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SUPPLY CHAIN MANAGEMENT: A CASE OF TAN LONG TRADING AND SERVICE TECHNOLOGY COMPANY LIMITED

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Abstract:

The supplying of raw materials and products plays an extremely vital role in meeting demands and goals of an enterprise, especially keeping a balance between product production and consumption. If a company knows how to manage its supply chain, it will help develop sustainability and easily compete with competitors, thereby rocketing profits tremendously and serving consumers wholeheartedly. Vietnamese businesses in the international market recognize the significance of the supply chain in creating competitive advantages and boosting companies' performance. This analysis delves into the knowledge and practices of supply chain management in Vietnam, by using qualitative research methods such as observing input processes of supply chains. Also, in-depth interviews will identify key factors causing current issues in management activities of Tan Long Trading and Service Technology Company. After demonstrating the present state and ways to manage its supply chain, this research proposes some valuable reference solutions to save costs, enhance customer service and optimize profits for similar businesses in the market.

Keywords:

Customer Service, Profit Optimization, Supply Chain Management, Tan Long Trading and Service Technology Company Limited JEL codes: M1, M10, M11, M12

Introduction

The supply chain is a well-organized system that involves people, activities, information, and resources to move products or services from suppliers to consumers. The recent emergence and

growth of retail supermarket chains by domestic and foreign businesses in the Vietnamese market have intensified the level of competition. In order to compete in this environment, manufacturing, construction, and business companies must pay attention to every step of the flow of raw materials to finished products and delivery to customers. Moreover, as the supply chain and management operations are critical to the overall business operation, departments and units within the company can be linked into a unified chain with an optimized plan to minimize costs, especially when market competition is high, and prices are strictly managed.

Literature review

Concept of Supply Chain and Supply Chain Management

The supply chain is perceived as a process that originates from raw material processing and extends to the end-consumer of finished products, with interconnections among stakeholders such as manufacturers, suppliers, and consumers (Montag, 2023; Tronnebati & Jawab, 2023). The supply chain can be divided into three levels: the direct supply chain, the extended supply chain, and the ultimate supply chain (Islan et al., 2013; LeMay et al., 2017; Min et al., 2019). Supply chain management is a comprehensive strategic system that vertically manages and connects the core activities of a business through logistics operations, creating forward or reverse flows, to distribute products at the right time, right place, and right quality, in order to increase input efficiency, minimize inventory costs and operating costs, while still meeting customer service requirements (Felea & Albăstroiu, 2013; Ricardianto, et al., 2022; Ahmed, et al., 2024).

Components of the Supply Chain

Components of the supply chain include the manufacturer who produces goods; the distributor who is an intermediary that procures goods in large quantities; the retailer who stores and sells products to customers in smaller; the customer or end-consumer purchases and uses the products; and the service provider (such as transportation, warehousing, etc.) is a specialized entity with expertise and skills (Al Naqbia et al., 2020; Al-Khayyal et al., 2020; Hayajneh et al., 2021). A complex and extended supply chain may involve more participants, as illustrated in the diagram:

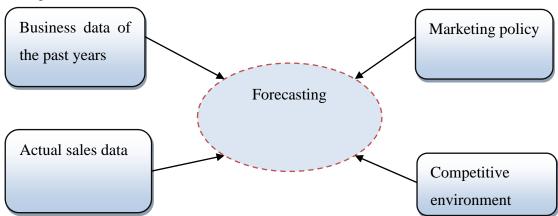


Figure 1: Components of Forecasting in Supply Chain Management

(Source: Proposed by the Authors)

Functions and Roles of Supply Chain

Supply chain has many functions for all logistics activities, in which the key function is not only to optimize inventory management but also to minimize inventory costs (Islan et al., 2013; Copyright © GLOBAL ACADEMIC EXCELLENCE (M) SDN BHD - All rights reserved



LeMay et al., 2017; Min et al., 2019). In addition, supply chain also manages profits and commissions to help businesses negotiate with suppliers on discount rates, commission policies, and other obligations more effectively (Giannakis & Croom, 2004; Mehmood, et al., 2021; Novitasari & Agustia, 2021).

Businesses can effectively control their entire process and manage their entire network from suppliers, manufacturing plants, warehouses, to distribution channels. Supply chain activities also help businesses better organize its production and distribution issues to minimize shortages that may result in delays (Islan et al., 2013; LeMay et al., 2017; Min et al., 2019). Therefore, without a supply chain, procurement, production, and distribution activities would never occur, and as a result, businesses would not be able to exist.

Supply Chain Operations Reference Model

The Supply Chain Operations Reference Model (or SCOR Model), is a tool that outlines the various processes and tasks required to manage a supply chain. It is comprised of five primary components: Plan, Source, Make, Deliver, and Return. By utilizing the SCOR Model, companies can identify areas where their supply chain operations can be improved and implement best practices to enhance their overall performance (Ikatrinasari et al., 2020; Ricardianto et al., 2022; Ahmed, et al., 2024).

Plan

Planning is an important part and the first step in supply chain management. It forecasts consumer demand and is directly related to inventory management and procurement in the next step. A business must know how to plan based on different benefits such as producing products or sourcing materials domestically or internationally by the following methods: Make-to-Stock (MTS), Make-to-Order (MTO), Assemble-to-Order (ATO), Configure-to-Order (CTO), or Engineer-to-Order (ETO).

Source

From a specific need or requirement, the procurement department will establish a standard table that clearly outlines the requirements (characteristics, technical specifications, physical or chemical properties, etc.). Then, a Request for Proposal (RFP) or Request for Quotation (RFQ) will be prepared and sent to suppliers. Upon receiving quotations, the procurement department will review and select the best supplier (based on price, value, and quality of goods) to place an order and create a transaction contract. Upon receiving the goods, this department will cross-check the purchase orders with the documents to verify the received goods before making payment to the supplier.

Make

Manufacturing is the process of producing products to meet customer requirements. To create quality products and deliver them on time and in the right quantity, a reasonable production plan that balances resources (labor, machinery, raw materials, quality requirements, productivity, etc.) is needed, along with flexible contingency planning.

Delivery

Delivery is the distribution of goods from the manufacturing plant to warehouses or distributors for further distribution to customers. The distribution companies must ensure efficient order management, delivering products to customers in the shortest possible time with the best quality, and having specific return policies to satisfy customers and contribute to strong

business development. If the business does not want to handle delivery internally, it can hire a third-party logistics company (with more expertise and experience in transportation) to handle the delivery.

Method

The article uses a situational research method and secondary data analysis. The subject of the article is a business in Vietnam. The article investigates the situation at Tan Long Company in order to propose solutions to improve the supply chain operations of this company and potentially serve as a lesson learned for companies with similar characteristics and contexts.

Company Overview

Formation and Development Process

Tan Long Trading and Service Technology Company Limited officially commenced operations on April 6, 2002, with business license number 4102048924 issued by the Ho Chi Minh City Department of Planning and Investment. The representative offices are located in Hanoi, Da Nang, and the trade promotion office is located in Toa Payoh Industrial Park, Singapore. The company is a legal entity with independent accounting, with a charter capital of 12,000,000,000 VND, specializing in trading medical equipment, kitchen equipment, industrial laundry equipment for hospitals, hotels, restaurants, resorts, companies, factories, and laundries. With the aim of legitimate enrichment and development of the Vietnamese economy, Tan Long has established a solid position in the market, as evidenced by the increasing number of traditional customers and new customers.

Function, Responsibilities, Administrative Organizational Structure, and Personnel Function: Tan Long Company is responsible for multiple functions related to industrialization (consulting, buying, selling, or leasing, warranty, maintenance, installation of interior decoration, household items; repairing, industrial washing, pressing, drying equipment, boilers, textile and garment machinery, equipment, medical instruments), selling processed agricultural and food products, coffee beans, coffee, raw materials for food and beverage, fresh cream, raw materials for fresh cream. The company also deals in domestic tourism (ecotourism, standard hotels and restaurants), souvenirs, and handicrafts.

Responsibilities: The basic responsibilities of Tan Long Company are to seek markets for product consumption, sign business contracts based on mutually beneficial agreements with domestic and international business entities, conduct economic accounting, and be responsible for production and business results. The company also has the task of complying with laws, policies, and economic management regulations of the State regarding import and export management, Vietnam's foreign trade policies, fulfilling tax obligations to the State, protecting the environment, and maintaining social order.

Administrative organizational structure, and personnel: The organizational structure of Tan Long Trading and Service Technology Company Limited consists of a Board of Directors and top executives such as Deputy Director of Sales Department and Deputy Director of Administrative Department. Deputy Director of Sales Department who is in charge of customer service department, sales department and planning & procurement department. Deputy Director of Administrative Department will be responsible for supervising accounting department, human resource department and import and export department. Furthermore,

medical equipment department and kitchen will belong to the sales department (Human Resource Department – Tan Long Trading and Service Technology Company Limited, 2019).

Current Status of Supply Chain Operations at Tan Long Trading and Service Technology Company Limited

The Company's Business Performance in the Period of 2017-2019

Table 1: The Company's Business Performance in the Period of 2017-2019 (Unit: VND)

Target	2017	2018	2019
Revenue	65.887.327.398	67.320.568.749	94.723.873.849
Cost	62.574.678.848	65.536.415.174	83.456.816.213
Profit	3.312.648.550	1.784.153.575	11.267.057.636

(Source: Financial Statements – Accounting Department – Tan Long Trading and Service Technology Company Limited, 2019)

In 2019, the revenue increased by 40.70%, expenses increased by 27.34%, and profits increased by 531.50% compared to 2018. Vietnam's economy is attracting investment in the restaurant and hotel industry, and the company has opened additional branches and restaurants. The company also focuses on investing in high-end restaurants, hotels, resorts, and leisure projects to achieve clear efficiency.

Comprehensive Planning

Departments at Tan Long Company are operating independently, lacking cohesion, and have not been given the appropriate level of attention. Production and inventory planning is inaccurate and only prepared for short-term goals. Tan Long Company is facing issues with supply planning due to a lack of long-term demand forecasting. The raw material planning department only relies on the demand of the closest month in order to plan for the following months. It does not meet the actual demand and can easily result in a shortage or excess of production materials.

Procurement and Purchasing

The current strategy is to expand market share, so Tan Long focuses on meeting customer demand. In addition, the company does not pay much attention to inventory control and prioritizes purchasing with the lowest cost (without controlling inventory which leads to wasting space).

Table 2: Value of Inventory over the Years (Unit: VND)

No	Year	Value	Difference
1	2017	9.724.865.214	
2	2018	12.265.125.655	2.540.260.441
3	2019	11.365.842.655	-899.283.000

(Source: Annual Report over the Years of Tan Long)

According to Table 2, the inventory value in 2018 compared to 2017 increased by about VND 2.5 billion. The value of inventory in 2019 compared to 2018 decreased by about VND 899 million. Numbers show that the company has made efforts to reduce the value of inventory to

increase cash volume and save costs.

Table 3: Some of Tan Long Company's Main Suppliers

No	Materials	Suppliers	Origins
1	Ice Maker	Hoshizaki Singapore PTE LTD	Singapore
2	Ice Maker	Shumazi Lubake LTD	Malaysia
3	Natural wood	Specialty Ingredient Management	Malaysia
4	Microwave oven	Specialty Ingredient Management	France
5	Medical equipment	BioPharmGuy	USA
6	Hybrid hobs	Specialty Ingredient Management	Singapore
7	Packaging, cartons	Saigon Culture Printing Company, Liksin	Viet Nam
8	Capolex anti-sticking agents	Far East Kontor Ltd	Denmark

(Source: Collected from Purchasing Division, 2019)

All of the suppliers mentioned are companies that have signed purchase contracts with reputable suppliers of raw materials and kitchen equipment to stabilize their sources and prices. The company is also actively seeking new suppliers with rich, quality, and competitively priced raw materials. For specialty items that only have one supplier which satisfies the standard, the company has to sign a contract to ensure product quality.

Tan Long focuses on supplying products on orders and must proactively secure its supplies and store its appropriate quantity in the inventory. The time from ordering from international suppliers to delivery of goods at Tân Long's warehouse takes more than a week, plus 4-5 days for procedures. To reduce costs, the company usually waits until the items in the warehouse are all sold out before placing new orders, resulting in delayed product supply. This delay is shown in [Table 4] as follows:

Table 4: Delivery Rate of Suppliers

No	Material	On-time Rate (%)	Delivery	Late Delivery Rate (%)
1	Wooden equipment	85%		15%
2	Medical equipment, other materials	88%		12%

(Source: Collected from Purchasing Division, 2019)

According to the collected data table, the late delivery rate of wooden furniture is 15%, while that of medical equipment and other materials is 12%. Usually, this is due to returned goods not meeting quality standards, or bad weather, complicated transportation network, difficulties at customs, and slow payment for goods to suppliers.

Therefore, if the company manages orders through the ERP (Enterprise Resource Planning) system Oracle E-Business Suite Release, it will help increase management efficiency, exchange information, and limit late deliveries.

Logistics Activities

In the company's logistics activities, there are several reasons leading to late deliveries, such as delayed transportation, slow warehouse stocking, out-of-stock items, and rearrangement of inventory. [See Table 5].

Table 5: Statistical Table of Causes of Late Delivery

Cause	Number of the order	Rate (%)	Accumulation frequency (%)
Late delivery	732	86%	79%
Warehouses arrange goods slowly	95	11%	90%
Out-of-stock items	15	2%	93%
Rearranged inventory	12	1%	95%
Total	854		

(Source: Collected from Customer and Service Division, 2019)

The company previously had its own fleet of vehicles to transport supplies, raw materials and finished products. But to minimize the problem of late deliveries, the company has contracted trucks to drivers to save repair and fleet management costs. [See Table 6].

Table 6: Number of Means of Transport Currently in Operation

No	Name of carrier	Quantity of cars
1	Ha Nam	10
2	Thuy Vân	5
3	Contracted company car	6
Total		21

(Source: Dispatch Department – Customer Service Division, 2019)

Lead time is important for customers to choose suppliers. Managers need to eliminate slack time to reduce lead times, including time spent on materials being processed, and time wasted due to waiting or delivery. We have the order fulfillment cycle timetable as follows in [Table 7].

Table 7: Order Fulfilment Cycle Timetable (Unit: Minutes)

Time indicator	2017	2010	2010	Δ%	Δ%
Time indicator	2017 2018		2019	2018/2017	2019/2018
From receiving orders to processing it	45	30	20	33,33%	33,33%
From receiving orders to manufacturing goods	750	630	500	16,00%	20,63%
From selecting goods to queueing up on trucks	140	120	100	14,29%	16,67%
Distribution to delivery	5.578	4.582	3.524	17,86%	23,09%
Total	6.513	5.362	4.144		
	(4,5 days)	(3,7 days)	(2,9 days)		

(Source: Collected from Customer and Service Division)

According to the collected data, the order processing and lead time of Tan Long has decreased each year, taking only about 4,144 minutes to process an order in 2019. The company has tried to improve its distribution process to meet the market demand quickly. However, last-minute changes to orders due to disagreements between sales staff and customers also affect delivery.

Some Solutions to Improve the Supply Chain Operations at The Company

Proposed Planning Solutions

The Forecasting and Planning department needs to closely connect with other departments to obtain accurate data for demand forecasting. The Planning department plan for timely procurement of raw materials and production. To ensure effective forecasting, the authors propose the following forecasting model. [See Figure 2].

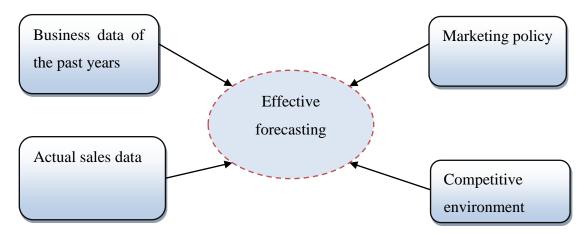


Figure 2: Effective Forecasting Model

(Source: Proposed by the Authors)

Close coordination between the Customer Service Division, Marketing Division, and Sales Division is necessary to receive and forecast data. Past data and marketing activities such as promotions, discounts, displays, and advertisements along with factors affecting sales volume need to be considered. The company will rely on past sales data and forecasts from sales staffs to come up with the final result.

Proposals for Sourcing Goods

Create Incentive Policies for Suppliers Having Well-Performed and Long-Term Operating Processes

The establishment of enduring agreements with suppliers possessing strong capabilities and expertise in the realm of goods and services is crucial for the company to fortify its connections and economize its procurement expenses. The company should maintain frequent communication with suppliers to stay abreast of changes in demand for goods and identify domestic suppliers to manufacture products locally and expedite delivery times.

Continue to Seek and Develop New Partners to Create Healthy Competition

Searching and developing new suppliers is also necessary to create healthy competition between suppliers, and avoid monopolies, pricing, etc. However, the company needs to carefully research new partners' profiles, legal status, sales figures, and the market they operate

in. Selecting new partners also depends on each type of goods, equipment, or service that the company needs to purchase.

Establish Core Product Groups to Develop Potential Suppliers

Developing the relationship with potential suppliers helps the company to obtain various benefits such as prices, delivery times, and quality. Steps to be taken include identifying a group of materials to be developed, identifying suppliers, evaluating the contract process, selecting the best suppliers, and monitoring the manufacturing process to draw lessons for the next period. An evaluation form for suppliers of raw materials and accessories is proposed as in [Table 8].

Table 8: Evaluation Form for Suppliers of Raw Materials and Accessories

	Items to consider					Evaluation		
Coefficien t	Pric e	Deliver y	Ability to meet quality standard s	Cooperatio n level	Tota l score	Continu e to purchas e goods	Stop purchasin g goods	
	3	2	4	1	10			
Suppliers			•					
A								
В								

(Source: Proposed by the Authors)

The company needs to consider many other important criteria to measure the effectiveness of suppliers, including sending accurate documents, timely notification of batch status, meeting product specifications and packaging requirements, defective rate, achieving goals and cost-effectiveness, accurate and timely invoices, conflict resolution and positive response. The company should evaluate these criteria every six months to eliminate unqualified suppliers.

Proposals for Distribution Operations

Solutions for Arranging Goods and Warehouses

Arranging goods and warehouses are crucial in the distribution process to save costs and time in finding goods. The company needs to develop a warehouse diagram and computerize warehouse management operations to control the type and location of inventory, facilitating quick arrangement of goods.

Solutions for Delivery Operations

Tan Long Company needs to carefully consider its plans of schedule, delivery routes, and cargo capacity to optimize total costs. The dispatch division needs to closely coordinate with warehouses to better manage orders. When combining batches on the same route, the company has to meet customer needs and minimize delivery costs. The company can create schedules and notify customers to place orders on common routes with other customers. When packaging, employees should use company logo adhesive tape to avoid loss of goods. The company needs to provide additional loading and unloading personnel to enhance its standard of service provided to customers and link departments for monitoring accurate delivery progress and providing feedback on delivery schedules.

Solutions for Evaluating Transportation Service Providers

Currently, the company tracks the progress of customers' shipment but has not fully evaluated the quality of transportation services. To improve quality, the author proposes an evaluation form as follows. [See Table 9].

Table 9: Evaluation Form for Transportation Services

NI	G .	Order number	Actual delivery (%)			Customer service attitude		Б 1 /
No.	Customer		On time	Fulfilled	Condition of goods	Good	Not good	Evaluate
1								
2								
3								

(Source: Proposed by the Authors)

Evaluation should be conducted at the end of each month and serve as a basis for determining each party's responsibilities.

Understanding Customers, Establishing a Customer Database

Establishing a customer database is not an easy task, but if done well, it can be a first step toward success. The database usually relies on factors such as "Who?", "What?", and "How?" to analyze the purchase history and activities of customers. The company should follow four basic types of data to build a customer database, including campaigns to attract loyal customers, multi-level marketing databases, customer support databases, and customer feedback.

Discussion and Conclusion

After nearly 20 years of establishment and development, along with changes in organizational structure, and despite objective and subjective difficulties that must be faced, Tan Long Trading and Service Technology Company Limited always strives to maintain its position. The company has also achieved certain successes in the market. However, in order to achieve higher efficiency and live up to its potential, the company can consider some proposed measures to overcome existing limitations and leverage its strengths. With the keenness of the leadership and the professional, knowledgeable, skilled, and continuous learning staff and workers, Tan Long Technical Trading and Services Technology Company Limited will continue to develop steadily in the future.

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References

- Ahmed, H., Al Bashar, M., Taher, M. A., & Rahman, M. A. (2024). Innovative Approaches To Sustainable Supply Chain Management In The Manufacturing Industry: A Systematic Literature Review. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 3(02), 01-13.
- Al Naqbia, E., Alshuridehb, M., AlHamadc, A., & Al, B. (2020). The impact of innovation on firm performance: A systematic review. *Int. J. Innov. Creat. Change*, 14(5), 31-58.
- Al-Khayyal, A., Alshurideh, M., Al Kurdi, B., & Aburayya, A. (2020). The impact of electronic service quality dimensions on customers' e-shopping and e-loyalty via the impact of e-



- satisfaction and e-trust: A qualitative approach. *International Journal of Innovation, Creativity and Change, 14*(9), 257-281.
- Felea, M., & Albăstroiu, I. (2013). Defining the concept of supply chain management and its relevance to Romanian academics and practitioners. *Amfiteatru Economic Journal*, 15(33), 74-88. ISSN 2247-9104.
- Giannakis, M., & Croom, S. R. (2004). Toward the development of a supply chain management paradigm: a conceptual framework. *Journal of supply chain management*, 40(1), 27-37. https://doi.org/10.1111/j.1745-493X.2004.tb00167.x
- Hayajneh, N., Suifan, T., Obeidat, B., Abuhashesh, M., Alshurideh, M., & Masa'deh, R. (2021). The relationship between organizational changes and job satisfaction through the mediating role of job stress in the Jordanian telecommunication sector. *Management Science Letters*, 11(1), 31-326.
- Ikatrinasari, Z., Harianto, N., & Yuslistyari, E. (2020). Improvement of supply chain performance of printing services company based on supply chain operation references (SCOR) model. *Uncertain Supply Chain Management*, 8(4), 845-856. DOI: 10.5267/j.uscm.2020.6.001
- Islam, D. M. Z., Meier, J. F., Aditjandra, P. T., Zunder, T. H., & Pace, G. (2013). Logistics and supply chain management. *Research in transportation economics*, 41(1), 3-16. https://doi.org/10.1016/j.retrec.2012.10.006
- LeMay, S., Helms, M. M., Kimball, B., & McMahon, D. (2017). Supply chain management: the elusive concept and definition. *The International Journal of Logistics Management*, 28(4), 1425-1453. https://doi.org/10.1108/IJLM-10-2016-0232
- Mehmood, A., Ahmed, S., Viza, E., Bogush, A., & Ayyub, R. M. (2021). Drivers and barriers towards circular economy in agri-food supply chain: a review. *Business Strategy & Development*, 4(4), 465-481. DOI: 10.1002/bsd2.171
- Min, S., Zacharia, Z. G., & Smith, C. D. (2019). Defining supply chain management: in the past, present, and future. *Journal of Business Logistics*, 40(1), 44-55. https://doi.org/10.1111/jbl.12201
- Montag, L. (2023). Circular economy and supply chains: definitions, conceptualizations, and research agenda of the circular supply chain framework. *Circular Economy and Sustainability*, *3*(1), 35-75. DOI: https://doi.org/10.1007/s43615-022-00172-y
- Novitasari, M., & Agustia, D. (2021). Green supply chain management and firm performance: The mediating effect of green innovation. *Journal of Industrial Engineering and Management*, 14(2), 391-403. https://doi.org/10.3926/jiem.3384
- Ricardianto, P., Barata, F., Mardiyani, S., Setiawan, E., Subagyo, H., Saribanon, E., & Endri, E. (2022). Supply chain management evaluation in the oil and industry natural gas using SCOR model. *Uncertain Supply Chain Management*, *10*(3), 797-806. DOI: 10.5267/j.uscm.2022.4.001
- Tronnebati, I., & Jawab, F. (2023). Green and Sustainable Supply Chain Management: A Comparative Literature Review. *Jordan Journal of Mechanical & Industrial Engineering*, 17(1), 115 126.