

**THE FACTORS THAT IMPACT CUSTOMER BUYING DECISIONS:
AN EXPLORATIVE CASE STUDY OF INDUSTRIAL PIPING HOSE**



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THE FACTORS THAT IMPACT CUSTOMER BUYING DECISIONS:
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ABSTRACT

The study focuses on exploring the sales representative set of supportive information, documents, and activities that impact the decision-making of customers on industrial piping hose. The information supplied to the customers during the three different phases is: (1) pre-sales: warranty document, assurance certification document, and auditing document; (2) during-sales: brand awareness, cynical information, and discount information; (3) after-sales: training information, customer relationship program, and after-sales onsite support. These provided details are explored to confirm the impact on the buying decisions of different sets of customers, namely the end-user, the budget holder, and the procurement officer, and the impact on different customer segments, such as the industrial user, the pipe hose distributor, and the re-seller. 40 current industrial customers who had bought the product were surveyed. The analysis of the results is accommodated by the logistic regression analysis. The results confirm that when dealing with procurement officers, the auditing document in the sales phase has the highest impact on the decision. For the budget holder, auditing and training are the two account able pieces of information. For the end-user, training is the most important aspect. When dealing with the distributor, auditing and discount information are the most important. For the industrial end-user, the auditing, the technical information, and the discount are the highest factors. For the re-seller, the highest consideration accounts for training, onsite support, and the customer relationship enhancement program. The study helps shape sales representative activities when engaging different roles of customers in different industrial segments.

Keywords: Customer Behaviors, Buying Decisions, Customer Types

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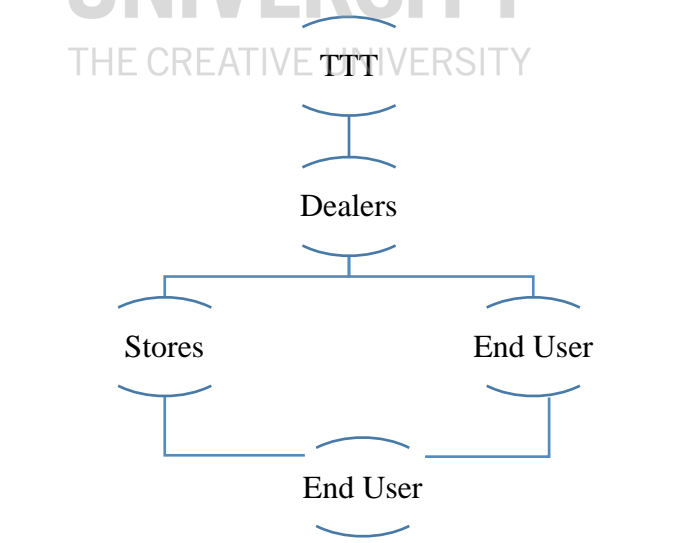


CHAPTER 1

INTRODUCTION

TTT Corporation Co., Ltd. (previously known as TOYOX Trading Thailand Co., Ltd.) was established on March 1st, 2007, as Thailand's sole distributor of industrial hose and connector under TOYOX, Japan's No. 1 hose brand, which is known for its renowned quality products accommodating various applications, from air, water, oil, food, drugs (with JSFL, FDA, and USP Class VI certification), to chemicals for more than 60 years. Toyota products are also ideal for different conditions such as high pressure, high temperature, vacuuming, painting, agriculture, spraying, car care, etc. In addition to high-quality products, TTT Corporation also provides expert consulting services on hoses and connectors to guide them in selecting the right hoses for safe use, meeting standards, cost, and energy savings. The company's vision is to be the center of high-quality hoses and hose connectors, with world-class service extended all over ASEAN countries.

Figure 1.1: TTT Distribution Channel



As TTT Corporation is the sole distributor of Toyota in Thailand, we decided to create a distribution channel by finding around 30 dealers who have the ability to keep stock to distribute to the hardware stores in industrial estates or factories directly

to join us as our partners. We have created the selling conditions and regulations for them to follow, such as the discount range to control the price in the market. We have a profit calculation and rebate for our dealers for selling our product to motivate them to reach their target together with us.

The dealer's level will have a range of discounts to sell to other hardware stores and factories (end-user). They can sell at any price they want within our control range. They will get a reward yearly for those who follow the rules the most, and they will get a rebate monthly if they can stock and distribute our product and reach the target that we commit to. The rebate will increase step by step the sales amount. Our dealers can sell to hardware stores and end users, but the discount range will be different because we would like small hardware stores to have chances to sell to end users near their location around an industrial estate.

The sub-dealer's level will determine the range of discounts to sell to the factory (end-user). They can sell at any price they want within our control range. We will have activities with them to promote our product in each industrial estate to help the user remember our brand and come to buy with our sub-dealers around the industrial estate. We also have a rebate reward with them to motivate them to promote our product to their customers.

1.1 Product and Service

Our main products are industrial hoses and connectors, which are used to connect to the machine. Many types of machines need hoses because of their flexibility in a limited area. The hose is easy to pull out, move to other machines, or keep after finishing the work. It is suitable for the temporary use point. The hose can be separated into three main types according to the material: polyvinyl chloride (PVC), Polytetrafluoroethylene (Teflon), and Polysiloxane (Silicone). The use of the term will be the main factor in choosing the hose. Moreover, we have both non-food-grade and food-grade food to serve customers depending on their industry. We have provided certificates to customers for their reference, for example, FDA, material report, etc.

Poly Vinyl Chloride (PVC) is mainly for ordinary uses such as oil, gas, water, and thermoplastic. This material can be used with almost every liquid conveyed through the machine except acid, high temperature, and high pressure.

Poly Tetra Fluoro Etylene (Teflon) is mainly for the chemical transfer between the machine and machine or machine and else. This type of material can be perfect for preventing chemicals such as ethyl alcohol (ethanol), fuel oil (heavy oil), hydrobromic acid, etc.

Polysiloxane (Silicone) is mainly for high-temperature areas such as streaming areas, boiling water conveys, etc. This type of material can prevent high temperatures perfectly, according to our product specifications.

We have separate services into three stages, which are pre-sales, repeat ordering, and after-sales service. We have activities to support them from end to end until customers recognize our brand and repeat orders with them to build a sustainable business with them. We hope they grow together with us.

For pre-sales service, we have a training session for every person to make them aware of our product, such as a good hose criterion, how to choose a hose to match the machine, and how to take care of the hose. We expect all trainees to understand the advantages and specifications of all types of hoses. Moreover, we also sent our technical team to help our dealer's sales as a co-visit in the first few times that they visit customers to show as an example case for their sales in selling our product. In addition, we also provide product certificates for every customer who asks for them. The certificate can also guarantee that our product quality is within the specifications of the factory, which makes the auditing process easier. The certificate can be a selling tool for our dealer to close an order more easily too.

For repeat orders, we do marketing activities such as a billboard near the Suvarnabhumi airport, online knowledge about industrial hose for everyone to watch, or information support, such as a catalog, hot line, Facebook fan page, line official account, or email. We would like to be close with our customers and have a sustainable relationship with them. Then, we decide the offline and online activities to keep in touch with our customers and always keep updated information about the industrial news and our products, including the current products and new arrivals.

We usually launch a promotion in our sales season to attract current customers, non-moving customers, and new customers to achieve our quarter and year target.

For after-sales service, we must claim a warranty for our product to certify its quality and improve customer satisfaction. We have a laboratory team to check the goods before claiming them for the customers. If it's under our criteria for a claim, we will take care of that cost by sending the new one to the customer free of charge. We always keep in touch with each one of our dealers by visiting twice a month to listen to the product feedback and suggest a selling method or help solve the customer's selling problems.

1.2 The Background of the Sales Activities

Our sales have grown in the past year, and we also have a target to register on the stock market in a few years. Then, we forecast the sales to double from the previous year to achieve our main target soon. We have plans and activities for our distributors to reach the target together.

For pre-sales, we want to provide knowledge and make customers confident in our product quality, warranty, and auditing process. Knowledge of the product is very important to us to educate the customer because it relates to their buying decisions. In the product quality stage, we have visited our customers free of charge to make a measurement with their machine to match our hose specification. Then, we have sample hose for them to test first before deciding to buy our product to guarantee that our product can be used with their machine to the highest quality of its specification. In addition, we have a warranty on hoses under our terms and regulations; we will change the new one for the customer immediately after our technical team visits and checks that it is under our warranty. Moreover, we have a seminar for every user to join in the title of how the good hose should be to achieve the auditing review by collaborating with factory auditing staff from the auditing company directly to share knowledge of the good factory. In the seminar, we ask the professor in the hygiene faculty of a popular university to join us to explain clearly to every user. We would like everyone who joins our activities to get as much knowledge as they can to improve their work and understand our product, as well as the option to choose a high-quality product with a reasonable price and service.

We always do activities with our brand to promote it to the public as much as we can by advertising on many channels such as billboards, social media, influencers, exhibitions, etc. We would like to get as much attention from users as we can through those channels for them to remember our brand and slogan, "Those must be Toyota." If they see or hear our brand many times, they will think of our brand when they would like to buy hose. According to the sample product provided in the pre-sales stage, we always keep in touch with them during every period to support them in terms of problem solving during the usage of the hose. The customer can call us any time they need help with hose, and we will support them to make them satisfied with both our product and service if we do business together. Although they use another brand, we are welcome to advise them on choosing the best hose for their machine.

We not only do activities in pre-sales and during the sales stages, but we also do activities with customers in the post-sales stage. We usually keep training with our users and distributors' sales. We are concerned that the distributor's sales would be efficient in selling our products too because they must distribute our goods to the factory in industrial estate. Then, they need to have knowledge of our goods as well as our sales. We decided on the training program under "hose doctor project." We created the program as a scholarship divided into three stages, which are theory, practical, and evaluation. We offer certificates to warranty the salesperson who is well-known about the product. The important part that cannot be out of focus is the customer's relationship. We always have a distributor meeting every year to keep in touch with them and listen for their feedback on our activities. The meeting is like a party, and we share business ideas with distributors about how we can grow together in the coming year. We do not only have yearly meetings, but we also assign our sales department to visit each distributor once a month to promote, listen, and help them solve their selling problems immediately.

1.3 Problem Statement

As I have joined the company and taken care of the Asia market, I have seen that the sales volume of the company has remained in the same range for many years. The market was not expanded as much as it could have been because of the new department established. There were not any activities to promote and build trust about

brand awareness as well. Then, there is a pool of improvement after I summarize the current market data, and I see the opportunities to increase the sales volume as a double from the current situation. I would like to set up a sales structure and service for my customers to grow together with them and build a good relationship with them, as they are an important key to boosting our increasing sales. It leads me to develop the sales and marketing program to boost the sales this year to achieve the goal.

There are also problems in dealing with the different types of partners. We have sales representatives directly with each type of partner to treat each partner in the way that the company would like to support them. The activities will be provided to all types, but we will limit some activities to dealers, who are our main distribution channel. The other two channels are also important, and we support them together with our dealers because most of them are sub-dealers. We have regulations to support special cases of sub-dealers in case our dealer cannot support them, as well as our own regulations. However, we will ask for feedback from all channels of support in our organization every year to develop our supporting activities for the incoming year, but if some customers have urgent cases, we are welcome to keep in touch with that specific customer immediately to solve the problem together with them.

CHAPTER 2

LITERATURE REVIEW

According to Barber and Tietje (2006, p. 27), industrial sales referred to “personal selling activities that facilitate the sales of products or services whose intended application is in the manufacturing process”. This definition separates consumer product sales from industrial sales. However, the customers can be a manufacturing factory, a reseller of the product, or a retailer that resells the product to other end customers.

2.1 How Forces Support Marketing Strategy?

The marketing function is to get close to the customers. In industrial markets, the sales force acts as the linkage for the marketer to pave their way toward the customers. There is a clear need to combine the marketer and the sales force into one team under the sales management scheme. The marketing strategies in the industrial market are as follows:

- 1) Ensure that the industrial customers have needs for the products that the company is selling.
- 2) Ensure the customers repeat their buying needs from the company.
- 3) Ensure that their products compete with the competitors regarding pricing and quality.
- 4) Ensure that there is a minimum inventory that is enough to sell to needy customers.

Under these marketing strategies, the sales force strategy must support the marketing activities in the following ways as shown in Table 2.1.

Table 2.1: Marketing Strategies

Marketing Strategy	Sales Force Activities
Ensure that the industrial customers have needs for the products that the company is selling,	<ul style="list-style-type: none"> - Build up the sales volume - Secure the product distributions - Provide product support services - Obtain product/market feedback
Ensure the customers repeat their buying needs from the company.	<ul style="list-style-type: none"> - Maintain sales volume - Differently approach customers based on segmentation - Ensure customer accessible to product acquisition when needed
Ensure that their products compete with the competitors regarding pricing and quality	<ul style="list-style-type: none"> - Ensure the product quality are compete-able with those of competitors - Regularly check the market position and price competition - Ensure the cost is controlled within a comparable range
Ensure that there is a minimum inventory that is enough to sell to the needing customers	<ul style="list-style-type: none"> - Manage inventory - Ensure the liquidation of inventory with special offerings

2.2 Sales Strategy According to Sales Life Cycle

The activities that support marketing strategies are tightly coupled with the sales strategy. This results in a competitive position within the marketplace. This will strongly impact the long-term relationship between the buyer and seller. Sales strategy is known to deliver sales performance. When a salesperson implements a sales strategy that aligns with the organization's goal for the sales process, the sales performance increases dramatically. However, in the outcome-controlled sales strategy, there is no impact on the sales performance at all. This means that to have the sales strategy implementation work, sales behavior, and market knowledge affect

the sales strategy implementation, while the control of the outcome may not be the best alternative to effectively manage the sales.

Strahle, Spiro and Acito (2016) indicated that the managing of products must follow the pattern of product life cycle. Different strategies in different phases of the product life cycle are applied. The phases of product life cycle are segregated into four phases of Build, Hold, Harvest, and Divest. Build is the phase where customers may have little or no knowledge about the product. In this phase, salesperson shall not emphasis much on the sales volume, but on educating the customers about the product. Salespersons also need to ensure the sales infrastructure is built for product acquisition and distribution. Hold is the phase where decision is under consideration. At this phase product sales volume must be built up and maintained. Harvest is the phase where a product is being productive. Salesperson must ensure the product delivers the expected quality and the proper way of employing product is being done. In this phase, salesperson must focus on the technical aspect and the after-sales technical support to maintain the sales volume. Divest is the final phase of the product. In this phase the product is being retired. This might be due to the lifetime of the product is at the terminal period or some maintenance activities is to be activated to prolong the product's lifetime. In this phase, salesperson must focus on the repetitive acquisition, or the technical maintenance service, as well as the product disposition and cost management.

Different researchers use different categorizations to formulate the sales strategy. Rink and Sawm (1979, p. 224-225) applied different sales strategy based on four different steps of sales engagement. The first step is the product concept investigation. In this step, the factors of product aggregation of class-form-brand, and the degree of newness or innovativeness are fundamentally important. In the second step of forecasting, the customer's firm characterization, and use of product in the business process are the essential factors. This step is to determine the economic climates if the climate is stable or growing. The last step is consideration of the firm's competitiveness. This determines the customer's firm's degree of competition if it is monopolizing the market, or the competition is freely and highly competitive.

Mintzberg (1984) used the life cycle from the product life cycle theory that consists of Product introduction, product growth, product maturity, and product declining phases. Mitchell and Clark (2019) deployed a different scheme of product-market orientation by segregating the life cycle into two phases of market orientation, and social exchange. Market orientation is where the product is introduced to the market. This phase, the salesperson must demonstrate the strategic ambition to the product penetration, define the competitive contents against competitors, and demonstrate the organizational capability in committing the product operationalizations. The second phase of social exchange involves reflexive results of the product operationalization. The salesperson must demonstrate knowledge of the product as well as the results of usage from other customers and the delivered values.

The segregation of product life cycle is deemed important for the underlying sales strategy. A well adopted life cycle must have a corresponding strategy to underlay. Activities of the sales must be planned.

2.3 The Roles of the Sales Force Functions

Sales strategy is operationalized in multi-dimensional domains: customer segmentation, prioritization, relationship establishment, and using the proper sales channels. To support the marketing strategy, the following are the roles of the sales force to commit.

Customers' partner: It is necessary for the salesperson to maintain relationships with the customers. It is a fundamental requirement for a salesperson to have a deep knowledge of the customers' preferences, problems, and values that the customers need the product to do the work for them.

Buyer-seller coordination: The salesperson and the customers must act as a team in coordinating the buying functions. The salesperson will become a part of the customers' supply chain, which is critical to their success. The partner may not just ensure the availability of the product for the customer to expose when needed but also help them to manage the production at a controllable cost, with quality outcomes that is from the use of the quality product in their production process. The salesperson is now between the customer and the supply chain that matters with the raw material

resource allocation. The relationship between the salesperson and the customer is now becoming critical.

Customer service support: The salesperson must deeply understand how the customer makes the buying decision and the important consideration before the decision is made. The salesperson must understand the customer's organizational structure for the flow of decision-making, the authorization of customer representatives that the salesperson is dealing with, and the uniqueness of the customer's character in the industry. This is to ensure how the product is used.

Information provider: The salesperson must ensure that the information about the product is given, and that the customer has a clear knowledge of what the product can and cannot do. It must be ensured that the correct method is applied, and the product is used correctly.

First-tier market analyst: It's a fundamental function of the salesperson to conduct the market competitive playground, sales forecast, cost analyzer, and technological adaptor for the sales activities analysis. The salesperson will be the first to know about any movement, the requirements shift, and the regulations' infringement. The analysis information must be shared with the rest of the organization for the rest to be prepared.

Different types of sales force result in different strategies when imposing to different customer's firm characters, and the different roles and level of decision-making authority of the engaging persons in the sales process.

2.4 The Industrial Market Shifts from a Product-Led to a Service-Oriented Market

The modern industrial buying pattern is shifting from product fit to service integrated market. Single-product buying is not enough, but the services bundled with the product purchase are also an important consideration. The shift-change process requires the integral transformation of the organizational structure and the uplifting of capabilities for the entire spectrum of knowledge and skills. The salesperson will be the first to touch the customers with the new capabilities. The bundling of services results in sales performance through value-based creation and customer orientation.

Service-oriented sales are tightly aligned with the product life cycle. Different skills are required during each phase of the life cycle. Creativity and informality are the keys to emphasize in the early product introduction phase. Operational planning, staging, training, optimism, problem-solving, and stamina are essential during the growth phase. During the mature stage, the efficiency of product and support performance, administration, judgment, and conservatism are the primary skills. During the declining phase, determination and courage are required. The driver of change may come from the change of market structure, the demand for specialist advice, the strategy requirement for bundle negotiation for the major contract, and the changing needs for services.

According to Paesbrughe, Rangarajan, Sharma, Syam, and Jha (2017), the engaging with the purchasing function can be divided into four sub-categories: (1) priced-focus, where the price is the primary consideration for purchasing; (2) cost-focus: where the total cost of acquisition is the primary determinant; (3) solution focus: where his functional requirements are met with the need; and (4) strategy focus: where the purchasing strategy considers the purchasing. Each stage of purchasing evolution requires distinct sales strategies by selling firms, and any mismatch of purchasing evolution and sales strategy may be detrimental to sales.

Michael, Rochford and Wotruba (2003) study reveals that the impact to the shift change comes when the newness of the product is introduced. It can be the new product to the industry, or the new product to the firm. The success of the transformation comes along with the technical training. Hence, technical training constitutes the success of service-oriented product purchase.

2.5 Types of Sales Force

Moncrief (1988) defined five different types of sales force as follows:

2.5.1 First the Institutional Seller. This type of salesperson performs all the necessary sales activities from prospecting, preparing, presenting, handling objections, closing the sales, and following up. The entire sales process is implemented, enforced, and controlled; this type of salesperson is also involved in building customer relationships through entertainment activities. They are to ensure

the customer has the required knowledge about the product and services through training and business case development.

2.5.2 The second type is the Order Taker. This type of salesperson will obtain the new purchasing order. The primary activity is to maintain a good relationship with the customers.

2.5.3 The third type is the Missionary Seller. This type of salesperson's primary objective is to ensure that the knowledge about the product is transferred to the customers. They are not keen on the order.

2.5.4 The fourth type is the Trade Service. The salesperson of this type works with product resellers, such as wholesalers, retailers, and brokers. The last type is the Trade Seller. The trade seller deals with lump sum trading in the bidding activity. They prepare the bidding proposal, product technical specification, price, and sometimes the financial supporting option for the customer.

Among different types of salespersons, different types require different strategies. This means the exploration of the sales in different customer industries shall be explored.

2.6 The Industrial Sales Strategic Landscape

According to Rink and Swan (1979), industrial sales consist of multiple dimensions of internal and external factors that impact sales including, type of customers, type of firms, function of the personnel dealing in product acquisition, the structure of the customer organizations, price-level, distribution infrastructure, the economic situation, the degree of competition, and variations of offerings. These factors vary according to the lifecycle of the product.

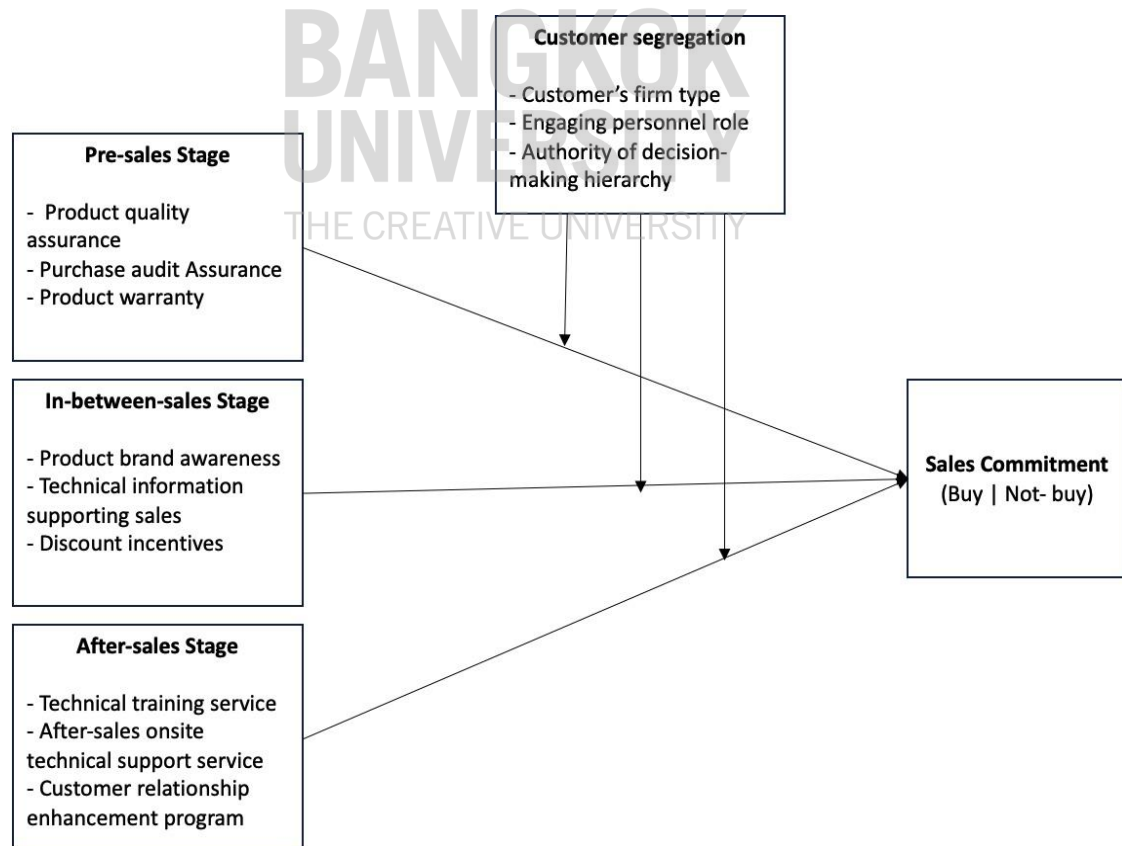
The first step is to segregate the sales life cycle into phases. For this study, the sales activities are split into three phases of pre-sales, in-between-sales, and post-sales. The presales phase is the introduction of products to market. This phase happens before any sales are taking place. During the introduction, customers are seeking information regarding the product, the matching of functions, the reputation of the sellers, and the quality of the product, the distribution and other quality assurance.

The second phase of the in-between sales is where the conclusion of selling is taking place. At this stage, the customer is concerning about the actual sales, including pricing and discounting term, the assurance of the class-form-brand properties of the product, and the technical information to ensure the correct matching confirmation of the products to the needs.

The third step happens after the decision has been made and the product is put into the operational phase. In the after-sales phase, the technical training on the product usage, the after-sales technical support, and the customer relationship enrichment are the keys for the product support and the future purchase repetition.

This study also determines the different types of customer's firm type, different roles of personnel involved in the sales process, and the customer's organizational structure that impact in the authority to commit in the decision-making.

Figure 2.1: Theoretical Framework



This leads to the following research questions (RQ)

RQ1: What types of salesperson activities impact the decision to buy in the pre-sales phase?

In the pre-sales phase, three types of activities are aggregately conducted—the product quality assurance that match the needs for customers operations, the information the support the auditing process of the customer buying regulations, and the product warranty to cover during the life of product in operation.

RQ2: What types of salesperson activities impact the decision to buy in the in-between-sales phase?

In the in-between-sales (during-sales) phase, three types of sales activities are imposed—the assurance of the class-form-brand through the brand awareness activities, the required technical information feed for the correct product-needs matching, and the discount incentive of volume purchasing.

RQ3: What types of salesperson activities impact the decision to buy in the after-sales phase?

For the after-sales phase, the sale activities are continued for product performance and future repetition of purchasing—Technical training, after-sales on-site technical support, and customer relationship enrichment.

RQ4: What kind of sales strategy to be employed when the condition of customers varies?

When engaging the customer with sales, different conditions of the customer do impact the decision-making. These different conditions are to be examined—Different type of the customer's firm (factory, dealer, or end-product reseller), different roles of engaging customers (the end-user, the budget holder, or the procurement personnel), and the procuring authorization capability of the engaging personnel (the executive, the user department, or the procurement)

CHAPTER 3

METHODOLOGY

3.1 Research Design Methodology

The quantitative survey is a way to observe the target group's feedback on our service or sales structure. The design of the survey questionnaire is based on a 5-point Likert scale. 1 is not important to the decision-making process, 2 is "somewhat important," 3 is the general impact of the decision, 4 is important for consideration, and 5 is necessary for the decision-making process. Figure 1 shows the selective choices for each question.

Figure 3.1: Selective Score for the Questionnaire



The Design of Experiment (DoE) approach is selected as the basis of questionnaire design (Bower, n.d.). DoE is a quantitative approach that is suitable for controlled experimental research. It allows for multiple input factors to be manipulated, determining their effect on a desired output (response). By manipulating multiple inputs at the same time, DOE can identify important interactions that may be missed when experimenting with one factor at a time. All possible combinations can be investigated, or only a portion of the possible combinations.

The objective of the DoE is to determine whether a factor or any combination of factors has any impact on the response (JMP Statistical Discovery LLC, n.d.). It also shows the optimum level of effort to spend on the factors to optimize the response. DoE is suitable to determine multiple factors that may influence decision-making. Determining one factor at a time may not reflect the combination of factors. The key idea of DoE is to offer a combining set of factors at the same time and ask the respondents what impact each different combination of factors has on their decision-making.

3.2 Design of Questionnaire

For this study, we split the sales activities into 3 phases: the pre-sales, the during-sales, and the post-sales phases. For the pre-sales phase, three types of activities and archetypes are involved: quality assurance, auditing requirements, and warranty certification. Under the during-sales phase, three activities are involved: brand awareness, technical information, the discount offering, and training. Under the after-sales activities that may impact the decision—the technical training, the onsite technical support, and the customer relationship program—we examine which factors of each phase are important during each phase of the customers' buying.

We asked the respondents to rate the factors based on the 5-level choices of importance in each phase based on the level of impact they have on decision-making. This way, we would recognize and emphasize the factors in which phase we should spend our effort.

3.3 Data Collection

The target of our survey is all our customers who have recently bought our products to observe the real case of those who are currently using our products in order to know the real case of using our products and services. Then this group will reply to us in the way that they need us to improve our products or services. The survey will be divided into three parts to determine which factor in each section is most important to the customer, which are the pre-sales, during-sales, and after-sales sections.

We distributed the online questionnaire to 40 of our existing customers based on their roles in the procurement process, their level in the organization, and the type of market segment they are in. We asked all of them to respond.

The role in the procurement process is divided into 3 types: the line users, who are the actual users of the product; the budget holder, who is the person who authorizes the use of the budget; and the procurement officer, who governs the procurement process.

The level of buyers in their organization consists of the senior management/executives who have high authority to conquer the buying, the

manager/supervisor who can communicate about the needs to procure, and the line officer who is the real user of the product.

The type of industry of the customers can be divided into 3 types: the factory that buys the product for their manufacturing process, the dealer who distributes the product in the local market, or the store that retails the product to the end-customers.

After collecting all the surveys, we list them in the table below in order to look at each topic that has the highest score in each section to know what the focus of our customer is first. Table 3.1 shows the questionnaire with the sample collected data.



Table 3.1: The Survey Score After Collection the Data

What is your company business?	What is your level in the organization?	What is your role in acquisition?	How much is assurance certificate important to your buying decision?	How much is audit verification important to your buying decision?	How much is warranty claim important to your buying decision?	How much is brand awareness important to your repeat buying decision?	How much is pre-sales technical support information important to your repeat buying decision?	How much do you satisfy with our discount incentive?	How much is technical training important to your buying decision?	How much is outside technical support important to your buying decision?	How much do you satisfy with our customer relationship enhancement?
Dealer	Senior Management/Executive	Procurement	5	5	5	5	5	5	4	5	5
Factory / User	Senior Management/Executive	User	3	3	3	4	4	3	3	4	4
Factory / User	Senior Management/Executive	Procurement	1	1	1	1	1	1	1	1	1
Factory / User	Senior Management/Executive	Procurement	5	3	5	5	5	3	5	5	4
Factory / User	Management/Supervisor	User	3	3	4	4	3	4	4	4	3
Factory / User	Management/Supervisor	Procurement	5	5	5	4	4	3	3	3	5
Factory / User	Management/Supervisor	User	3	3	3	4	5	3	3	4	3
Factory / User	Line Officer	Procurement	3	3	5	4	4	2	3	3	3
Factory / User	Senior Management/Executive	Budget Holder/Controller	4	3	5	5	4	3	4	3	4
Factory / User	Management/Supervisor	User	4	3	3	3	3	4	3	4	5
Factory / User	Line Officer	User	5	5	5	4	4	2	3	3	4
Dealer	Line Officer	User	4	3	4	4	4	4	4	4	4
Factory / User	Senior Management/Executive	User	5	5	5	4	5	4	5	4	5
Factory / User	Management/Supervisor	Procurement	5	5	5	3	4	3	3	3	5
Factory / User	Management/Supervisor	Procurement	2	4	3	1	3	2	1	1	4
Factory / User	Line Officer	User	3	1	3	1	4	3	3	3	5
Factory / User	Management/Supervisor	Procurement	5	5	5	3	4	2	1	1	5
Factory / User	Management/Supervisor	Procurement	5	5	5	3	3	3	3	3	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	1	5	5	2	5	3	3	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	1	5	3	4	4	1	1	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	3	5	5	1	4	1	1	3
Dealer	Senior Management/Executive	Budget Holder/Controller	3	1	4	4	1	3	1	1	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	1	5	5	1	5	1	1	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	3	4	3	3	4	3	4	4
Dealer	Senior Management/Executive	Budget Holder/Controller	3	1	3	3	2	3	1	4	3
Dealer	Senior Management/Executive	Budget Holder/Controller	5	3	5	5	3	5	3	4	5
Factory / User	Management/Supervisor	Procurement	5	5	5	3	3	2	1	1	4
Factory / User	Management/Supervisor	User	3	1	5	5	4	3	4	4	4
Factory / User	Management/Supervisor	User	3	3	5	3	5	1	5	5	5
Factory / User	Management/Supervisor	Procurement	5	5	5	4	1	4	1	1	4
Store	Senior Management/Executive	Budget Holder/Controller	4	1	5	5	1	3	1	3	5
Store	Senior Management/Executive	Budget Holder/Controller	5	1	5	3	1	5	1	1	5
Store	Senior Management/Executive	Budget Holder/Controller	3	1	5	3	1	4	1	3	4
Store	Senior Management/Executive	Budget Holder/Controller	5	1	5	5	4	4	1	5	5
Store	Senior Management/Executive	Budget Holder/Controller	1	1	1	3	1	5	1	3	5
Dealer	Senior Management/Executive	Budget Holder/Controller	5	1	5	5	4	5	3	4	5
Dealer	Senior Management/Executive	Budget Holder/Controller	3	1	5	3	3	4	3	5	5
Store	Senior Management/Executive	Budget Holder/Controller	3	1	3	5	1	4	1	3	5
Factory / User	Management/Supervisor	Procurement	5	5	5	3	4	4	2	4	5
Factory / User	Management/Supervisor	Procurement	5	5	5	1	1	4	1	1	4

**Cronbach's alpha score is 0.65 while the standard score is 0.70.

3.4 Quantitative Methods

Since the outcome of our correspondent is either "buy" or "not buy," The binary value of the outcome makes logistic regression a suitable method for our analysis. Logistic regression is the process of modeling the probability of a discrete outcome given an input variable. The most common logistic regression model is a binary outcome, such as true/false, yes/no, etc. (Edgar & Manz, 2017). Logistic regression is a useful analysis method for classification problems where you are trying to determine if a new sample fits best into a category. The output of logistic regression is the probability that the factors or the combination of factors that appear together will have an impact on the result (Bartosik, 2021). The following steps are performed for the analysis with logistic regression:

Step 1: Assign nominal value to the column (e.g. procurement =1; budget holder =0.5; user =0)

Step 2: Evaluate Logit Value

Logit_Score = Intercept + (b1 x Assurance) + (b2 x Audit) + (b3 x Warranty) + ... + (b9 x CRM)
 = Intercept + SUMPRODUCT (range of co-eff. b1-b9, range of value of variables)

Step 3: Determine exponential of Logit_Score
 = EXP (Logit_Score)

Step 4: Calculate probability.

$$P(X) = \frac{e^x}{1+e^x}$$

$$= \text{EXP_Value} / (1 + \text{EXP_Value})$$

Step 5: Evaluate Likelihood Value

= If (Nominal_Variable, EXP_Value, (1 – EXP_Value))

Step 6: Evaluate Likelihood Value

= LN (Likelihood_Value)

Step 7: Evaluate sum of loglikelihood value

= SUM (All Loglikelihood_Value)

Step 8: Use Solver Analysis Tool to do the final analysis

Run the Solver tool from Data

Set Objective at the cell of Sum (Loglikelihoods_Value)

Set Changing Variable Cell to the range of all Coefficients (b0-b9)

then click OK

Keep Solver Solution then click OK

After the completion of the binary logistic regression analysis in excel, you will see that our assumed variable value is substituted with the new analysis value and these values are the correct regression variables value of our dataset.

We can consider the result of any specific data, if we are meeting and selling our product to the person form “Procurement”, if we put effort on assurance = 5, audit = 5, warranty = 5, awareness = 3, technology information = 3, discount = 2, training = 1, outside support = 1, and CRM = 4, it most likely that we can sell the product with probability of 73.60%

CHAPTER 4

FINDINGS

The results after using logistic regression in Excel show the possibility of selling opportunities to the positions in the organization and the percentage of success when approaching those specific positions and organizations. The result of three positions that have the power to make a buying decision shows the importance of each position approaching the decision-maker directly to increase the opportunity of selling our products.

4.1 The Logistic Regression of Each Role

When you approach the customer company, you should find the right person who has a chance to make a buying decision to present your product because it will waste your time if you present to the position that can listen to you and report to the decision-maker again. It also takes a lot of time and process before they will decide to buy your product as well. The message that you present may not be the same as it was written in the report, which means the staff may not present your strength in the report. The result of this regression will help you to focus on the right position before you make an appointment with your customer to present your products.

Table 4.1: Procurement

Regression Statistics	
Multiple R	0.731
R Square	0.534
Adjusted R Square	0.394
Standard Error	0.376
Observations	40

ANOVA					
	df	SS	MS	F	Significance F
Regression	9	4.861	0.540	3.822	0.003
Residual	30	4.239	0.141		
Total	39	9.100			

(Continued)

Table 4.1 (Continued): Procurement

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.426	0.373	1.142	0.263	-0.336	1.187	-0.336	1.187
Assurance	-0.075	0.109	-0.690	0.495	-0.298	0.148	-0.298	0.148
Audit	0.188	0.051	3.674	0.001	0.083	0.292	0.083	0.292
Warranty	0.081	0.098	0.829	0.414	-0.119	0.282	-0.119	0.282
Awareness	-0.016	0.066	-0.243	0.810	-0.151	0.119	-0.151	0.119
TechInfo	0.035	0.078	0.443	0.661	-0.125	0.195	-0.125	0.195
Discount	-0.038	0.085	-0.454	0.653	-0.212	0.135	-0.212	0.135
Training	-0.058	0.081	-0.718	0.478	-0.223	0.107	-0.223	0.107
Onsite_Support	-0.054	0.074	-0.727	0.473	-0.204	0.097	-0.204	0.097
CRM	-0.059	0.084	-0.708	0.485	-0.231	0.112	-0.231	0.112

Procurement has the lowest influence when making purchasing decisions.

Audit is the most important factor that procurement sees as important, with a significant level of 1%.

The most interesting procurement position is the auditing process, which is important information. We should prepare the presentation by using more data in the auditing certificate than in the past because it will attract the audience better with their interest in the topic. The result guides us to prepare the right information before making an appointment with procurement if we need to present the product that has this position in the meeting.

Table 4.2: Budget Holder

Regression Statistics	
Multiple R	0.904
R Square	0.816
Adjusted R Squar	0.761
Standard Error	0.242
Observations	40

ANOVA					
	df	SS	MS	F	Significance F
Regression	9	7.837	0.871	14.816	0.000
Residual	30	1.763	0.059		
Total	39	9.600			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.142	0.240	0.589	0.560	-0.349	0.633	-0.349	0.633
Assurance	0.086	0.070	1.216	0.234	-0.058	0.230	-0.058	0.230
Audit	-0.172	0.033	-5.212	0.000	-0.239	-0.104	-0.239	-0.104
Warranty	0.033	0.063	0.516	0.610	-0.097	0.162	-0.097	0.162
Awareness	0.032	0.043	0.757	0.455	-0.055	0.119	-0.055	0.119
TechInfo	-0.078	0.051	-1.549	0.132	-0.181	0.025	-0.181	0.025
Discount	0.064	0.055	1.171	0.251	-0.048	0.176	-0.048	0.176
Training	-0.144	0.052	-2.759	0.010	-0.250	-0.037	-0.250	-0.037
Onsite_Support	0.090	0.048	1.885	0.069	-0.007	0.187	-0.007	0.187
CRM	0.050	0.054	0.924	0.363	-0.061	0.161	-0.061	0.161

Budget holders have the lowest influence when making purchasing decisions. Audit training is the most important factor that budget holders see as important, with a significant level of 1%.

The budget holder is one of the most important positions in every company. They will calculate every digit of their budget before spending it on the product. The results show that they are interested in the auditing process and training, so we need to place those topics in our presentation as well to attract their attention.

Table 4.3: Users

Regression Statistics								
Multiple R	0.661							
R Square	0.437							
Adjusted R Square	0.268							
Standard Error	0.375							
Observations	40.000							

ANOVA					
	df	SS	MS	F	Significance F
Regression	9.000	3.279	0.364	2.590	0.024
Residual	30.000	4.221	0.141		
Total	39.000	7.500			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.433	0.372	1.163	0.254	-0.327	1.192	-0.327	1.192
Assurance	-0.010	0.109	-0.094	0.926	-0.233	0.212	-0.233	0.212
Audit	-0.016	0.051	-0.314	0.756	-0.120	0.088	-0.120	0.088
Warranty	-0.114	0.098	-1.164	0.254	-0.314	0.086	-0.314	0.086
Awareness	-0.016	0.066	-0.246	0.807	-0.151	0.118	-0.151	0.118
TechInfo	0.044	0.078	0.557	0.582	-0.116	0.203	-0.116	0.203
Discount	-0.026	0.085	-0.302	0.765	-0.198	0.147	-0.198	0.147
Training	0.202	0.081	2.503	0.018	0.037	0.366	0.037	0.366
Onsite_Support	-0.036	0.074	-0.490	0.628	-0.186	0.114	-0.186	0.114
CRM	0.009	0.084	0.112	0.912	-0.162	0.181	-0.162	0.181

Users have the lowest influence when making purchasing decisions. Training is the most important factor that users see as important, with a significant level of 5%.

This position is normally held by the worker in the factory who uses our product every working day. Although they do not have the power to decide in buying compared to procurement and budget holders, they are an important factor in terms of the actual performance of the product that they need in their field of work. This position can persuade the other position to buy our product as well if we can get their attention to what they focus on when they use the product in the working field. The results show that this position is looking for training sessions before selling the product. Then, we need to prepare the technical staff to explain to them the safety of

using our product manual to provide them with an understanding of our product. If it is good and improves their performance in the manufacture, this point will help us to lead this position to feedback on the decision that this brand has better quality than the other brand.

The results show that each position will have its own focus on buying the products, which is a clue for us when we approach each position with the target company. As shown in Table 1, we need to focus mainly on the audit process to increase the opportunity to sell products to procurement departments due to the result showing that procurement will mainly focus on the auditing process. Next in table 2, we need to approach the auditing and training process with the budget holder because this position is aware of those two topics in their procurement process. Finally, in Table 3, we need to focus on the training process when approaching users, as their main focus is.

4.1.1 After completion of the logistic regression, the result will show the possibility of approaching each position in the specific topic as in 4.1.

Table 4.4: Probability in Approaching Each Role

Role	Role_Procurement	Role_BudgetHolder	Role_User	Multinomial_Role	Assurance	Audit	Warranty	Awareness	TechInfo	Discount	Training	Onsite_Support	CRM	Logistic Score_Procurement (Logit-Procurement) (x)	Exponential (e^x)	Probability - Procurement P(x) = e^x/(1+e^x)
Procurement	1	0	0	0	5	5	5	3	3	2	1	1	4	1.024	2.783	0.736
Procurement	1	0	0	0	5	5	5	3	4	2	1	1	5	0.999	2.715	0.731
Procurement	1	0	0	0	2	4	3	1	3	2	1	1	4	0.931	2.538	0.717
Procurement	1	0	0	0	5	5	5	1	1	4	1	1	4	0.909	2.483	0.713
Procurement	1	0	0	0	5	5	5	4	1	4	1	1	4	0.861	2.366	0.703
User	0	0	1	2	5	5	5	4	4	2	3	3	4	0.819	2.269	0.694
Procurement	1	0	0	0	5	5	5	3	4	3	3	3	5	0.737	2.090	0.676
Procurement	1	0	0	0	5	5	5	4	4	3	3	3	5	0.721	2.057	0.673
Procurement	1	0	0	0	5	5	5	3	4	4	2	4	5	0.703	2.020	0.669
Procurement	1	0	0	0	5	5	5	4	3	3	3	3	5	0.687	1.987	0.665
Procurement	1	0	0	0	3	3	5	4	4	2	3	3	3	0.654	1.923	0.658
User	0	0	1	2	5	5	5	4	5	4	5	4	5	0.548	1.729	0.634
Budget Holder/Controller	0	1	0	1	5	3	5	5	1	4	1	1	3	0.529	1.698	0.629
Procurement	1	0	0	0	5	5	5	5	5	5	4	5	5	0.498	1.645	0.622
User	0	0	1	2	3	3	3	4	5	3	3	4	3	0.434	1.543	0.607
Procurement	1	0	0	0	1	1	1	1	1	1	1	1	1	0.429	1.535	0.606
Procurement	1	0	0	0	4	3	5	5	4	3	4	3	4	0.407	1.502	0.600
User	0	0	1	2	3	3	5	3	5	1	5	5	5	0.401	1.494	0.599
User	0	0	1	2	3	3	4	4	3	4	4	4	3	0.349	1.418	0.586
User	0	0	1	2	3	3	3	4	4	3	3	4	4	0.340	1.405	0.584
User	0	0	1	2	4	3	4	4	4	4	4	4	4	0.249	1.283	0.562
Budget Holder/Controller	0	1	0	1	5	3	4	3	3	4	3	4	4	0.213	1.238	0.553
Procurement	1	0	0	0	5	3	5	5	5	3	5	5	4	0.201	1.222	0.550
Budget Holder/Controller	0	1	0	1	5	1	5	3	4	4	1	1	5	0.171	1.187	0.543
Budget Holder/Controller	0	1	0	1	3	1	5	3	1	4	1	3	4	0.170	1.186	0.542
Budget Holder/Controller	0	1	0	1	5	3	5	5	3	5	3	4	5	0.165	1.179	0.541
Budget Holder/Controller	0	1	0	1	3	1	4	4	1	3	1	1	5	0.159	1.172	0.540
User	0	0	1	2	4	3	3	3	3	4	3	4	5	0.148	1.159	0.537
Budget Holder/Controller	0	1	0	1	3	1	3	3	2	3	1	4	3	0.087	1.091	0.522
User	0	0	1	2	3	1	5	5	4	3	4	4	4	0.053	1.055	0.513
Budget Holder/Controller	0	1	0	1	4	1	5	5	1	3	1	3	5	0.042	1.043	0.510
Budget Holder/Controller	0	1	0	1	5	1	5	3	1	5	1	1	5	0.029	1.029	0.507
User	0	0	1	2	3	1	3	1	4	3	3	3	5	0.007	1.007	0.502
Budget Holder/Controller	0	1	0	1	5	1	5	5	1	5	1	1	5	-0.003	0.997	0.499
Budget Holder/Controller	0	1	0	1	3	1	5	3	3	4	3	5	5	-0.043	0.958	0.489
Budget Holder/Controller	0	1	0	1	5	1	5	5	4	4	1	5	5	-0.075	0.928	0.481
Budget Holder/Controller	0	1	0	1	3	1	3	5	1	4	1	3	5	-0.084	0.919	0.479
Budget Holder/Controller	0	1	0	1	1	1	1	3	1	5	1	3	5	-0.102	0.903	0.474
Budget Holder/Controller	0	1	0	1	5	1	5	5	4	5	3	4	5	-0.176	0.839	0.456
Budget Holder/Controller	0	1	0	1	5	1	5	5	2	5	3	3	5	-0.192	0.826	0.452

The probability of each role is an important clue for approaching the customer by selecting from the highest percentage first.

The table shows the probability of selling products to each position when we approach them with the topic that they focus on, the procurement process. The table shows that procurement has the highest percentage of success when approached with the auditing process. This information suggests that we should approach the procurement department to see if we can find in each company an easier way to sell our products.

4.2 The Logistic Regression of Each Organization

The organizational level is important when selling the products. You may waste your time if you approach someone who does not have a buying decision because your presentation will not be directed at the decision-maker of that company. You should know before making an appointment with your customer to include the decision-maker in your meeting. The result of this regression will help you determine the right organizational level in each company and who will be a decision-maker for you. It also guides the focus of each level in the organization.

Table 4.5: Senior

Regression Statistics	
Multiple R	0.717
R Square	0.514
Adjusted R Square	0.368
Standard Error	0.401
Observations	40

ANOVA

	df	SS	MS	F	Significance F
Regression	9	5.084	0.565	3.519	0.004
Residual	30	4.816	0.161		
Total	39	9.900			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.560	0.397	1.409	0.169	-0.251	1.372	-0.251	1.372
Assurance	0.126	0.116	1.079	0.289	-0.112	0.363	-0.112	0.363
Audit	-0.161	0.054	-2.949	0.006	-0.272	-0.049	-0.272	-0.049
Warranty	-0.091	0.105	-0.872	0.390	-0.305	0.123	-0.305	0.123
Awareness	0.093	0.070	1.326	0.195	-0.050	0.237	-0.050	0.237
TechInfo	-0.044	0.083	-0.529	0.601	-0.215	0.126	-0.215	0.126
Discount	0.070	0.090	0.771	0.447	-0.115	0.254	-0.115	0.254
Training	-0.021	0.086	-0.244	0.809	-0.197	0.155	-0.197	0.155
Onsite_Support	0.035	0.079	0.441	0.662	-0.126	0.195	-0.126	0.195
CRM	-0.041	0.090	-0.460	0.649	-0.224	0.142	-0.224	0.142

Senior has the lowest influence when making purchasing decisions. Audit is the most important factor that seniors see as important with a significant level of 1%.

Table 4.6: Supervisor

Regression Statistics	
Multiple R	0.666
R Square	0.444
Adjusted R Square	0.277
Standard Error	0.411
Observations	40

ANOVA

	df	SS	MS	F	Significance F
Regression	9	4.037	0.449	2.658	0.021
Residual	30	5.063	0.169		
Total	39	9.100			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.101	0.407	0.249	0.805	-0.731	0.933	-0.731	0.933
Assurance	-0.136	0.119	-1.143	0.262	-0.380	0.107	-0.380	0.107
Audit	0.191	0.056	3.417	0.002	0.077	0.305	0.077	0.305
Warranty	0.091	0.107	0.847	0.404	-0.128	0.310	-0.128	0.310
Awareness	-0.059	0.072	-0.823	0.417	-0.207	0.088	-0.207	0.088
TechInfo	-0.001	0.086	-0.012	0.991	-0.176	0.174	-0.176	0.174
Discount	-0.043	0.093	-0.463	0.647	-0.232	0.146	-0.232	0.146
Training	-0.036	0.088	-0.408	0.686	-0.216	0.144	-0.216	0.144
Onsite_Support	0.003	0.081	0.042	0.967	-0.161	0.168	-0.161	0.168
CRM	0.074	0.092	0.801	0.429	-0.114	0.261	-0.114	0.261

Supervisors have the lowest influence when making purchasing decisions. Audit is the most important factor that supervisors see as important, with a significant level of 1%.

Table 4.7: Officer

Regression Statistics	
Multiple R	0.364
R Square	0.133
Adjusted R Square	-0.127
Standard Error	0.323
Observations	40

ANOVA

	df	SS	MS	F	Significance F
Regression	9	0.478	0.053	0.510	0.855
Residual	30	3.122	0.104		
Total	39	3.600			

(Continued)

Table 4.7 (Continued): Officer

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.339	0.320	1.058	0.298	-0.315	0.992	-0.315	0.992
Assurance	0.011	0.094	0.116	0.909	-0.181	0.202	-0.181	0.202
Audit	-0.030	0.044	-0.688	0.497	-0.120	0.059	-0.120	0.059
Warranty	0.000	0.084	0.005	0.996	-0.172	0.173	-0.172	0.173
Awareness	-0.034	0.057	-0.599	0.554	-0.150	0.082	-0.150	0.082
TechInfo	0.045	0.067	0.672	0.507	-0.092	0.182	-0.092	0.182
Discount	-0.027	0.073	-0.368	0.716	-0.175	0.122	-0.175	0.122
Training	0.057	0.069	0.823	0.417	-0.085	0.199	-0.085	0.199
Onsite_Support	-0.038	0.063	-0.602	0.552	-0.167	0.091	-0.167	0.091
CRM	-0.032	0.072	-0.449	0.657	-0.180	0.115	-0.180	0.115

Officer has no significant factor in the decision-making process.

The result shows no significant factor when the person who is involved in the procurement process is at the user level. This indicates that in the sale of this product, there are no outstanding relevant factors for the sales rep. to be aware of.

4.2.1 After completion of the logistic regression, the result will show the possibility of approaching each organization level in the specific topic, as in 4.2.

Table 4.8: Probability in Approaching Each Level in Organization

Org. Level	Org.-Senior	Org.-Sup	Org.-Officer	Assurance	Audit	Warranty	Awareness	TechInfo	Discount	Training	Onsite_Support	CRM	Logistic Score_Procurement (Logit-Procurement) (x)	Exponential (e^x)	Probability - Procurement P(x) = e^x/(1+e^x)
Senior Management/Executive	1	0	0	5	1	5	5	1	5	1	1	5	1.150	3.157	0.759
Senior Management/Executive	1	0	0	5	1	5	5	2	5	3	3	5	1.133	3.104	0.756
Senior Management/Executive	1	0	0	5	1	5	5	4	4	1	5	5	1.086	2.963	0.748
Senior Management/Executive	1	0	0	3	1	3	5	1	4	1	3	5	1.081	2.947	0.747
Senior Management/Executive	1	0	0	5	1	5	5	4	5	3	4	5	1.079	2.942	0.746
Senior Management/Executive	1	0	0	5	1	5	3	1	5	1	1	5	0.963	2.620	0.724
Senior Management/Executive	1	0	0	4	1	5	5	1	3	1	3	5	0.954	2.596	0.722
Senior Management/Executive	1	0	0	3	1	3	3	2	3	1	4	3	0.897	2.453	0.710
Senior Management/Executive	1	0	0	1	1	1	3	1	5	1	3	5	0.895	2.448	0.710
Senior Management/Executive	1	0	0	5	3	5	5	1	4	1	1	3	0.841	2.319	0.699
Senior Management/Executive	1	0	0	5	3	5	5	3	5	3	4	5	0.802	2.230	0.690
Senior Management/Executive	1	0	0	5	1	5	3	4	4	1	1	5	0.761	2.140	0.682
Senior Management/Executive	1	0	0	3	1	4	4	1	3	1	1	5	0.757	2.132	0.681
Senior Management/Executive	1	0	0	3	1	4	3	1	4	1	3	4	0.753	2.122	0.680
Management/Supervisor	0	1	0	3	1	5	5	4	3	4	4	4	0.709	2.031	0.670
Senior Management/Executive	1	0	0	5	3	4	3	3	4	3	4	4	0.678	1.971	0.663
Senior Management/Executive	1	0	0	3	1	5	3	3	4	3	5	5	0.650	1.916	0.657
Senior Management/Executive	1	0	0	5	3	5	5	5	3	5	5	4	0.608	1.837	0.648
Management/Supervisor	0	1	0	4	3	3	3	3	4	3	4	5	0.603	1.827	0.646
Line Officer	0	0	1	4	3	4	4	4	4	4	4	4	0.581	1.788	0.641
Management/Supervisor	0	1	0	3	3	4	4	3	4	4	4	3	0.541	1.717	0.632
Senior Management/Executive	1	0	0	1	1	1	1	1	1	1	1	1	0.525	1.691	0.628
Senior Management/Executive	1	0	0	3	3	3	4	4	3	3	4	4	0.498	1.645	0.622
Management/Supervisor	0	1	0	3	3	3	4	5	3	3	4	3	0.495	1.640	0.621
Senior Management/Executive	1	0	0	4	3	5	5	4	3	4	3	4	0.479	1.614	0.617
Line Officer	0	0	1	3	1	3	1	4	3	3	3	5	0.463	1.589	0.614
Senior Management/Executive	1	0	0	5	5	5	5	5	5	4	5	5	0.406	1.501	0.600
Management/Supervisor	0	1	0	5	5	5	4	1	4	1	1	4	0.386	1.471	0.595
Line Officer	0	0	1	3	3	5	4	4	2	3	3	3	0.252	1.287	0.563
Management/Supervisor	0	1	0	5	5	5	4	3	3	3	3	5	0.214	1.238	0.553
Management/Supervisor	0	1	0	5	5	5	3	4	4	2	4	5	0.202	1.223	0.550
Senior Management/Executive	1	0	0	5	5	5	4	5	4	5	4	5	0.188	1.207	0.547
Management/Supervisor	0	1	0	5	5	5	4	4	3	3	3	5	0.170	1.185	0.542
Line Officer	0	0	1	5	5	5	4	4	2	3	3	4	0.141	1.152	0.535
Management/Supervisor	0	1	0	5	5	5	1	1	4	1	1	4	0.106	1.112	0.526
Management/Supervisor	0	1	0	5	5	5	3	4	3	3	3	5	0.076	1.079	0.519
Management/Supervisor	0	1	0	5	5	5	3	3	2	1	1	4	0.065	1.067	0.516
Management/Supervisor	0	1	0	3	3	5	3	5	1	5	5	5	-0.010	0.990	0.497
Management/Supervisor	0	1	0	5	5	5	3	4	2	1	1	5	-0.021	0.980	0.495
Management/Supervisor	0	1	0	2	4	3	1	3	2	1	1	4	-0.156	0.856	0.461

The probability of each level is an important clue for approaching the customer by selecting the highest percentage first.

The results show that the probability of approaching a higher level in an organization has a higher percentage in selling products because those people can decide immediately if they think it is a valuable and reasonable deal for them. Our work will be much easier when we know who we should contact in each company, and it will help us save time because each company will have many buying processes.

4.3 The Logistic Regression of Each Industry

According to our distribution channel, we have three main channels to explore our products are dealer, factory, and store. The results show which topic we should focus on when we have a business meeting with each of those channels to understand what they really need from our service or product.

Table 4.9: Dealer

Regression Statistics	
Multiple R	0.587
R Square	0.345
Adjusted R Square	0.148
Standard Error	0.428
Observations	40

ANOVA

	df	SS	MS	F	Significance F
Regression	9	2.896	0.322	1.753	0.120
Residual	30	5.504	0.183		
Total	39	8.400			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.092	0.425	-0.217	0.830	-0.960	0.776	-0.960	0.776
Assurance	0.121	0.124	0.973	0.338	-0.133	0.375	-0.133	0.375
Audit	-0.118	0.058	-2.027	0.052	-0.237	0.001	-0.237	0.001
Warranty	0.000	0.112	-0.001	0.999	-0.229	0.228	-0.229	0.228
Awareness	0.003	0.075	0.043	0.966	-0.150	0.157	-0.150	0.157
TechInfo	0.039	0.089	0.436	0.666	-0.143	0.221	-0.143	0.221
Discount	0.168	0.097	1.737	0.093	-0.029	0.365	-0.029	0.365
Training	0.025	0.092	0.271	0.788	-0.163	0.213	-0.163	0.213
Onsite_Support	-0.039	0.084	-0.464	0.646	-0.210	0.133	-0.210	0.133
CRM	-0.097	0.096	-1.015	0.318	-0.293	0.098	-0.293	0.098

Dealers have the lowest influence when making purchasing decisions. Audit certificate and discount are the most important factors when approaching a dealer under a significant level of 10%.

There are only 2 factors that appear to be significant to the activities when dealing with the dealer. Both the audit certificate and the discount are significant under the 0.1 value. That means both factors are important to help the sales, but there may be other factors that are deemed important when dealing with this type of buyer. There is no outstanding factor in this buyer category. This suggests a follow-up interview should be conducted to confirm the factors that have impacted the buying decision for the dealers. The dealer is our partner and will help us explore our product in their area of service. They are important to us because they are the key to the success of our company in launching our product in all markets at the same time. Then, we need to focus their attention on our product, and their feedback is a good way for us to improve our service or product. The result shows that dealers focus on audit certificates more than others. We should prepare as much as we can for the audit certificate of our product to support their sales because if they can sell us more easily, they will focus more on our product to make a profit.

Table 4.10: Factory

Regression Statistics	
Multiple R	0.849
R Square	0.720
Adjusted R Square	0.636
Standard Error	0.304
Observations	40

ANOVA

	df	SS	MS	F	Significance F
Regression	9	7.131	0.792	8.585	0.000
Residual	30	2.769	0.092		
Total	39	9.900			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.119	0.301	3.712	0.001	0.503	1.734	0.503	1.734
Assurance	-0.046	0.088	-0.518	0.608	-0.226	0.135	-0.226	0.135
Audit	0.135	0.041	3.270	0.003	0.051	0.219	0.051	0.219
Warranty	-0.027	0.079	-0.338	0.738	-0.189	0.135	-0.189	0.135
Awareness	-0.049	0.053	-0.921	0.364	-0.158	0.060	-0.158	0.060
TechInfo	0.035	0.063	0.548	0.588	-0.095	0.164	-0.095	0.164
Discount	-0.157	0.069	-2.292	0.029	-0.297	-0.017	-0.297	-0.017
Training	0.136	0.065	2.088	0.045	0.003	0.270	0.003	0.270
Onsite_Support	-0.087	0.060	-1.461	0.154	-0.209	0.035	-0.209	0.035
CRM	-0.020	0.068	-0.292	0.772	-0.159	0.119	-0.159	0.119

Factories have the lowest influence when making purchasing decisions. Audit certificates, discounts, and training are the most important factors that the factory sees as important, with a significant level of 5%.

From the perspective of factories that use the product in their production process and directly buy from us, the significant factors are the audit, discount, and training. They need an auditing certificate for the factory editing process. They also consider the terms of the discount and the technical training important to their buying decision.

When the sales representative is dealing directly with factory customers, all three phases are important. In pre-sales, the factory buyers will ask for a certificate for auditing purposes. During the sale, the discount plays an important role in their decisions. After the sale, the factory regards technical on-site after-sales support as important to their decision.

Table 4.11: Store

Regression Statistics	
Multiple R	0.736
R Square	0.542
Adjusted R Square	0.404
Standard Error	0.279
Observations	40

ANOVA					
	df	SS	MS	F	Significance F
Regression	9	2.763	0.307	3.942	0.002
Residual	30	2.337	0.078		
Total	39	5.100			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.026	0.277	-0.096	0.925	-0.592	0.539	-0.592	0.539
Assurance	-0.075	0.081	-0.930	0.360	-0.241	0.090	-0.241	0.090
Audit	-0.017	0.038	-0.448	0.657	-0.094	0.060	-0.094	0.060
Warranty	0.027	0.073	0.370	0.714	-0.122	0.176	-0.122	0.176
Awareness	0.046	0.049	0.936	0.357	-0.054	0.146	-0.054	0.146
TechInfo	-0.074	0.058	-1.266	0.215	-0.192	0.045	-0.192	0.045
Discount	-0.011	0.063	-0.172	0.865	-0.139	0.118	-0.139	0.118
Training	-0.161	0.060	-2.689	0.012	-0.284	-0.039	-0.284	-0.039
Onsite_Support	0.126	0.055	2.302	0.028	0.014	0.238	0.014	0.238
CRM	0.117	0.062	1.875	0.071	-0.010	0.244	-0.010	0.244

The table has shown that stores have the lowest influence when making purchasing decisions. Audit certificates, onsite support, and CRM are the most important factors that the store sees as important, with a significant level of 7%.

For the store, a small store in the industry estate that sells the equipment to the factory in their area may need support from the company when it comes to the technical parts. Both the technical training and the after-sales on-site technical support are deemed important. The sales nature of the store to end users may not need

attention so much in the pre-sales and during-the-sales phases. They need technical knowledge after the sales. This is the point where the selling to the store the company could focus.

Another factor that is significant for the store buyer is the after-sales CRM. The CRM is where the relationships between the company and the retail store are enhanced. The significance of CRM is under 0.1, which indicates a lower priority. However, this activity is also to be considered for building the sales distribution network and is not to be ignored.



Table 4.12: Probability in Approaching Each Channel of Us.

What is your company business?	Ind-Dealer	Ind-Factory	Ind-Store	Assurance	Audit	Warranty	Awareness	TechInfo	Discount	Training	Onsite_Support	CRM	Logistic Score_Procurement (Logit-Procurement) (x)	Exponential (e^x)	Probability - Procurement P(x) = e^x/(1+e^x)
Dealer	1	0	0	5	1	5	5	4	5	3	4	5	0.839	2.315	0.698
Dealer	1	0	0	5	1	5	5	2	5	3	3	5	0.801	2.227	0.690
Dealer	1	0	0	5	1	5	5	1	5	1	1	5	0.790	2.202	0.688
Store	0	0	1	5	1	5	3	1	5	1	1	5	0.783	2.188	0.686
Dealer	1	0	0	5	1	5	3	4	4	1	1	5	0.732	2.079	0.675
Store	0	0	1	5	1	5	5	4	4	1	5	5	0.583	1.791	0.642
Dealer	1	0	0	5	3	5	5	1	4	1	1	3	0.580	1.786	0.641
Dealer	1	0	0	5	3	5	5	3	5	3	4	5	0.565	1.759	0.638
Dealer	1	0	0	5	3	4	3	3	4	3	4	4	0.488	1.628	0.620
Dealer	1	0	0	4	3	4	4	4	4	4	4	4	0.434	1.543	0.607
Factory / User	0	1	0	5	3	5	5	5	3	5	5	4	0.415	1.514	0.602
Dealer	1	0	0	5	5	5	5	5	5	4	5	5	0.393	1.481	0.597
Store	0	0	1	3	1	5	3	1	4	1	3	4	0.392	1.480	0.597
Factory / User	0	1	0	3	1	5	5	4	3	4	4	4	0.384	1.468	0.595
Factory / User	0	1	0	3	3	4	4	3	4	4	4	3	0.371	1.449	0.592
Dealer	1	0	0	3	1	5	3	3	4	3	5	5	0.345	1.412	0.585
Dealer	1	0	0	3	1	3	3	2	3	1	4	3	0.322	1.380	0.580
Factory / User	0	1	0	4	3	5	5	4	3	4	3	4	0.308	1.360	0.576
Store	0	0	1	3	1	3	5	1	4	1	3	5	0.302	1.352	0.575
Factory / User	0	1	0	3	1	3	4	1	3	3	3	5	0.288	1.333	0.571
Factory / User	0	1	0	5	5	5	4	5	4	5	4	5	0.285	1.330	0.571
Factory / User	0	1	0	4	3	3	3	3	4	3	4	5	0.269	1.309	0.567
Factory / User	0	1	0	3	3	3	3	4	5	3	3	4	0.256	1.292	0.564
Store	0	0	1	4	1	5	5	1	3	1	3	5	0.255	1.290	0.563
Factory / User	0	1	0	5	5	5	4	1	4	1	1	4	0.244	1.276	0.561
Factory / User	0	1	0	5	5	5	1	1	4	1	1	4	0.234	1.264	0.558
Store	0	0	1	1	1	1	3	1	5	1	3	5	0.221	1.248	0.555
Dealer	1	0	0	3	1	4	4	1	3	1	1	5	0.209	1.232	0.552
Factory / User	0	1	0	5	5	5	3	4	4	2	4	5	0.168	1.183	0.542
Factory / User	0	1	0	3	3	3	4	4	3	3	4	4	0.120	1.127	0.530
Factory / User	0	1	0	3	3	5	4	4	2	3	3	3	0.088	1.092	0.522
Factory / User	0	1	0	5	5	5	4	4	3	3	3	5	0.068	1.070	0.517
Factory / User	0	1	0	5	5	5	3	4	3	3	3	5	0.064	1.066	0.516
Factory / User	0	1	0	5	5	5	4	3	3	3	3	5	0.029	1.029	0.507
Factory / User	0	1	0	1	1	1	1	1	1	1	1	1	0.010	1.010	0.502
Factory / User	0	1	0	5	5	5	4	4	2	3	3	4	-0.003	0.997	0.499
Factory / User	0	1	0	5	5	5	3	3	2	1	1	4	-0.017	0.983	0.496
Factory / User	0	1	0	5	5	5	3	4	2	1	1	5	-0.076	0.927	0.481
Factory / User	0	1	0	3	3	5	3	5	1	5	5	5	-0.267	0.766	0.434
Factory / User	0	1	0	2	4	3	1	3	2	1	1	4	-0.269	0.764	0.433

There are many channels for selling the product. The probability shows who is the priority to approach first.

The results show who is the most important partner whom we should approach first for the business meeting to increase our sales. All channels have importance to our sales, but we need to focus on the most important first to boost sales as much as we can. Next, we will focus on the second priority onward until the last company on the list. We can combine all the results together, and we find out what channel we need to focus on first. Then, it tells us the main character of each channel so we can make an appointment for a business deal. Moreover, it also shows us the topic that we should prepare for the meeting with them to attract their attention. That information will lead us to success in our goal.

CHAPTER 5

CONCLUSION

5.1 Discussion

The result of the survey, after using regression analysis, shows the opportunity for selling the product and sales expansion through the right channel and factor when approaching the customer. The result guides the way for sales representatives to focus on the right thing when selling the product to a specific channel of ours. The activities that they can join to grow together with us. It can answer the research question below as well.

5.1.1 What factors have impacted the role in the procuring process?

5.1.1.1 What factors impact the Procurement Role in making buying decision?

Answer: According to the study, when the sales representative is dealing with personnel from the procurement department, the area to focus on is the auditing process. Sales representatives need to prepare certification documents as product references for procurement.

5.1.1.2 What factors impact the Budget Holder Role in making buying decision?

Answer: According to the study, when the sales representative is dealing with the budget holder, the area of focus is the auditing process and training. Sales representatives need to prepare certification documents such as product references and a training schedule plan for budget holders.

5.1.1.3 What factors impact the User Role in making buying decision?

Answer: According to the study, when the sales representative is dealing with the users, the area of focus is training. Sales representatives need to prepare a training schedule for users.

5.1.2 What factors have impact to the Position Level in the organization when procuring?

5.1.2.1 What factors impact the senior level in making buying decision?

Answer: According to the study, when the sales representative is dealing with personnel at the senior level, the area to focus on is the auditing process. Sales representatives need to prepare certification documents as product references for meetings with senior level.

5.1.2.2 What factors impact the supervisor level in making buying decision?

Answer: According to the study, when the sales representative is dealing with personnel at the supervisory level, the area to focus on is the auditing process. Sales representatives need to prepare certification documents as product references for meetings with supervisors.

5.1.2.3 What factors impact the officer level in making buying decision?

Answer: Officer has no significant factor in the decision-making process.

5.1.3 What factors have impact on the industry in the procuring process?

5.1.3.1 What factors impact the dealer in making the buying decision?

Answer: According to the study, when the sales representative is dealing with dealers, the area to focus on is the auditing process and discount. Sales representatives need to prepare certification documents such as product references and discount rates for dealers.

5.1.3.2 What factors impact the factory in making the buying decision?

Answer: According to the study, when the sales representative is dealing with factories, the areas to focus on are the auditing process, discounts, and training. Sales representatives need to prepare certification documents such as product references, discount rates, training schedule plans for factories, and a CRM database to support them in store.

5.1.3.3 What factors impact the store's buying decision?

Answer: Training, outside support, and CRM According to the study, when the sales representative is dealing with the store, the areas of focus are training, out-of-service support, and CRM. Sales representatives need to prepare a training

schedule plan, an outside support plan and evaluation, and a CRM database to support them in store.

5.2 Business Implication

This result can guide the upcoming year's sales and supporting activities plan for sales representatives to achieve the company's goals. The sample for this research came from the customers, who were divided into three groups: dealer, store, and factory. Their feedback is important for us to develop our service to support them in the upcoming year. We also understand better how to train our representatives to support their interests when making a buying decision. The design of the activities should also match the focus of each group.

In terms of dealers, the current process is slow in issuing audit certificates for each buying bill. Then we have their feedback to be a reference that we should prepare the certificate immediately when the order has been confirmed by the customer to deliver together with the product. It helps our dealer sell our product more easily and faster when they have this certificate. Next, we need to improve our training course for their own sales representative to sell our product like our representative. Stores also have their sales, but they will focus on only the industrial estate. We know from the result that they would like to be trained more in selling our product, have outside support with their representative, and have a customer database for approaching each customer directly. We will provide our sales to help them more with those problems, to boost their sales and ours as well.

Factories are also an important part of us because they are the people who use our product on their production line. Their feedback is important to improve to keep them with us for the long term and maintain our sales too. We help them pass factory audits easier with our certificate and auditor seminar that we have twice a year for them to understand the criteria of the audit for free.

5.3 Research Limitation

The limitation of this research is that some confidential information about the company cannot be shared with us, such as profit, budget, and margins. We can access most information in the company as the management team provides it. Then, we do research mainly into the sales activities and focus on customer satisfaction to improve the service through the action plan. This limitation may affect the sales forecast for the next project, but we are also confident that our action plan can lead us to reach our goals. Another limitation is the number of survey participants. With logistic regression analysis, the proper number of participants in exploring the three main factors and nine sub-factors should be greater than 300. With limited access to the list of purchased customers, only 40 with direct connections can be reached.

5.4 Conclusion

This study explores the customer buying decisions of different types of customers. We can understand their buying behavior by the topic that they mention when they make a buying decision. We have separated the topic into three main topics, which are pre-sales, during sales, and after sales. In addition, we have three subtopics under each main topic to identify the direction of buyer's decisions. We collect data by using a questionnaire. Then, we use the reliability tool to measure the trustworthiness of the questionnaire. Next, we use linear regression to observe which topics buyers are interested in when they make a buying decision. After we get the result, we use probability to analyze which customer type and position have the highest percentage in selling the products when sales approach to present the products. Finally, we will get to the topic of why buyers are interested when making a buying decision. Sales will acknowledge what they need to prepare to approach each type of customer with whom they are making an appointment.

BIBLIOGRAPHY

- Barber, C. S., & Tietje, B. C. (2006). A new look at industrial sales and its requisite *Journal of Selling and Major Account Management*, 6(4), 27-40.
- Bartosik, A., & Whittingham, H. (2021). Evaluating safety and toxicity. In *The era of artificial intelligence, machine learning, and data science in the pharmaceutical industry* (pp. 119-137). Cambridge, MA: Academic Press.
- Bower, K. M. (n.d.). *What is the design of experiments (DOE)? Learn about quality*. Retrieved from <https://asq.org/quality-resources/design-of-experiments>.
- Edgar, T. W., & Manz, D. O. (2017). Chapter 4-Exploratory study, *Research methods for cyber security* (pp. 95-130). Cambridge, MA: Syngress.
- JMP Statistical Discovery LLC. (n.d.). *Design of experiments*. Retrieved November 3, 2023 from https://www.jmp.com/en_ph/statistics-knowledge-portal/what-is-design-of-experiments.html.
- Michael, M., Rochford, L., & Wotruba, T. R. (2003). How new product introductions affect sales management strategy: The impact of type of “newness” of the new product. *Journal of Product Innovation Management*, 20(4), 270-283.
- Mintzberg, H. (1984). Power and organization life cycles. *The Academy of Management Review*, 9(2), 207–224.
- Mitchell, S. L., & Clark, M. (2019). Reconceptualising product life-cycle theory as stakeholder engagement with non-profit organisations. *Journal of Marketing Management*, 35(1-2), 13-39.
- Moncrief, W. C. (1988). Five types of industrial sales jobs. *Industrial Marketing Management*, 17(2), 161-167.
- Paesbrughe, B., Rangarajan, D., Sharma, A., Syam, N., & Jha, S. (2017). Purchasing-driven sales: Matching sales strategies to the evolution of the purchasing function. *Industrial Marketing Management*, 62, 171-184.
- Rink, D. R., & Swan, J. E. (1979). Product life cycle research: A literature review. *Journal of Business Research*, 7(3), 219-242.

Strahle, W. M., Spiro, R. L., & Acito, F. (2016). Marketing and sales: Strategic alignment and functional implementation. *Journal of Personal Selling & Sales Management*, 16(1), 1-20.





APPENDIX

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Questionnaire

The questionnaire of the research is separated into 4 parts

Part 1: Industrial Hose Buying Decision Elements

Q: What is your company business?

A: A. Factory/User

B. Store

C. Dealer

Q: What is your level in the organization?

A: A. Line Officer

B. Management/Supervisor

C. Senior Management/Executive

Q: What is your role in acquisition?

A: A. User

B. Procurement

C. Budget Holder/Controller

Part 2: Decision-making element combination section (Pre-sales factors)

This part scores from 1 to 5 scales from “not important at all” to “extremely important”

Q: How much is assurance certificate important to your buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much is audit verification important to your buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much is warranty claim important to your buying decision?

A: 1 Not important at all

5 Extremely important

Part 3: Decision-making element combination section (repeat order factors)

This part scores from 1 to 5 scale from “not important at all” to “extremely important”

Q: How much is brand awareness important to your repeat buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much is pre-sales technical support information important to your repeat buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much do you satisfy with our discount incentive?

A: 1 Not important at all

5 Extremely important

Part 4: Decision-making element combination section (after-sales factors)

This part scores from 1 to 5 scale from “not important at all” to “extremely important”

Q: How much is technical training important to your buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much is outside technical support important to your buying decision?

A: 1 Not important at all

5 Extremely important

Q: How much do you satisfy with our customer relationship enhancement?

A: 1 Not important at all

5 Extremely important

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