

IMPROVING THE LANDED COST OF IMPORTING FOOD FROM FRANCE

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ABSTRACT

This research is a case study of a Thai importing company. The company was facing a significant increase in landed costs. The objectives of this research were to identify problems, find solutions, and implement appropriate actions to improve the landed cost of food importation from France. Recommendations, solutions, and preventive actions were provided to improve and reduce the cost of this business as well as avoid recurrent problems. This research applied tools approach to define the problems, measure the current performance, analyze the root causes of the problem, and identify improvements to the current process. The researcher also suggested an improvement plan with recommendations to achieve a sustainable process of operational improvement for the company. The result has shown a significant improvement in the delivery performance of the suppliers after implementing the improvement plan. The two major root causes, a gross price, and a freight charge, had been reduced, lowering the landed cost of food importation. The company still needs to have continuous improvement to develop a process to be more efficient. This is to ensure a sustained improvement is carried out with practical monitoring to prevent recurrent problems.

Key words: France; Landed costs; Importation; Freight charge; Supply chain management.

บทคัดย่อ

งานวิจัยนี้เป็นกรณีศึกษาของบริษัทผู้นำเข้าไทย เนื่องจากบริษัทกำลังเผชิญกับต้นทุนแฝงที่เพิ่มขึ้นอย่างมาก การวิจัยนี้จึงมีวัตถุประสงค์เพื่อระบุปัญหา หาแนวทางแก้ไข และดำเนินการตามความเหมาะสมเพื่อปรับปรุงต้นทุนการนำเข้าอาหารจากฝรั่งเศส อีกทั้งมีการให้คำแนะนำ แนวทางแก้ไข และมาตรการป้องกันเพื่อปรับปรุงและลดต้นทุนของธุรกิจนี้ รวมทั้งหลีกเลี่ยงปัญหาที่เกิดขึ้น งานวิจัยนี้ใช้หลายเครื่องมือเพื่อกำหนดปัญหา วัดประสิทธิภาพในปัจจุบัน วิเคราะห์สาเหตุของปัญหา และระบุการปรับปรุงกระบวนการ นอกจากนี้ผู้วิจัยยังได้เสนอแผนการปรับปรุงพร้อมข้อเสนอแนะ เพื่อให้เกิดกระบวนการปรับปรุงการปฏิบัติงานอย่างยั่งยืนสำหรับบริษัท ผลที่ได้หลังจากดำเนินการตามแผนการปรับปรุงแสดงให้เห็นการพัฒนาประสิทธิภาพการขนส่งของผู้ผลิตอย่างมีนัยสำคัญ ซึ่งมีสาเหตุหลักสองประการ ได้แก่ราคาสินค้าและค่าขนส่งที่ลดลง ส่งผลให้ต้นทุนการนำเข้าอาหารลดลง แต่อย่างไรก็ตามบริษัทยังคงต้องมีการปรับปรุงอย่างต่อเนื่อง เพื่อพัฒนากระบวนการให้มีประสิทธิภาพมากยิ่งขึ้น ทั้งนี้เพื่อให้แน่ใจว่ามีการปรับปรุงอย่างต่อเนื่อง จึงมีการเฝ้าติดตามเชิงปฏิบัติเพื่อป้องกันปัญหาที่เกิดขึ้น

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INTRODUCTION

Food inflation has been a major driver of inflation in the Eurozone and elsewhere. Food prices began to rise in the middle of 2021 as the industry was impacted by greater distribution costs, labor shortages, rising commodity prices, and enduring shortages. The conflict in Ukraine in 2022 made this trend worse, with food inflation first rising in developing nations and then, more recently, in industrialized economies. The rate of food price increases is significant not only because it directly affects household budgets, particularly for those at the bottom end of the income distribution, but also because it shapes the public's expectations of inflation, which can lead to higher inflation (Goldman, 2022).

One factor for the more persistent food inflation in developed countries could be the continuation of supply disruptions and food product shortages caused by the pandemic. The pandemic affected the movement of commodities along foreign supply chains raised the cost of local corporate operations and hampered merchants' efforts to manage inventory. These issues may result in greater production costs, restocking difficulties, product scarcity, as well as merchants passing on expenses to customers in the form of higher pricing (Mahapatra, 2022).

Inflation has a significant impact on importers, particularly those that import commodities such as meat, dairy, wheat, sugar, and oil. To import products that contain dairy as a standard ingredient, the company must bear a higher product price and higher transportation costs. Although importers can raise the markup of the products from customers, some customers insist on the same as they might have an agreement to provide price notification for at least one quarter. As a result, importers must bear additional costs because they are unable to raise prices to customers while also attempting to support customers to maintain long-term relationships.

Carrier and mode selection are components of the transportation decision-making process, which includes mode of transport selection and carrier selection, as well as price negotiating and service levels. The primary modes of transportation are railways, roadways, airways, waterways, and pipe ways. The appropriate mode could be one solution that helps with cost reduction. Besides, other strategies reduce importation costs, including shipment consolidation and negotiation strategies. The result of these solutions is to reduce transportation costs, optimize lead time efficiency, and increase profit margin once products are sold.

PROBLEM STATEMENT AND RESEARCH QUESTIONS

The land cost of importing goods via air freight is considerably high as it has increased approximately 20% year over year. Airfreight shipments are fluctuating and are expensive compared to transportation via vessel departure from France. In addition, air freight shipments require a higher frequency of orders than sea freight, leading to rising expenses.

Elements of Landed Cost

The landed cost has been increasing since all shipments are delivered by the same transport mode and same incoterm as a free carrier. According to FCA incoterm, there are many elements contained in the landed cost, as shown in Table 1, They are the product cost, freight charge, handling cost, import duty, and insurance. Those elements can be the cause of higher importation costs.

Table 1: Landed Cost of Orders from September 2021 to August 2022 (EUR)

Order Name	Total Weight (KG)	Gross price	Freight Charge	Handling cost	Import duty	Insurance	Landed Cost
A1-2021	333.92	3593.46	1203.43	403.33	1449.85	35.93	6686.00
A2-2021	332.12	3476.55	1271.53	519.52	1434.87	34.78	6737.25
A3-2021	533.46	5395.97	1843.03	504.66	2187.89	53.96	9985.51
A4-2021	637.06	6124.08	2736.50	522.98	2676.55	61.24	12121.35
A1-2022	538.64	5488.63	2274.31	526.16	2345.35	54.89	10689.34
A2-2022	331.80	3376.26	1471.54	423.31	1464.47	33.76	6769.34
A3-2022	338.96	3058.93	1543.11	434.41	1389.79	30.59	6456.83
A4-2022	455.20	4489.09	2261.95	539.78	2038.78	44.89	9374.49
A5-2022	557.88	5690.66	2775.18	539.89	2556.83	56.91	11619.47
A6-2022	712.36	7957.32	3716.99	547.16	3526.17	79.57	15827.21
A7-2022	430.36	4609.54	2120.97	429.43	2032.98	46.10	9239.02
A8-2022	456.54	5228.12	2374.59	542.27	2296.50	52.28	10493.76

Figure 1: Product Price from September 2021 to August 2022

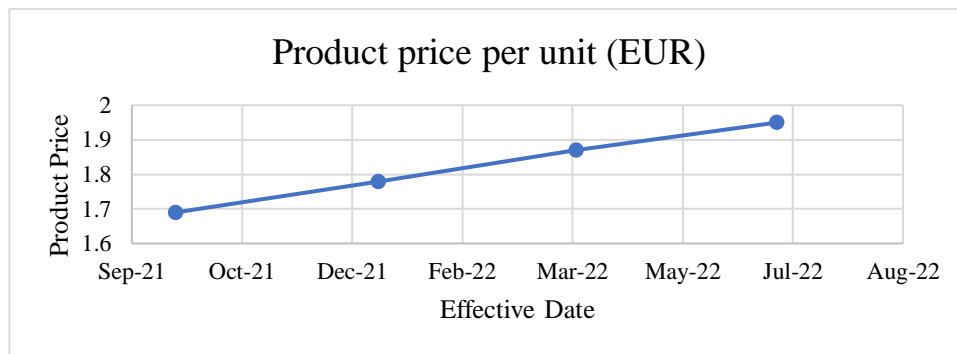
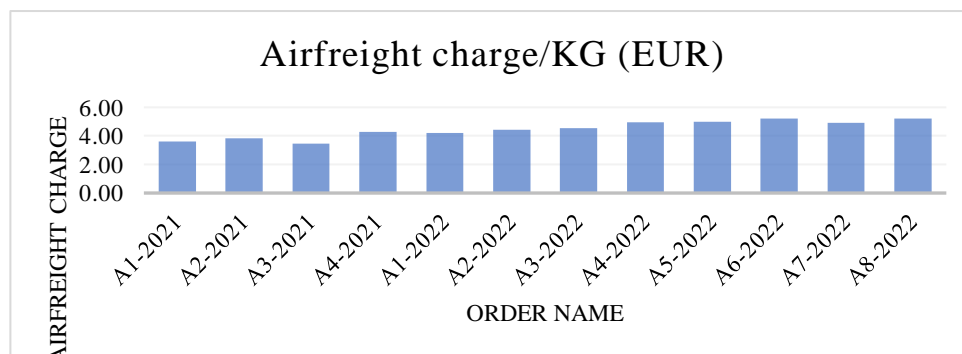


Figure 2: Airfreight Charge from September 2021 to August 2022



The product price and air freight charge are periodically informed by the supplier and freight forwarder about the price increase notification. Figure 1 shows that the product price has significantly increased from September 2021 to August 2022 by approximately 15%. Furthermore, the airfreight charge in Figure 2 has gradually increased by approximately 45% from order A1-2021 to order A8-2022.

Therefore, the research question is, "How is the landed cost of food importation from France maximized?"

Research Objectives

The main objective of this research was to improve the landed cost of one importing company. Therefore, the following research objectives were as follows:

1. To analyze ABC Company's current situation, including landed cost structure, transportation mode selection, and the volume of each shipment, all of which impact the total landed cost;
2. To apply the DMAIC concept to analyze and identify the root causes of increased landed cost; and
3. To improve purchasing costs of product importation and save overall landed costs.

Scope of the Research

This research was related to ABC Company in the overseas procurement field. The company has both a domestic department for domestic manufacturing and an overseas department for importing raw materials and finished goods known as "trading goods". The study was focused on trading goods, especially dairy products in the importing sector, which originate from France. To analyze and identify the root cause of the increased landed cost, historical data was collected from company systems and shipping documents, including commercial invoices, packing lists, and bills of lading, as secondary data. Moreover, historical data was collected from the ABC Company from 2021 to 2022. When all the data was collected, many tools were conducted to facilitate the analysis of processes and implement the improvement plan. There were three main tools, such as Define-Measure-Analyze-Improve-Control (DMAIC) tools, consolidation strategy, and negotiation strategy. The results of those strategies emphasized cost improvement and cost controllability.

Significance of the Research

To obtain a higher profit, the solution is not only to improve sales performance but also to lower the cost of goods sold. The tools and suggested strategies, including the DMAIC consolidation strategy and negotiation strategy, are aimed at being applied in business. In addition, this research will provide companies with ideas to take action to improve their current circumstances. Therefore, the result of this research will assist ABC Company and other importing companies to effectively control landed costs, which facilitates better cost controllability and increased profit margin.

Limitations of the Research

Despite the researcher's comprehensive preparation of this research, there were certain limitations and inadequacies. Due to the availability of information and time constraints, the researcher concentrated mainly on ABC Company. Besides, the historical data from 2021 and 2022 was conducted to analyze root causes and implement them during 2022. In addition, this research focused only on importation from France, where the shipment departed.

LITERATURE REVIEW

The review of the related literature chapter clarifies the selected literature review related to the study of landed cost improvement. Many theories, tools, methodologies, and techniques are selected to be described in this chapter. Those tools' analysis will help to identify the root causes of increased landed costs and find out how to improve them.

The study of land cost improvement mainly focuses on the definition and concept of the DMAIC methodology, which is a tool applied for problem solving. The DMAIC methodology is used to identify the root causes, including five steps such as define, measure, analyze, improve, and control. In addition, DMAIC is one of the various supply chain strategies used

for continuous improvement known as Kaizen to not only reduce landed cost but also increase the efficiency of the working process in the procurement dimension. Those improvements will finally increase customer satisfaction.

In addition, various tools were used to analyze the root causes and enhance the current importation procedure as well as control the landed cost. The four main tools, which are SIPOC, Process Map, Run Chart, and Histogram, were used under DMAIC. The related literature explained in the next section is on consolidation in logistics and transportation and price negotiation strategy.

Many references were selected to support and compare this study of landed cost improvement. The literature related to DMAIC, consolidation in transportation technique, and negotiation strategy were selected to improve the landed cost. The concept of DMAIC methodology was the tool applied for problem-solving in this study, including five steps such as define, measure, analyze, improve, and control, as Gijo et al. (2011) have mentioned. Furthermore, the consolidated transportation and negotiation strategies discussed in this case study are process improvement strategies.

As Baykasoglu and Kaplanoglu (2011) explained, freight or load consolidation is a transportation option that consolidates different products that are produced and used at different places and different times into one vehicle load to minimize transportation costs and maximize transport utilization. Besides, Burt (2006) and Lysons (2003) agreed that companies normally proceed with negotiations for contract prices and other conditions with the supplier whose expectations are considerably beneficial to their business.

Kusminska (2021) explained and proved that consolidation services lower the cost of small cargo transportation. Additionally, the results of the case study by Liu and Zhao (2019) were applied at the national level and projected for future years to estimate the potential cost savings from freight consolidation. The result came out to be that the consolidated cargo could be moved with only 67% of the current number of trucks, reducing operation costs by 23%.

ANALYSIS AND FINDINGS

This section discusses all the theories, tools, methodologies, and techniques that were applied to find a solution and improve the issues that the company was facing. The first methodology is DMAIC. The DMAIC process was used by applying various tools that have been mentioned step by step in the previous chapter. This project followed the DMAIC steps: the define phase, measure phase, analyze phase, improve phase, and control phase.

For the define phase, three tools were used to identify problems, such as a bar chart, project charter, and SIPOC. To measure the current state, one tool was applied in the measure phase, which was a detailed process map. In the analyze phase, two types of charts (boxplot and run chart) were used to identify root causes. It was suggested that the company conduct a reduction in waste by applying shipment consolidation and negotiation strategy. Furthermore, the IMR chart was applied as a control chart in the control phase.

Table 2 illustrates the steps of the DMAIC process and states the overview of the DMAIC process including a variety of effective tools as a continuous improvement.

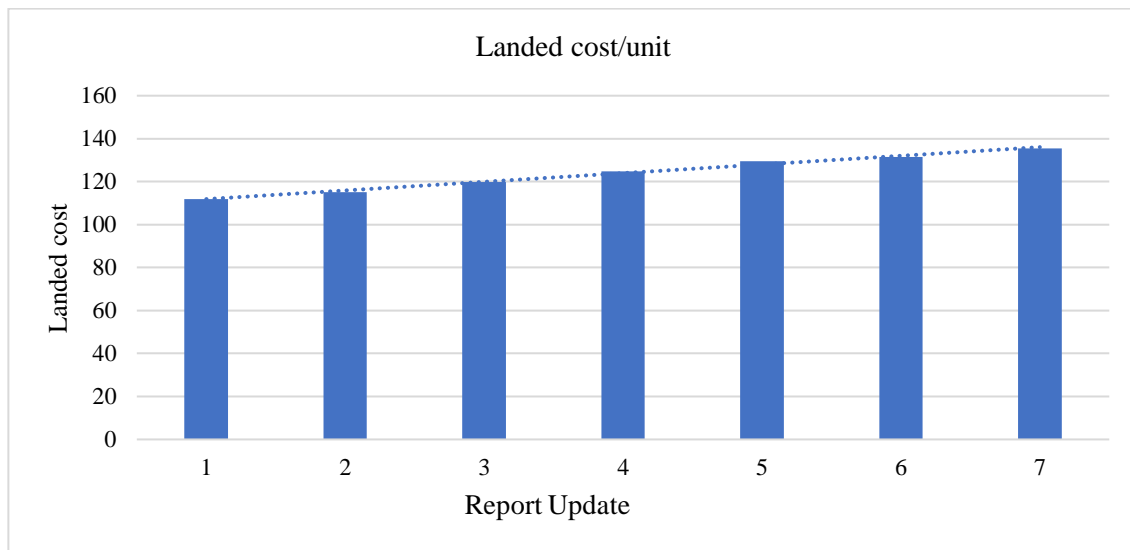
Table 2: Steps of the DMAIC Process

Phase	Methodology	Tool
Define	Step 1: Identify the problem	SIPOC, Project Charter
	Step 2: Create a project overview	Project charter
Measure	Step 3: Collect data	Process map
Analyze	Step 4: Apply graphical analysis	Run Chart, Box plot
Improve	Step 5: Brainstorm	Shipment consolidation, Price negotiation
Control	Step 6: Control new strategy	Control Chart

Define Phase

For the DMAIC methodology, the process starts with the define phase. This phase assists in facilitating the identification of the existing problem, including the level of severity, the exact area the problem occurs, and the factors or who stimulates those problems. Figure 3 shows the trend of the landed cost that has gradually increased as an upward trend. Even though the trend does not appear to be a spike, the landed cost has increased by approximately 20% over the previous year. The increased amount is considered a high-severity event, which would significantly impact the profit margin of the company.

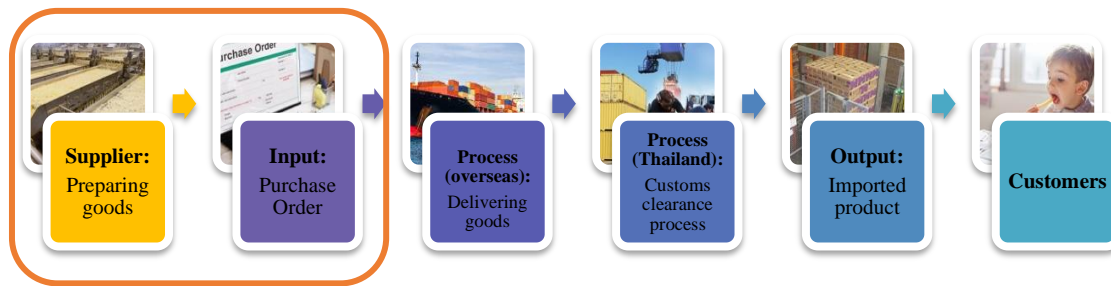
Figure 3: Landed Cost Trend



1. SIPOC

SIPOC is one of the tools conducted to point out where the problem has occurred. According to the procedure in Figure 4 (SIPOC Map), the supplier receives input as a purchase order from a Thai import company. Then, the supplier prepares and arranges the shipment for the Thai import company. Once the shipment is ready, the process of delivering goods and customs clearance will follow. Finally, the output as a shipment of food will arrive at the importer's warehouse and be ready for distribution to customers. According to previous information, the critical step is defined as the period from the supplier to the end of the input (highlighted box).

Figure 4: SIPOC Map



2. Project Charter

After the overview of the importation procedure had been visually created by using the SIPOC map, the area of the problem was pointed out. The project charter was the next tool that the researcher was interested in adapting and applying to this study. Table 3 shows the overview in terms of the project name, project objective, project scope, project timeline, and responsible people. The project charter was created with the name "Landed Cost Improvement". The business case is that the cost of air freight shipment is fluctuating and is expensive compared to transportation via vessel departure from France.

Table 3: Project Charter

Project name	Landed Cost Management
Business Case	The cost of airfreight shipment is fluctuating and is expensive compared to transportation via vessel departure from France. In addition, airfreight shipment requires a high frequency of ordering than sea freight leading to rising expenses.
Problem statement	The landed cost of imported goods via airfreight is considerably high as it has increased approximately 20% year over year resulting in a lower profit margin.
Goal Statement	To improve purchasing cost of product importation and save overall landed cost by approximately 20%
Project Scope	1.) The project focused on trading goods, especially dairy products, in the importing sector. The origin is France. 2.) The historical data was collected from ABC Company from 2021 to 2022.
Timeline	Define: 2nd week of February Measure: 3rd week of February Analyze: 4th week of February Improve: March to September Control: April to September
Responsibilities	1. Supplier 2. Freight Forwarder 3. Procurement team

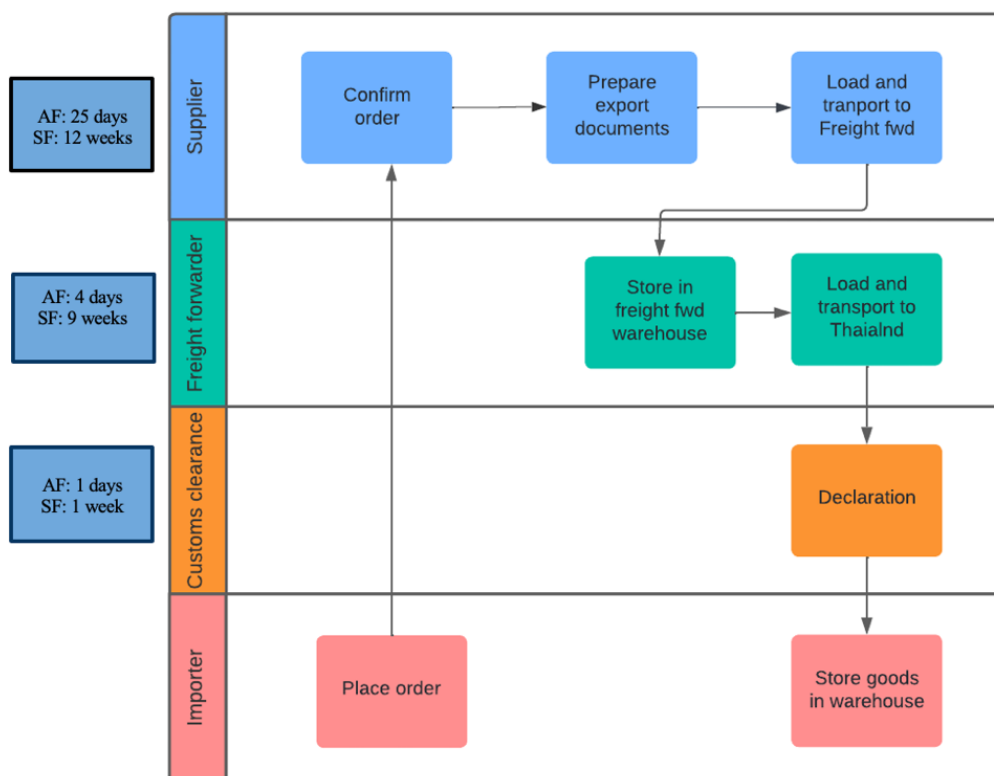
Furthermore, air freight shipments require a higher frequency of orders than sea freight, leading to high expenses. Apart from the business case, a problem statement was also stated. The landed cost of imported goods via airfreight is considerably high as it has increased approximately 20% year over year, resulting in a lower profit margin. Hence, the goal of this project was to improve the purchasing costs of imported products and save overall landed costs by approximately 20%.

However, the scope of the project must be set to narrow and specify the problem. There were two project scopes. Firstly, the project was focused on trading goods, especially dairy products in the importing sector, which originated from France. Secondly, historical data was collected from ABC Company from 2021 to 2022. The timeline of this project was considerably consumed during the improve phase from March to September 2022. There were three major parties involved in this project: the supplier, freight forwarder, and procurement team of ABC Company.

Measure Phase

In the measure phase, the process map was applied to measure the current situation. Figure 5, the Detailed Process Map illustrates that food importation was the only tool used in this phase to understand the overall procedure and develop the existing process.

Figure 5: Detailed Process Map



1. Detailed Process Map

Once the order has been placed by the importer, the supplier will confirm the order by sending back the proforma invoice. The proforma invoice states the quantity of the product, the price per unit, and the freight charge. If the importer does not agree with the price, the negotiation process will proceed immediately to this step. After the proforma invoice is confirmed, the supplier will prepare the export documents and arrange the shipment by loading the goods into the container. Thus, the process from placing orders to sending them to freight forwarders takes approximately 12 weeks. After the goods are loaded into the container and delivered to the freight forwarder, the container will be loaded into the vessel and transported from the French port to the Thai port. The estimated transit time from the French port to Thailand is nine weeks. Once the shipment arrives at the Thai port, the import declaration must be processed by Thai customs clearance, which takes around one week. Then, the goods will be stored in a warehouse, sticker-labeled, and delivered to customers.

Analyze Phase

The analyze phase is critical because it is where the root cause of the higher landed cost will be discovered. Graph analysis will be conducted, including a boxplot and run chart. The first step of analyze phase is to use historical data. The numeric data recorded in the table will be converted to graphical data to easily notice the trend and the frequency of data.

The expense or landed cost of each shipment is converted into a percentage. Table 4 indicates the portion of the expense for each separate airfreight shipment. The data collected from September 10, 2021, to August 8, 2022, includes 12 shipments. There are various ranges of each element included in the landed cost, which is shown as a boxplot version in Figure 6 (Landed cost breakdown).

Table 4: Portion of Expenses in Each Airfreight Shipment

Sample	Gross price	Freight Charge	Handling cost	Import duty	Shipping exp	Transport	Insurance
1	54%	18%	6%	22%	0%	0%	1%
2	52%	19%	8%	21%	0%	0%	1%
3	54%	18%	5%	22%	0%	0%	1%
4	51%	23%	4%	22%	0%	0%	1%
5	51%	21%	5%	22%	0%	0%	1%
6	50%	22%	6%	22%	0%	0%	0%
7	47%	24%	7%	22%	0%	0%	0%
8	48%	24%	6%	22%	0%	0%	0%
9	49%	24%	5%	22%	0%	0%	0%
10	50%	23%	3%	22%	0%	0%	1%
11	50%	23%	5%	22%	0%	0%	0%
12	50%	23%	5%	22%	0%	0%	0%

Figure 6: Landed Cost Breakdown

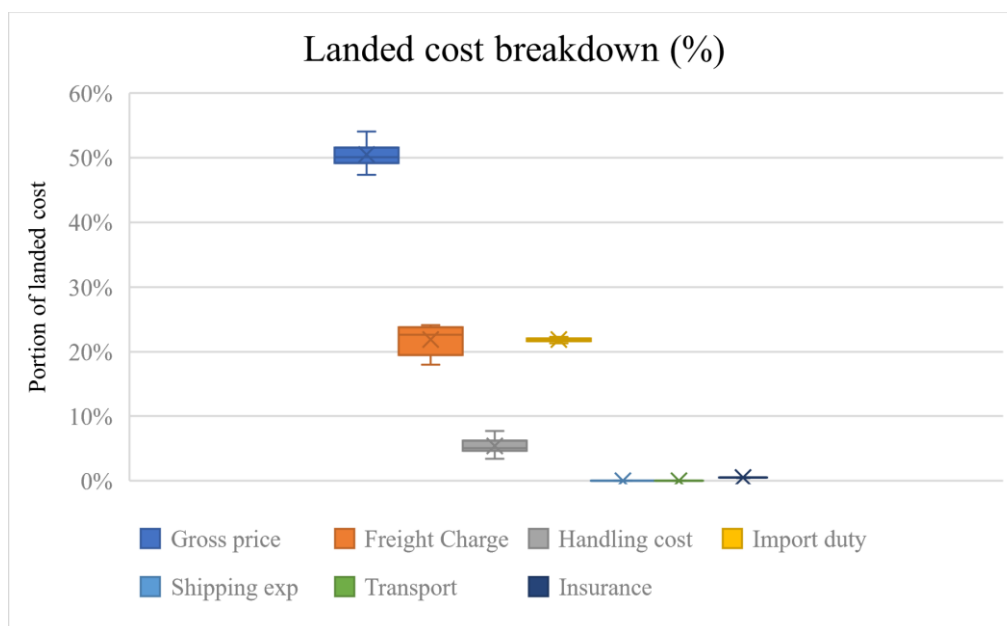


Figure 6 shows the landed cost breakdown into seven elements. The 12 airfreight shipments were applied from September 10, 2021 to August 8, 2022. Freight charges, handling costs, import duty, shipping expenses, transportation, and insurance were all included in the landed cost.

According to the graph, the top three highest components of the landed cost are the gross price, freight charge, and import duty. However, the import duty is quite stable since it is a government settlement. Therefore, only the gross price and freight charge were subjected to further analysis.

Figure 7: Gross Price (THB/UNIT)

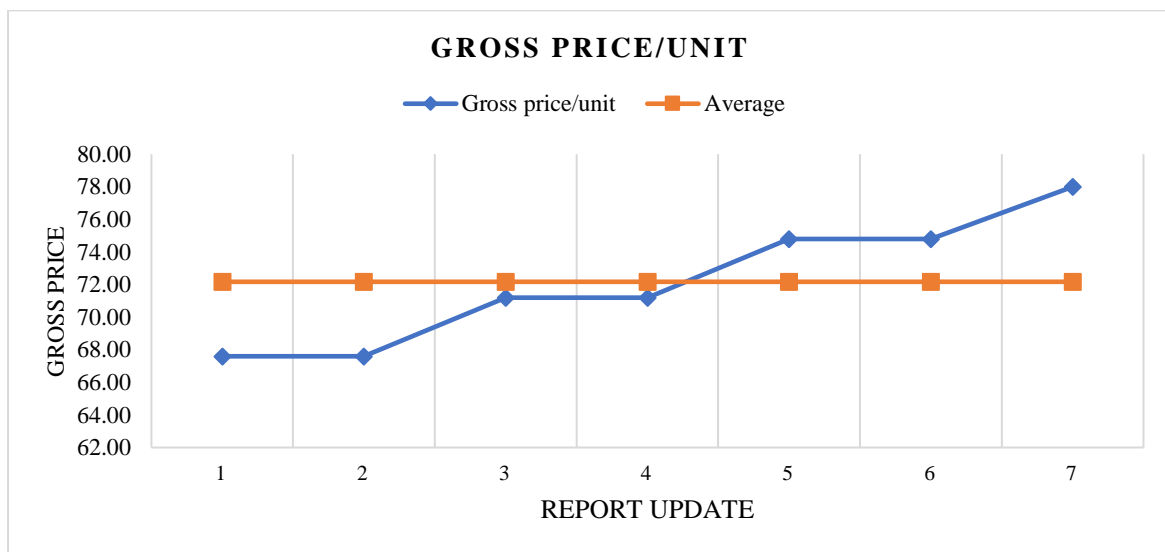
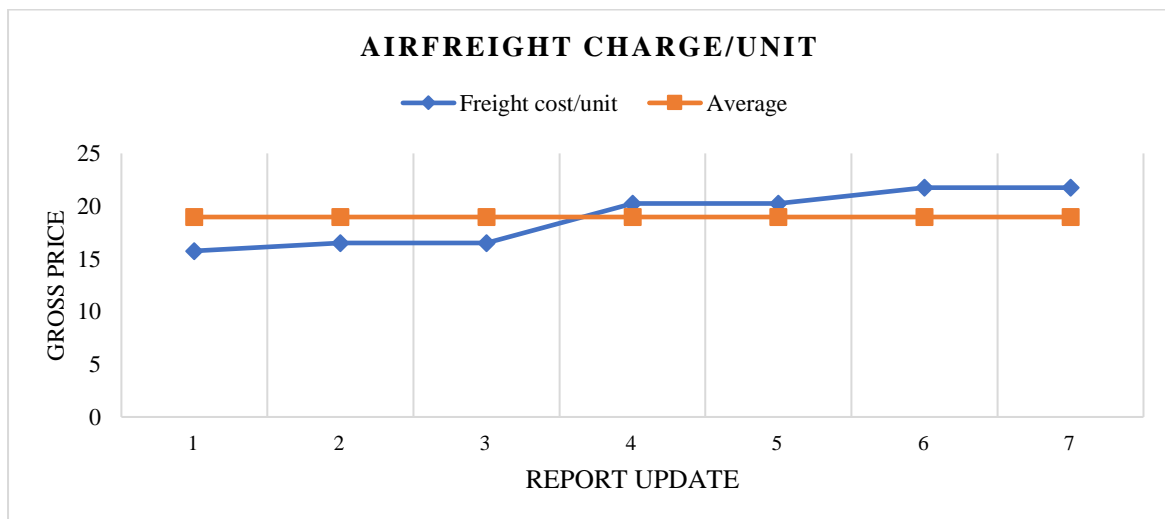


Figure 8: Airfreight Charge (THB/UNIT)



The second step of this phase was to analyze deeply the gross price and airfreight charts and identify the one that impacts the landed cost the most. The data was collected from a landed cost report, which was updated seven times from September 29, 2022. According to Figure 7, the gross price seems to have changed incredibly because of its steep trend compared to Figure 8. However, regarding historical data, the gross price has increased by 15% YOY while the freight charge has significantly risen by 38% YOY.

Table 5: Percentage Change in Gross Price, Freight Cost, and Landed Cost

Sample	Gross price/unit	Freight cost/unit	Landed cost/unit	% Different in gross price	% Different in freight cost	% Different in landed cost
1	67.60	15.75	111.81	0%	0%	0%
2	67.60	16.5	115.01	0%	5%	3%
3	71.20	16.5	119.89	5%	0%	4%
4	71.20	20.25	124.77	0%	23%	4%
5	74.80	20.25	129.45	5%	0%	4%
6	74.80	21.75	131.4	0%	7%	2%
7	78.00	21.75	135.34	4%	0%	3%

Table 5 illustrates the calculated and summarized percentage change in gross price, freight cost, and landed cost. The data clearly shows that small changes in gross price have a greater impact on landed cost than large changes in the freight charge.

Improve Phase and Control Phase

This section presented the improve phase and control phase. For the improve phase, its objective is to identify the solutions to solve the root causes as well as implement effective actions. The researcher has proposed implementing a shipment consolidation strategy to solve higher freight issues and a negotiation strategy to solve higher gross prices. Once the strategies have been applied, all the results will be recorded for further analysis and will proceed to the next phase. The final phase is control.

Table 6: Actual Cost Saving of Brand X from Consolidation Strategy

Total saving										THB 218,365.50
No.	Shipment	Item Description	Quantity in SKU	Stock keeping unit	Currency	SF landed cost (THB)	AF landed cost (THB)	Amount Saving/EA	% saving	Amount Saving THB
1	Consolidate S1-2022	A	1440	EA	EUR	87.62	108.24	20.62	24%	29,690.81
2	Consolidate S1-2022	B	660	EA	EUR	87.62	108.24	20.62	24%	13,608.29
3	Consolidate S1-2022	C	20	EA	EUR	104.24	124.86	20.62	20%	412.37
4	Consolidate S1-2022	D	42	EA	EUR	109.78	130.40	20.62	19%	865.98
5	Consolidate S1-2022	E	0	EA	EUR	99.05	123.79	24.74	25%	-
6	Consolidate S1-2022	F	30	EA	EUR	99.05	123.79	24.74	25%	742.27
7	Consolidate S2-2022	A	1800	EA	EUR	91.77	108.24	16.46	18%	29,635.72
8	Consolidate S2-2022	B	1560	EA	EUR	91.77	108.24	16.46	18%	25,684.29
9	Consolidate S2-2022	C	80	EA	EUR	109.23	124.86	15.63	14%	1,250.34
10	Consolidate S2-2022	D	85	EA	EUR	115.05	130.40	15.36	13%	1,305.27
11	Consolidate S2-2022	E	30	EA	EUR	103.74	123.79	20.06	19%	601.73
12	Consolidate S2-2022	F	0	EA	EUR	103.74	123.79	20.06	19%	-
13	Consolidate S3-2022	A	1920	EA	EUR	91.77	118.32	26.55	29%	50,973.50
14	Consolidate S3-2022	B	2160	EA	EUR	91.77	118.32	26.55	29%	57,345.19
15	Consolidate S3-2022	C	120	EA	EUR	109.23	136.48	27.25	25%	3,269.67
16	Consolidate S3-2022	D	36	EA	EUR	115.05	142.52	27.48	24%	989.22
17	Consolidate S3-2022	E	40	EA	EUR	103.74	135.34	31.60	30%	1,264.04
18	Consolidate S3-2022	F	23	EA	EUR	103.74	135.34	31.60	30%	726.83

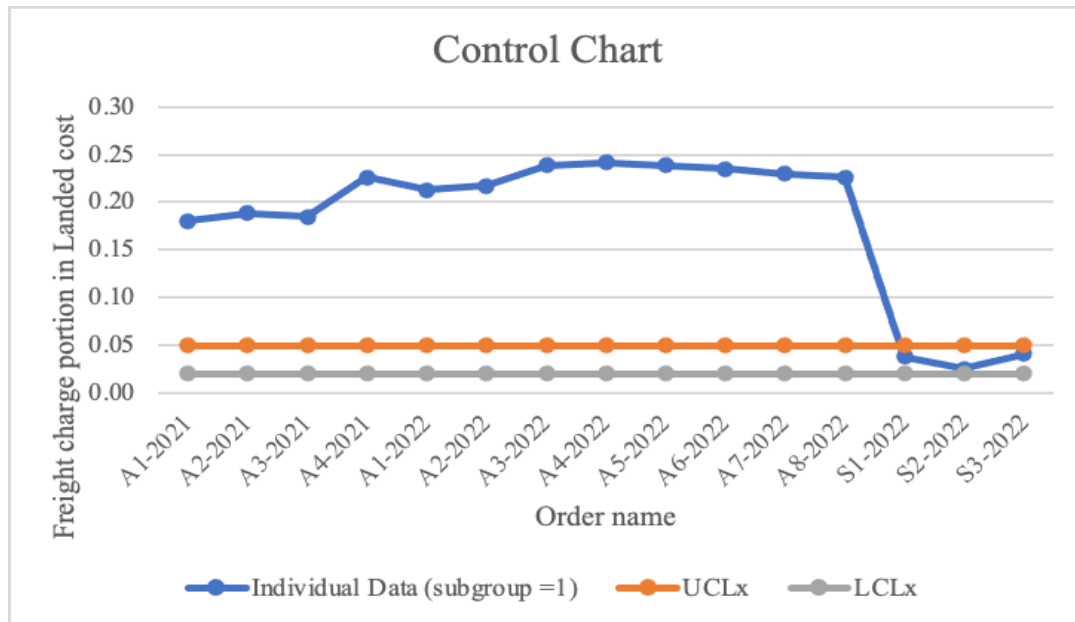
Table 7: Actual Cost Saving of Brand X from Negotiation Strategy

Total saving										THB 23,368.94
No.	Shipment	Item Description	Quantity in SKU	Stock keeping unit	Currency	Landed cost with old price (THB)	Landed cost with new price (THB)	Amount Saving/EA	% saving	Amount Saving THB
1	Consolidate S3-2022	A	1920	EA	EUR	91.77	97.17	5.40	6%	10,361.06
2	Consolidate S3-2022	B	2160	EA	EUR	91.77	97.17	5.40	6%	11,656.20
3	Consolidate S3-2022	C	120	EA	EUR	109.23	115.33	6.10	6%	731.85
4	Consolidate S3-2022	D	36	EA	EUR	115.05	121.37	6.32	5%	227.69
5	Consolidate S3-2022	E	40	EA	EUR	103.74	109.96	6.22	6%	248.98
6	Consolidate S3-2022	F	23	EA	EUR	103.74	109.96	6.22	6%	143.16

The results from the improvement phase will be collected, and the standard level must be set up. The control phase mainly concentrates on continuous improvement regarding new strategies to sustain and improve landed costs. When the process is fully operational, the landed

costs will be controlled and improved, resulting in higher profit margins. Three shipments have been applied with new strategies, including shipment consolidation and price negotiation. When strategies are applied to a net order value of 1,140,243 baht (consolidate S1-2022, S2-2022, and S3-2022), landed costs are reduced by 21%, including 23,368.94 baht of price negotiation and 218,365.50 baht of shipment consolidation.

Figure 9: Control Chart of Freight Charge (Percent)



In the control phase, the control chart is applied as a tool for cost management. The standard for the freight charge portion of the landed cost is set. The upper control limit is set at 5% of the total landed cost, with a lower control limit of 2% of the total landed cost. The trend of freight charges is under control after applying a consolidation strategy and a negotiation strategy.

CONCLUSION AND RECOMMENDATIONS

Food inflation has become a major impact on prices. A large number of businesses, including importation, have been considerably affected by this circumstance. Importing businesses suffer from higher expenses. The researcher was interested in initiating this project to find solutions and strategies for minimizing the difficulties caused by higher costs. This study focused on daily product importation from France because it is directly related to the researcher's position as a procurement specialist at ABC Company. The researcher has used many tools to analyze and clarify the problem as well as find the solution. Small changes in gross price have a greater impact on landed cost than large changes in freight charge, according to the analyze phase. Therefore, the researcher decided to focus on both the gross price and the freight charge. After the strategies had been implemented, the result was very satisfactory as ABC Company was able to save 21 percent, including 23,368.94 baht for price negotiation and 218,365.50 baht for three shipment consolidations. As a result, the profit of these shipments has increased.

Despite the researcher's comprehensive preparation of this research, there remain certain limitations and inadequacies. According to the availability of information and time constraints, the researcher initially concentrated mainly on the ABC Company. Furthermore, the historical

data was collected from a certain period, which is from September 2021 to August 2022. The data was conducted to analyze the root cause and implementation in 2022. In addition, this research concentrated mainly on importation from one origin, France, where the shipment had departed.

Apart from the limitations, recommendations for future research are also suggested. The first suggestion is to think about studying for a longer period because working on price and cost is quite sensitive. A short period may not collect all the factors that impact the landed cost. The second recommendation is to study another origin or another region. The different origins and different regions may have a variety of factors that affect the gross price and freight charge. To consider a wider range of origins, the mutual factor might be a strong reason to improve.

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