

**THE FACTORS OF HIGH LEVEL LOGISTICS
SERVICES TO IMPROVE CUSTOMER
SATISFACTION**

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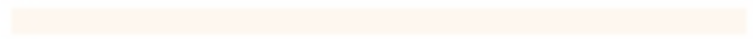
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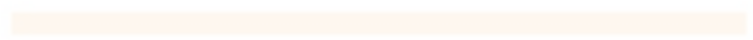
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by

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**Faculty of Entrepreneurship and Business
UNIVERSITI MALAYSIA KELANTAN**

2022/2023

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TABLE OF CONTENTS

TITLE PAGE I

THESIS DECLARATION II

ACKNOWLEDGEMENT III

TABLE OF CONTENTS IV

LIST OF FIGURES VIII

LIST OF TABLES IX

ABSTRACT X

CHAPTER 1: INTRODUCTION 1

1.1 Background of the Study 1

1.2 Problem Statement 5

1.3 Research Questions 6

1.4 Research Objectives 7

1.5 Scope of the study 7

1.6 Significance of Study 8

1.7 Definition of Terms 9

 1.7.1 Customer demand management capability 9

 1.7.2 Innovation capability 10

 1.7.3 Information management capability 11

1.8 Organization of the Proposal 12

CHAPTER 2: LITERATURE REVIEW 13

2.0 Introduction 13

2.1 Underpinning Theory 14

2.2 Previous Study 16

 2.2.1 Customer Satisfaction 17

 2.2.2 Innovation capability 18

 2.2.3 Customer demand management capability 19

 2.2.4 Information management 20

2.3 Hypotheses Statement 22

2.3.1 Independent Variable 1 and Dependent Variable	22
2.3.2 Independent Variable 2 and Dependent Variable	22
2.3.3 Independent Variable 3 and Dependent Variable	23
2.4 Conceptual Framework	23
2.5 Summary	24
CHAPTER 3: RESEARCH METHODOLOGY	25
3.0 Introduction	25
3.1 Research Design	25
3.2 Data Collection Method	26
3.2.1 Primary data collection method	26
3.3 Study Population	26
3.4 Sample Size	28
3.5 Sample Techniques	29
3.6 Research Instrument Development	30
3.7 Measurement of the Variables	34
3.7.1 Nominal Scale	34
3.7.2 Interval scale	35
3.8 Procedure for Data Analysis	36
3.8.1 Pilot Test	36
3.8.2 Frequency Analysis	37
3.8.3 Descriptive Analysis	37
3.8.4 Reliability Analysis	38
3.8.5 Normality Test	39
3.8.6 Pearson's Correlation Coefficient Analysis	39
3.9 Summary	40
CHAPTER 4: DATA ANALYSIS AND FINDINGS	42
4.0 Introduction	42
4.1 Pilot Test	42
4.2 Frequency Analysis	44
4.2.1 Gender	44

4.2.2 Race	45
4.2.3 Age	46
4.2.4 Academic Qualification	48
4.3 Descriptive Analysis	49
4.3.1 Customer Satisfaction	49
4.3.2 Innovation Capability	51
4.3.3 Customer demand management capability	52
4.3.4 Information management capability	53
4.4 Reliability Test	55
4.5 Normality Test	56
4.6 Pearson’s Correlation Coefficient Analysis	57
4.6.1 The relationship between the innovation capability and customer satisfactions	58
4.6.2 The relationship between the customer demand management capability and customer satisfaction	59
4.6.3 The relationship between the information management capability and customer satisfaction	60
4.7 Chapter Summary	62
CHAPTER 5: DISCUSSION AND CONCLUSION	63
5.0 Introduction	63
5.1 Key Finding	63
5.2 Discussion	65
5.2.1 Hypothesis 1	65
5.2.2 Hypothesis 2	66
5.2.3 Hypothesis 3	66
5.3 Implications of the Study	67
5.4 Limitations of the Study	69
5.5 Recommendations for Future Research	69
5.6 Overall Conclusion of the Study	71
REFERENCES	73
APPENDIX A: DRAFT OF QUESTIONNAIRE	76

APPENDIX B: GANTT CHART 83
APPENDIX C: TURNITIN REPORT95



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LIST OF FIGURES

Figure 2.1: Theory of Customer Satisfaction	16
Figure 2.2: The Conceptual Framework of the Research	23
Figure 3.1: The number of population living in Kota Bharu	27
Figure 3.2: The Determining of Population and Sample Size	28
Figure 3.3: Example of Nominal Scale	35
Figure 3.4: Likert Scale	35
Figure 4.1: Gender of Respondents	45
Figure 4.2: Race of Respondents	46
Figure 4.3: Respondent's age	47
Figure 4.4: Respondent's Academic Qualification	48

LIST OF TABLES

Table 3.1: Cited Questionnaire.....	32-34
Table 3.2: Rule of Thumb for Cronbach Alpha Coefficient.....	38-39
Table 3.3: Rule of Thumb for Interpreting the Size of the Correlation Coefficient.....	40
Table 4.1: Result of Reliability Coefficient Alpha for Pilot Test.....	43
Table 4.2: Gender of Respondents	44
Table 4.3: Race of Respondents.....	45
Table 4.4: Respondent's age.....	46-47
Table 4.5: Respondent's Academic Qualification.....	48
Table 4.6: Descriptive Analysis of Customer Satisfaction.....	49-50
Table 4.7: Descriptive Analysis of Innovation Capability.....	51
Table 4.8: Descriptive Analysis of Customer Demand Management Capability.....	52-53
Table 4.9: Descriptive Analysis of Information Management Capability.....	53-54
Table 4.10: Reliability Test.....	55
Table 4.11: Normality Test.....	56-57
Table 4.12: Hypothesis 1.....	58
Table 4.13: Hypothesis 2.....	59-60
Table 4.14: Hypothesis 3.....	61
Table 5.1 : Summary of Pearson's Correlation Coefficient Analysis.....	65

FACTORS OF HIGH LEVEL LOGISTICS SERVICES TO IMPROVE CUSTOMER SATISFACTION

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Abstract: *This study's goal is to learn more about the connections between high-level logistical service characteristics and customer satisfaction in Kelantan. Factors of high level logistic service are one of the most significant determinants of customer happiness. In this topic of study, several researchers are looking for the elements of high-level logistic service (innovation capability, customer demand management capability, and information management capability) that have an influence on customer satisfaction. The research provided in this article is focused on the link between customer happiness at Kelantan and proclaimed elements of high quality logistic service, which, according to the authors, provides value to research in the area of customer satisfaction in logistics. This research will look at three aspects of high-level logistic service, specifically innovation capability, customer demand management capability, and information management capability, all of which will boost customer satisfaction in Kelantan. There will be an online survey. The residents of Kelantan will be the population this survey targets. Our team will conduct a study with 260 participants, and questionnaires will be sent to the intended sample size using an online social media platform. To accomplish the study goal in this work, we will make use of a pilot test, frequency analysis, descriptive analysis, reliability analysis, normalcy test, and Pearson's Correlation Coefficient analysis.*

Keywords: *customer satisfaction, innovation capability, customer demand management capability and information management capability.*

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Logistics supply chain arrange the shipments and storage of products and services. Beginning with raw resources, the practice moves on to manufacturing and distribution before coming to an end when an organization delivers finished products to a consumer or when products are delivered back to their original location. In other words, Supply chain management establishes the strategy and oversees daily logistical operations that take place in manufacturing plants, distribution centers, and other facilities(Mentzer, DeWitt et al. 2001).

Supply chain management refers the processes used to produce final goods from raw materials and send them to the consumer. Supply chain management also streamlining supply chain operations, which can be advantageous to clients and business partners(Mentzer, DeWitt et al. 2001, Stadtler 2008). Supply chain management entails managing a frequently sizable collection of suppliers, manufacturers, wholesalers, distribution companies, retail chains, producers, and sub-suppliers (such as suppliers of raw materials. The connections between these numerous supply chain members differ.

One of the objectives of supply chain management is improving the distribution system to ensure that finished goods and services are accessible to customers at the appropriate time(Cardona-Valdés, Álvarez et al. 2011). By ensuring that finished goods are available at the appropriate time and location in the appropriate quantity, this goal is achieved. Businesses can boost sales and profits by providing better customer service and satisfaction levels. Artificial Intelligence (AI)

in Supply Chains & Logistics gaining Supply Chain Momentum. Supply chain AI is assisting in providing the potent optimal solution functionality necessary for more precise production scheduling, enhanced performance, good quality, reduced costs, and output vector, all while promoting safer working environments. Under Revolution 4.0, technology is starting to take the place of human capital and boost operational effectiveness. The quick pace of life has enhanced customer demand for greater logistics efficiency and effectiveness, especially in logistics activities (Argo, Tan et al. 2013).

According to Paul Farris, the proportion of all consumers whose reported experiences with a company, its goods, or its services surpass predetermined satisfaction targets is referred to as customer satisfaction (2010). This research article intends to investigate how the relationship between factors of high-level logistics services and customer satisfaction at Kota Bharu. According to Bowersox and Novack, Due to their role in enhancing customer satisfaction, logistics services are not only considered as a potential area for cost reductions but also a way to obtain a competitive edge in the market. (2008,1995). We cannot disregard that, in order to support global commerce and serve as the foundation of economic growth, logistics has taken on a very significant role.

The Malaysian government has long acknowledged the importance of the logistics sector to the country's economy, both now and in the future. Since it forms the basis for allowing international trade, logistics has really come to play a key role in Malaysia's economy. The industry is so important that, in November 2013, when announcing the 2014 budget, Prime Minister Datuk Seri Najib Tun Razak promised that the government would develop a master plan for the logistics industry in order to improve the performance of the country's logistics operations from its 2012 ranking of

29th in the World Bank Logistics Performance Index Report. This will help with smooth operations in logistic serviced based companies. Smooth operations in the service department will result in higher customer satisfaction, which will then have a positive impact on customer retention, or the likelihood that consumers will keep purchasing goods from the business (H. Brdulak,2009).

Quality is the cornerstone of the service sector's operation, making it one of the primary responsibilities of the industry's explosive growth (Balachandran & Radhakrishnan,2005). Given this, it is safe to say that one of the most significant current logistics business success guarantors is the quality of the provided services, particularly given the knowledge that a service is an impalpable act or process (Chen, Chang, & Lai, 2009; Huang, Wang, & Xue, 2012), and as a result, it is closely related to the fulfillment of the clients' needs.

Technology is beginning to replace human resources under Revolution 4.0 and contribute to greater operational efficiency. The customer demand for increased logistics effectiveness and efficiency, particularly in reverse logistics, increased due to the quick pace of life. The customer wants to return the defective item in the quickest and cheapest manner possible. However, according to Charles online shoppers lack the knowledge necessary to make a product return (2014). Any supply chain's efficient and effective flow of products and services, as well as their storage, are under the supervision of logistics. In addition to the flow of goods and services, logistics is also responsible for the movement of information from the point of origin to the point of consumption. One of the main obstacles to maintain customer satisfactions is the environment's turbulence and unpredictability in needs.

In the retail industry, meeting customer demands for timely delivery of products and services while still being cost-effective is a constant concern. Retail businesses always require a smooth flow of products, timely delivery, and inventory availability, thus logistics is extremely important in determining the route and medium by which the products may be delivered in the most efficient manner and on time. If there is any delay in the delivery of the items to the store or a rise in price, the consumer will get unsatisfied and go to a rival. Additionally, since increasing profitability is every company's primary goal, performance within the organization must also be at its highest level in order to satisfy customers, whose contentment will increase the business's profitability.

Furthermore, Businesses are often faced with the challenge of how to attract genuine, devoted clients. Everyone may agree that customer happiness and high-quality services are essential conditions for retaining customers. If a consumer is happy, it makes sense that he will purchase or continue to utilize the company's services. That doesn't always happen, though, as loyalty has other requirements in addition to satisfaction. Until a competing service with better quality and pricing enters the market, a consumer may remain content. A client may have favourable sentiments regarding a business while not being happy with a service, and vice versa.

Other than that, there are problems such as limited information. Limited information on product returns is available on online stores, and it is even difficult to locate at other places like Facebook and YouTube. Therefore, internet shoppers' ability to return a defective item has been hindered due to a lack of information on product returns. Additionally according to Massey, because the online retailers did not supply their clients with the return policy, online shoppers who purchased things on social media are unable to obtain it (2018). High level logistic service factors is an

important for a logistic based company and also logistic students should get to know the factors as they can use it in the near future. In this study, we will examine the relationship high level logistics service factors and customer satisfaction..

1.2 Problem Statement

Many scholars, like Berry, & Parasuraman (1993), assert that how customers perceive and interpret the external elements impacting the establishment of expectations determines how those expectations will show themselves. A corporation may be able to anticipate and prepare for some elements, but others (psychological, cultural, and social) are more dependent on the client. As a result, logistics companies confront a significant task in trying to comprehend their clients' requirements and expectations. Given this, logistics businesses must bear in mind the pursuit of competitive advantage and the expansion of their client base. Hence, this article strives to examine whether there is a relationship between factors of high-level logistics services and customer satisfaction at Kota Bharu. Esper, Fugate, and Davis-Sramek (2007) assert that without logistics services that add value to businesses, guarantee the promptness of products' time and place, and satisfy customers' needs, effective economic development of the nation and industrial and commercial business success are not possible.

However, few academics have examined the connection between factors of high-level logistics services and customer satisfaction. The term "logistics" describes the total process of controlling the acquisition, storage, and delivery of resources to their intended location. Choosing potential distributors and suppliers and evaluating their efficiency and accessibility are all part of logistics services. The term "logisticians" is used to describe logistics professionals. The term "logistics" was first

used by the military to describe the methods used by military personnel to acquire, store, and transport equipment and supplies. The phrase is increasingly often used in the corporate world, especially by organizations in the industrial sectors, to describe the management and movement of resources through the supply chain.

We will have a deeper understanding of the factors of high-level logistics services to improve customer satisfaction at Kelantan thanks to this essay. We want to change how people view logistic services. We therefore established our research objective to statistically assess the association between factors of high-level logistics services and customer satisfaction at Kota Bharu. The theoretical and empirical components of the essay will be separated. In the theoretical segment, we will discuss the connection between the factors of high-level logistics services and customer satisfaction based on a thorough examination of the literature. From these, we produce research hypotheses. However, in the empirical part, we'll use a statistical test to confirm the association between three different sorts of characteristics.

1.3 Research Questions

The research questions of this study are:

- i. What is the relationship between the innovation capability and customer satisfaction ?
- ii. What is the relationship between the customer demand management capability and customer satisfaction ?
- iii. What is the relationship between the information management capability and customer satisfaction ?

1.4 Research Objectives

The main objective of this research is to study the relationship between factors of high level logistics services to improve customer satisfaction :

- i. To examine the relationship between the innovation capability and customer satisfaction ?
- ii. To examine the relationship between the customer demand management capability and customer satisfaction ?
- iii. To examine the relationship between the information management capability and customer satisfaction ?

1.5 Scope of the study

The research is about the factors of high-level logistics services to improve customer satisfaction in Kelantan. This research is limited to the citizens who live in Kelantan. We intended to choose Kelantan citizens specifically because we are undergraduate students from University Malaysia Kelantan and it would be very helpful for us to carry out this research at Kelantan. The research will take 3 months to accomplish. Logistic services are one of the modern tools for dealing with economic obstacles.

The Logistics study focuses on analyzing logistics organization capacity to provide high-quality service and, as a result, make and maintain satisfied consumers. Customer satisfaction building is frequently viewed as a difficulty involved in the management of any firm seeking a sustainable and long-term existence in a chosen market. This study focuses on the investigation of customer satisfaction in the context of logistics services. It is thought that there is a positive relationship between logistics

service quality, customer satisfaction. After analyzing several methodologies available in the literature, a conceptual model is built with the goal of identifying characteristics that influence consumer satisfaction with logistics services. The quality features of logistics services are given special consideration.

Elements influencing customer happiness are important to understand in order to understand the causes or factors that are responsible for creating consumer satisfaction for a specific brand. Customer satisfaction is achieved when a brand meets the requirements and wants of its customers. The findings revealed that the content significantly contributed to explaining consumer satisfaction; however, pricing fairness had a greater influence on customer satisfaction.

Customer satisfaction is crucial since it provides logistics firm managers with a statistic to oversee and enhance their services. Customer satisfaction may also be used to determine the continuation of logistical services or the life of a product by assessing customer loyalty. Customers who are happy and satisfied will ensure the continuity of sales, which means the continuity of logistical services.

1.6 Significance of Study

This paper aim to study the factors of high-level logistics services to improve customer satisfaction. Nowadays, there are more logistic companies in the industry and the competition in the service sector continue to rise. The only thing that differentiate them is the quality of the service provided to their customer. The data collected through survey questionnaire sent to customer who are currently live in Kelantan and have used the logistic services. Research has shown that there are few factors affecting the customer satisfaction of the logistic services.

A good service quality will improve customer satisfaction thus encourage customer retention for the business. The study will illustrate the customer satisfaction on the logistic service. This study will help the logistic companies to acquire a solution to improve their services quality in order to increase customer satisfaction and determine their impact.

1.7 Definition of Terms

1.7.1 Customer demand management capability

A skill known as customer demand management has an ability to distinguish goods or services in order to improve customer distinctiveness. This includes the quality of customer assistance and transportation services (Croxtton, Lambert et al. 2002). This capacity is also defined as the customer centred logistics competence or the integrating competence. To be able to serve customers effectively, a business must have the flexibility and responsiveness necessary to accommodate customers who have unusual or diverse needs. There is a correlation between the level of customer needs and the capabilities of the logistics department (Gligor and Holcomb 2012). The requirements of the customer serve as the inspiration for all aspects of the logistics process, and the order itself reflects these requirements. Customers always have the expectation of receiving perfect service whenever there is a demand for service.

In addition, the requirements of organization customers are distinct from those of consumer requirements due to the characteristics of organization customers. The organization customer requires total solutions, not a particular services result (Karia, Wong et al. 2015). An organization customer wants total alternatives, not just a specific service product. The organization customer wants a long-term stable supplier. Customer requirements are secondary, with limited elasticity and cyclical change.

When a business does not provide good service quality, it is doubtful that customers will engage in the normal long-term partnerships associated with freight forwarding. Therefore, the power to handle consumer demand is viewed as the primary factor influencing Logistics capabilities(Zhang, Vonderembse et al. 2005).

1.7.2 Innovation capability

The ability of the company can turn its information and concepts into existing innovations, operations that run completely, and technologies for the advantage of the company, contribute to enhancing performance levels both in terms of quality, and have substantial beneficial associations(Ho and Chang 2015). The ability to deliver specialized services that a consumer requires is the essence of what we mean when we talk about having an innovative performance. This is the most fundamental capacity required of logistical service providers, which are frequently intimately connected with the physical assets of a company.

It is possible to concertize innovation capabilities through transport capacity, offering storage space or guaranteeing shipping times, ensuring the safety of cargo, and dynamically reacting to urgent abrupt requests from consumers(Shou, Shao et al. 2017). reaction to requests in a timely manner, at the appropriate time and location, assistance to clients in the resolution of newly appearing issues, and provision of correct data that demonstrates the innovative capabilities of logistics firms in comparison to that of their competitors. Companies in the logistics industry have a responsibility to ensure that their customers receive acceptable and consistent service regardless of location or employee. According to the records from the past, the effectiveness of the 3PL is evaluated based on the parameters of price, reliability, adaptability, on-time transit, correct distribution, harm to delivering, faster delivery, shorter time delivery, and renewing for new and improved services(Daugherty, Chen

et al. 2011). As a result, the capacity for innovation is regarded as the most important aspect determining skills in the area of logistics.

1.7.3 Information management capability

The ability to handle data satisfactorily satisfies the tactical and operational information requirements of the supply in order to reconcile demand and supplies and improve supply chain communication. This ability has a substantial impact on the competitive advantage of logistics service providers in the areas of lowered costs, improved service quality, and more novel service delivery and personalization(Kimitei, Chepkwony et al. 2019). Data in many forms, including such statistics, pictures, and activities, can be transformed into information by being organized and interpreted in a specific way. In contrast to information, baseline data are simply a collection of raw numbers. Information with fresh context and perspective, tailored to the needs of various users, is created only after the data has been processed.

Both internal and external data are essential for companies. Thus, it is crucial to combine reliable data with logistics support. When it comes to making logistics services more cost-effective and responsive to customers' necessities, documentation is the single most critical component. Distribution and logistics systems are the result of integrating data with the logistics infrastructure(Naway and Rahmat 2019). As a component of the business's overall information management, it aids in the formulation of order fulfillment decisions and promotes the efficient allocation of company resources. In order to remain competitive in the face of the current trend of international industrial prosperity, businesses need to make use of the gives additional. With the aid of IT, logistics companies can better integrate their operations, procedure,

transfer, and handle the information flow that occurs during the movement of cargo, and more easily and effectively distribute files associated with this process.

(Shou, Shao et al. 2017) found that one of the most significant issues confronting companies in the sense of today's information overload and sudden changes in computer media is the ever-increasing and limitless requirement for data. Is for data to be useful, precise, opportune, and complete, collection and processing must happen directly. Thus, it is generally agreed that the capacity to handle knowledge appropriately is the most important factor in determining success in shipping.

1.8 Organization of the Proposal

This project is divided into three chapters. The first chapter begins with an introduction, followed by the study's background, a statement of problems, research question, research aim, the scope of the research, study of importance, definitions of operational terminology, and a summary of the organization suggestion.

The second chapter will concentrate on a review of prior studies and research using the conceptual framework and underlying theory. Furthermore, this study closes this chapter one by covering hypotheses connected to the variables of this research that are related to our research.

The third chapter concentrates on the research methodology portion, which includes the methodologies and strategies introduced in the first chapter. Furthermore, this chapter summarizes research design, data collection methods, sampling strategies, study population, research tools, variable measurement, data analysis procedure, and conclusion.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

A literature review is a piece of academic writing that contextualizes and throughout that of the scholarly literature on a given subject (Rowe 2014). It is called a literature review instead of a literature report because it also contains a critical assessment of the sources. It is both a method of reading and writing about the literature. A literature review is typically one of the first tasks completed after selecting a topic in a longer piece of writing, such as a dissertation or project. Before beginning a new investigation, undergoing a literature review will demonstrate the acquaintance with and comprehension of the most recent studies in the field (Paul and Criado 2020). (Mentzer, DeWitt et al. 2001)

In the literature review, this segment will portray the relationship between the factors of high-level logistic service and the customer satisfaction at Kelantan. In this part, the reader will learn and gain more understanding of the dependent variable which is the customer satisfaction and the independent variables are customer demand management capability, information management capability, and innovation. Logistic has been defined as a crucial element for integrating the organization's internal procedure with the supply chain operation in order to improve the customer satisfaction. According to Bowersox et al. (2002), he studied all the process and operation of the supply chain management which will affect the logistic and customer satisfaction. He stated that logistic and the value proposition have a big influence towards the customer satisfaction in the logistic process. Customer satisfaction assesses the customer's expectations of a product or service offered by a business have been fulfilled. Customer satisfaction is a general term that includes aspects such as

quality of the goods and services delivered and the price of the items or services. According on the previous study, customers are not only anticipating higher-quality goods, but also a top-notch customer experience, which is connected to the idea of behavioural intents and customer satisfaction (Bowersox et al., 2002; Parasuraman et al., 1985). The main goal of this study is to comprehend the idea of customer satisfaction through factor analysis from the aspect of logistic service. In this section, reader will learn about the dependent and independent variables and whether if they correlate to each other. The variables will be addressed, and an appropriate theory will be presented to support this research.

2.1 Underpinning Theory

Majority of theories' applications as conceptual frameworks for investigations can be found in qualitative interpretative research (Bi, Liu et al. 2020). This is essentially the result of the interaction between technological and non-technical elements, both of which play a role in the field of information systems. In the field of information systems studies, the term underpinning theories refers to theories that are used to comprehend the social context (Bolton, Lemon et al. 2004). Underpinning theories are referred to, by Gregor (2002) as theories for understanding social context in information system studies. The theories are intended to explain "how" and "why" things happen in the way that they do. It is useful to comprehend how various theories can be applied in the order of their respective methodological usefulness. The sequence in which the underlying ideas are used has a significant influence and impact on how data are collected, arranged, and analyses (Nassè, Nanéma et al. 2021). The significance of the sequence lies in the fact that it helps with regularity, prediction, and consistency of research, all of which have effect on the findings.

The Customer Satisfaction Index (CSI) is a conceptual theory that operates under the assumption that factors like customization and innovation, customer demand management capability, and information management capability all have an effect on customer satisfaction. Researchers in consumer perception and behaviour in industrialized nations have started conducting in-depth studies on the topic of customer satisfaction (Rather, Tehseen et al. 2021). Fornell and his fellow researchers at Michigan University were instrumental in the development of the Swedish Customer Experience Barometer, which was the country's first system for measuring customer satisfaction on a national scale.

The Swedish Customer Satisfaction Barometer evolved into a national measuring device that is standardized across companies and industries and measures customer satisfaction in addition to the service and product ratings given by respondents. The conceptual framework is the foundation for predicting these index values (Nassè, Nanéma et al. 2021). This aim of connecting consumer experience to its influences, such as customer requirements, perceived quality, and value perception, and to its implications, such as loyalty among customers and concerns, Despite the fact that these CSIs are fundamentally comparable in their measurement model, they have some evident discrepancies in the model's construction and variables' choices, which means that their outcomes cannot be evaluated with one another at all (Bolton, Lemon et al. 2004).

In contrast, for nations to develop their personal CSIs, those nations must first take inspiration from the experiences of other countries before they can create CSIs that are appropriate for the characteristics of their own nation (Mursu, Luukkonen et al. 2007). Because of this, a comparative and analytical assessment of the distinctions

between these exists, and the results indicate that they are both necessary and helpful. A theory which underpins a study is characteristically relied upon for rationales.

The value of each business driver to the customer's overall pleasure is measured by the driver element. The relevance of each service driver characteristic within a business driver is determined by the characteristic element of the service driver. The operating component gives us the ability to gauge client satisfaction based on how well we are able to perform our jobs(Solms 2018). This procedure establishes a connection between shifts in organizational effectiveness and shifts in satisfaction and loyalty driver characteristics, which in turn contribute to shifts in satisfaction level.

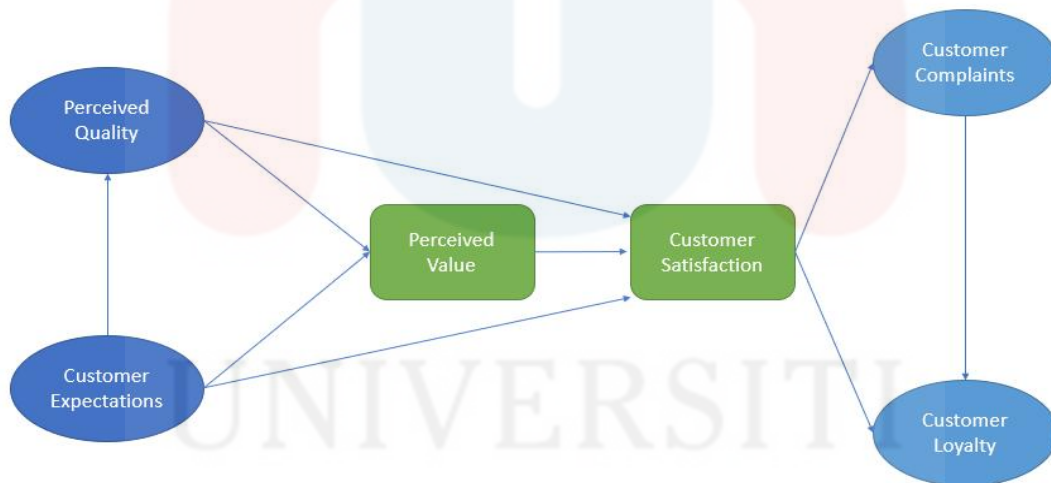


Figure 2.1: Theory of Customer Satisfaction

2.2 Previous Study

Previous studies are an essential component of scientific research, and there can be no full scientific research without them. It is one of the things that every researcher and student cares about since they are normally highly appreciated.

Previous studies are all previous investigations that have addressed the issue under discussion and study by the researcher. When a researcher is working on a certain issue, he or she will undoubtedly need to return to earlier studies, assess them, thoroughly examine them, and then find the parallels and contrasts between them and his or her research.

2.2.1 Customer Satisfaction

Customer satisfaction is the level to which a company's clients are pleased with that firm's offerings and performance. Information gathered from customer surveys and reviews may be used to guide product and service development decisions. It is imperative that a company priorities its consumers' needs above anything else. Every kind of company, from manufacturing to retail to wholesale to government to service to charities to internal committees, is included here. Companies should not make the mistake of assuming they know their customers' needs. Instead, techniques like consumer surveys, focus groups, and polling need to be used to hear what the customer is saying. Insights into client preferences might help businesses provide superior service. Why happy customers are so crucial. The level of satisfaction shown by one's clientele is a strong indicator of the level of approval felt by one's target audience. High levels of satisfaction are associated with increased customer loyalty, higher lifetime value, and positive word-of-mouth for a brand. The relationship between service quality and customer satisfaction has been the subject of several studies in recent years (Choi, Lee, Kim, & Lee, 2005; Kang, James, & Alexandris, 2002; Kouthouris & Alexandris, 2005; Rajpoot, 2010), among others. These research' findings have added to our knowledge of service quality's dimensional approach in a number of important ways. Quality of service as perceived by customers is directly related to their level of satisfaction and loyalty to a brand.

Several scholars (Y. Ekinici, 2002; Faullant, Matzler, & Fiiller, 2008; Parasuraman et al., 1985; Yu & Shen, 2011), among others, have argued that service quality is a significant predictor of customer happiness. One study found that customer pleasure actually has a greater impact on customer loyalty than service quality itself. However, it may take more than happiness with the service to inspire customers to remain faithful (Cronin & Taylor, 1992; Faullant et al., 2008; Gonzalez, Comesana, & Brea, 2007; Heung, Wong, Qu & 2002; Kandampully & Suhartanto, 2000).

2.2.2 Innovation capability

In recent years, the majority of businesses that produce and sell things have grown to view innovation skills as essential. In research from Huse et al. It appears that innovation is the only way for businesses to successfully adapt to change and seize opportunities. In Malaysia today, transportation and logistics services are crucial, especially as they help a lot of small and medium-sized firms strategically direct their products into specialized markets(2005). Therefore, it is crucial for logistics service 1

organizations to include innovative skills into their logistics service operations in today's competitive industry. Logistics service providers may develop their core competency through learning-by-doing, which will make it very tough for rivals to copy and purchase. In addition, the Langley et al. (2006) assessment identified service provision and innovation capacity as the logistics industry's two main future problems.

The effectiveness of the logistics provider is evaluated based on price, reliability, ability to adapt, on-time transshipment, correct distribution, damage to delivering, delivery speed, reduced time delivery, and regenerating for new and enhanced services. As a result, the ability to innovate is thought to be the most crucial factor determining logistics skills. Response to requests on a timely, suitable date and place, guidance to customers in the resolving of newly seeming problems, and

provision of proper information that illustrates logistics companies' innovative capabilities in contrast to their rivals. Companies in the logistics industry must make sure that their clients receive adequate and consistent service regardless of the location or employee (Bolton, Lemon et al. 2004).

Capacity of the business to transform its ideas and information into working innovations, fully functional operations, and technologies to its advantage, contribute to raising performance standards both in terms of quality, and have significant beneficial associations. What we mean when we talk about an innovative performance is the capacity to provide the specialized services that a consumer requires (Berry, & Parasuraman, 1993). This is the most basic skill required of integrated logistics service providers, who are frequently closely linked to a company's property resources.

2.2.3 Customer demand management capability

According to new research, Planning approach known as demand management. Businesses use it to estimate demand and make plans for how to satisfy it with services and goods (Jenkins, 2022). Operations and marketing are better connected thanks to demand management. Strategy, capacity, and customer demands are better coordinated as a consequence. According to study published in 2014 in the Global Journal of Management and Business, demand management "provides a vital bridge between the marketplace and a company's internal processes." Demand management was defined in the research as "the development of interactions between operations and marketing with the purpose of understanding the market and implementing actions in sync with firm strategy, production capacity, and end-customer wants."

The demand management capacity is also known as the able to integrate expertise or the customer centre logistics competence. A business must be flexible and responsive enough to cater to customers with unique or varied needs in order to effectively serve its customers. The degree of consumer demands and the logistics department's capabilities are correlated with one another (H. Brdulak,2009). All elements of the logistics process are driven by the customer's requirements, which are reflected in the order itself. Every time there is a demand for services, customers expect to get flawless service.

Furthermore, because of the features of organisation customers, the requirements of organisation customers differ from those of consumer customers. The organization's client requires comprehensive solutions, not just a specific service outcome. A business customer wants comprehensive options, not just one service product. The organization's client is looking for a reliable, long-term supplier. Customer needs are secondary, have little elasticity, and undergo periodic change. It is unlikely that customers will form the typical long-term collaborations associated with transporting goods when a company does not offer high-quality service (H. Brdulak,2009).

2.2.4 Information management

In research from Cooper et al., an increasingly information-based economy, information management capabilities have shown to be crucial success elements for firms(2016). Although there is a long history of knowledge management literature, little is known about how an organization's learning culture influences the results brought about by knowledge management activities. Additionally, there is a lack of information about how to operational knowledge management initiatives successfully in order to operate in the dynamic logistics and supply chain management

environment. According to the research that is currently available, implementing sound information management procedures, encouraging a learning culture, and investing in human capital may result in significant returns on investment, improved customer satisfaction and a competitive advantage in the marketplace (Moustaghfir and Schiuma, 2013; Pantouvakis and Bouranta, 2013).

Evaluation of the information system's properties in the supply chain. It needs to be noted that the platform's logistics are extremely tight regarding to data because its cross-sectional functions require information from a wide range of businesses and functional areas. Due to these factors, electronic communication is highly demanded in supply chain information systems. The implementation of information in all links of the logistic chain is very intense, and information links all business processes, as their fundamental characteristics. The established goal for information management in the logistics system, which is capable of supporting growth and planning procedures, is only achieved through incorporated data processing, which generates the necessary transparency in the supply chain channel (Mentzer, DeWitt et al. 2001).

All current electronic data collection and preparation is done in the field of information flow management and control. One way to reduce overall costs, improve quality of products and services, and rationalize the information systems industry. In addition to a dedication of resources to guarantee the reduction of overall costs, the rationalization of the observed area contributes to an increase in information flow rate and quality. Lowering shipping times, improving delivery accuracy, and removing delivery mistakes are all impacted by timely information acquisition and information quality. Integrating computers into the logistics chain information system.

2.3 Hypotheses Statement

A statement that identifies a research problem and predicts an answer is called a hypothesis. It is an essential part of the scientific process that forms the cornerstone of scientific experiments. Therefore, when formulating your hypothesis, you must be cautious and detailed. According to academics in 2021, a small inaccuracy in the formulation of your hypothesis might have a negative effect on your study.

2.3.1 Independent Variable 1 and Dependent Variable

Innovation capability is one of the key logistical factors that can increase customer happiness. Innovation has recently become crucial in both theory and practise in a highly competitive global market where customers seek value in their everyday purchases. According to Vargo and Lusch Offering new or modified solutions to customer issues or wants in a way that adds value as perceived and utilized by customers is the essence of innovation (2004). The following research hypothesis is consequently suggested.

H1: There is a positive relationship between the innovation capability and customer satisfaction at Kelantan .

2.3.2 Independent Variable 2 and Dependent Variable

Customer demand management competence is one of the key logistical factors that may boost customer satisfaction. The provider must be able to modify its product to suit a wide range of consumer wants and conditions. Understanding the client's needs and situation and providing the appropriate offering all help to improve the joint demand chain, which further increases demand chain efficiency and boosts customer happiness. The following research hypothesis is consequently suggested.

H2: There is a positive relationship between the customer demand management capability and customer satisfaction at Kelantan.

2.3.3 Independent Variable 3 and Dependent Variable

Another high level logistic factor to improve customer satisfaction is information management capability. According to Operations, and Management Science (ALOMS) Book Series, the information that is the foundation of a successful logistics management is now a factor that helps businesses to develop competitive logistics strategies. A compelling appropriate processes to improve the performance of intermediaries has been identified as logistics information technology and information management skills. As a result, the following research hypothesis is proposed.

H3: There is a positive relationship between the information management capability and customer satisfaction at Kelantan.

2.4 Conceptual Framework

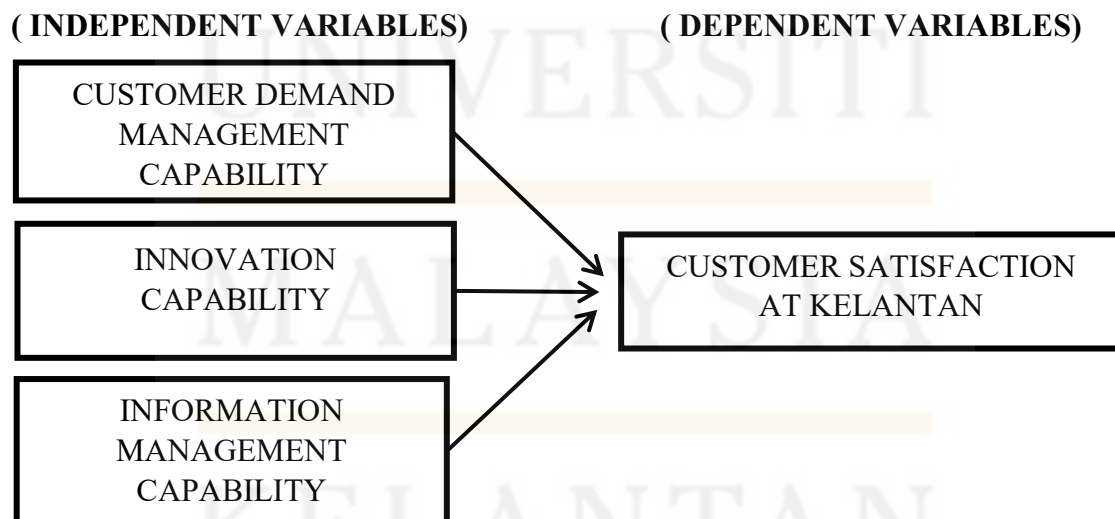


Figure 2.2 : The Conceptual Framework of the Research

(Independent Variables 1, 2, 3 and Dependent Variable)

2.5 Summary

This chapter evaluated the conceptual framework, underlying theory, and prior research. It has a dependent variable (customer satisfaction at Kelantan) and independent factors (customer demand management capability, innovation capability and information management capability). Research hypotheses and the theoretical framework were covered after the literature review of independent factors and dependent variables. The conceptual framework of this study showed how the factors of high level logistics and customer satisfaction at Kelantan were related. In Chapter 3, which examines the research technique, the main objective of the literature review for the hypotheses will be examined.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

According to Kothari (2004), research methodology is "the methodical approach to solving the problem of the study." This chapter outlines the research problems the author pursues and the manner in which they analyse the findings in context of the main issue. In this chapter, we will discuss the method that will be used in the analysis and evaluation of the data. This section will also discuss the research design, data collection method, study population, sample size, sampling technique, research instrument and data analysis.

3.1 Research Design

Research design can be described as a process of obtaining, evaluating, interpreting and reporting data in research studies (Creswell & Plano Clark 2007). This is the basic approach for linking the relevant and reachable empirical research to the conceptual research study. Raw data collection, numerical data collection and analysis can be related to quantitative methods of data collection and evaluation.

The information will be acquired through a sample survey on the local people in Kelantan. A quantitative method can be used to swiftly collect a great collection of information for this study issue. The variables and data collected from the survey will also be used for descriptive analysis in this study. This method can be utilised to test a wide range of varying hypotheses by applying a function such as variance or standard deviation. These hypotheses frequently point to variations among subgroups. Descriptive analysis will help to evaluate and describe the relationship of the factors of high level logistic service with the customer satisfaction at Kelantan.

3.2 Data Collection Method

Data collection is a systematic method for precisely acquiring data from all pertinent sources in order to shed light on the research topic, test the hypothesis, and assess the results. The essential goal of data collecting is to collect reliable data that can be examined and utilised as evidence or to support conclusions. The two main categories of data collection techniques are primary and secondary.

A questionnaire will be used in the study as a primary data in order to obtaining the data related to our research topic. We will use online questionnaire by using the Google form and distributed the questionnaire among the local citizen who lived in Kelantan. The goals and queries of the study's research will be linked to our online questionnaire. The online questionnaire will automatically record and save the data evaluation from the respondent's in the Google Form account.

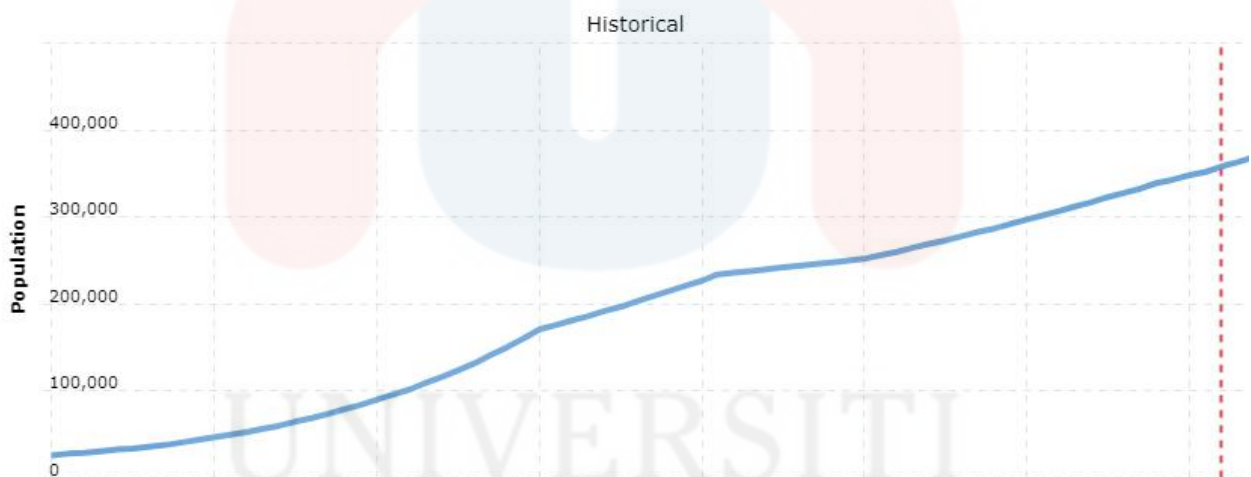
3.2.1 Primary data collection method

The study will use a quantitative data approach due to the primary data collection method. Quantitative approach focuses on collecting statistical values and using it to analyse a specific event or generalise it across groups of individuals. In order to handle the accumulation of facts and identify the drivers of behaviour, quantitative approaches address research issues in an objective manner, where data is monitored and evaluated.

3.3 Study Population

The need for logistics services is always rising as a result of the large number of states that make frequent use of these services. We settled on Kelantan since we are now enrolled at Kampus Kota, Universiti Malaysia Kelantan. Overall, Kelantan has a

population of 1.93 million people (Source: Department of Statistics Malaysia). We selected residents of Kota Bharu, a city with a population of 358,000 according to Macrotrends (a data provider). The 784 residents of Kota Bharu who make use of logistics services are the primary audience for this research. Those who live in Kota Bharu and who use logistics services were selected as our target audience because they are representative of the general population and have the most direct experience with the services we want to improve. In addition, customers who make use of logistics services have a deep understanding of both the services themselves and the processes involved in utilizing them.



(Source: Macrotrends)

Figure 3.1 : The number of population living in Kota Bharu

3.4 Sample Size

A study's sample size represents the proportion of the population from whom data were collected. However, there are a variety of patterns that may be used to represent sample size. The assigned sample size is the total number of units used in the study's touch or information combination tests. The sample size for this research will be determined to be 260 people, who will be representative of the whole population. According to Krejcie and Morgan, the "N" in the table indicated the size of the whole population, while the "S" indicated the size of the study group (1970). Our population size is 784 people majorly using logistics services, thus a sample size of 260 is sufficient for our purposes.

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Figure 3.2 : The Determining of Population and Sample Size

3.5 Sample Techniques

For the purposes of this research, the population of respondents will be comprised of Kota Bharu, Kelantan residents who have used logistics services in the last year. For this study's population, a sample size of 260 people is required. That's why we'll use a method called "convenience sampling" to choose some of the responses from among that massive pool.

According to Alison Galloway (2005), convenience sampling will be employed in this research since it is one of the simplest and most time-saving techniques to collect data from the study population as a whole. The preferred sample size is substantial, and this method will facilitate the researcher's rapid collection of a sample size of 260 respondents. The term "convenience sampling" refers to a research technique in which information about a market is gathered from a pool of respondents chosen because they are easy to reach. Thus, using convenience sampling in this way will guarantee that the primary study doesn't need any more resources. Since time is of the essence, convenience sampling is the method of choice given the constraints of time and the urgency of the data collection task at hand.

However, while using Krejcie and Morgan's criteria for sample size accumulation, the examiner must always exercise caution (1970). Assuming that the level of accuracy is 0.05 and that alpha is known to be 0.05 under these circumstances, we get this. There are a number of sample size confirmation designs that are rather distinct; at any rate, these two factors are becoming more common (Kenpro, 2012).

3.6 Research Instrument Development

There are an infinite number of possible experiments in the field of research, each requiring specialised equipment to perform the necessary labour to answer the questions (Birmingham and Wilkinson 2003). The numerous requirements of a researcher make it difficult for everyone to master every accessible instrument, especially given the exponential rate of technological advancement. Although each field of science is distinct from the next, they all share the requirement for research tools to conduct out experiments in the pursuit of knowledge expansion. Tools, equipment, software, and intellectual property are daily need for all scientists (Hagan 2014). Each of these elements serves a vital function in filling in the remaining gaps and completing the puzzle of solutions, but research tools play the most crucial role.

Research instrument refers to any device a scientist uses to collect, measure, and evaluate data. The data was collected from participants in the study project who were interested in the issue. Instruments serve a variety of purposes (Hannes, Lockwood et al. 2010). There are various methods for conducting quantitative, qualitative, and hybrid research. The selection of the instrument depends on the sort of study being conducted. The more thoroughly you describe it, particularly if you have produced their own tool, such as a survey, the greater the probability that somebody else will replicate your study to verify its validity. A good research instrument consists of one that has been verified and whose dependability has been demonstrated. It should be able to gather data in a manner that corresponds with the study question.

The research instrument must aid in addressing the study's aims, objectives, and research questions, as well as confirm or refute the study's premise (Taber 2018).

There should be no bias in the data collection process, and it should be clear how the research instrument must be utilized. Acknowledging what a research instrument is and the choices are available as a scholar enables to make informed selections and maintain usage records so that future researchers can replicate your work. As a scholar, the differential between naming one tool a research instrument and another anything else can mean the difference between gaining money and losing it (Hagan 2014).

A structured interview is one in which a predetermined number of formal questions are posed to the interviewer and their response are documented using a standardized and validated technique. An unstructured interview, but at the other hand, may well be based on the same broad theme of inquiries, but the individual asking the questions may alter the sequence and manner which the questions are being asked. In a concentration interview, the interviewer modifies the line or subject of their questions based on the interviewee's responses. A group discussion interview is a conversation in which a group of participants or interviewers are presented questions to determine their opinion or opinions on a certain topic.

There are five sections to the questionnaire (A, B, C, D and E). Each part represents a distinct variable: section A represents demographic questions, section B represents customer satisfaction questions, section C represents customization and innovation questions, section D represents customer demand management capability questions and section E represents information management capability questions. Element to enhance and perceive by logistics services to improve customer satisfaction.

Table 3.1 : Cited Questionnaire

Type of Section	Variable	Type of Question	Sources
A	Demographic Profile	<ul style="list-style-type: none"> • Gender • Age • Ethnicity • Highest Education 	(Imran, Hameed et al. 2018)
B	Customer Satisfaction	<ul style="list-style-type: none"> • Company's professional services and friendly behaviours will increase customer satisfaction • Product ordered, delivered, and received in a timely manner will increase customer satisfaction. • The details provided about service time is appropriate and accurate will increase customer satisfaction. • Items are shipped in accordance with the orders made will increase customer satisfaction. • Inform customers if there is a delay in delivery will increase customer satisfaction. 	(Meidutė-Kavaliauskienė, Aranskis et al. 2014)
C	Innovation capability	<ul style="list-style-type: none"> • Increase efficiency through automation to provide customers with faster resolutions will increase customer satisfaction. • Using technology to aid fulfillment processes and reduce human error will increase customer satisfaction. • Logistics innovation helps to saves time. 	(Ghoumrassi and Tigu 2017)

		<ul style="list-style-type: none"> • warehouse technology to increases order picking processes. • Innovative helps to keep up with customer needs 	
D	Customer demand management capability	<ul style="list-style-type: none"> • Help customers in resolving cargo transportation dispute will increase customer satisfaction. • Help customers in contacting insurance companies to file claims for compensation will increase customer satisfaction. • Flexibility in responding to consumer requests will increase customer satisfaction. • Adapting processes to suit unforeseen client needs in a flexible manner will increase customer satisfaction. • Dealing with customer problems patiently will increase customer satisfaction. 	(Meidutė-Kavaliauskienė, Aranskis et al. 2014)
E	Information management capability	<ul style="list-style-type: none"> • Help customers with valuation, cost savings, problem solutions, and other tasks will increase customer satisfaction. • Sending pre-alert notices of shipment/delivery issues will increase customer satisfaction. • The services for returning and exchanging things are straightforward, convenient, and responsible will increase customer 	(Uvet 2020)

		<p>satisfaction.</p> <ul style="list-style-type: none"> • The company offers cargo tracking services will increase customer satisfaction. • Recommending alternative actions when unexpected issues occur will increase customer satisfaction. 	
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3.7 Measurement of the Variables

The most popular technique for gathering data is through surveys. Respondents will either fill out a digital questionnaire that will be directly given to students or distribute it electronically by way of a Google form and transmit the link to the Google form via WhatsApp and Telegram. This will allow for the gathering of data. We select the questionnaire since it is the least expensive and most efficient approach for gathering information. As a result, the questionnaire distribution process is random, the data gathered was also important given the study-related issue, and employing the questionnaire allows for the quick receipt of comments. There will be 260 res-ponders to the set of surveys, and the questionnaire will be broken up into two main sections.

3.7.1 Nominal Scale

Normative Scale With the help of a nominal scale, this research study may classify the participants into several categories or classes. Simply said, the categories are there to make it simpler for responders to select a response from the many groupings. According to Sekaran and Bougie, using SPSS software, the nominal scale offers practitioners a few quick, normative techniques to evaluate the data (2016). The

demographic responded utilizing the nominal scale is asked to enter gender, race, and education level and race in Section A of the questionnaire.

Gender:

	MALE
	FEMALE

Figure 3.3 : Example of Nominal Scale

3.7.2 Interval scale

According to Sekaran and Bougie, the primary measuring scale in this work is the interval scale, which enables us to execute mathematical operations on the gathered data (2016). The Likert scale, which enabled respondents to choose a scale from 1 to 5 to represent their honest thoughts, was used in sections B through E of the questionnaire. According to the researcher, the Likert scale might have as many different ranges of values. Due to the fact that we sought to examine the connection between the high level logistic elements and customer satisfaction in Kelantan, our group decided to utilize just a 5-level Likert scale as the range. As a result, it is simple to comprehend the scale and less onerous for the respondent to complete the questionnaire.

Degree of agreement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Scale	1	2	3	4	5

Figure 3.4 : Likert Scale

3.8 Procedure for Data Analysis

The most significant aspect of this research is data processing. The data analysis works in tandem with analytical analysis and logical inference to gain the necessary information for data collection. The evaluation of patterns and correlations is done through data analysis. The analysis of data's primary objective is to investigate its importance so that educated people's judgments can more likely be based on knowledge. Based on research by Dr. Balkishan Sharma, the examination of the data examines the relationship between factors and modifies the data into facts and impressions (2018). Understanding data processing will help the researcher understand the importance of the study method, together with the appraisal hypothesis and statistical advantages related to the study's questions. Additionally, the researcher will use the Statistical Programmer for Social Science computer programme to access the earlier data in this investigation (SPSS). The researcher uses SPSS to compute the data that was collected in a shorter period of time and to streamline the quantitative analysis in the simplest form and ways that are feasible. The researcher can make sense of the data used in quantitative research with the aid of SPSS. For this study's statistical analysis, the normalcy test, pilot test, descriptive analysis, reliability analysis, and analysis of Pearson's correlation coefficient were all used.

3.8.1 Pilot Test

The analysis of the pilot research will serve as a foundation for larger investigations in the future. The feasibility, duration, and cost of establishing the design of the topic that the researcher would explore were all confirmed by the pilot study that was conducted for this study topic. By creating a questionnaire with 5 sections (A, B, C, D, and E), the research will select the pilot study as its

quantification technique. There will be demographic questions in Section A. Customer satisfaction-related questions will be in Section B. Customization and innovation-related questions will be found in Section C. Questions concerning the capabilities of customer demand management will be found in Section D. Information management capability questions are included in Section E. The researcher may complete the work of the study with the help of the pilot study, which also gives them an opportunity to look through the questions to spot any potential problems and re-plan the investigation. In order to get a test of reliability for this study's target group, which consists of residents of Kelantan, the researchers will distribute 20 sets of sample questionnaires to respondents from this community. The data will be analysed and recorded later. The outcome of the pilot study will determine how the researchers plan to proceed with a larger poll to collect more information.

3.8.2 Frequency Analysis

In the frequency research, the constant factors are analyzed along with the frequency of each result for each set of rating features. There will be a decision and setting of the mean, median, and central tendency modes. To quantify the measuring scale, inter quartile variation, standard deviation, and variance in this study, the test of variability will be modified. Quartile, decile, and percentiles are used in frequency analysis, according to Archdeacon, T. J. (1994).

3.8.3 Descriptive Analysis

In this study, the descriptive analysis will be used to create the previous aspect and component of the data. It offers an accessible summary of the sampling and quantification issues. According to Hammer,, Harper, D. A., and Ryan, P. D., descriptive analysis serves as the foundation for all quantitative data analysis as well as analysis of straightforward visuals (2001). The descriptive analysis will also be

used in this study to explore and compile the data. The demographic data, which are demographic profiles of respondents, will be gathered in the questionnaire for this analysis of the descriptive phase together with information on gender, race, and years of education. According to Timothy L. Lash, M. P. Fox, and A. K. Fink, descriptive analysis must come first before statistical inference when quantifying data analysis (2009). The results that are more general than the data itself can be found by statistical inference. Data for the study will be collected from 260 respondents.

3.8.4 Reliability Analysis

The internal consistency of the test of scale items is quantified as reliability. The qualities of measuring scales and the components that make up the scales may be studied using reliability analysis. The reliability analysis technique computes a variety of frequently used scale reliability measures and also gives data on the connections between the scale's individual components. The Cronbach alpha coefficient, which employs the internal consistency approximation approach, is typically utilised in a test of dependability. In order to provide a consistent conclusion for the survey results, the reliability of each risk will be examined in this study's analysis using Cronbach's alpha. Furthermore, it is stated in Panayides, P. (2013) that a coefficient alpha value greater than or equal to 1 maintains reliability in a more excellent state, and that 0.6 is the lowest reliability that will be accepted as the coefficient alpha value. If the value falls below 0.6, it will be noted as reliability that is unacceptable.

CRONBACH'S ALPHA	INTERNAL CONSISTENCY LEVEL
$\alpha \geq 0.9$	Excellent
$0.9 \geq \alpha \geq 0.8$	Good

$0.8 \geq \alpha \geq 0.7$	Acceptable
$0.7 \geq \alpha \geq 0.6$	Questionable
$0.6 \geq \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 3.2 : Rule of Thumb for Cronbach Alpha Coefficient

3.8.5 Normality Test

The graphical examination of normalcy is regarded as an extra measure of normality, claims Nor, A. W. (2015). In most cases, sample data taken from a Gaussian distribution will be constrained using the test of normality. When doing a normality test, the Shapiro-Wilk and Kolmogorov-Smirnov tests are shown and available in the SPSS programme. According to the general rule, if the value of p is less than 0.05 ($p < 0.05$), the study project will draw the conclusion that the variable is not typically distributed.

3.8.6 Pearson's Correlation Coefficient Analysis

In statistics, the Pearson's Correlation Coefficient analysis measures the linear correlation between two variables, known as variables X and variables Y (contribute by p-value). The terms Pearson's r and bivariate correlation are also used to refer to Pearson's Correlation Coefficient. There is a +1 to -1 ownership ratio. The research will be able to quantify the study's findings by the ratio. According to Mukaka, if the ratio is negative, it indicates that there is no connection between the two variables. In the sequence given, a ratio of 1 indicates a perfect and meaningful link between the two variables (2012). To measure the association between high level logistics service factors and customer satisfaction, the researchers will use Pearson's Correlation Coefficient analysis.

CORRELATION COEFFICIENT'S SCALE	VALUE
$\pm 0.91 - \pm 1.00$	Very strong (Positive correlation)
$\pm 0.71 - \pm 0.90$	Strong
$\pm 0.51 - \pm 0.70$	Moderate
$\pm 0.31 - \pm 0.50$	Low
$\pm 0.01 - \pm 0.30$	Very Low (Negative correlation)
0.00	No correlation

Table 3.3 : Rule of Thumb for Interpreting the Size of the Correlation Coefficient

3.9 Summary

The methodologies used to investigate the results of the researchers' research will all be covered and analyzed in the chapter's conclusion. This chapter will explain the method or process being employed, how to use the methods, and why the researcher chose the aforementioned approach or techniques, among other things. The study aims to evaluate the link between high level logistics service elements and customer satisfaction while also examining the research from a quantitative perspective. The study design, demographic, sample size, sampling methodology, research equipment, and data processing process will all be covered in this chapter. In later chapters, the data analysis will be covered in greater detail. In this part of the study, the creation of a flawless questionnaire will be more beneficial. In this study, the population choice and sample size will increase. Finally, the study provides a detailed explanation of the review's procedural technique in this chapter, allowing the researcher to have a better understanding of the variables from the information that

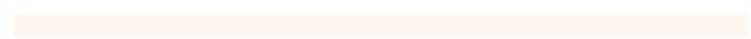
will be acquired and collected. The quantitative technique, record-keeping, and evaluation of the quantitative data through questionnaire distribution will be covered in Chapters 4 and 5.



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CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.0 Introduction

In this chapter, the study will use the statistical package for the social sciences (SPSS) programme to evaluate the data that was gathered through a questionnaire. The table and figure will represent the outcome. There are several sections in this chapter, including the pilot test, frequency analysis, descriptive analysis, reliability test, normality test, and the relationship between independent variables and dependent variables. A total of 260 respondents were surveyed to collect the data.

4.1 Pilot Test

The pilot test can help the researcher finish the task of the study and also provides an opportunity to review the questions, identify any potential issues, and re-plan the investigation. We had conducted pilot test and distributed 30 sets of sample questionnaire survey to participants from this community in order to obtain a test of reliability for the study's target population, which comprises citizens of Kelantan. The range of the Cronbach's Alpha (α) coefficient provides a clear statement of the strength of connection in Table 3.2 of Chapter 3. The questionnaire's reliability score should not be less than 0.6, as this is regarded as having poor reliability. The item's internal consistency dependability is increased by the value's proximity to 1.

Table 4.1: Result of Reliability Coefficient Alpha for Pilot Test

Variable	Number of items	Cronbach's Alpha Coefficient (α)	Internal Consistency
CUSTOMER SATISFACTION	5	0.936	Excellent
INNOVATION CAPABILITY	5	0.940	Excellent
CUSTOMER DEMAND MANAGEMENT CAPABILITY	5	0.944	Excellent
INFORMATION MANAGEMENT CAPABILITY	5	0.939	Excellent

Source: Group 47 developed by conducted online research survey

Table 4.1 above showed the reliability of pilot test analysis for dependant variable and independent variables. Based on the table 4.1, all variables were above the α of 0.6. The questionnaire was therefore approved. There were 5 questions were computed in each variable. The Cronbach's Alpha coefficient value (α) was varying. The α for the dependent variable which is customer satisfaction is 0.936, thus showed the reliability was excellent. The first α was 0.940 for the independent variable 1 (**innovation capability**) which was indicated that was good and reliable. The second α was 0.944 for the independent variable 2 (**customer demand management capability**) which was indicated acceptable and reliable. Lastly, the third α was 0.939 for the independent variable 3 (**information management capability**) which was

indicated acceptable and reliable. The overall findings for this research study thereby provided a strong indication of the strength of relationship.

4.2 Frequency Analysis

The frequency analysis of the respondents' demographic background. The results of this survey included 260 respondents. Section A of the data includes inquiries about the respondents' gender, race, age, and academic qualifications as well as questions about their demographic profile. Descriptive statistical analysis involving frequency and percentage were used to examine the demographic profile.

4.2.1 Gender

Table 4.2: Gender of Respondents

GENDER		
Item	Frequency	Percentage (%)
Male	118	45.4
Female	142	54.6
Total	260	100.0

Source: Group 47 developed by conducted online research survey

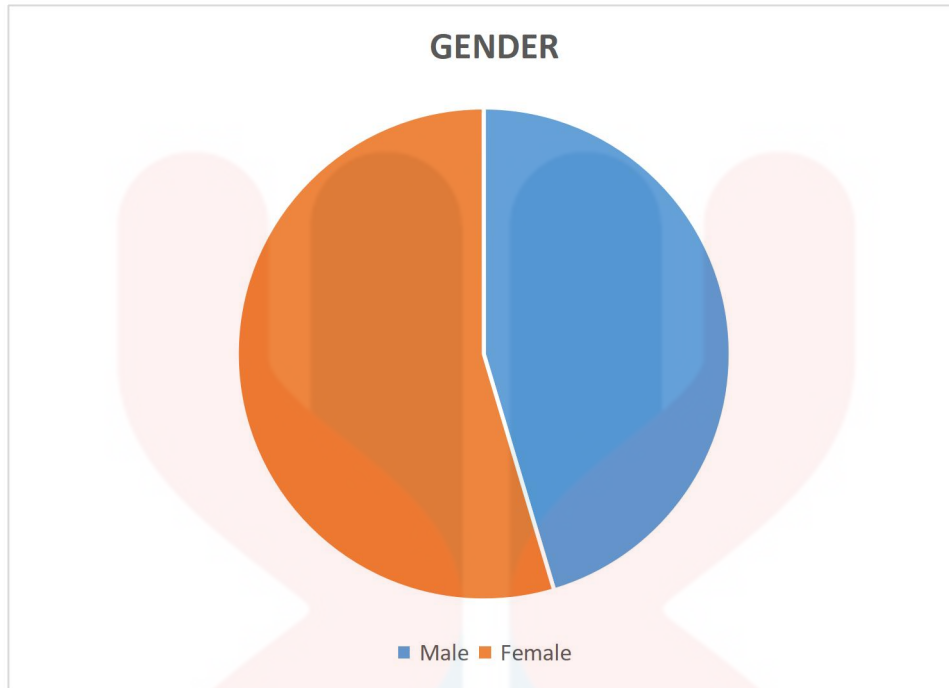


Figure 4.1: Gender of Respondents

According to table 4.2 above, there were 142 female respondents in this study, making up 54.6% of the total, compared to 118 male respondents, who made up 45.4%. The percentage based on the figure 4.1 indicated that there were more female respondents than male respondents.

4.2.2 Race

Table 4.3: Race of Respondents

RACE		
Item	Frequency	Percentage (%)
Malay	90	34.6
Chinese	106	40.8
Indian	57	21.9
Others	7	2.7
Total	260	100.0

Source: Group 47 developed by conducted online research survey

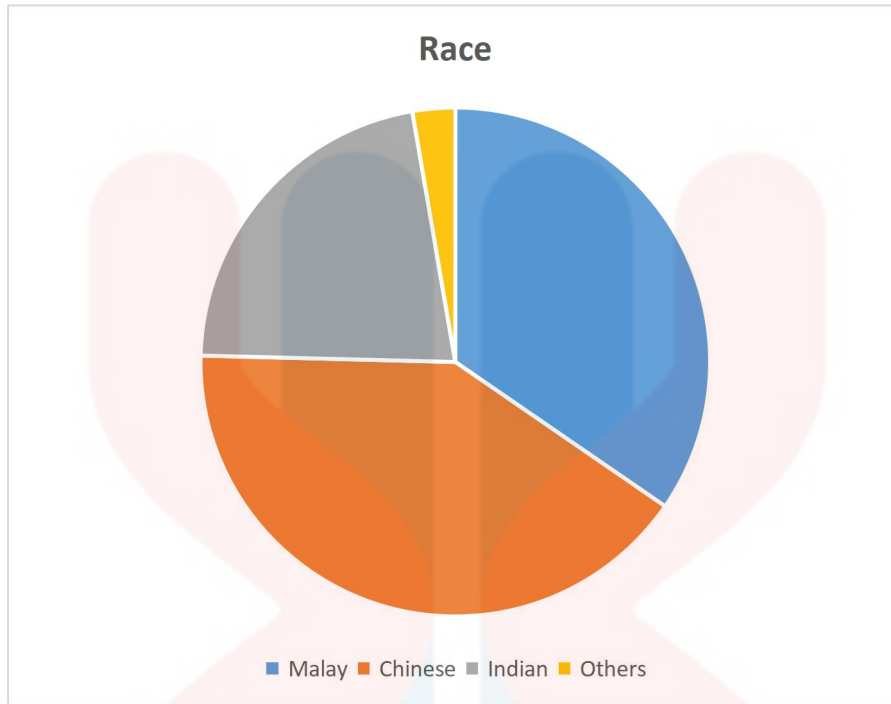


Figure 4.2: Race of Respondents

Based on table 4.3 showed in term of race, the majority of respondents were Chinese, accounting for 106 respondents (40.8%), followed by Malay, accounting for 90 respondents (34.6%). The third highest respondents came from Indian with 57 respondents (21.9%) and last was others with 7 respondents (2.7%). Therefore, the Chinese race people had the highest percentage compared to other races based on figure 4.2.

4.2.3 Age

Table 4.4: Respondent's age

AGE		
Item	Frequency	Percentage (%)
19 years old and below	13	5.0
20-29 years old	163	62.7

30-39 years old	35	13.5
40-49 years old	38	14.6
49 years above	11	4.2
Total	260	100.0

Source: Group 47 developed by conducted online research survey

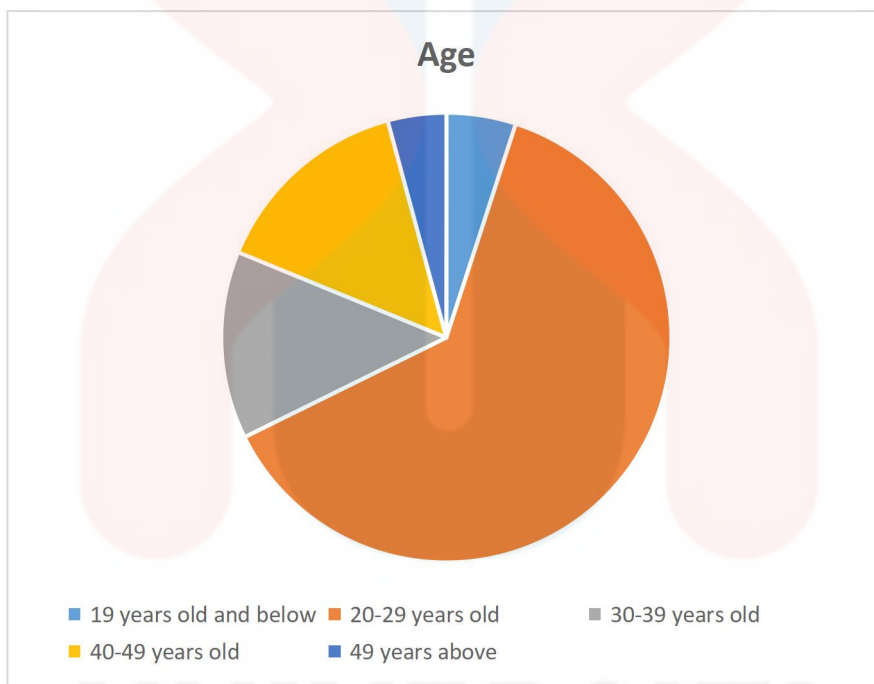


Figure 4.3: Respondents' Age

The age of the respondents from our survey was shown in table 4.4 and figure 4.3. The age category with the biggest percentage of respondents is 20–29 years old, with 163 (62.7%), while the second highest percentage is 40–49 years old, with 38 (14.6%). The age range of 30-39 years old is the third highest with 35 (13.5%) respondents. Meanwhile, there were respondents with the age range of 19 years old and below and 49 years old and above with 13 (5.0%) and 11 (4.2%) respondents respectively.

4.2.4 Academic Qualification

Table 4.5: Respondent’s Academic Qualification

ACADEMIC QUALIFICATION		
Item	Frequency	Percentage (%)
SPM	37	14.2
STPM / DIPLOMA	51	19.6
DEGREE	142	54.6
OTHERS	30	11.5
Total	260	100.0

Source: Group 47 developed by conducted online research survey

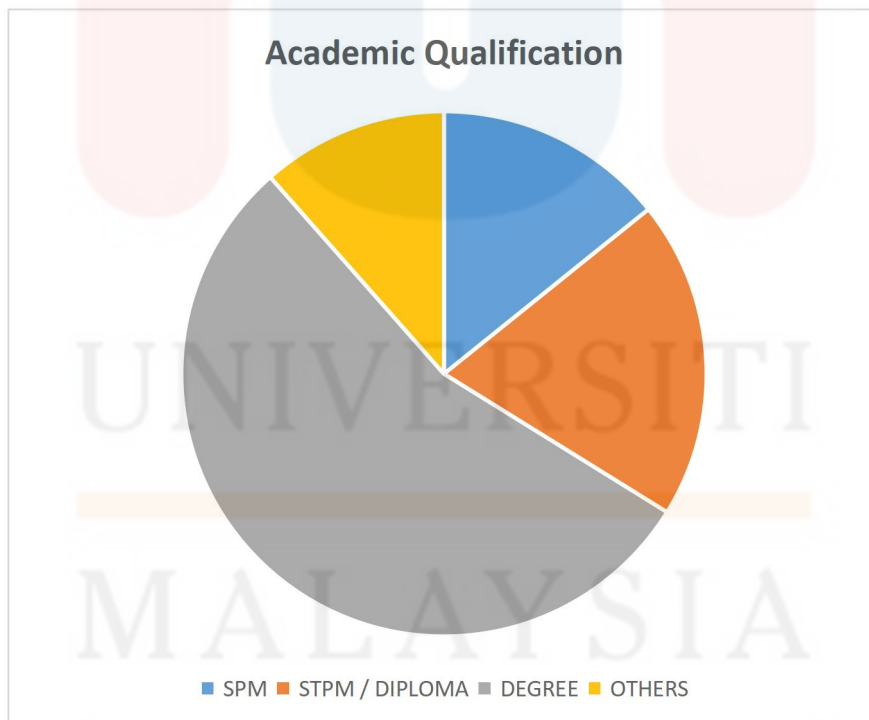


Figure 4.4: Respondents’ Academic Qualification

The respondents' academic qualifications were shown in table 4.5 and figure 4.4. It showed that the highest number of respondents with 142 (54.6%) were Degree

qualification while the second highest number of respondents with 51 (19.6%) were STPM or Diploma qualification. Meanwhile, there were SPM qualification and others which were 37 (14.2%) respondents and 30 (11.5%) respondents respectively.

4.3 Descriptive Analysis

The term "descriptive statistics" may be used to offer straightforward explanations of statistical measures like the mean and standard deviation that are useful for summing up large amounts of data. This section will go into the mean and standard deviation for both the independent and dependent studies, as well as the frequency distributions for respondent demographics and a selection of questions pertaining to customer service, insurance, and baggage delivery.

The mean score is a common statistic used in surveys, and it captures how respondents felt about various aspects of the survey process such as customer service, insurance, and baggage delivery (customer satisfaction of courier service). To assess the mean score, we shall consider a variety of possible interpretations. In this study, the questionnaire's sections B to E's mean and standard deviation (α) were examined.

4.3.1 Customer Satisfaction

Table 4.6: Descriptive Analysis of Customer Satisfaction

Variables	N	Mean	Std. Deviation
1. Company's professional services and friendly behaviors will increase customer satisfaction.	260	4.36	0.913
2. Product ordered, delivered, and received in	260	4.36	0.908

a timely manner will increase customer satisfaction.			
3. The details provided about service time is appropriate and accurate will increase customer satisfaction.	260	4.33	0.913
4. Items are shipped in accordance with the orders made will increase customer satisfaction.	260	4.35	0.904
5. Inform customers if there is a delay in delivery will increase customer satisfaction.	260	4.22	0.853

Source: Group 47 developed by conducted online research survey

Descriptive statistics for answers to the independent variable "customer satisfaction" were shown in Table 4.5. The customer satisfaction department's mean score on both questions was 4.36 for variable 1 and 2. Customer satisfaction will rise as a result of the company's professional services and pleasant behaviour, and as a result of the prompt delivery and receipt of the products that customers have bought. However, variable 5 has a lower mean, coming in at 4.22. With a mean score between 4.00 and 4.36, it's safe to assume that customers of logistics services believe that having staff members who are well-versed on the products they're selling is crucial to providing outstanding support.

The average for variable 4 is higher than 4.22, coming in at 4.35. This indicates that the respondent strongly agreed that ensuring orders are fulfilled accurately would lead to happier customers. In summary, all respondents believed that

customer service and timely product delivery play a role in determining their level of satisfaction.

4.3.2 Innovation Capability

Table 4.7: Descriptive Analysis of Innovation Capability

Variables	N	Mean	Std. Deviation
1. Increase efficiency through automation to provide customers with faster resolutions will increase customer satisfaction.	260	4.24	0.929
2. Using technology to aid fulfillment processes and reduce human error will increase customer satisfaction.	260	4.19	0.934
3. Logistics innovation helps to saves time.	260	4.26	0.982
4. Warehouse technology to increases order picking processes.	260	4.08	0.960
5. Innovative helps to keep up with customer needs	260	4.23	0.940

Source: Group 47 developed by conducted online research survey

The descriptive statistics for answers to the independent variable, "innovation capability," were shown in Table 4.6. The mean score for variable 3 is 4.26, making it the highest. Given that the mean score for variable 3 is greater than 4.2, it is reasonable to conclude that respondents found "Logistics innovation helps to saves time" to be true. Contrarily, 4.08 is the lowest score ever recorded for variable 4.

The mean scores for variables 1, 5, and 2 are 4.24, 4.23, and 4.19, respectively, making them the second-, third-, and fourth-highest scorers. The average statement received a score of 4.08 out of a possible 4.26. This indicates that all respondents strongly agreed that the statement in variable 3 (that "Logistics innovation helps to saves time") is true. As a result, consumers may put even more faith in the time-saving benefits of logistical innovations.

4.3.3 Customer demand management capability

Table 4.8: Descriptive Analysis of Customer demand management capability

Variables	N	Mean	Std. Deviation
1. Help customers in resolving cargo transportation dispute will increase customer satisfaction.	260	4.15	0.903
2. Help customers in contacting insurance companies to file claims for compensation will increase customer satisfaction.	260	4.20	0.920
3. Flexibility in responding to consumer requests will increase customer satisfaction.	260	4.13	0.966
4. Adapting processes to suit unforeseen client needs in a flexible manner will increase customer satisfaction.	260	4.19	0.987
5. Dealing with customer problems patiently will increase customer	260	4.00	0.977

satisfaction.			
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Source: Group 47 developed by conducted online research survey

When it comes to the Customer demand management capability, the mean score for variable 2 is 4.20. It may read: "Enhance customer satisfaction by assisting clients in making contact with insurance firms to make claims for settlement." The lowest average is a 4.00 on variable 5. It's worth noting that even the most hesitant buyer of logistics services would likely agree that being patient with those who have issues is the best way to earn their pleasure. Additionally, the mean scores for variables 4, 1, and 3 are 4.19, 4.15, and 4.13, respectively. The score of 4.13 for variable 3 is second-lowest overall. Since the average rating was between 4.00 and 4.20, it may be assumed that customers of the logistics service agreed with all statements. To sum up, it is safe to say that customers of logistics service providers enjoy the benefits of excellent demand management.

4.3.4 Information management capability

Table 4.9: Descriptive Analysis of Information management capability

Variables	N	Mean	Std. Deviation
1. Help customers with valuation, cost savings, problem solutions, and other tasks will increase customer satisfaction.	260	4.08	0.957
2. Sending per-alert notices of shipment/delivery issues will increase customer satisfaction.	260	4.12	0.956
3. The services for returning and exchanging	260	4.28	0.926

things are straightforward, convenient, and responsible will increase customer satisfaction.			
4. The company offers cargo tracking services will increase customer satisfaction.	260	4.12	0.926
5. Recommending alternative actions when unexpected issues occur will increase customer satisfaction.	260	4.11	0.954

Source: Group 47 developed by conducted online research survey

Information management capability was used as the independent variable, and table 4.8 displayed descriptive data related to those replies. The mean score for Variable 3 is 4.28, making it the highest-scoring variable. The respondents' agreement with the statement "The services for returning and exchanging products are easy, convenient, and responsible will boost customer satisfaction" is shown by the variable 3 mean score being more than 4.2. Contrarily, variable 1 has the lowest total score, 4.08.

Mean scores for variables 2 and 4 are 4.12, with variable 5 coming in at 4.11 for third highest mean score. With a mean score between 4.08 and 4.28, it is clear that all respondents strongly agree with the statement found in variable 3. That implies if customers of a logistics company think that their services for exchanging or returning items are simple, easy to use, and trustworthy, they will be more satisfied with the company as a whole.

4.4 Reliability Test

Standardizing the studies or trials was how researchers determined how accurate a certain measurement was. There are two perspectives on reliability: internal and external. Internal validity and efficacy of the experiment were calculated using the general correlation element and the alpha index. If you want to know how devoid of random mistake a scale is, go no further than its dependability. In addition, if the result is constant throughout time, the instrument might be considered trustworthy. Internal reliability, a split-half approach, includes Cronbach's alpha as well. Cronbach's alpha is a part of internal reliability; it is used to calculate the average correlation or internal consistency of the research instrument (Cronbach, 1951).

Table 4.10: Reliability Test

Variable	Number of item	Cronbach's Alpha Coefficient ()	Internal Consistency
CUSTOMER SATISFACTION	5	0.909	Excellent
INNOVATION CAPABILITY	5	0.919	Excellent
CUSTOMER DEMAND MANAGEMENT CAPABILITY	5	0.910	Excellent
INFORMATION MANAGEMENT CAPABILITY	5	0.894	Good

Source: Group 47 developed by conducted online research survey

Cronbach's alpha for each variable was calculated using the reliability analysis tool in SPSS and is shown in Table 4.12. In this model, the levels of customer satisfaction, the innovation capability, and the ability to manage customer demand all operate as independent variables. The SPSS data shows that the Cronbach's alpha values for the three independent variables are 0.909, 0.919, and 0.910, respectively. The Cronbach's alpha score of 0.894 for the dependent variable "Information management capabilities" demonstrates good levels of internal consistency. A total of 260 participants were surveyed, and the findings confirmed the validity and trustworthiness of the real questionnaire.

4.5 Normality Test

Normality test was an additional of the graphical assessment of normality (Elliot & Woodward, 2007). Normality test usually used to define the sample data that had been collected from a normal distribution. Normality test that developed by the SPSS software are Kolmogorov-Smirnov test and Shapiro-Wilk test. According to the rule of thumb, the research was concluded that the variable was not normally distributed if value p is less than. 0.05 ($p < 0.05$).

Table 4.11: Normality Test

Variable	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
CUSTOMER SATISFACTION	0.258	0.000	0.672	0.000
INNOVATION	0.265	0.000	0.725	0.000

CAPABILITY				
CUSTOMER DEMAND	0.209	0.000	0.784	0.000
MANAGEMENT CAPABILITY				
INFORMATION	0.241	0.000	0.748	0.000
MANAGEMENT CAPABILITY				

Source: Group 47 developed by conducted online research survey

The results of the normality test, which the Shapiro-Wilk and Kolmogorov-Smirnov tests, were presented in Table 4.13. There were outliers discovered in the data following the normality test. Each independent variable's significance value, or p value, is 0.000, which is less than 0.05 ($p < 0.05$). The significant value result for the Kolmogorov-Smirnov test, which was a p-value less than 0.05 for all the variables, was displayed in the table above. This indicated that the data were not average. Additionally, the table displayed the Shapiro-Wilk test's significant value result, which was a p-value of 0.05 or less for all variable. This implied that the data was not average as well. The normality test therefore revealed that all the variables indicated not a normal distribution, and each variable's null hypothesis was rejected.

4.6 Pearson's Correlation Coefficient Analysis

Pearson's correlation coefficient analysis was used in this research to measure the strength and significant relationships between independent variables and dependent variable. Thus, the independent variables of this study were innovation

capability, customer demand management capability, information management capability and the dependent variable was customer satisfaction.

4.6.1 The relationship between the innovation capability and customer satisfactions.

Hypothesis to Address Research Question 1:

H0: There is no positive relationship between the innovation capability and customer satisfactions.

H1: There is a positive relationship between the innovation capability and customer satisfactions.

Table 4.12: Hypothesis 1

		Innovation Capability	Customer Satisfaction	Value
Innovation Capability	Pearson Correlation	1	0.801**	Strong
	Sig. (2-tailed)		0.000	
	N	260	260	
Customer Satisfaction	Pearson Correlation	0.801**	1	
	Sig. (2-tailed)	0.000		
	N	260	260	

Source: Group 47 developed by conducted online research survey

Table 4.14 above showed the relationship between the innovation capability and customer satisfactions. According to the result of the Person Correlation

Coefficient, this study accepted H1 because with the result of 0.801 it proved that there was significant relationship between the innovation capability and customer satisfactions. Meanwhile H0 was rejected because the value was 0.00 where there are no significant relationships between the innovation capability and customer satisfactions. From the result, H1 showed the level of relationship between the innovation capability and customer satisfactions was strong.

4.6.2 The relationship between the customer demand management capability and customer satisfaction.

Hypothesis to Address Research Question 2:

H0: There is no positive relationship between the customer demand management capability and customer satisfaction.

H2: There is a positive relationship between the customer demand management capability and customer satisfaction.

Table 4.13: Hypothesis 2

		Customer demand management capability	Customer Satisfaction	Value
Customer demand management capability	Pearson Correlation	1	0.760**	Strong
	Sig. (2-tailed)		0.000	
	N	260	260	

Customer Satisfaction	Pearson Correlation	0.760**	1	
	Sig. (2-tailed)	0.000		
	N	260	260	

Source: Group 47 developed by conducted online research survey

Table 4.15 above showed the relationship between the customer demand management capability and customer satisfaction. According to the result of the Person Correlation Coefficient, this study accepted H2 because with the result of 0.760 it proved that there was significant relationship between the customer demand management capability and customer satisfaction. Meanwhile H0 was rejected because the value was 0.00 where there are no significant relationships between the customer demand management capability and customer satisfaction. From the result, H2 showed the level of relationship between the customer demand management capability and customer satisfaction was strong.

4.6.3 The relationship between the information management capability and customer satisfaction.

H0: There is no positive relationship between the information management capability and customer satisfaction.

H3: There is a positive relationship between the information management capability and customer satisfaction.

Table 4.14: Hypothesis 3

		Information management capability	Customer Satisfaction	Value
Information management capability	Pearson Correlation	1	0.767**	Strong
	Sig. (2-tailed)		0.000	
	N	260	260	
Customer Satisfaction	Pearson Correlation	0.767**	1	
	Sig. (2-tailed)	0.000		
	N	260	260	

Source: Group 47 developed by conducted online research survey

Table 4.16 above showed the relationship between the information management capability and customer satisfaction. According to the result of the Person Correlation Coefficient, this study accepted H3 because with the result of 0.767 it proved that there was significant relationship between the information management capability and customer satisfaction. Meanwhile H0 was rejected because the value was 0.00 where there are no significant relationships between the information management capability and customer satisfaction. From the result, H3 showed the level of relationship between the information management capability and customer satisfaction was strong.

4.7 Chapter Summary

The Social Science Statistical Package was used to examine the sample data that were received from the questionnaire in this chapter (SPSS). First, reliability test studies were based on Cronbach's Alpha Rules of Thumb. The demographics of the respondents were analyzed using data collection analysis, which was followed by a descriptive analysis that offered a full summary of the data collection analysis. Test for reliability to confirm the accuracy of the data. To determine whether there was a link between the dependent variable and the independent variables, we employed the Pearson's Correlation Coefficient.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter will analyse the SPSS results from chapter 4 and evaluate the theories that the data from the previous chapter supported. In this chapter, we will cover the key findings, discussions of hypotheses, implications, and limitation, as well as recommendations for further study. The study's overall conclusion was the relationship of the factors of high level logistic service and the customer satisfaction.

5.1 Key Finding

The general scope of the analysis was to be covered in Chapter 5. We were able to determine whether or not we could accomplish the goals of the research project thanks to the help of the insights or explanations provided in the findings. This study examined how the factors of high-level logistical service and customer satisfaction relate to one another. This study's primary goal was to examine the relationships between the elements of high-level logistic service in order to improve customers satisfaction. Therefore, the first objective of this research is to examine the relationship between the innovation capability and customer satisfaction. Next, the second objective is to examine the relationship between the customer demand management capability and customer satisfaction. Lastly, the third objective is to examine the relationship between the information management capability and customer satisfaction.

The Pearson Correlation Coefficients analysis was used to verify the relationship and set the research objectives. In accordance with the table by Krejcie &

Morgan (1970), a sample size of 260 respondents was needed for this study, with 118 men and 142 women filling out the questionnaires that were provided. The statistics we gathered from our online questionnaire survey show that, whereas female respondents are more likely to be highly engaged consumers and participants, they filled out fewer surveys in total than male respondents. We used primary data to conduct this research by distributing a set of questionnaires and collecting responses from the target group as respondents.

We used the SPSS software to evaluate the data that were collected for this investigation. The reliability test was conducted to ensure that every data was accurate and reliable. The Cronbach's Alpha Coefficient was evaluated by using 30 participants in the pilot test. A pilot test was necessary to determine the validity of the independent and dependent variables before distributing the questionnaires to the students in order to ensure that all questions could support the research. Table 4.1's findings for the test indicated that the reliability test was above 0.6. As a result, the findings indicated that using the questionnaire for this research was adequate and deemed acceptable.

A particular approach has been used and studied in order to achieve the study's objectives. In order to evaluate the research objectives, we conducted descriptive analysis, frequency analysis, reliability analysis, normality test, and analysis of the Pearson Correlation Coefficient. Three research objectives were achieved and demonstrated a strong positive link, according to our analysis of all the test results. Customer satisfaction was positively correlated with all independent factors, including innovation capability, customer demand management capability, and information management capability. Therefore, all of the research's goals had been achieved with the help of this study.

5.2 Discussion

Table 5.1 Summary of Pearson's Correlation Coefficient Analysis

Hypothesis	Correlation Value	Significant Value	Conclusion
H1	0.801	0.000	Accepted (strong)
H2	0.760	0.000	Accepted (strong)
H3	0.767	0.000	Accepted (strong)

Source: Group 47 developed by conducted online research survey

5.2.1 Hypothesis 1

H1: There is a positive relationship between the innovation capability and customer satisfactions.

As based on the Pearson Correlation Coefficient analysis in Chapter four, we were founded that there is a positive relationship between the innovation capability and customer satisfactions. The positive level of innovation capability was 0.000 which the p value < 0.05 . Table 5.1 showed that the r value equal to 0.801 and H1 was accepted where it indicated that there was strong positive relationship between the innovation capability and customer satisfactions. According to Yeh, Chen and Chen (2019), customer satisfaction is a result of the effective outcomes of innovation capability. In reality, when client wants become more varied, it is vital to innovate in order to improve services and raise their quality. According to Hu, Horng and Sun (2009), Customers must be wowed and persuaded by the services that the logistic company can provide. According to the previous studies findings the hypothesis 1 of

this research was accepted. Hence, the innovation capability increases the customer satisfactions.

5.2.2 Hypothesis 2

H2: There is a positive relationship between the customer demand management capability and customer satisfaction.

As based on the Pearson Correlation Coefficient analysis in Chapter four, we were founded that there is a positive relationship between the customer demand management capability and customer satisfaction. The positive level of demand management capability was 0.000 which the p value < 0.05 . Table 5.1 showed that the r value equal to 0.760 and H2 was accepted where it indicated that there was strong positive relationship between the customer demand management capability and customer satisfactions. In accordance with a study by Demand management is a strategy that will estimate need for certain goods or services and plan how to supply that demand, according to recent study by Reinblatt (2022). By identifying and bridging demand gaps, this improves both consumer satisfaction and logistic service providers' experiences. According to Fritze (2021), a logistic service provider have to create a workable plan to address the present and prospective future situations in various target markets by using demand management to improve customer satisfaction. According to the previous studies findings the hypothesis 2 of this research was accepted. Hence, the customer demand management capability increases the customer satisfactions.

5.2.3 Hypothesis 3

H3: There is a positive relationship between the information management capability and customer satisfaction.

As based on the Pearson Correlation Coefficient analysis in Chapter four, we were founded that there is a positive relationship between the information management capability and customer satisfaction. The positive level of information management capability was 0.000 which the p value < 0.05 . Table 5.1 showed that the r value equal to 0.767 and H3 was accepted where it indicated that there was strong positive relationship between the information management capability and customer satisfactions. According to Bourgeois and Slater (1980), An organization's environmental setting is likely to have an impact on its composition, behaviour, and outcomes. It follows that under some environmental conditions more than others, customer information management may have a bigger beneficial impact on company outcomes such as customer satisfaction and firm performance. According to Byrd's research (2022) a logistic service provider needs a well-implemented information management capacity to forge enduring relationships with their clients. According to the previous studies findings the hypothesis 3 of this research was accepted. Hence, the information management capability increases the customer satisfactions.

5.3 Implications of the Study

Implications, as we already explored, the findings of our research indicated that all the three hypotheses were accepted as all of it showed a positive significant relationship. All independent variables which were innovation capability, customer demand management capability and information management capability had positive relationship towards the dependent variable which was customer satisfaction.

Meanwhile, the three independent variables which were innovation capability, customer demand management capability and information management capability showed a moderate positive relationship with the dependent variable customer

satisfaction. These factors should be further studied because, as was already indicated, others researcher work had shown that they have an impact on customer satisfaction. This study was designed to identify potential future routes for customer satisfaction that have an exogenous relationship on different factor. To increase customer satisfaction in Kelantan, we will have a greater understanding of the components of high-level logistics services. We wish to alter public perceptions of logistical services. Therefore, we set our research's goal to statistically evaluate the relationship between high-level logistics service variables and satisfaction of customers.

Furthermore, the study contributes high levels of satisfaction are associated with increased customer loyalty and higher lifetime value. Second, the logistics study primarily concerned with examining the ability of logistics organisations to offer high-quality service and, as a result, create and maintain satisfied customers. Building customer satisfaction is frequently seen as a challenge for any business trying to survive for the long term in of a market. The investigation of customer satisfaction in the context of logistics services is the primary focus of this study.

Third, the study contributes to understand the causes or elements that contribute to consumer satisfaction with a brand. When a brand satisfies the needs and desires of its customers, it has achieved customer satisfaction. The conclusions showed that the content played a significant role in explaining customers satisfaction. By evaluating customer loyalty, customer satisfaction can also be used to predict whether logistical services will be maintained or how long a product will last. Satisfied and pleased customers will guarantee the continuation of sales, which translates into the continuation of logistical services.

5.4 Limitations of the Study

Primarily, time was a significant barrier for many investigations. The research paper for this was completed in just under four months. As a result, we had little time for research and data gathering. We struggled to gather data from the respondents due to their hectic schedules and lack of time. Some of them are hurried, while others don't want to participate in the survey. Additionally, in order to complete the online Google form, respondents must have dependable internet access, such as Wi-Fi or mobile data. If only WIFI or data connections are available, the survey's questions have not been fully answered.

As a result, the respondent would have to fill out the survey once more. The online survey was also distributed via social media. The survey URL must always be distributed in order to receive responses. The large percentage of them would respond when they had time. We kept disseminating the link through Chat groups and private messages in order to make sure that the target number of respondents was attained and that the ideal time was chosen for customers to complete the online survey. Not to mention, different students have different viewpoints on what can be done to increase customer satisfaction. Similar to the results of the first study, the outcome would be unpredictable.

5.5 Recommendations for Future Research

Kelantan's logistics sector will continue to develop to a very high standard. Consequently, it is imperative that logistics service research take the initiative to initiate this transformation. Because of these restrictions, I propose a few directions for follow-up study. To begin, fresh studies may be done in other countries, where

residents may have varying perspectives on the value of logistics firms' newest offerings. The researcher will be prompted to expand their scope, maybe doing a survey of all Malaysians who have ever used a certain logistical service. Due to this fact, the scope of the research is narrowed to the state of Kelantan in Malaysia. While a larger sample size may aid in obtaining more reliable results that can be extrapolated to a wider setting, it may also hinder the researcher's ability to conduct future studies.

In addition, it's possible that logistics firms may keep their businesses growing sustainably by offering additional services, such as those that are logistics firms, to meet the fundamental demands of their customers and certain extras. Product delivery quality has also been improved via measures including automating the morning unload and shipment sorting on logistics sites in place of the present method of unloading by linear transport.

Next, the quality of the customer service provided is a major factor in whether or not a person would utilize a logistics company. Today, more than ever, providing excellent customer service is essential. Everyone nowadays has an expectation of high-quality service whenever they use any kind of technology. Having a positive customer service experience might encourage people to use the logistics services again and again, which is directly related to how quickly requests are filled. Logistics firms may take advantage of this opening by offering superior online and offline customer care by, for example, installing track and trace software so that clients can monitor the progress of their deliveries and by creating a FAQ website to address frequently asked concerns.

Additional research might depend on a variety of services to comprehend the utilization appeal that could be impacted by others in addition to information

management capability, innovation capability, and client demand management capacity. Customer happiness, innovation capability, and customer demand management competence are the focus of this study's research, although there are numerous more services that impact consumers' preferences when deciding on a logistics provider. Therefore, the articles and the journal as a reference to gather the essential information and complete the analysis for future research may further analyse the other variable that indirectly encourages people to use logistics services, such as utilizing the observation or survey. In addition to yearly population statistics and age-group analyses, researchers interested in logistics service users may dig further into their past experiences.

Finally, many data collecting tools might be the subject of future research. The researcher may get powerful and best findings by employing both quantitative methods like a questionnaire and qualitative methods like an interview. This is because the interview gives the respondents a voice in the questions asked and gives the researcher insight into the respondents' needs. Accordingly, thorough and precise information may be tallied during data collection. Future studies' findings may delve further into how logistics firms' supplementary offerings affect customers' happiness in the modern age of rapid economic expansion.

5.6 Overall Conclusion of the Study

There is a lot of pressure on modern logistics firms to meet the needs of an expanding client base, which has created a challenging environment in which to do business. The study in this chapter shows that the three independent variables of Information management capacity, innovation capability, and customer demand management capability are the most important in attracting consumers who utilize a

logistics service and therefore ensuring customer satisfaction. High-level logistical elements that impact customer satisfaction are identified, including information management capability, innovation capability, and customer demand management competence.

In the next step, we look at customer satisfaction as the variable of interest. The results of this research are crucial for elucidating the ways in which supplementary or novel offerings affect customers' overall pleasure. The researcher was successful in collecting surveys from all 260 respondents.

Information management competence, innovation capability, and customer demand management capability were also investigated in connection to consumers' reliance on logistics services for day-to-day shopping in Kelantan, Malaysia. All three independent factors were shown to be significantly linked to the dependent one. Customers may influence a company's actions, which can lead to inconsistent results when examining the effects on expanded or new service methods.

Overall, this study accomplished all three of its aims. The results of this investigation may be utilized as a road map for logistics providers to modify and enhance the services they provide to consumers in an effort to capture their interest and earn their pleasure. When incorporating new or supplementary services into overall company plans, logistics providers must keep in mind that these services may evolve over time.

Companies' decisions to adopt novel service delivery methods are driven by a wide range of variables, including industry, geography, consumer needs, and more. To sum up, enhanced or innovative service practices will play an important part in competitive circumstances going forward.

REFERENCES

- Argo, A. M., et al. (2013). "Investigation of biochemical biorefinery sizing and environmental sustainability impacts for conventional bale system and advanced uniform biomass logistics designs." *Biofuels, Bioproducts and Biorefining* 7(3): 282-302.
- Birmingham, P. and D. Wilkinson (2003). *Using research instruments: A guide for researchers*, Routledge.
- Bi, J. W., Liu, Y., Fan, Z. P., & Zhang, J. (2020). Exploring asymmetric effects of attribute performance on customer satisfaction in the hotel industry. *Tourism Management*, 77, 104006.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: A framework and propositions for future research. *Journal of the academy of marketing science*, 32(3), 271-292.
- Cooper, A. L., Huscroft, J. R., Overstreet, R. E., & Hazen, B. T. (2016). Knowledge management for logistics service providers: the role of learning culture. *Industrial Management & Data Systems*, 116(3), 584–602. <https://doi.org/10.1108/imds-06-2015-0262>
- Croxtan, K. L., Lambert, D. M., García-Dastugue, S. J., & Rogers, D. S. (2002). The demand management process. *The International Journal of logistics management*, 13(2), 51-66.
- Colbjørnsen, T. (2015). Digital divergence: analysing strategy, interpretation and controversy in the case of the introduction of an ebook reader technology. *Information, Communication & Society*, 18(1), 32-47.
- Daugherty, P. J., Chen, H., & Ferrin, B. G. (2011). Organizational structure and logistics service innovation. *The International Journal of Logistics Management*.
- Constantinides, E. (2014). Foundations of social media marketing. *Procedia-Social and behavioral sciences*, 148, 40-57.
- Ghoumrassi, A., & Tigu, G. (2017, August). The impact of the logistics management in customer satisfaction. In *Proceedings of the International Conference on Business Excellence* (Vol. 11, No. 1, pp. 292-301).
- Gligor, D. M., & Holcomb, M. C. (2012). Understanding the role of logistics capabilities in achieving supply chain agility: a systematic literature review. *Supply Chain Management: An International Journal*, 17(4), 438-453.
- Gajewska, T., & Grigoroudis, E. (2017). Estimating the performance of the logistics services attributes influencing customer satisfaction in the field of refrigerated transport. *International Journal of Shipping and Transport Logistics*, 9(5), 540-561.
- Huse, M., Neubaum, D. O., & Gabrielsson, J. (2005). Corporate Innovation and Competitive Environment. *The International Entrepreneurship and*

- Management Journal*, 1(3), 313–333. <https://doi.org/10.1007/s11365-005-2596-2>
- Hagan, T. L. (2014, July). Measurements in quantitative research: How to select and report on research instruments. In *Oncology Nursing Forum* (Vol. 41, No. 4, pp. 431-433).
- Hannes, K., Lockwood, C., & Pearson, A. (2010). A comparative analysis of three online appraisal instruments' ability to assess validity in qualitative research. *Qualitative health research*, 20(12), 1736-1743.
- Ho, L. H., & Chang, P. Y. (2015). INNOVATION CAPABILITIES, SERVICE CAPABILITIES AND CORPORATE PERFORMANCE IN LOGISTICS SERVICES. *International Journal of Organizational Innovation*, 7(3).
- Innis, D. E., & La Londe, B. J. (1994). Customer service: the key to customer satisfaction, customer loyalty, and market share. *Journal of business Logistics*, 15(1), 1.
- Imran, M., Hameed, W. U., & Haque, A. U. (2018). Influence of industry 4.0 on the production and service sectors in Pakistan: Evidence from textile and logistics industries. *Social Sciences*, 7(12), 246.
- Karia, N., Wong, C. Y., Asaari, M. H. A. H., & Lai, K. H. (2015). The effects of resource bundling on third-party logistics providers' performance. *International journal of engineering business management*, 7(Godište 2015), 7-9.
- Lisińska-Kuśnierz, Małgorzata, and Teresa Gajewska. "Customer satisfaction with the quality of the logistic services." *LogForum* 10.1 (2014): 13-19.
- Jenkins, A. (2022, August 30). *What is Demand Management: Functions, Process and Examples*. Oracle NetSuite. <https://www.netsuite.com/portal/resource/articles/inventory-management/demand-management.shtml>
- Kimitei, E., Chepkwony, J., Lagat, C., & Bonuke, R. (2019). Influence of Valence of Logistic Information Integration Capability on Firm Performance in Kenya. *Journal of Logistics Management*, 8(3), 51-60.
- Kotler, P., & Levy, S. J. (1969). Broadening the concept of marketing. *Journal of marketing*, 33(1), 10-15.
- Leeflang, P. S., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European management journal*, 32(1), 1-12.
- Meidutė-Kavaliauskienė, I., Aranskis, A., & Litvinenko, M. (2014). Consumer satisfaction with the quality of logistics services. *Procedia-Social and Behavioral Sciences*, 110, 330-340.
- Mursu, Á., Luukkonen, I., Toivanen, M., & Korpela, M. (2007). Activity Theory in Information Systems Research and Practice: Theoretical Underpinnings for an Information Systems Development Model. *Information Research: an international electronic journal*, 12(3), n3.

- Naway, F., & Rahmat, A. (2019). The mediating role of technology and logistic integration in the relationship between supply chain capability and supply chain operational performance. *Uncertain Supply Chain Management*, 7(3), 553-566.
- Nassè, T. B., Nanéma, M., & Carbonell, N. (2021). Equity and underpinning theories: an overview with some recommendations in the hotel and tourism industries. *International Journal of Tourism & Hotel Business Management*, 3(3), 534-539.
- Rather, R. A., Tehseen, S., Itoo, M. H., & Parrey, S. H. (2021). Customer brand identification, affective commitment, customer satisfaction, and brand trust as antecedents of customer behavioral intention of loyalty: An empirical study in the hospitality sector. In *Consumer Behaviour in Hospitality and Tourism* (pp. 44-65). Routledge.
- Shou, Y., Shao, J., & Chen, A. (2017). Relational resources and performance of Chinese third-party logistics providers: the mediating role of innovation capability. *International Journal of Physical Distribution & Logistics Management*.
- Solms, M. L. (2018). The neurobiological underpinnings of psychoanalytic theory and therapy. *Frontiers in Behavioral Neuroscience*, 294.
- Stokes, R. (2013). *eMarketing: The essential guide to marketing in a digital world*. Quirk eMarketing.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48(6), 1273-1296.
- Zenetti, G., Bijmolt, T. H., Leeflang, P. S., & Klapper, D. (2014). Search engine advertising effectiveness in a multimedia campaign. *International Journal of Electronic Commerce*, 18(3), 7-38.
- Zhang, Q., Vonderembse, M. A., & Lim, J. S. (2005). Logistics flexibility and its impact on customer satisfaction. *The International journal of logistics management*, 16(1), 71-95.

MALAYSIA

KELANTAN

APPENDIX A: DRAFT OF QUESTIONNAIRE



UNIVERSITI MALAYSIA KELANTAN FACULTY OF ENTREPRENEURSHIP AND BUSINESS BACHELOR OF LOGISTICS AND DISTRIBUTION TRADE WITH HONOURS

“THE FACTORS OF HIGH LEVEL LOGISTICS SERVICES TO IMPROVE CUSTOMER SATISFACTION”

Dear Respondents,

We are University Malaysia Kelantan final-year students enrolled in the Bachelor of Entrepreneurship (Logistic and Distribution trade) programme (Honours). We are presently conducting a research study on “The relationship between high level logistics service factors and customer satisfaction in Kelantan”. 5 minutes of your valuable time will be spent on the questionnaire. Your attention and devotion to answering this questionnaire with a thoughtful response would be appreciated. All comments received will only be used for academic purposes and will be kept private and confidential. You are appreciated for helping with this research and contributing. Regarding the next several components, the question is. Read the question attentively, then respond accordingly. We appreciate your help and suggestions. Please email us to request further information :

1. DANESH A/L SOLLEYAPPAN (A19A1024)

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4. AMIRUL ZAKWAN HARIZ BIN ARMAN (A20B1264)

Email: a20b1264@siswa.umk.edu.my

Responden yang dihormati,

Kami adalah pelajar tahun akhir Universiti Malaysia Kelantan yang mendaftar dalam program Ijazah Sarjana Muda Keusahawanan (Perdagangan Logistik dan Pengedaran) (Kepujian). Kami sedang menjalankan kajian penyelidikan mengenai "Hubungan antara faktor perkhidmatan logistik tahap tinggi dengan kepuasan pelanggan di Kelantan". 5 minit masa berharga anda akan dibelanjakan untuk soal selidik. Perhatian dan kesungguhan anda untuk menjawab soal selidik ini dengan jawapan yang bernas amatlah dihargai. Semua komen yang diterima hanya akan digunakan untuk tujuan akademik dan akan dirahsiakan dan dirahsiakan. Anda dihargai kerana membantu penyelidikan ini dan menyumbang. Mengenai beberapa komponen seterusnya, persoalannya ialah. Baca soalan dengan penuh perhatian, kemudian jawab dengan sewajarnya. Kami menghargai bantuan dan cadangan anda. Sila e-mel kepada kami untuk meminta maklumat lanjut:

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UNIVERSITI
MALAYSIA
KELANTAN

Section A: Demographic Profile / Bahagian A: Profil Demografi

Please tick (/) at the suitable answer. *Sila tandakan (/) pada jawapan yang sesuai.*

Please tick (/) at the suitable answer. *Sila tandakan (/) pada jawapan yang sesuai.*

1. Gender/ Jantina:

Male/ *Lelaki*

Female/ *Perempuan*

2. Race/ Bangsa:

Malay/ *Melayu*

Chinese/ *China*

Indian/ *India*

Other/ *Lain-lain* : _____

3. Age / Umur:

Below 20 years old / *Bawah 20 tahun*

20 to 30 years old / *20 hingga 30 tahun*

31 to 40 years old / *31 hingga 40 tahun*

41 to 50 years old / *41 hingga 50 tahun*

Above 50 years old / *50 tahun ke atas*

4. Highest Education / Pendidikan Tertinggi

Preschool Education / *Pendidikan Prasekolah*

Primary Education / *Sekolah Rendah*

Secondary Education / *Pendidikan Menengah*

Post-secondary Education / *Pendidikan Lepas Menengah*

Tertiary Education / *Pengajian Tinggi*

The following questions are to identify the relationship of high level logistics service factors and customer satisfaction in Kelantan. As for the questions of scale provided below. You can tick (/) your honest and sincere answers in the scale from 1 to 5. *Soalan berikut adalah untuk mengenal pasti hubungan faktor perkhidmatan logistik tahap tinggi dan kepuasan pelanggan di Kelantan. Bagi soalan skala yang disediakan di bawah. Anda boleh menanda (/) jawapan anda yang jujur dan ikhlas dalam skala dari 1 hingga 5.*

1 = Strongly Disagree/ *Sangat Tidak Setuju*

2 = Disagree/ *Tidak Setuju*

3 = Neutral/ *Berkecuali*

4 = Agree/ *Setuju*

5 = Strongly Agree/ *Sangat Setuju*

Section B: Customer Satisfaction / Bahagian B: Kepuasan pelanggan

No.	Question/ Soalan	1	2	3	4	5
1.	Company's professional services and friendly behaviours will increase customer satisfaction/ <i>Perkhidmatan profesional syarikat dan tingkah laku mesra akan meningkatkan kepuasan pelanggan.</i>					
2.	Product ordered, delivered, and received in a timely manner will increase customer satisfaction. / <i>Produk yang dipesan, dihantar dan diterima tepat pada masanya akan meningkatkan kepuasan pelanggan.</i>					
3.	The details provided about service time is appropriate and accurate will increase customer satisfaction. / <i>Butiran yang diberikan tentang masa perkhidmatan adalah sesuai dan tepat akan meningkatkan kepuasan pelanggan.</i>					
4.	Items are shipped in accordance with the orders made will increase customer satisfaction/ <i>Barang yang dihantar mengikut tempahan yang dibuat akan meningkatkan</i>					

5.	Inform customers if there is a delay in delivery will increase customer satisfaction./Memaklumkan kepada pelanggan sekiranya berlaku kelewatan penghantaran akan meningkatkan kepuasan pelanggan					
----	--	--	--	--	--	--

Section C: Innovation / Bahagian C: Penyesuaian dan inovasi

No.	Question/ Soalan	1	2	3	4	5
1.	Increase efficiency through automation to provide customers with faster resolutions will increase customer satisfaction. / Meningkatkan kecekapan melalui automasi untuk menyediakan pelanggan dengan resolusi yang lebih pantas akan meningkatkan kepuasan pelanggan.					
2.	Using technology to aid fulfilment processes and reduce human error will increase customer satisfaction. / Menggunakan teknologi untuk membantu proses pemenuhan dan mengurangkan kesilapan manusia akan meningkatkan kepuasan pelanggan.					
3.	Logistics innovation helps to saves time. / Inovasi logistik membantu menjimatkan masa.					
4.	Warehouse technology to increases order picking processes. / Teknologi gudang untuk meningkatkan proses pemilihan pesanan.					
5	Innovative helps to keep up with customer needs/Inovatif membantu untuk mengikuti keperluan pelanggan					

**Section D: Customer demand management capability / Bahagian D: Keupayaan
pengurusan permintaan pelanggan**

No.	Question/ Soalan	1	2	3	4	5
1.	Help customers in resolving cargo transportation dispute will increase customer satisfaction. / <i>Membantu pelanggan dalam menyelesaikan pertikaian pengangkutan kargo akan meningkatkan kepuasan pelanggan.</i>					
2.	Help customers in contacting insurance companies to file claims for compensation will increase customer satisfaction. / <i>Membantu pelanggan menghubungi syarikat insurans untuk memfailkan tuntutan pampasan akan meningkatkan kepuasan pelanggan.</i>					
3.	Flexibility in responding to consumer requests will increase customer satisfaction. / <i>Fleksibiliti dalam menjawab permintaan pengguna akan meningkatkan kepuasan pelanggan.</i>					
4.	Adapting processes to suit unforeseen client needs in a flexible manner will increase customer satisfaction. / <i>Menyesuaikan proses untuk memenuhi keperluan pelanggan yang tidak dijangka dengan cara yang fleksibel akan meningkatkan kepuasan pelanggan</i>					
5.	Dealing with customer problems patiently will increase customer satisfaction. / <i>Menangani masalah pelanggan dengan sabar akan meningkatkan kepuasan pelanggan.</i>					

Section E: Information management capability / Bahagian E: Keupayaan pengurusan maklumat

No.	Question/ Soalan	1	2	3	4	5
1.	Help customers with valuation, cost savings, problem solutions, and other tasks will increase customer satisfaction. / <i>Membantu pelanggan dengan penilaian, penjimatan kos, penyelesaian masalah dan tugas lain akan meningkatkan kepuasan pelanggan.</i>					
2.	Sending pre-alert notices of shipment/delivery issues will increase customer satisfaction. / <i>Menghantar notis pra-makluman tentang masalah penghantaran atau penghantaran akan meningkatkan kepuasan pelanggan.</i>					
3.	The services for returning and exchanging things are straightforward, convenient, and responsible will increase customer satisfaction. / <i>Perkhidmatan untuk memulangkan dan menukar barang adalah mudah, mudah, dan bertanggungjawab akan meningkatkan kepuasan pelanggan</i>					
4.	The company offers cargo tracking services will increase customer satisfaction. / <i>Syarikat yang menawarkan perkhidmatan pengesanan kargo akan meningkatkan</i>					
5.	Recommending alternative actions when unexpected issues occur will increase customer satisfaction. / <i>Mengesyorkan tindakan alternatif apabila berlaku isu yang tidak dijangka akan meningkatkan kepuasan pelanggan.</i>					

APPENDIX B: GANTT CHART

No	ACTIVITIES	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14
		(16/10/22 - 22/10/22)	(23/10/22 - 29/10/22)	(30/10/22 - 5/11/22)	(6/11/22 - 12/11/22)	(13/11/22 - 19/11/22)	(20/11/22 - 26/11/22)	(27/11/22 - 3/12/22)	(4/12/22 - 10/12/22)	(11/12/22 - 17/12/22)	(18/12/22 - 24/12/22)	(25/12/22 - 31/12/22)	(1/1/23 - 7/1/23)	(8/1/23 - 14/1/23)	(15/1/23 - 21/1/23)
A)	Planning for research i) -Discussion with supervisor (F2F) - finding the title and related thesis														
	ii) -Discussion with supervisor (GM) -Decide the topic -Start to do thesis (Introduction)														
B)	Action on plans -Progress of chapter 1 -Discuss with supervisor (F2F) -Correction for chapter 1														
	-Discussion with group members (F2F) -Start to do chapter 2														

	(Literature review)													
	-Discuss with supervisor (F2F) -Correction for Literature review -Start to do chapter 3 (Research Methodology)													
	-Sending full report to supervisor for report check -Correction -Preparing slide													
	Submission and presentation													
C)	Data Gathering -Creating questionnaire -Discussion with supervisor to check the questionnaire													
	-Distribution the questionnaire													
D)	Analysis of data collected -Analysis the questionnaire -SPSS													

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

Student's Name: DANESH A/L SOLLEYAPPAN, TIU HUI SING, PRAKASSRAJ A/L SANTHANATHAS, AMIRUL ZAKWAN HARIZ BIN ARMAN

Matric No.: A19A1024, A19A0952, A19A0792, A20B1264

Name of Supervisor: ENCIK ABDUL AZIZ BIN MAT HASSAN

Name of Programme: SAL

Research Topic: THE FACTORS OF HIGH LEVEL LOGISTICS SERVICES TO IMPROVE CUSTOMER SATISFACTION

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Content (10 MARKS) (Research objective and Research Methodology in accordance to comprehensive literature review) Content of report is systematic and scientific (Systematic includes Background of study, Problem Statement, Research Objective, Research Question) (Scientific refers to researchable topic)	Poorly clarified and not focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Fairly defined and fairly focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Good and clear of Research objective and Research Methodology in accordance to comprehensive literature review with good facts.	Strong and very clear of Research objective and Research Methodology in accordance to comprehensive literature review with very good facts.	____ x 1.25 (Max: 5)	
		Content of report is written unsystematic that not include Background of study, Problem Statement, Research Objective, Research Question	Content of report is written less systematic with include fairly Background of study, Problem Statement, Research Objective, Research Question	Content of report is written systematic with include good Background of study, Problem Statement, Research Objective, Research	Content of report is written very systematic with excellent Background of study, Problem Statement, Research Objective, Research	____ x 1.25 (Max: 5)	

FKP

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

			and unscientific with unsearchable topic.	and less scientific with fairly researchable topic.	Question and scientific with good researchable topic.	Question and scientific with very good researchable topic.		
2.	Overall report format (5 MARKS)	Submit according to acquired format	The report is not produced according to the specified time and/ or according to the format	The report is produced according to the specified time but fails to adhere to the format.	The report is produced on time, adheres to the format but with few weaknesses.	The report is produced on time, adheres to the format without any weaknesses.	$\frac{\quad}{0.25} \times$ (Max: 1)	
		Writing styles (clarity, expression of ideas and coherence)	The report is poorly written and difficult to read. Many points are not explained well. Flow of ideas is incoherent.	The report is adequately written; Some points lack clarity. Flow of ideas is less coherent.	The report is well written and easy to read; Majority of the points is well explained, and flow of ideas is coherent.	The report is written in an excellent manner and easy to read. All of the points made are crystal clear with coherent argument.	$\frac{\quad}{0.25} \times$ (Max: 1)	
		Technicality (Grammar, theory, logic and reasoning)	The report is grammatically, theoretically, technically and logically incorrect.	There are many errors in the report, grammatically, theoretically, technically and logically.	The report is grammatically, theoretically, technically and logically correct in most of the chapters with few weaknesses.	The report is grammatically, theoretically, technically, and logically perfect in all chapters without any weaknesses.	$\frac{\quad}{0.25} \times$ (Max: 1)	
		Reference list (APA Format)	No or incomplete reference list.	Incomplete reference list and/ or is not according to the format.	Complete reference list with few mistakes in format adherence.	Complete reference list to according to format.	$\frac{\quad}{0.25} \times$ (Max: 1)	

FKP

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

	Format organizing (cover page, spacing, alignment, format structure, etc.)	Writing is disorganized and underdeveloped with no transitions or closure.	Writing is confused and loosely organized. Transitions are weak and closure is ineffective.	Uses correct writing format. Incorporates a coherent closure.	Writing include a strong beginning, middle, and end with clear transitions and a focused closure.	____ x 0.25 (Max: 1)	
3.	Research Findings and Discussion (20 MARKS)	Data is not adequate and irrelevant.	Data is fairly and adequate irrelevant.	Data is adequate and relevant.	Data is adequate and very relevant.	____ x 1 (Max: 4)	
		Measurement is wrong and irrelevant	Measurement is suitable and relevant but need major adjustment.	Measurement is suitable and relevant but need minor adjustment.	Measurement is excellent and very relevant.	____ x 1 (Max: 4)	
		Data analysis is inaccurate	Data analysis is fairly done but needs major modification.	Data analysis is satisfactory but needs minor modification.	Data analysis is correct and accurate.	____ x 1 (Max: 4)	
		Data analysis is not supported with relevant output/figures/tables and etc.	Data analysis is fairly supported with relevant output/figures/tables and etc.	Data analysis is adequately supported with relevant output/figures/table and etc.	Data analysis is strongly supported with relevant output/figures/table and etc.	____ x 1 (Max: 4)	
		Interpretation on analyzed data is wrong.	Interpretation on analyzed data is weak.	Interpretation on analyzed data is satisfactory.	Interpretation on analyzed data is excellent	____ x 1 (Max: 4)	
4.	Conclusion and Recommendations	Implication of study is not stated.	Implication of study is weak.	Implication of study is good.	Implication of study is excellent	____ x 1.25	

FKP

**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)**

	(15 MARKS)					(Max: 5)	
		Conclusion is not stated	Conclusion is weakly explained.	Conclusion is satisfactorily explained.	Conclusion is well explained.	$\frac{\quad}{1.25} \times$ (Max:5)	
		Recommendation is not adequate and irrelevant.	Recommendation is fairly adequate and irrelevant.	Recommendation is adequate and relevant.	Recommendation is adequate and very relevant.	$\frac{\quad}{1.25} \times$ (Max:5)	
	TOTAL (50 MARKS)						

FKP



**ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT (PPTAI): TOTAL MARKING SCHEME
(COMPLETED BY SUPERVISOR & EXAMINER)**

Research Topic: THE FACTORS OF HIGH LEVEL LOGISTICS SERVICES TO IMPROVE CUSTOMER SATISFACTION

Student's Name: DANESH A/L SOLLEYAPPAN, TIU HUI SING, PRAKASSRAJ A/L SANTHANATHAS, AMIRUL ZAKWAN HARIZ BIN ARMAN

Matric No.: A19A1024, A19A0952, A19A0792, A20B1264

FKP

Assessment	Marks Given By	Marks Given By	Total
Effort (20%) <i>- Reflective Note</i>			
Presentation (20%)			/ 2 =
Research Paper (10%)			/ 2 =
Research Report (50%)			/ 2 =
GRAND TOTAL (100%)			

Signature: _____

Name of Supervisor: ENCIK ABDUL AZIZ BIN MAT HASSAN

Date:

Signature: _____

Name of Examiner : ENCIK MAHATHIR BIN MUHAMAD

Date:

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Name of Programme: SAL

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NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Determination	Is not determined and does not put in any effort in completing the research report	Is determined but puts in little effort in completing the research report	Is determined and puts in reasonable effort in completing the research report	Is very determined and puts in maximum effort in completing the research report	___ x 1 (Max: 4)	
2.	Commitment	Is not committed and does not aim to complete on time and/ or according to the requirements	Is committed but makes little effort to complete according to the requirements	Is committed and makes reasonable effort in fulfilling some of the requirements	Is very committed and makes very good effort in fulfilling all the requirements, without fail.	___ x 1 (Max: 4)	
3.	Frequency in meeting supervisor	Has not met the supervisor at all.	Has met the supervisor but less than five times.	Has met the supervisor for at least five times.	Has met the supervisor for more than five times.	___ x 1 (Max: 4)	
4.	Take corrective measures according to supervisor's advice	Has not taken any corrective action according to supervisor's advice.	Has taken some corrective actions but not according to supervisor's advice, or with many mistakes.	Has taken some corrective actions and most are according to supervisor's advice, with some mistakes.	Has taken corrective actions all according to supervisor's advice with few mistakes.	___ x 1 (Max: 4)	

5.	Initiative	Does not make any initiative to do the research.	Make the initiative to work but requires consistent monitoring.	Make the initiative to do the research with minimal monitoring required.	Makes very good initiative to do the research with very little monitoring required.	___ x 1 (Max: 4)	
TOTAL (20 MARKS)							/20



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**BORANG KELULUSAN PENYERAHAN
LAPORAN AKHIR PROJEK PENYELIDIKAN TANPA JILID**

Kepada,

Dekan,
Fakulti Keusahawanan dan Perniagaan
Universiti Malaysia Kelantan

Kelulusan Penyerahan Draf Akhir Laporan Akhir Projek Penyelidikan Tahun Akhir Tanpa Jilid

Saya, **ENCIK ABDUL AZIZ BIN MAT HASSAN**, penyelia kepada pelajar berikut, bersetuju membenarkan penyerahan dua (2) naskah draf akhir Laporan Akhir Projek Penyelidikan Tahun Akhir tanpa jilid untuk pentaksiran.

Kumpulan: Kumpulan 3

Nama Pelajar: DANESH A/L SOLLEYAPPAN

No Matrik: A19A1024

Nama Pelajar: TIU HUI SING

No Matrik: A19A0952

Nama Pelajar: PRAKASSRAJ A/L SANTHANATHAS

No Matrik: A19A0792

Nama Pelajar: AMIRUL ZAKWAN HARIZ BIN ARMAN

No Matrik: A20B1264

Tajuk Penyelidikan:

The Factors Of High Level Logistics Services To Improve Customer Satisfaction

Sekian, terima kasih

Tandatangan Penyelia

Tarikh:



Universiti Malaysia
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**REKOD PENGESAHAN PENYARINGAN TURNITIN
VERIFICATION RECORD OF TURNITIN SCREENING**

Kod>Nama Kursus: **ALS4113 Projek Penyelidikan Logistik II**

Code/ Course Name: **ALS4113 Final Year Research Project Logistic II**

Sesi/Session: **Semester September 2022/2023**

Semester: 7

Nama Program/Name of Programme: **SAL**

Fakulti/Pusat/Faculty/Centre: **Fakulti Keusahawanan Dan Perniagaan/ Faculty of Entrepreneurship and Business**

Pengesahan Penyaringan Plagiat/ Verification of Plagiarism Screening

Saya **Danesh A/L Solleyappan**, No.Matrik **A19A1024** (wakil kepada kumpulan 47) dengan ini mengesahkan Kertas Projek Penyelidikan ini telah melalui saringan aplikasi turnitin. Bersama ini dilampirkan sesalinan laporan saringan Turnitin dengan skor persamaan sebanyak **22 %**.

*I, **Danesh A/L Solleyappan**, Matrix number **A19A1024** (representative of group 47) hereby declare that I have screen my thesis using Turnitin Software. Enclosed here with a copy of verification of Turnitin screening with similarity score of **22%**.*

Tajuk Kertas Kerja Penyelidikan/ The Tittle of Research Project Paper:-

The Factors Of High Level Logistics Services To Improve Customer Satisfaction

Tandatangan/Signature

Nama Pelajar/Student Name: **DANESH A/L SOLLEYAPPAN (representative of group 47)**

No.Matrik/Matrix No: **A19A1024**

Tarikh/Date: **19/01/2023**

Pengesahan Penyelia/Supervisor: **Encik Abdul Aziz Bin Mat Hassan**

Tandatangan/Signature:

Tarikh/Date:

APPENDIX C: TURNITIN REPORT

GROUP 47_FULL RESEARCH PAPER			
ORIGINALITY REPORT			
22%	17%	5%	14%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	discol.umk.edu.my <small>Internet Source</small>	3%	
2	Submitted to Universiti Malaysia Kelantan <small>Student Paper</small>	2%	
3	etd.uum.edu.my <small>Internet Source</small>	1%	
4	Submitted to Universiti Teknologi MARA <small>Student Paper</small>	1%	
5	myscholar.umk.edu.my <small>Internet Source</small>	1%	
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