products and services from producers to consumers'.

Four basic types of business relationships

According to Spekman; et. al (1998) there are four main types of business to business relationship between participants in a supply chain, range from a transactional relationship to a more collaborative one. Transactional relationship characterized by multiple suppliers and short term contracts, partners are evaluated based on cost (Spekman; et. al.,1998), so that only suppliers that meet buyer's criteria in term of cost benefits are selected. Cooperation is a starting point of supply chain management in which firms engage in relationships with fewer suppliers in long term contracts and share little information (Spekman; et. al., 1998).

The third one is coordination in which more essential information flows among partners. They argue that both cooperation and coordination are not sufficient even though quite necessary. Then, they state that the most ideal partnership is collaboration where the partners share common future vision and engage in joint planning.



Source: Speakman; et. al. (1998)

The six key principles of supply chain management as an approach

Boehlje (1999) states that managing supply chain from up stream levels to down stream (retailers) is required. Further, Boehlje (1999) claims that there are five critical dimensions of value chain that need to be managed: (1) the set of processes or activities that create values for customers; (2) the product flow features of the chain; (3) the information flows; (4) the financial flows; and (5) the governance/coordinating system. Managing the relationship, or good governance, between participants in a supply chain is the most important factor to enabling the management of other important dimensions of the supply chain. SCM seeks closer (more collaborative) and longer term relationships between participants. Thus the heart of SCM lies on the relationship quality between partners in a supply chain.

Managing an effective supply chain management that is implied in a relationship between chain's participants can be descriptively evaluated against the six key principles of supply chain. According to Collins and Dunne (2002), there are six key principles of supply chain management: (1) Develop a customer focus; (2) Create and share consumer value; (3) Implement

an effective quality management system; (4) Develop an open communication system; (5) Implement an effective and efficient logistics system, and (6) Manage the relationships between chain members.

This analytical tool can describe the existing condition of relationships between participants within the chain, as well as the performance of a supply chain in managing its critical dimensions. As a result, an evaluation of supply chain performance and the critical aspects that needed to be improved could be addressed. Thus this study uses this approach to examine the performance of a modern food retailers' chain in managing their critical dimensions of supply chain.

THE PROFILE OF PT. SAUNG MIRWAN

PT. Saung Mirwan was established as a family ownership enterprise, in 1983 by Tantang Hadinata. It is located in Megamendung, Bogor, West Java. It works as a grower and vendor that supplies to some big supermarkets centers such as, Hero, and Carrefour and Restaurants such as Mc Donald and Japanese restaurants. It has a vision to become a leader company in agribusiness by producing high quality agricultural products, using a good technology and establishing partnerships with farmers and other institutions and developing human resources. Nowadays, Saung Mirwan is a highly successful case in producing good quality agribusiness produces, partnering with a number of small-scale farmers and promoting women employment in a high value agriculture.

In the beginning of business, Tatang Hadinata, as an owner, tried to plant melon in open area. In 1985 he was developed business through growing garlic on 7 Hectare (Ha) of open area in Cianjur and employed 100 workers. Because there were many farmers grew the same

produce on that location, so that its business for garlic was less profitable and then was shut down. The firm removed its business to Sukamanah.

The firm has its own farm, storage, grading and packaging facilities in a one certain location. At the moment, Saung Mirwan produces 18 types of flowers and more than 40 types of vegetables in its own farm, but the firm focuses on vegetables which has positive trend in demand. Its main vegetables are *edamame* (japanese soybean), lettuce head, broccoli and *shallot*. The gardening area is separated into a green house and an open field. From 1991 to 2001 the green house area was increased by about 1.5 Ha to 3 Ha. Nowadays the company has about 9 Ha ownership areas and rents other 8 Ha of planting areas which spread out in Sukamanah and Leumah Neundeut, Bogor and Garut, West Java. The main criteria for selection of production area, is based on an appropriate agro climate for vegetable and flowers. Besides, its production areas, which are located in West Java are quite near to Jakarta, a capital city and also are very close to urban areas except Garut, wherein most of modern markets are located.

Although Saung Mirwan has its own cultivation areas, the majority of the products that are supplied to its customers come from "partnership". The partnership (contract farming) program at PT Saung Mirwan began in 1992 involving five traditional farmers around the company's location. Then, the cooperation was expanded to reach Megamendung, Bogor and also other countryside in West Java, Garut. At present, more than 300 partner farmers cultivate vegetables of which 95 % of them are small-scale farmers that own less than 0.5 Ha of farming area. This indicates that the company is concern to empower small-scale farmers.

There are several divisions in the organizational structure of PT. Saung Mirwan to support its processes and activities such as

production, partnership, packing, marketing, and administration division. Division of production has main responsibility to control the production of vegetables, fruit and flowers. Partnership division aims to outsource fresh vegetables through partnership programs. Another one is packing division whose main responsibility is to handle post harvested products through washing, storage and packaging activities. Since 1999, Saung Mirwan employs about 265 field workers, which 96 of them are females and there are also 95 part time workers. Female employees work for green house areas, quality control and packinghouse, and responsible for sorting, grading and packaging. To motivate its workers, the company provides several facilities such as support facilities (a table tennis, a tennis court, mini-golf field), a prayer room, a fishing area, and accommodations.

As the modern retailers are growing faster, the need for fresh vegetables is increasing. Therefore, nowadays, many farm producer companies such as PT. Kapri, Pondok Pesantren Al-Ittifaq and CV. Putri Segar, specialty in vegetables throughout Java is trying to capture this opportunities. The competitors not only come from other farm producers but also from farm product supplier companies such as PT. Bimandiri-KSP, CV Mekar Dana Protifindo and Farm HK vegetables which also supply their products to modern retailers. Due to many competitors of fresh vegetables has improved recently, the company is aware of the need to innovation for its product and has been working hard to compete with others to become desirable suppliers. Fortunately, a firm has close personal relationship with some farm business experts from the Netherlands that are known with high quality of agribusiness products. Those experts usually give a consultancy to a firm about technology, market information and partnership. For example, at present company applies vacuum

technology in storage that making longer shelf life of vegetables.

THE DIMENSIONS OF FRESH VEGETABLE SUPPLY CHAIN

The awareness of Indonesian agribusiness companies including PT. Saung Mirwan to focus on end consumers needs is getting higher as the shift of consumer lifestyle to urbanized behavior and their awareness of good quality product. To ensure that the firm offers values to the right consumers on the right time and the right supply better than competitors, managing chain from upstream level to downstream is urgent. There are several important dimensions of supply chain that should be recognized. Therefore, in this part these dimensions of value chain for modern retailing chain of fresh vegetables are explored.

THE PROCESS OF VALUE CREATION AND PRODUCT FLOW

As Boehlje (1999) stated that the total value of product derived by end-users, results from the accumulation of value creation from each chain participant through certain activities. Meanwhile, product flow features of the chain describe how products delivered through the chains including its transporting and logistics system. Thus, as Porter (1980 cited in Dunne 2001) argues that the ability of individual firms to create value and the ability of firms to co-ordinate their value creation become critical factors of chain' competitive edges.

Since the firm has been established, the production has been concentrated on vegetables. As mentioning in the previous section the main vegetables that are supplied by the firm to supermarkets are edamame, broccoli, paprika, lettuce head and shallot. Because its capacity of production could not meet the demand from customers, so that the company outsourcers

some fresh vegetables from individual farmers and if necessary from other farm producers. The farmers which most of them are small-scale farmers, supply fresh vegetables to Saung Mirwan through three types of relationship: *mitra beli* (buying partners), *mitra kota* (city partner) and *mitra tani* (plasma-nucleus model, long term contract). The role of plasma-nucleus will be explained in detail in the governance section.

To fulfill a quick increasing in order of any variety of vegetables, the company supplied by *Mitra beli* (buying partners), which are mostly local collectors and small farmers that grow vegetables without Saung Mirwan direction and no special agreement. However, if the firm does not need the products, there is no obligation for further buying. *Mitra beli* comes from Jember (Central Java), Cipanas, Garut and Lembang. However, Saung Mirwan should accept a fluctuation price from this kind transaction, which only based on price. This is the disadvantage of having arm-length relationship in which firm accept fluctuated price and the supplier can not continue doing supply.

For paprika, besides grown by the firm, it is also outsourced from *mitra kota*. According to four type of relationship as stated by Spekman et.al., (1998), this type of relationship can be defined as a model of cooperation. *Mitra kota* is medium scale-farmers around Bogor that has plant vegetables in green house areas. They use hydroponics system and manual spray to grow paprika. Unlike for *mitra beli*, Saung Mirwan requires *mitra kota* to plant paprika for certain volume, price and certain period and there is an obligation for Saung Mirwan to buy paprika based on contract. The firm reports that since 2002, *mitra kota* has experienced reduction to just about 20 farmers. The reduction is because of the trend on the paprika price in market that tends to be increasing, so that they become inconsistent toward the agreement. The farmers who still commit to the agreement need for

market guarantee and feel connectedness to the firm.

However, the main supply for Saung Mirwan comes from *mitra tani* through plasma nucleus relationship. Main products of Saung Mirwan (edamame, lettuce head, broccoli, and shallot) are mostly supplied through this relationship. Saung Mirwan gives planting programs and guidance of standard products to farmers and technical assistants harvesting technique and post-harvesting handling and provides loans for seeds. Within this model, the firm can get consistent supply from their partners and the farmers are secure for market guarantee in competitive price. For edamame and lettuce head, the firm establishes this contract farming with 150 farmers in Gadog (Bogor) and Garut. The average demand for edamame is about 2.5 – 3 tons each week. Sometimes, if there are peak orders, a firm should outsource 25 % of edamame from *mitra beli* in Jember. Meanwhile, 75 % of total lettuce head is supplied by *mitra tani* (50 farmers) in Garut. If there are any added orders from customers, a firm buys from *mitra beli* in Lembang.

Especially for broccoli, 50 % of demand comes from its division of production and *mitra tani*, and other 50 % is bought from *mitra beli* in Garut, Cipanas and Lembang. This is because this vegetable is very difficult to be planted and required certain agro climate and grown on the land that never been used to grow cabbage. Besides, it is very easy for broccoli to be infected by many diseases. So that, the firm claims that it is very risky to just depend on broccoli supply from a particular relationship.

In term of product transporting system from suppliers to the firm, Saung Mirwan provides cooling transporting services for *mitra tani* in Garut because the long distances to pick them up to the company. Saung mirwan also delivers its vegetable to supermarkets using its own cooling transportations. At the moment Saung Mirwan

supplied 60 % - 70 % of total vegetables demand to their main customers (Hero, Carrefour, Sogo and Hypermarket).

All products from division of production and all partners delivered to packing division. Packing division add values of vegetable through sorting, trimming, storage, and packaging. Trimming is aimed to remove physical contaminant such as soils, and damaged leaves. For example for lettuce and cabbage 2-3 outer leaves are removed. Then, products are stored up by appropriating temperature with their shelf life. Lettuce and cabbage are stored in the 4-7° C storage, while paprika is stored in the 7- 10° C storage. As mention before that at present the firm also utilizes vacuum techniques that can keep vegetables until 3 weeks without reducing its quality. There are five types of packaging: packed/ wrapped uses plastic film; wrapped trayfoam; plastic bags; shield type A plastic and vacuum plastic. In general the purposes of using those type of packaging is to protect them from cross contamination, reduce evaporation so that their self life can be longer and also attract consumers.

FINANCIAL FLOW

Financial is associated not only with transfer mechanism but also the sharing of financial performance information and margin distribution within the chain (Boehlje, 1999). Margin distribution will depends on the ability of each participant to create values of product. In the case of Saung Mirwan, there is less financial performance information sharing between the firm, its suppliers and customers. In the case of *mitra beli*, they do not have ideas of how much Saung Mirwan resell their products to further buyers and as mention above, price is set based on current price and used for a week of contract. Payment is transferred 2 week after buying.

For *mitra tani*, which transportation is provided by company, the price of vegetables is

excluded from transportation cost. However, the price accepted by farmers is still higher compared to local collectors' bid. For example, edamame, they gain Rp 3,000 – Rp 4,000 from the firm, while price in local collectors is less than Rp 3,000 and become lower than that if there is oversupply in the market. Farmers receive weekly-payment because most small-scale farmers need quick cash for supporting their everyday life. As a nucleus, a firm can investigate the cost structure of its plasmas (*mitra tani*) and can give reasonable price for them. So that, most farmers are enjoying this relationship rather than dealing in adversarial relationship with collectors. For *mitra kota*, the payment period is fortnightly and contract price is established every one week. However, based on the agreements Saung Mirwan has responsibility to buy certain volume of products for certain period. Besides, for *mitra kota* most of them can afford transportations, so that the cost of transportation is included to the contract price.

For new suppliers and small-scale farmers, payment is usually direct payment (in cash) not via Bank. This is because most of small farmers have no bank account and because of administration matter for new suppliers. Meanwhile, Saung Mirwan accepts payment from customers every fortnightly, but sometimes delayed. The price accepted from customers is included the transportation cost through bank transfer. Most supermarkets do not directly inform the margin that they get from their sales. They just inform the price and demand fluctuation in general. But, as a preferred supplier, Saung Mirwan has its own brand and well packaging for most of its vegetables sold in main customers and they accept higher price than other competitors.

INFORMATION FLOW

Well and open communication is the key success to ensure information flow. Good communication leads to the developing of trust and therefore commitment will be established as well (Morgan & Hunt, 1994). For *mitra beli* and *mitra kota* there is less information flow. A firm communicates with *mitra beli* via telephone if there is an order for them. The content of information is also limited around price and demand it requires at that time. However, using such type of relationship, the firm can be flexible to outsource its vegetables when there is a quick change in demand, but no guarantee for flat price. This is in case, plasmas (*mitra tani*) could not afford for higher production quickly and also because farms production is also depends on nature.

In the case of *mitra tani*, in which plasma nucleus "partnership" is established, there is an intensive communication between them. Saung Mirwan employs consultants for farmers to give technical assistance about planting and standard guidance about product quality. Besides using phone line, the company visits the farmers periodically to control their production and to derive real and accurate information about any problem in the fields. Further, meeting and discussion is also held periodically between Saung Mirwan and the farmers to anticipate the change in demand more effectively. However, the firm stated that it is hard to control and communicate with huge number of farmers. So that, sometimes there are some produces that do not meet the company's requirement and should be rejected, but they are allowed to sell rejected product to traditional markets or other buyers with much lower price. To ensure that farmers are not cheated by the company, especially for farmers located around the company location who deliver their product to the company by themselves, they should see the sorting process for their product. The company

will ask them to be more concern about post-harvest handling to reduce defect.

Maintaining communication with its customers is not unimportant. Further, agribusiness is high risk of nature, sometimes if it could not meet the demand in the right volume and quality, the firm will inform customers via telephone or a direct visit before delivery and if possible, it will replace the product or redeliver them in the next few days. Nowadays, the firm has its own website that is used as other type of communication and information sources with customers/ suppliers and other potential partners. However, due to the lack of special operators, most information is usually out of date.

GOVERNANCE/ COORDINATING SYSTEMS

The type of coordination system will have an effect on who has power and control in the value chain and how risk and rewards are shared (Boehlje, 1999), and that is expressed on the type of relationship. In order to meet the consumers' requirement, building and developing closer relationship with partners is important. Further, Brouthers, et. al. (1995) cited in Whipple and Frankel (1998) states that in today's global environment the alliance are necessary because most firms lack of internal resources to achieve competitive advantages themselves. Therefore, modern retailers in Indonesia are trying to establish closer relationship with several preferred suppliers, such as Saung Mirwan. Moreover, Saung Mirwan also established contract farming with small-scale farmers (*mitra tani*) to ensure the consistency of supply, because it has limit resources that could not fulfill the demand through its own production.

Relationship with Suppliers

Mitra tani are the most important suppliers for Saung Mirwan because the highest volume of main vegetables is outsourced from them. The

partnership began in 1991, since the early development of modern retailers in Indonesia. The company realized that it faced a problem to fulfill the customers' need with specific products at certain volume regularly. The one of several reasons to establish the relationship is efficiency. Building partnership with farmers enables the company to supply larger volume without investing capital on rent- land that is quite expensive in West Java. This indicates that to begin relationships, the firm also applied alliance conceptualization before selection criteria as formulated by Whipple & Frankel (1998) by recognizing the needs for relationship.

The firm also select small-scale individual farmers to joint as *mitra tani* who own or rent land of minimum of 0.1 Ha and on certain appropriate agro climate location for vegetable and can supply products regularly in desired standard and showing a willingness to cooperate with.

The plasma nucleus partnership system is a general trade sub contract applied with the farming contract system (Krisnamurthi and Fauzia, 2004), where the nucleus company (Saung Mirwan) organized the order contract to the plasma (small-scale farmers) complying with the condition written in the agreement before the plants is being cultivated. Within this agreement, the farmers should follow Saung Mirwan's planting program in order to produce commodity that were required by its customers and complies with the roles and courses of technical assistance given by the nucleus. The initiatives and innovation ideas to build new product development comes from the firm. The farmers just do what the company asks for as compliance from the captain. For instance, when the firm asked them to plant new vegetables such as zukini (Japanese Vegetable), the farmers was being directly doing so, because they believe in the firm reputation that it can sell that new produces for them. This indicates that in this

relationship Saung Mirwan as a buyer is dominant then farmers. But farmers also enjoy the relationship because they have market guarantee and accept reasonable price from the company. They have been maintaining relationship for more than a decade. Besides, they are allowed to sell second grades product to other buyers. Therefore, closer relationship can be established in unbalance power situation (Cox, 2004 and Hingley, 2005).

However, the weakness is no very detail agreement as tight control between firm and *mitra tani* in term of other responsibilities and punishment. For example, there is no agreement to protect the information about varieties or seeds from others. Beside, due to many suppliers involved, communication is sometimes distributed unbalance for every individual farmer in different location so that the degree of connectedness is not equal. Thus, the company points out that very few of them come out from the partnership after they gain knowledge from company and tried to run business solely.

Relationship with Buyers

Saung Mirwan supplies about 80 percent of fresh vegetables to modern Retailers and sells about 20 percents to food outlets, hotels and restaurants. For modern retailers, about 90 percent of supply goes to several modern retailers in Jakarta and others are sold to supermarkets in urban cities around West Java. In 1998, the firm tried export vegetables to Hong Kong, Taiwan, Japan and Singapore. But, in 2002 that export marketing was discontinued because of the high shipping cost, besides, local markets is still potential to increase the shares. The total sales of edamame increase gradually, even though from 2006 to 2007 it remains steady. Its sales reached Rp 574,382,320 in April 2006 and Rp 574,050,100 in April 2007.

The company has been developing relationships with its main customers such as

Hero supermarket-Jakarta, Diamond, Sogo and Lion Superindo more than 10 years. Then, he stated that since Hypermarket and Carrefour have operated in Indonesia, Saung Mirwan also has become one of their main suppliers for vegetables. At present its most profitable vegetable gained from modern retailers is edamame, which demand remains increasing and the price remains stable. The firm has its own consideration to establish relationship with customers. Profitable Order quantity and the willingness for long-term business relationship are two main factors for a firm, while other important factors are term of payment, competitive price and the same vision about quality of product.

Meanwhile, the firm claims that the reasons for customers choosing Saung Mirwan as a main suppliers are its quality of product, supply continuity and refrigerated transportation that will impact on shelf life products. For those reasons, some big supermarkets in Jakarta (Hero, Sogo, Carrefour and Diamond) allow the company to use its own brand. They also began with small order for certain period before establishing long-term contract.

The firm always tries to maintain its relationship with customers through keeping communication or doing sales call (periodic visit) every week to listen to any complain from customers about its products. The firm also gives a prediction of production weekly to each customer. If there is a change in cost of production, the firm also inform customer via telephone or directly visits. This indicates that the firm is concern to keep its customers trust through being honest and communicating every problem. This indicates that even though customers are more dominants, as the firm continuously performs well dedication to meet requirement in consistent supply and quality, the degree of interdependent between them

becomes higher, and the use of power become diminished (Dunne, 2001 and Fearn, 1998).

ANALYSIS

In order to result in adaptive, agile and aligned supply chain as well as efficient, the dimension of supply chain should be managed (Boehlje, 1998 and Lee, 2004). An effective of managing supply chain that expressed through relationship between Saung Mirwan and its partners can be analyzed based on six principles of supply chain management.

DEVELOP A CUSTOMERS AND CONSUMERS FOCUS

According to Collins and Dune (2002) and Liker and Choi (2004), understanding the costumers need and how the suppliers work are very essential in managing supply chain. Through plasma nucleus relationship, Saung Mirwan develops its suppliers' capability in producing vegetables that meet end consumers requirement by giving them technical assistance and consultancy. It tries to understand and control suppliers' work through visiting them periodically.

Due to the large number of suppliers, the firm through partnership division should work extra hard to ensure that communication is well enough with them. However, in anticipating the quick change in demand and harvesting failures from some suppliers, the division should outsource extra amount of vegetables through *mitra beli*. This is other concern of consumers focus that ensuring supply' consistency. On the other hand, due to too many vegetables (40 types) grown by division of production, the need for consumers focus is biased by production focus on many varieties in insufficient volume. Therefore this causes the need to outsource insufficient supply of certain vegetables.

The firm tries to do market research periodically to captures consumers needs. For

example, while visiting customers weekly and derives market information indirectly the firm usually observe the consumers behaviors in the stores. Nowadays, many consumers are aware of save and health food, so that the firm delight them through well packaging systems suited with the type of vegetables and covered with its own brand to support its with the high quality and derives consumers loyalty. And based on its market research the company develops new product differentiation, called "Fresh & Cut", is ready to cook vegetable.

SHARE VALUE IN SUPPLY CHAIN

The total values is delivered to end users is accumulated from the value that created by each supply chain participant. In managing supply chain, the share value among partners should be proportioned with the value that created or added by each member (Collins and Dunne, 2001). Saung Mirwan tries to give reasonable price to the suppliers so that supplier can capture appropriate profit from its production.

Farmers usually gains higher price from the firm than from collectors, because the firm appreciate their hard works for good quality of products and they copy the firm production system. The firm takes value from its contribution to cooling transporting, handling, storage and packaging, so that the price of Saung Mirwan little bit expensive than other suppliers. The customers take value through providing cooling space in the stores and well-stores environments to attract consumers. The customers gain margin per kg vegetables is not too high, but they are able to make good profit though sales volume. Sharing and taking value can be described from *edamame* example. Farmers accept price Rp 3,000 – Rp 4,000 per kg, the firm sell supermarket Rp 7,000 – Rp 8,000 and the end consumers pay for it Rp 8,000 – Rp 9,000 per kg. However, the margin could not be

calculated because lack of cost of production information. This can be argued that through the price taken, values shared equal enough to the value added contribution of each level of supply chain.

IMPLEMENT EFFECTIVE QUALITY MANAGEMENT SYSTEMS

To ensure the firm gets the product right, implementing a good quality management system is very important. According to Collins and Dunne (2001), the firms should understand the specification of product needed by end consumers. Saung Mirwan products are consumed by end users from middle class to high class society require safer, healthier, and ready to cook vegetables. To ensure that its vegetables delivered to consumers on the right specification, Saung Mirwan applies quality control from the beginning of production to delivery. It and its farmers use good quality seeds, good irrigation system in open areas and control farmers operation. It does shorting of all vegetable that supplied from farmers. Trimming is applied to avoid physical contaminant. And as mentioned earlier, to avoid across contamination and give good evaporation and decay for consumer safety, several types of packaging applied that fitted with type of vegetables.

The firm gains SNI (Indonesian National Standard) for good quality of vegetables and it is mentioned on the label.

DEVELOP AN OPEN COMMUNICATION SYSTEM

Reliable information is a foundation of effective communication and open communication is a starting point to build health relationship (Collins and Dunne, 2001). Saung Mirwan tried to develop effective communication with both customers and suppliers. To ensure connectedness among farmers, although there is a formal agreement, the ways company treat them as family, gives them consultation about

any problem related to production, informal meeting with them every week. However, as cultural constrain that many of them tend to be reactive of having communication with the firms, not being proactive. So company should supervise them directly to cross check the information.

The Company is not a sole supplier for customers, so that it tries to be more proactive with customers by informing them reliable information that needed about supply and production reports, new product development and listening to them for any compliance. Thus, the customers will also treat the same ways and have willingness to give the same feedback.

ENSURING AN EFFECTIVE AND EFFICIENT LOGISTICS SYSTEM

Saung Mirwan supplies perishable products that require extra careful handling and speed of transporting. Therefore, Saung Mirwan has its own cooling transporting system to pick up vegetables from farmers out side Bogor and to deliver them to customers. Vegetables also should be stored in appropriate cooling storage suited with the types of vegetables to avoid chilling injuries and appropriate packaging to protect them from contaminants. It applies vacuum technology to control shelf life of vegetables.

However, for farmers around Bogor, the firm could not afford for cooling transportation, so that the degree of defects while sorting section is higher than from other suppliers. Further, the lack of awareness of farmers to utilized right picking practice and post harvesting handling leads to damage of some vegetables. In term of efficiency logistics system, the company should expense a high cost for running cooling transportation, packaging and cool storages, because its suppliers which most of them small holders could not afford for this, they should

compete with other vendors to maintain its cost of production.

MANAGE THE RELATIONSHIP BETWEEN MEMBERS

Managing relationship with large number of suppliers (about 300 small holders) and spread out in different locations is no easy task for Saung Mirwan. In the type of relationship that exist between Saung Mirwan and suppliers, plasma nucleus as sub contract farming system can be defined as relationship with preferred suppliers, not pure partnership. Although farmers and the firms work together to result in demanded vegetables but they do not involve in planting program and product development planning. They just do what firm has planned. Further, partnership or collaboration occurs if there is a joint plans, joint invest and joint value creation (Speakman, 1998). The relationship with *mitra kota* is usually cooperation, because the contract usually for certain period such as peak order period. Adversarial relationship is shown between firm and *mitra tani* which the firm can order any time if necessary but can stop order if the product is not required.

The relationship between the firm and its customers is still on the level of cooperation and establishes for long-term period. Even though the firm usually has informal meeting and visiting customers, the information is shared still a bit in general not in detail. Spekman (1998) stated that in cooperation, partners change a bit important information and engage partners in longer-term contracts. However, for some category products they have reach coordination level. This can be seen that during informal discussion or weekly meeting, they usually involve in joint planning for certain vegetables. For example, for edamame, the packaging design ideas usually come from customers and sharing information is more deeply and more open.

CONCLUSIONS AND RECOMMENDATION

In the case study of PT. Saung Mirwan, it can be figured out that the firm has tried applying the six key principles of supply chain management in managing its supply chain although for several aspect is still less effective and efficient. The firm has maintained long-term relationship with both main suppliers and customers for decades. However, due to the higher degree of competitive in agribusiness environment, the firm should improve some critical points in managing supply chain more effective and efficient, so that more agile, adaptive and aligned supply chain can be achieved and its competitive advantages can be improved.

First, the company should consider in developing its relationship with focusing only with several suppliers, not with many individual farmers to improve effective coordination and better communication. This does not mean that firms should reduce the involvement of small-scale farmers and against its mission to empower them. But the firm that is seen by farmers as chains leader can encourage horizontal cooperation among individual farmers in the same location, for example building *kelompok tani* farmers groups in Garut. Although it is not easy and takes time and adjustment, but supervision and communication can be more effective through such approach.

Second, in selecting and accepting small farmers to cooperate with, the company not only consider the reliability of its land, but also the farmers who has positive mentality to cooperate with, because in Indonesia, most farmers still attract to do business in the short-term advantages and quick cash of adversarial relationship. Besides, the contract agreements should be arranged as a more effective control for trust and commitment.

Finally, production too many range of products (40 types of vegetables) and 18 types of flowers will lose its focus on consumers needs and less efficient in term of capacity of most demanded products. Therefore, the company should concentrate only very demanded products. In addition, the company should have more accurate planting program planning through establishing more coordinated relationship, not just cooperation with buyers. Thus, the essential information such as product specification and expected demand can be derived. Thus, the company will not need *mitra beli* (adversarial relationship) to outsource products quickly, because the price can be fluctuated.

To sum up, in my point of view developing closer more collaborative relationship will result in the effectiveness of PT Saung Mirwan supply chain although it takes times and processes. The chain will be more aligned and more flexible in response to the change in demand, and therefore they can offer value to end-consumers better than other chain.

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