

# Supply Chain Management in Small and Medium Sized Enterprise in Brunei Darussalam

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## Abstract

In the current increasing globalized economy, it is becoming more challenging for small and medium sized enterprise (SME) to continue to exist and grow in today's competitive business and global market. A lot of enterprises have started to recognize the current competition happens between supply chains instead of individual companies. Hence, this project investigates the present supply chain management in Brunei SMEs specifically grocery stores for pasteurised milk, using insights from 64 cases. This project will also be investigating the reason behind frequent stock outs as well as low variation of pasteurised milk in SMEs in Brunei by studying their current supply chain management (SCM) practice. The research instrument was a survey form. The IBM SPSS Statistical Software was used as the research tool to analyse the current supply chain management in Brunei. Based on the findings, the major sources of stock outages in Brunei are due to poor demand and inventory planning, and poor integration in the supply chain. To conclude this research, SMEs in Brunei should consider managing their supply chain network instead of their own individual company. The efficiency of the SCM practice can be improved through the use of the latest technology where demand and supply can be managed better. Forecasting is suggested to determine demand uncertainty, while the economic order quantity (EOQ) method can be used in demand and inventory planning.

**Keywords:** Supply chain, Small and medium sized enterprise, Brunei Darussalam

## 1. Introduction

In the recent globalized economy, SMEs are considered to be revolutionary in developing as well as developed nations. They provide significant growth to the economy as well as the generation of employment. However, it is becoming more challenging for SMEs to continue to exist and grow in competitive global market because customers want better products with lower prices, better service, more product variation and faster delivery. Additionally, the modification of business models is making businesses more competitive to survive. Hence, a lot of enterprises have started to recognize that current competition happens between supply chain networks instead of individual companies. SCM is one of the effective tools in obtaining the competitive advantage (Ketchen et al., 2008; Alrashidi, 2018). The definition of SMEs differs for every country. Table 1 shows the definition of SMEs in Brunei. In the context of Brunei Darussalam, SMEs could be defined as those companies with 1 to 100 employees who contribute around 98.5% of the total business establishments by incorporating micro, small and medium-sized companies.

Table 1: Definition of SMEs in Brunei Darussalam (Polsaram et al., 2011)

Type of enterprise	Value
Micro	1 to 5
Small	6 to 50
Medium	51 to 100
Large	Above 100

### 1.1 Concept of Supply Chain Management

In order to understand and research SCM, it is important to first understand how a supply chain works. A supply chain is started by customer demand and product supply (Scott et al., 2011; Alazemi, 2018). Commodities that can easily be found in supermarkets are more likely to be produced on a supply basis. This means that the supply chain starts to supply before the customer comes to the supermarket. Small household equipment, electronics and general fashion clothing — most of which are sourced, produced and shipped in advance.

In broader perspective, a supply chain refers to the suppliers and distributors of goods within their factories and warehouses who carry out various tasks, such as procurement, inventory control, production, distribution and delivery (Stadtler & Kilger, 2008). Essentially, a supply chain is a sequence of shared operations and associations between common processors and involves all aspects of obtaining raw materials, converting them into finished products and delivering them to the final customer (Kandagatla, 2005).

These processes do not need to take place in a single company. In fact, a supply chain “consists of two or more companies connected” through the flow of resources, information, and finances (Stadtler & Kilger, 2008). The connected companies serve each other by dividing the tasks of producing parts and components, producing finished products, processing logistic services, and distributing them to the final customer. Several companies, therefore, with different functions and objectives, must work together to ensure that the supply chain operates smoothly. From another perspective, those associated companies may be seen as a processing chain, or as a network of companies connecting to their upstream and downstream operations and activities, for the central purpose of delivering value to the end consumer.

### 1.2 Problem Statement and Objective

As milk is an ideal medium for the growth and multiplication of various microorganisms, it is susceptible to early deterioration. Thermal processing techniques such as pasteurization and UHT treatment are adopted to extend the shelf-life of raw milk, in order to extend its market reach. Thermal processing of milk by pasteurization is widely adopted worldwide. Pasteurization can be done by adopting Low Temperature Long Time (LTLT) pasteurization where milk is heated to 63°C in 30 minutes, or High Temperature Short Time (HTST) pasteurization, 71°C in 15 seconds. The shelf-life of pasteurized milk is more than raw milk but it is still limited, at approximately 10 to 20 days when stored at 6.1°C (Labuza, 1982) and is heavily influenced by its temperature storage (Petrus et al., 2010). Hence, pasteurized milk can be found sold in supermarkets in a refrigerator where temperature is low.

UHT milk sterilization is a novel technique for milk preservation and is the most effective treatment for long shelf-life at room temperature (Ansari, 2018). UHT milk is processed by heating it continuously at 130°C and 150°C for 3 to 5 seconds (Jaeger, et al., 2010), and then immediately cooled to a temperature of less than 32°C and filled aseptically in sterile sealed packaging (Pereira et al., 2013). The shelf-life of UHT milk is generally higher than pasteurized milk at around 12 months (Barraquio, 2014) which is normally seen in Brunei grocery stores, supermarkets, even in minimarts. The comparison between these two techniques is tabulated in Table 2 for better understanding.

It can be observed that UHT milk is widely available in the local market of Brunei. Pasteurised milk, however, often stocks out in some SMEs and there is a low variety of pasteurized milk available in the country’s market. Although no scientific paper has been found, many Bruneians have already known this. Present source of literature also reveals that these areas of supply chain has not been investigated.

Table 2: Comparison between pasteurization and UHT treatment

Process	Treatment condition applied	Expected shelf life
Pasteurization	63°C for 30 minutes	Up to 20 days
	71°C for 15 seconds	
UHT treatment	130°C and 150°C for 3 to 5 seconds	Up to 365 days

The aim of this project is to investigate the supply chain management in Brunei for pasteurized milk and to propose the most efficient way. For this purpose, this project aims to:

1. Study the present supply chain management for pasteurized milk.
2. Analyse the supply chain system using insights gained from the selected SMEs.
3. Propose optimum and efficient supply chain management practices of this product in SMEs.
4. To create and increase awareness among Bruneians of how pasteurised milk is healthier than sterilised and UHT treated milk.
5. To contribute to the lack of literature of perishable supply chain.

## **2. Literature Review**

This chapter includes literature reviews from relevant journal articles, books, conference proceedings, as well as dissertation reports. This section provides the foundation of knowledge on the topic of this project and justifies the methodology for the investigation of the SCM in SMEs in Brunei.

### **2.1 Application of SCM on SME**

An investigation by Koh *et al.*, concerning manufacturing SMEs in Turkey, discovered that the implementation of SCM brings advantages such as lower level of inventory and lead time, improved flexibility, more precise resource planning and forecasting, and cost cutting (Koh *et al.*, 2007). Meehan and Muir added the potential benefits of SCM to SMEs include the decrease in repetition on processes within the organization (Meehan & Muir, 2008). However, there are also signs indicating that SMEs are weak in utilising the benefits of SCM (Arend & Wisner, 2005). Arend and Wisner investigated the effect of SCM on SME's performance and reported a negative relationship linking the two pairs due to:

1. SMEs did not apply SCM as profoundly as LEs did,
2. SMEs did not prioritize tactical focus areas, for example product development, quality and customer service, and
3. SMEs and SCM are not well-fitted together when SMEs have a self-governing choice (Arend & Wisner, 2005).

One of the most common issues is the inefficiency of SCM (Morrissey & Pittaway, 2006). In light of past literature that has been mentioned on the investigation of the effects of SCM on the performance of SMEs, it can be said that the implementation of SCM in SMEs brings a handful of benefits when applied properly and more deeply.

### **2.2 SCM Implementation**

Thakkar *et al.* investigated manufacturing SMEs in India and found out that culture contributes to the barriers to the implementation of SCM; stubborn, low dedication towards vision and old-mindsets (Thakkar *et al.*, 2013). A study by Singh *et al.* on Indian SMEs found that the evaluative obstacles to innovation and the adoption of technology are due to lack of funding and resources, incapability to understand what the market needs and competition, narrow vision and goals, and lack of integration between inter-departments within the organization (Singh *et al.*, 2005). In addition, the selected Indian SMEs were challenged with demand uncertainty, unstable production schedules and product requirements quoted by customers, growing local and global competition, inadequate transportation, communication and coordination mechanisms, political instability, and lack of reliability in information of resources such as access to skilled labour, raw material and its prices, latest development in technology and their benefits, etc (Singh *et al.*, 2005). SMEs often operate with restricted finance (Anja *et al.*, 2009) and use of information technology (Dyerson *et al.*, 2009), often dependent on out of date technology (Hendrickson, 2009). These barriers would hinder the implementation of SCM in SMEs.

Due to the flat organizational structure of SMEs, it is easier to implement SCM (Thoo *et al.*, 2012). With respect to their organizational structures, SMEs have the lead of initiating and carrying out changes, for instance, the CEO can provide a change initiative across the organization easily since SMEs have less departments. Due to its small size, SMEs are easier to operate and flexible in adjusting the way they work to develop a better solution. Furthermore, SMEs are swifter in their internal functions and familiarize speedily to the unpredictable market conditions (Lazarica, 2009). SMEs have less customers than LEs (Thakkar *et al.*, 2009). Demands in SMEs are mostly from major or stronger customers (Pittaway & Morrissey, 2004). As a result, they have closer relationships with their customers or develop special bond with them. Thoo *et al.* believed maintaining good and close relationship with clients cause better SCM performance to the company (Thoo *et al.*, 2011). Therefore, SMEs are capable of adapting quickly to the demand changes and market turmoil with the implementation of SCM.

### **2.3 Supply Chain Optimization**

Supply chain optimization aims to successfully control the various elements within the chain. The essence of the optimization process is the elimination of those elements that do not create or support value, but which still exist as participants or activities within the chain. Optimization is the management of complicated supply chains in their entirety by synchronizing all value-added elements within production or distribution, while eliminating all other elements (Rabbino *et al.*, 2004). Based on the definition, it can be said that there are a number of goals that firms want to achieve by optimizing the supply chain: synchronization of all elements (participants and activities) that add value in production or distribution and elimination of elements that do not create or support value. According to Geary and Zonnenberg, top performers have a clear supply chain strategy aligned with overall business objectives and customer requirements (Geary & Zonnenberg, 2000). Performance measures in a supply chain are required to streamline the

flow of material, information, and cash, simplify the decision-making procedures, and eliminate non-value adding activities. Optimization as a process does not happen by itself. Reviewing the literature in this field, the following three factors have been identified as the most important.

- Suppliers' failure to deliver on promises,
- Manufacturing plant failures and computer errors, and
- Uncertainty about order quantities and the appearance of a bullwhip effect (Bento, 2003).

All the factors mentioned increase the volume inventories. The very purpose of stock existence is precisely to insure against supply uncertainty. According to Gold, optimization is most likely to be achieved through a collaborative exchange of information between cross-functional teams within and outside the organization (Gold, 2006). The desire to optimize the supply chain must be conceptualized or have the support of top management of the company. This requires the existence of two-way communication between the management and senior managers in charge of integrating the supply chain, as well as the functions and processes within it. According to Atyeh, the Q model, which is also called the fixed order-quantity model, is one of the most used methods within supply chain optimization, which he also used in his study on supply chain management, optimization and forecasting techniques (Alzhrani, 2020). The escalating development of IT helps businesses better manage their demands. Handfield and Nichols noted that managers achieve substantial benefits through the use of IT, such as the integration of fast-flowing information, data exchange and information collection enhanced customer and supplier relationships, and global inventory management (Handfield & Nichols, 1999). Using software and information technology help distributors, retailers, suppliers, producers and consumers to eliminate lead times and reduce other unnecessary processes. Furthermore, IT makes it easier to manage supply chain agreements, distribution, outsourcing and procurement plans online. Therefore, better information technology is required for better supply chain management.

## 2.4 Order Quantity

An estimation, prediction, or forecast of future demand can be done to reduce future uncertainty. The process of forecasting can therefore be described as the mechanism of arriving at measures for planning the future. For forecasting future demand, there are many different approaches. There are however two distinct classes of methods of forecasting: qualitative forecasting and quantitative or statistical forecasting (Scott et al., 2011).

Qualitative forecasting includes the simple process of estimating future demand, making intuition-based hunches and using one's own experience. In which it includes judgment and reasoning of common sense when determining future demand. While this set of qualitative techniques is often labelled "unscientific" and bad business practice, the importance and value of using human reasoning and judgment in the inventory planning and forecasting process has been realized by so many businesses.

Quantitative forecasting, on the other hand, comprises statistical models that can have a causal nature (for example, more ice cream sales with hot weather) or that can be based on time series of historical data. The time series method is actually the most frequent form of statistical forecasting. The time series is a series of data points for a particular period of time. The EOQ model (Eqn 1) is to calculate order quantities at individual stock keeping unit level:

$$EOQ = \sqrt{\frac{2CR}{PF}} \quad (1)$$

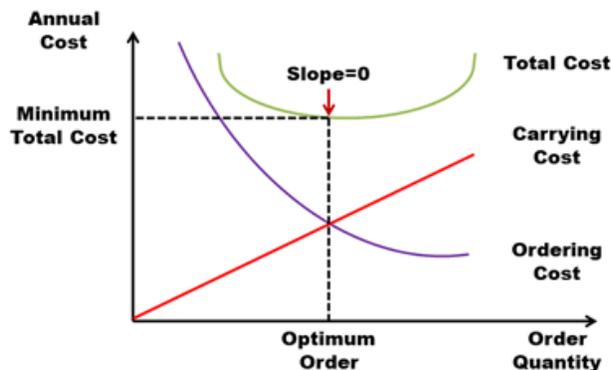


Figure 1: The Economic Order Quantity model (Navlani, n.d.)

Where  $C$  is the ordering cost per order,  $R$  is the annual demand in units,  $P$  is the purchase cost of one unit,  $F$  is the annual holding cost as a fraction of unit cost, and therefore,  $PF$  is the holding cost per unit per year. Figure 1 shows the EOQ model cost curve. The EOQ is a company's optimal order quantity that reduces its total costs related to ordering, receiving, and holding the inventory. In other words, it estimates the best reasonable amounts of items a business should order to minimize costs and maximize value when re-stocking inventory. This EOQ model, however, rests on a number of assumptions, some of which may be unrealistic for many product groups:

- a) The demand rate is known, constant and continuous.
- b) The supplier lead-time is known and constant.
- c) There are no stock outs permitted – since demand and lead time are known, stock outs can be avoided.
- d) The cost structure is fixed – order costs are the same regardless of lot size, holding cost is a linear function based on average inventory and unit purchase cost is constant (no discounts based on bulk purchase).
- e) There is sufficient space, capacity and capital to procure the desired quantity (Scott et al., 2011).

Efficient EOQ models need complete data to estimate several figures. The limitations of the EOQ model are as follows:

- a) It requires complicated math calculations.
- b) The model depends on the assumption of just one-product, and the equation does not permit for merging several different products in the single order.
- c) The model does not take into account purchase discounts that could be achieved by purchasing inventory in bulk.

### **3. Methodology**

Both qualitative and quantitative data are collected using a survey form constructed to answer the questions of this project. Survey forms are distributed to SMEs directly and collected another day to let SMEs fill in the forms with ease and comfortably. The survey forms were completed by the upper management team such as the manager, assistant manager and supervisor, who are knowledgeable and have a proper understanding about the supply chain management of pasteurized milk in the company. All data from the survey forms were collected and gathered for analysis. Brainstorming allows ideas to generate from different perspectives. This technique is also useful to generate ideas for possible root causes and improvement solutions. The analysis was done using the IBM SPSS statistical software.

In order to get valid quantitative data, around 40 SMEs were visited and analysed. Each of the samples was labelled as a case number (e.g. Case 1, Case 2, ...) to protect the anonymity of the case organisations involved in this study.

The questionnaire in this study was prepared based on the literature review. The questionnaire in the form of a survey was distributed to SMEs. A letter from the university to verify the legitimacy of the survey was distributed along with the question form in an envelope. In addition, the questionnaire is divided into six major sections (See Appendix A).

The first section is devoted to identify the sample details such as the year of establishment of their company, total number of employees as well as the total number of days of operation of company annually. The second section of the questionnaire was under sales and inventory. The third section on delivery lead time followed by suppliers, and the information technology section. Under the IT section includes five-point Likert Scale from 1 (no usage) to 5 (very high usage) to identify the company's usage of IT in the management of milk supply chain. The last section is specifically for identifying the sample's knowledge in SCM.

First, the data was organized and reduced by selecting, focusing, and simplifying the data for the sake of manageability and then transformed so the data can be understood in terms of the issues being addressed.

In order to get quantitative analysis, statistical graphs were used to study and analyse the collected data. The statistical graphs will be created by using the IBM SPSS Statistical Software. In this project, the statistical model used was bar charts because they are easy to understand, widely used, and are easy to compare several values at a time. From the bar charts produced, data analysis and conclusion were made in order to achieve the project's objectives.

### **4. Results and Discussions**

The collected data was studied and examined. In order to study the current supply chain management for SMEs in Brunei, this project investigated why there is often stock outs for pasteurized milk supplies. The variables that are affecting this will first be explored and analysed. Then, solutions to the problems will be proposed in order to achieve the optimum and efficient supply chain management of milk in Brunei SMEs, while meeting the project's objectives at the same time.

Out of 64 companies, 34 of them are selling milk, 3 companies no longer selling the milk, and the rest do not sell milk. Analysed data will only be considering from companies that are selling. However, out of 34 companies that are selling milk, only 32 of them are willing to reveal the information needed for analysis. Companies that are no longer selling

pasteurised milk as a result of having no customers and these products had to be returned back to its supplier(s), or the products reached its expiry date. This is costing more than the profits they bring to the company. It is also understood that cases that do not sell pasteurised milk due to:

- i. Some managers do not know the existence of pasteurised milk.
- ii. Managers do not see the reason why they have to sell pasteurised milk when they have UHT treated/sterilised milk which is more convenient and more profitable.

Initially, the plan was to investigate the SCM of pasteurised milk in Brunei SMEs. However, due to the low level of SMEs selling pasteurised milk in Brunei, popular supermarkets which are possibly LEs, were considered in order to be able to get data. The cases investigated include their branches in Brunei-Muara, Tutong, and Belait district only. Of all the cases that are currently selling pasteurised milk, they were then categorised based on their type of enterprises. This can be found out by determining the total number of employees within the company, and classifying them based on the definition of SMEs in Brunei.

Based on the findings, about 62.5% of the cases belong to SMEs, while 9.4% belong to the LEs, and 28.1% of the cases cannot be classified as they did not disclose how many employees they currently have. It has been found that none of the selected cases belongs to medium enterprises. The highest number of varieties represent only 9.4% of the cases. While, 90.6% of the cases have a variation of three and below. Hence, it can be concluded that, there is a low variety of pasteurised milk in Brunei.

#### 4.1 Stock Outages

Figure 2 shows a grouped bar chart showing the relationship between the type of enterprise and stock outages of milk supply for the population of the study. All of the cases which belong to LEs claimed they do not get stock outages in pasteurised milk supply. Micro and small enterprises often stock out of pasteurised milk with 54.5% of them belonging to micro enterprises, and 18.2% from small enterprises. From the cases which claimed do not get stock outages, stated in the survey that when they do face stock outages of milk supply, it is due to inadequate transportation and product recall. However, this happens rarely. Inadequate transportation can happen since pasteurised milk is mostly imported and due to their perish ability, transportation which is temperature controlled may be limited.

Most of the cases with a percentage of 93.8% get stock outs for 1 to 2 times in a month, while 6.3%, 2 to 3 times in a month. From cases where they often stock out of milk supply, the main cause of stock outs is supplier stock uncertainty with 68.8%. The causes of stock outs can be followed by demand uncertainty with 25% and unstable production schedules from suppliers with 6.3%.

Cases that have been operating for more than 20 years seems to have no stock outages while cases in operation for less than 20 years often get stock outages. The accumulation of experience leads firms to a better knowledge of business opportunities both domestically and internationally, and therefore, as time passes, companies are getting better at managing the demands and supplies.

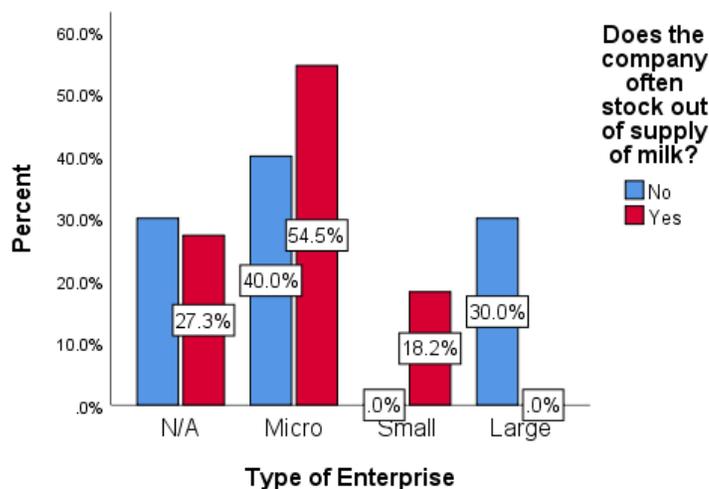


Figure 2: Stock outages according to the type of enterprise

## 4.2 Inventory

Figure 3 shows the relation between the frequency of stock replenishment in a month and stock outages. It can be seen from the figure, cases that restock their milk supply more frequently do not get stock outages, while cases that restock their supply for less than once per week usually get stock outages.

Inventory by nature is operations intensive. With the number of items running into thousands, coupled with the number of transactions that are involved in managing inventory operations on daily basis, it is quite possible that without water tight controls over processes, systems and operations, inventory will go out of control resulting in pilferage, loss due to damage, mismanagement, theft or shrinking.

In the case of inventories having extra sensitive characteristics involving perish ability, shelf life or temperature control, such as pasteurised milk, it becomes necessary to keep a tighter watch and control over such inventories and their management. Therefore, the use of IT in the management of inventory is crucial.

Traditionally, order processing has been a very time-consuming activity (up to 70% of the total order-cycle time). Thus, most of the time it has negative effects on time based on the performance of supply chains. However, in recent years it has benefited greatly from advances in electronics and IT. Bar code scanning allows retailers to rapidly identify the required products and update inventory level records. Computers allow salespeople to check in real time whether a product is available in stock and to enter orders instantaneously. Therefore, the use of IT in order processing is beneficial for companies in order to reduce order cycle time.

As a summary, most of the companies that face stock outages have little to no usage of IT in most of the listed areas. During an interview with one of the managers, they are using a mobile application, WhatsApp or by phone calls to communicate with their suppliers and employees. Inventory management is done manually using traditional methods. According to one of the assistant managers who explained how their business with their supplier's works, suppliers will come to them to offer their products, which in this case is pasteurised milk. Companies will agree to sell their products in their company, make a contract with the supplier, and the supplier will come as agreed in the contract.

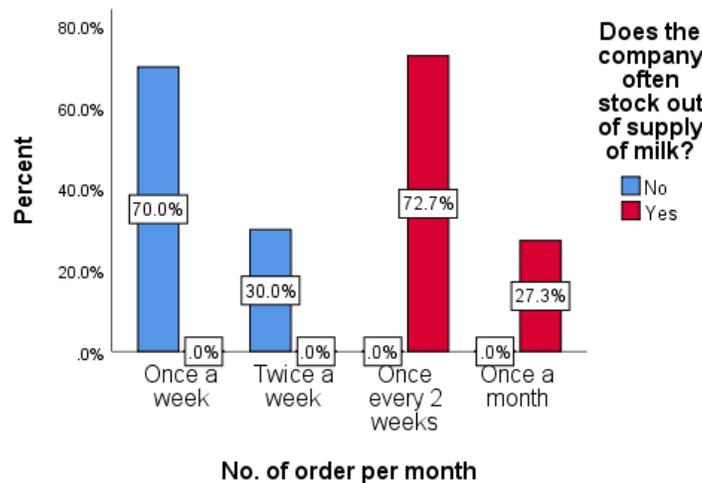


Figure 3: Frequency of stock replenishment in a month

## 4.3 Efficient Supply Chain Management Practice

Figure 4 shows a clustered bar chart showing the relationship between the practice of SCM and stock outs of pasteurised milk supply. Based on the findings, 70% of the cases that do not practice SCM often face stock outs in milk supply. Significantly, 30% of the cases that practice SCM in their company get stock outs while 69.2% do not. Cases that do not implement SCM are using traditional methods which focuses on the company only and not the supply chain networks. According the results obtained from the survey form, 33.3% of the cases believed SCM helps to lower lead time, while 66.7% implemented SCM as a way to lower inventory and overall supply chain costs. These effects are harmonious with the findings found by Koh et al. (Koh et al., 2007). Based on the findings, a few of the cases faced barriers to the implementation of SCM in their companies. The barriers are:

- i. Staff discipline and their willingness to learn and cooperate,
- ii. Financial constraints on upgrading hardware when needed, and
- iii. Good IT system with accurate information and measurement results.

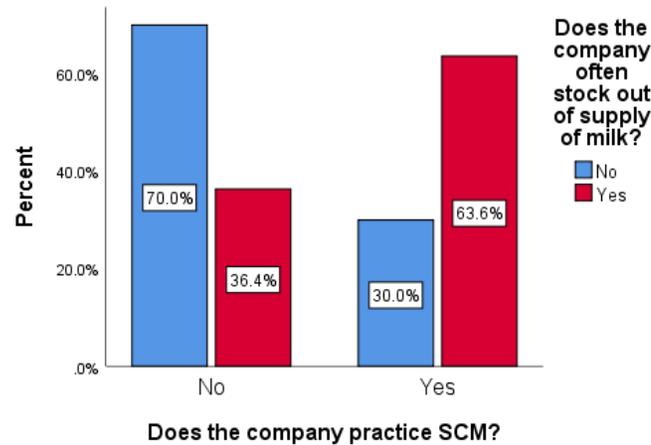


Figure 4: Relationship between the practice of SCM and stock outs

As mentioned beforehand under the Information Technology section, most of the cases that are facing frequent stock outs have little to no usage of information technology in processes like purchasing and procurement, inventory management, transport management, order processing, order scheduling, and interaction with suppliers as well as the departments within the companies. Due to this, it is suggested that these cases should use more IT in their management as means of increasing productivity, efficiency as well as integration in the supply chain.

Inventory management is complex, involving suppliers, SKUs, and can sometimes be driven by factors beyond the control of the purchasing or planning departments. Deciding how much inventory to carry is by no means a simple task. Therefore, inventory management will benefit greatly from the use of technology.

During the data analysis, it was observed that there is poor integration within the studied companies. In order to optimize the supply chain management practice, any unnecessary processes or activities that does not add value to the supply chain should be eliminated. This can be done by communicating with the supplier(s) and the departments in the company. Companies need to have better communication platform instead of just using mobile application. As Holley et al. have suggested, IT is a useful tool to integrate the activities of internal and external organizational forces, as well as the end users in the supply chain (Holley et al., 2002). Therefore, technology helps business to better manage their supply chains and preserve precious resources such as time and physical space. With proper technology in place, companies can solve the issues of stock outages.

## 5. Conclusions

Therefore, from the analysis and discussions made in this research, it can be concluded that:

- Businesses that have been operating for more than 20 years in Brunei seemed to have no problems in terms of stock outages.
- There is little variety of pasteurised milk available in the local market due to low demand and limited suppliers.
- The major sources of stock outages are poor planning and poor integration with suppliers as well as within the company.
- The efficiency of the supply chain management practice for businesses in Brunei can be improved through the use of the latest technology. The suggested method of determining demand uncertainty was by using the forecasting method – the time series. The software for forecasting is available online. The EOQ model and Fixed-Order Quantity methods can be used in demand and inventory planning.

While pasteurised milk offers more nutritional values, UHT milk is more advantageous for the local market in Brunei due to the extended shelf life at higher ambient temperature and elimination of requirement of refrigeration or cold chain during storage and distribution. While some SMEs have tried to sell pasteurised milk, some of them do not get customers at all. Moreover, customers prefer to get their pasteurised milk supplies from big supermarkets where they are known to sell pasteurised milk.

Based on the findings, 62.5% of the population of the study belong to SMEs, while 9.4% was big supermarkets which belong to LEs. These LEs do not get stock outages. Moreover, they offer 6 varieties of pasteurised milk, and have been operating for more than 30 years. Therefore, since pasteurised milk is not widely available in Brunei, people are reluctant to find pasteurised milk elsewhere other than from big supermarkets where pasteurised milk can always be

found for many years. Financial constraints seems to be a deterrent factor for SMEs in Brunei from using the latest technology for SCM. In addition, SMEs in Brunei are challenged with demand uncertainty, unstable production schedules from suppliers, and supplier stock uncertainty. Findings of this study contributes knowledge to the SCM literature in Brunei. However, because this project was among the first to examine the practice of SCM in Brunei SMEs, any generalization of the results should be made with caution. Continued research on SCM is important for the steady growth of Brunei SMEs.

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