FACTORS AFFECTING THE IMPLEMENTATION OF E-LOGISTIC AMONG SMALL MEDIUM-SIZED ENTERPRISE (SMES) IN MALAYSIA

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SUPERVISORS DECLARATION

I hereby acknowledge that this project paper has been accepted as part of fulfilment for the degree of Bachelor of Technology Management (Supply Chain Management and Logistic) with Honours and will submit to the Universiti Teknikal Malaysia Melaka.

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DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled "**FACTORS AFFECTING THE IMPLEMENTATION OF E-LOGISTIC AMONG SMALL MEDIUM-SIZED ENTERPRISE (SMES) IN MALAYSIA**" is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

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DEDICATION

I would like to appreciate the dedication of my beloved family members who educated me and motive me to learn until degree level. And I express a deep sense of gratitude to my lecturer whom also my supervisors for my final year project, Dr Muzani bin Zainon, Madam Nurshamimah Binti Samsuddin, Ts Dr Nurhayati Binti Kamarudin and my fellow friends. They have provided me fully support and advice throughout this research. Without their blessing and encouragement, this research is impossible to complete within short period of time.

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ABSTRACT

The purpose of this study is to investigate the factors that influence the implementation of e- logistics among small and medium-sized enterprises (SMEs) in Malaysia. The study focuses on factors which are electronic payment systems, organizational structure, human resources, and legal infrastructure. The research makes use of a mixed-methods approach and draws on the Technology-Organization-Environment (TOE) paradigm. Geographically, the study is limited to small medium sized enterprise that using e-logistic in Malaysia. The methodology employs a quantitative method strategy, collecting 173 extensive data and using the statistical package for social science (SPSS) for data analysis. The findings revealed that electronic payment system is most influential factor toward on adoption of e-logistic among small medium sized enterprises in Malaysia. The implications of this study are SMEs should invest in staff training to overcome internal challenges, while e-logistics providers must offer user-friendly solutions. Policymakers should enhance digital infrastructure and provide financial incentives to support adoption. Wider e-logistics use can boost economic growth, job creation, and sustainability. Future research should explore its impact in other regions and examine emerging technologies like blockchain and AI.

Keyword: *E-Logistic, Small medium-sized enterprises (SMEs),* Technology-Organization-Environment *(TOE), Electronic Payment Systems, Organizational Structure, Human Resources, Legal Infrastructure, Adoption of e-logistic, Statistical Package for the Social Sciences (SPSS).*

ABSTRAK

Tujuan kajian ini adalah untuk menyelidiki faktor-faktor yang mempengaruhi pelaksanaan e-logistik dalam kalangan perusahaan kecil dan sederhana (PKS) di Malaysia. Kajian ini memberi tumpuan kepada faktor-faktor seperti sistem pembayaran elektronik, struktur organisasi, sumber manusia, dan infrastruktur perundangan. Kajian ini menggunakan pendekatan kaedah campuran dan berasaskan paradigma Teknologi-Organisasi-Persekitaran (TOE). Dari segi geografi, kajian ini terhad kepada perusahaan kecil dan sederhana yang menggunakan e-logistik di Malaysia. Metodologi yang digunakan ialah kaedah kuantitatif dengan mengumpulkan 173 set data dan menganalisisnya menggunakan perisian Perisian Statistik untuk Sains Sosial (PSSS). Penemuan kajian menunjukkan bahawa sistem pembayaran elektronik merupakan faktor yang paling berpengaruh terhadap penerimaan e-logistik dalam kalangan PKS di Malaysia. Implikasi kajian mencadangkan bahawa PKS perlu melabur dalam latihan kakitangan untuk mengatasi cabaran dalaman, manakala penyedia e-logistik harus menawarkan penyelesaian yang mesra pengguna. Pembuat dasar perlu meningkatkan infrastruktur digital dan menyediakan insentif kewangan bagi menyokong penerimaan e-logistik. Penggunaan e-logistik yang lebih meluas dapat merangsang pertumbuhan ekonomi, mewujudkan peluang pekerjaan, dan meningkatkan kelestarian. Kajian masa depan disyorkan untuk meneroka kesannya di wilayah lain serta meneliti teknologi baharu seperti blockchain dan kecerdasan buatan (AI) dalam meningkatkan keupayaan e-logistik PKS.

Kata Kunci: *E-Logistik, Perusahaan Kecil dan Sederhana (PKS), Teknologi-Organisasi-Persekitaran (TOE), Sistem Pembayaran Elektronik, Struktur Organisasi, Sumber Manusia, Infrastruktur Perundangan, Penerimaan e-logistik, Perisian Statistik untuk Sains Sosial (SPSS).*

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LIST OF ABBREVIATIONS

ABBEVIATION	MEANING
SME	Small Medium-sized Enterprise
ICT	Information And Communication Technology
PLS-SEM	Semi-Square Structural Equation Modelling
MSMEs	Micro, Small, And Medium-Sized Enterprises
GDP	Gross Domestic Product
DFTZ	Digital Free Trade Zone
ERP	Enterprise Resource Planning
TMS	transportation management system
WMS	warehouse management system
EDI	electronic data interchange
AI	artificial intelligence
IoT	Internet of Things
TRA	Theory Of Reasoned Action
TAM	Technology Acceptance Model
MM	Motivation Model
TPB	Theory Of Planned Behaviour
c-TAM-TPB	Combine Technology Acceptance Model and Theory of Planned Behaviour
MPCU	Model Of PC Utilization
DOI	Diffusion Of Innovations
TOE	Technology Environment Organization Framework
SCT	Social Cognitive Theory
EPS	Electronic Payment System
OG	Organization and Governance
HR	Human Resources
LI	Legal Infrastructure

IE	Investigate the Effect
MSF	Most Significant Factors
SPSS	Statistical Package for Social Sciences

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The research that presents an overview of the background study related to the factors influencing the implementation of e-logistic among small and medium-sized enterprises (SMEs) in Malaysia is the subject of this thesis. This chapter gives a broad summary of the background research on the adoption of E-logistic and includes the research outline. This chapter also contains a problem statement on the adoption of e-logistics among small and medium-sized businesses in Malaysia, as well as the research question, objective, study scope, significance, and limitations.

1.2 BACKGROUND OF THE STUDY

In the modern business environment, the integration of digital technologies into logistics operations, often referred to as e-logistics, has emerged as a critical factor for increasing efficiency, reducing costs, and improving customer happiness. E-logistics includes many tasks that are made easier by information and communication technologies (ICT), such as managing supplies, completing orders, transporting goods, and storing them.

Small and Medium-sized Enterprises (SMEs) play a major part in the economic growth of many regions. SMEs in Malaysia are increasingly adopting e-logistics solutions to stay competitive in the market. However, the successful application of e-logistics among SMEs is affected by numerous factors, ranging from technological infrastructure to organizational readiness and external environmental conditions (Piotr Adamczewski, 2017).

Several studies have highlighted the benefits of e-logistics for SMEs, such as increased operating efficiency, better supply chain management, and improved customer service (Wiranto & Sanjaya, 2022). Even with these benefits, many small and medium-sized businesses have trouble accepting e-logistics because they don't have enough money, technical know-how, or are unwilling to change.

Understanding the factors that affect the application of e-logistics among SMEs in Malaysia is important for lawmakers, company owners, and technology providers. This information can help in developing effective strategies and solutions to support SMEs in beating hurdles to e-logistics adoption, thereby promoting their growth and sustainability in the digital age.

1.3 PROBLEM STATEMENT

The fast development of digital technologies has changed logistics operations all around, so e-logistics is becoming more and more important for increasing competitiveness and efficiency. Small Medium-sized Enterprises (SMEs) in Malaysia have great difficulties implementing e-logistics, despite its acknowledged advantages including better supply chain management, lower operating costs, and more customer satisfaction (Azlinda Chek Talib et al., 2023).

Among SMEs in Malaysia, the main challenges to the use of e-logistics are limited financial resources, inadequate technological infrastructure, lack of technical knowledge, and organizational opposition to change (Mahbubul Hye et al., 2020). Further complicating the adoption process are outside elements include insufficient backing of government policies, market competitiveness, and changing consumer expectations.

While previous research has thoroughly covered the benefits of e-logistics (Miraz et al., 2020), there is a scarcity of studies directly addressing the unique challenges and factors affecting e-logistics adoption among SMEs in Malaysia. Without a thorough awareness of these elements, SMEs might find it difficult to properly use e-logistics, therefore depriving themselves of chances for digital age sustainability and development.

Thus, this study is to find and evaluate the main elements affecting the e-logistics adoption among Malaysian SMEs. By closing this gap, the study aims to offer insightful analysis for legislators, companies, and technology providers to create focused plans and actions enabling the effective implementation of e-logistics in this important industry.

1.4 RESEARCH QUESTION

To achieve the objectives of the study, this paper will provide an explanation as to why these assessment problems occur by addressing the following the research questions:

a) What is the level of that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia?

b) What is the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.

c) What is the most affecting factor toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia?

1.5 RESEARCH OBJECTIVE

The study is carried out the factors affect Small medium-sized enterprise (SMEs) in Malaysia to implementation e logistic. The research objectives are framed as the following:

a) To measure the level factors that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia.

b) To examine the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.

c) To identify the most factor that affecting toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

1.6 SCOPE OF THE STUDY

The factors that influence adoption of e-logistics among Malaysian Small and Medium-sized Enterprises (SMEs) and the scope of this study by some of variables such as electronic payment system, organization and governance, human resources and legal infrastructure. Geographically, the study is limited to the Malaysia area and offers insights particular to the local business and economic climate. Organizationally, the research targets SMEs as defined by the Malaysian SMEs Corporation across several industries related to logistics and supply chain management, including manufacturing, retail, wholesale, transportation, and other sectors engaged in logistics and supply chain operations that adopted e-logistic.

The study's methodology is a quantitative research strategy that collects extensive data. To evaluate data based on variance, the Statistical Package for the Social Sciences (SPSS) software is used in conjunction with the structural equation modelling approach. We will perform an evaluation test using SPSS's structural equation modelling capabilities to evaluate a structural equation modelling approach that allows for the estimation of complex effect connection models with latent variables. Standard result assessment criteria can be computed using SPSS software, which also facilitates alternative statistical analyses. The tests involved testing hypotheses regarding the importance of theoretical components included throughout the questionnaire and were conducted utilizing quantitative data readings.

1.7 SIGNIFICANCE OF THE STUDY

This study has dual significance as it adds significantly to the body of knowledge in academia and real-world applications about the use of e-logistics by Small and Medium-Sized Enterprises (SMEs) in Malaysia. Academically, it will add to the body of knowledge on digital transformation and logistics management by providing insights on the factors influencing the adoption of e-logistics. By concentrating on Malaysia, the study draws attention to challenges and opportunities unique to the area, providing the industry with a unique viewpoint.

Policymakers will be able to develop focused efforts and support programs to increase SMEs' adoption of e-logistics thanks to the study's useful results. By using the insights, SME owners and managers may better understand the advantages and challenges of e-logistics and find practical ways to overcome obstacles like limited budgets and a lack of technological expertise. This will make the use of e-logistics more efficient.

Technology suppliers will also benefit from having a better understanding of the needs of SMEs in Malaysia, which will enable them to provide specific solutions that address these challenges. In the end, the study can contribute to the competitiveness and economic growth of SMEs in Malaysia by increasing the use of e-logistics.

1.8 LIMITATION OF THE STUDY

The fact that the study was limited to SMEs in Malaysia, may restrict the applicability of the conclusions to other areas or nations. The distinct economic, cultural, and regulatory landscape of Malaysia may have an impact on the outcomes that isn't relevant elsewhere. Furthermore, the sample size will saturate at 180 sampling respondents and all of them work in various departments in an organization such as marketing, sales, admin assistant or the owner itself for small organizations.

1.9 SUMMARY

This study addressed the research background, the problem statement, research questions and objective, as well as the scope, significance and limitation of the study. In the study, an overview is presented by describing Chapter 1. In the following chapter, we'll go over more about independent and dependent variables.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will have elaborated about the literature review use in the research. The first step in this study is to evaluate several books, journals, articles, and online sources. The adoption of e-logistics in the modern era will have an impact on small and medium-sized enterprises (SMEs) in Malaysia, since their use of e-logistics will expand, and their competitiveness will rise. Understanding the factors that drive the adoption of e-logistics makes it an important and exciting subject. The researcher successfully formulated a theoretical framework including summaries of relevant literature. To investigate the variables impacting the use of e-logistic, relevant theories are examined in this part. This chapter includes the earlier study conducted by earlier researchers. Researchers can support their area of interest by drawing on the findings of earlier researchers.

2.2 OVERVIEW OF SMALL MEDIUM-SIZED ENTERPRISE (SMEs)

Small and medium-sized enterprises (SMEs) are an essential part of the global economy, serving as the foundation of many of them. SMEs, which are usually distinguished by their small size, are important for creating jobs, stimulating competition, and encouraging innovation. Focusing on flexibility and agility, SMEs frequently succeed in niche markets by providing customized goods or services catered to client requirements. Notwithstanding their modest size, SMEs play a critical role in the supply chain, propelling regional development, and contributing considerably to economic growth and stability.

The level of development in each country has also an impact on the small and medium entrepreneurship sector. The difference among contributions in terms of economic results and the employment rate in SMEs in low and high-income countries is noteworthy. SMEs in high-income countries account for more than 51 percent of GDP and 57 percent of employment, while in low-income countries, this figure slightly rises above 20 percent of both GDP and employment rate (Mahmudova & Kovács, 2018).

2.2.1 Small and Medium Enterprises in Malaysia

Approximately 1,173,601 micro, small, and medium-sized enterprises (MSMEs) made up 97.4% of all business establishments in Malaysia as of 2022. The services sector accounts for 84.7 percent of these MSMEs, with construction (7.9%), manufacturing (5.6%), and agriculture (1.4%) following closely behind (*Financing SMEs and Entrepreneurs 2024*, 2024). The significant proportion of MSMEs in the Malaysian economy is evidenced by their vital function, especially in the wide range of industries they cover.

SMEs have a major economic impact on Malaysia, making a big contribution to GDP and employment. MSMEs were responsible for 38.4% of the country's GDP in 2022, demonstrating their critical role in promoting economic expansion (*OECD*

Digital Economy Outlook 2024 (Volume 1), 2024). Additionally, they employed about 7.3 million individuals, or roughly 48% of the workforce (DEPARTMENT OF STATISTIC MALAYSIA (DOSM), 2022). Notwithstanding their contributions, SMEs encounter difficulties that can obstruct their expansion and effectiveness, such as high implementation costs and regulatory barriers.

The Malaysian government has run several initiatives and financial aid programs to help SMEs expand and prosper. These include the Digital Free Trade Zone (DFTZ), intended to ease e-commerce entry into international markets, and the SME Masterplan (2012-2020), which seeks to improve productivity, innovation, and market access. In addition, organizations such as Bank Negara Malaysia and SME Corp Malaysia offer vital funds and resources to assist SMEs in overcoming technological and financial obstacles (Bank Negara Malaysia, 2020; "SME Corp Malaysia," n.d.).

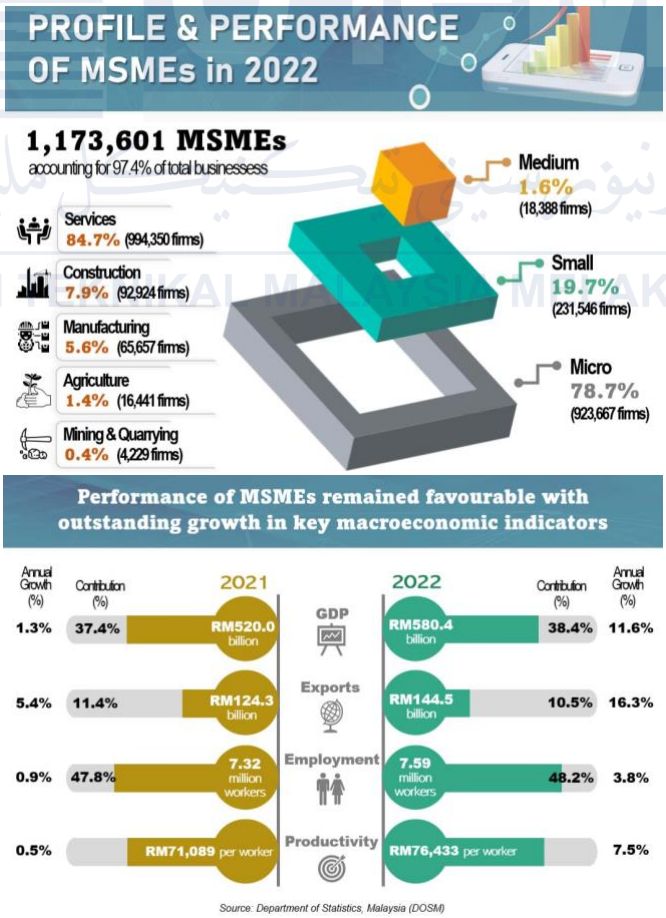

Figure 2.2.1: Malaysia SMEs Performance in 2022

Source: (DEPARTMENT OF STATISTIC MALAYSIA (DOSM), 2022)

2.3 THE IMPLEMENTATION OF E-LOGISTIC

The use of digital platforms and technology in the administration and performance of logistical procedures is known as electronic logistics, or e-logistics. E-logistics aims to improve efficiency, visibility, and responsiveness by integrating several supply chain components, such as order fulfilment, transportation, warehousing, and inventory management (Erceg & Sekuloska, 2019).

Using digital platforms and software to automate and optimize logistical processes is a crucial component of e-logistics (Piotr Adamczewski, 2017). To enable real-time tracking, communication, and coordination throughout the supply chain, this may entail implementing enterprise resource planning (ERP), transportation management systems (TMS), warehouse management systems (WMS), and electronic data interchange (EDI) platforms (Chung et al., 2015).

In addition, e-logistics frequently makes use of cutting-edge technologies like blockchain, artificial intelligence (AI), and the Internet of Things (IoT) to streamline operations and enhance judgment (Atumonye et al., 2022; Nasereddin, 2024). For instance, AI algorithms may evaluate real-time data from IoT sensors to improve scheduling and routing, and IoT sensors can offer data on the location and state of commodities in transit. Blockchain technology can lower the risk of fraud and mistakes in logistics transactions by improving security and transparency.

All things considered, there are several advantages to using e-logistics, such as lower costs, better inventory control, quicker order processing, and enhanced customer support. Organizations may improve their logistics operations and achieve a competitive edge in today's fast-paced and increasingly digital business environment by using the power of digital technology.

2.4 ADOPTION MODEL

Based on the research by (Amini & Bakri, 2015), numerous theories and models have been put out to investigate the process of embracing new technologies. The nine major theories of this field are theory of reasoned action (TRA), the technology acceptance model (TAM), the motivation model (MM), the theory of planned behaviour (TPB), the combined TAM and TPB (c-TAM-TPB), the model of PC utilization (MPCU), diffusion of innovations (DOI), technology environment organization framework (TOE) and social cognitive theory (SCT).

Among these theories, The TOE framework is an apt basis for grouping success factors in technology adoption due to its holistic approach. The framework for TOE considers the connection between external environmental conditions, organizational preparedness and capabilities, and technical characteristics by taking these three aspects into account (Rahman & Sensuse, 2024). Organizations can traverse external market dynamics and regulatory requirements, as well as assess the new technology's compatibility with current systems and internal readiness for change, thanks to this holistic perspective. Through a comprehensive analysis of these variables, the Technology Adoption Framework (TOE) offers a refined comprehension of the intricacies associated with technology adoption. This facilitates the identification and resolution of critical success factors by businesses, hence augmenting the probability of successful implementation and integration.

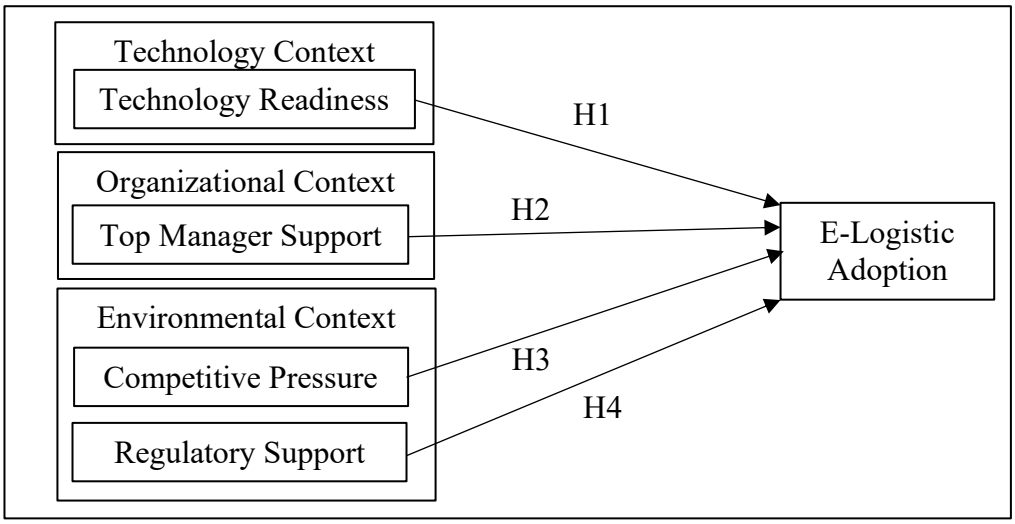

Figure 2.4: TOE Model

2.5 THE FACTOR OF IMPLEMENTATION OF E-LOGISTIC TOWARD SMEs IN MALAYSIA

In this study, the researcher had made an integration of TOE model to identify the factor of Implementation of e-logistic among SMEs in Malaysia. Besides, apart from the variables derived from TOE model, the other independent variable for instance compatibility also considered as a significant measurement of the factor of e-logistic adoption.

2.5.1 Electronic Payment System

The term "e-payment" describes the electronic techniques utilized for online financial transactions (Tien Minh et al., 2022). Customers may safely and conveniently pay for goods and services online thanks to this system, which is essential to e-commerce. Security, simplicity, acceptability, and privacy are critical e-payment system attributes that are essential to winning over customers (Nadeem et al., 2018). ICT facilitates these qualities by offering the technology and infrastructure required to guarantee reliable, secure, and seamless transaction processing.

Since they make it possible to conduct the financial transactions required for the movement of products, e-payment systems are essential to e-logistics (Wiranto & Sanjaya, 2022). ICT serves as a link between consumers and retailers, making it easier to manage logistics processes like transportation more effectively. This covers operations such as payment processing, tracking, and shipment coordination. A solid ICT infrastructure and a dependable e-payment system are prerequisites for successful e-logistics (Nadeem et al., 2018). ICT improves overall performance and customer happiness by ensuring that e-logistics operations are transparent, efficient, and responsive to client needs.

2.5.2 Organization and Governance

Organizational structure and governance must be considered while implementing e-logistics in SMEs (Tien Minh et al., 2022). SMEs must choose centralized or decentralized logistics. Centralizing logistical activities under one department improves coordination, uniformity, and economies of scale. However, it can be rigid and impede decision-making. A decentralized model lets departments or locations to manage their logistics needs independently, which is more flexible and responsive but may increase expenses and inconsistency.

Logistics must be integrated with sales, procurement, and customer service for efficient operations and real-time information flow. Logistics and sales coordination provides accurate and timely order fulfilment, while procurement coordination optimizes inventory levels and streamlines the supply chain (Snyder & Shen, 2019). Close engagement with customer service promotes client satisfaction through efficient delivery and handling of returns.

A strong governance framework is needed for e-logistics. Establishing clear rules and processes, including specified roles and duties, standard operating procedures (SOPs), and compliance guidelines, assures consistent and legally compliant operations. Performance monitoring and reporting are essential for tracking delivery timeframes, order accuracy, and inventory levels (Tien Minh et al., 2022). These tools enable management to make educated decisions about logistics performance, promoting accountability, transparency, and continuous improvement.

2.5.3 Human Resources

Small and medium-sized businesses (SMEs) that use e-logistics must adopt a strategic approach to human resource management, emphasizing hiring, performance management, training, change management, and organizational culture (Tien Minh et al., 2022). To use e-logistical systems efficiently, employees need to pick up new skills. This means that they need thorough training on digital tools, software, and updated logistics procedures. They also need ongoing learning opportunities to stay up to date on best practices and developing technology. Throughout the implementation process, it is crucial to maintain open lines of communication to manage expectations and lower resistance to change. While support services like helpdesks facilitate the shift, employee buy-in and commitment are fostered when they are involved in the planning and implementation stages.

Hiring candidates with the requisite experience such as IT specialists, data analysts, and e-logistics managers should be the main goal of recruitment strategies. Internal mobility should also be encouraged to make the most of current talent and foster career advancement (Leso et al., 2023). It is necessary to update performance management systems with new measures that accurately reflect the duties and goals of e-logistics. Additionally, offering rewards for exceptional performance can spur workers to thrive. It is imperative to foster a digital culture that values innovation and technology. This can be done by encouraging a positive outlook on change, recognizing accomplishments, and providing leadership support. Fostering cooperation amongst departments, including sales, logistics, and IT, guarantees integrated operations and raises the general efficacy of e-logistics deployment ("Logistics and E- Logistics Management: Benefits and Challenges," 2019).

2.5.4 Legal Infrastructure

The incorporation of e-logistics into small and medium-sized firms (SMEs) in Malaysia, requires a thorough comprehension and observance of a complex legislative framework. First and foremost, SMEs need to understand the guidelines provided by Malaysia's Personal Data Protection Act 2010 (PDPA) (Personal-Data-Protection-Act-2010). This legislation requires careful attention to guarantee that personal information received through e-logistics systems is managed securely and transparently. It controls the collecting, processing, and handling of personal data in commercial transactions. To protect people's right to privacy, compliance with PDPA requires creating strong privacy rules that are easily accessed by users. Failure to adhere to these standards may result in heavy fines and jeopardize the credibility and reputation of SMEs doing business in Malaysia's ever-changing commercial environment.

In addition, the increasing prevalence of electronic contracts in e-logistics transactions highlights how crucial it is for SMEs to comply with the Electronic Commerce Act of 2006 (LAWS OF MALAYSIA REPRINT). To guarantee the legitimacy and enforceability of electronic signatures and contracts in the digital sphere, this legal framework offers the essential standards. SMEs can promote more seamless transactions and reduce the likelihood of legal problems resulting from the use of electronic contracts by complying with the terms of this legislation. For SMEs looking to take advantage of the benefits provided by e-logistics while preserving legal clarity and compliance within their company processes, the Electronic Commerce Act is a vital enabler.

SMEs involved in cross-border trade not only have to handle domestic laws but also the intricacies of international trade regulations. When using e-logistics to reach a wider market, SMEs must adhere to Malaysia's Customs Act 1967 and the Free Zones Act 1990 (LAWS OF MALAYSIA Act 235 CUSTOMS ACT 1967). These rules control things like accurate documentation, correct classification of products, and compliance with import/export requirements. Maintaining adherence to trade laws reduces legal risks and promotes smooth customs clearance procedures, which in turn improves the effectiveness and dependability of cross-border logistical operations.

SMEs may fully utilize e-logistics to propel their growth and competitiveness in both local and international markets by proactively addressing trade compliance needs.

2.6 THEORETICAL FRAMEWORK

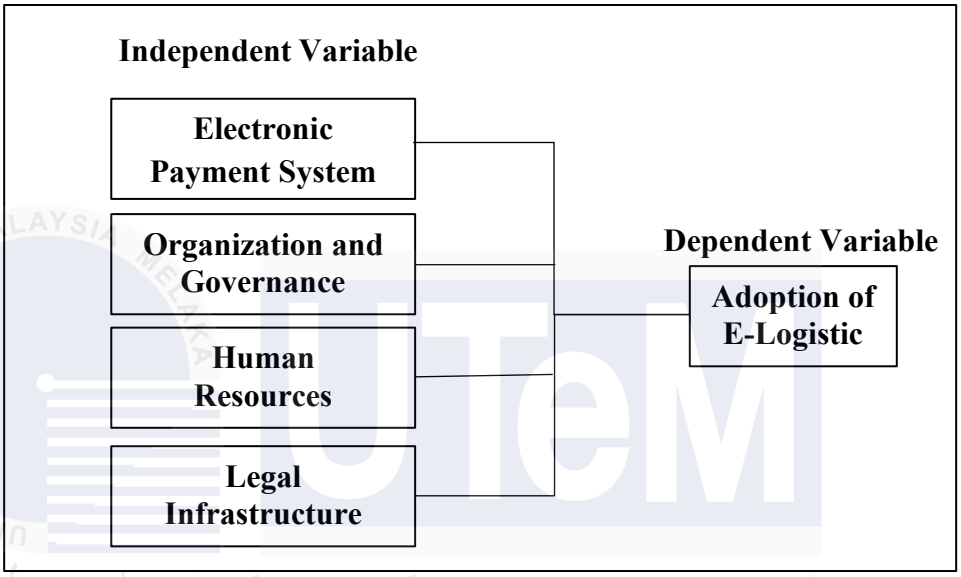

Figure 2.6: Conceptual Framework of the Research

The independent variables and variable impacts of Internet adoption of goods among adults in Malaysia are included in the suggested research framework in this study. Technology environment organization framework (TOE) that is suitable to be applied in this study. Inside the conceptual framework, there are 4 mains factors (Electronic Payment System, Organization and Governance, Human Resources and Legal Infrastructure) proposed by (Tien Minh et al., 2022)

2.7 SUMMARY OF THE FACTORS OF ADOPTION OF E-LOGISTIC AMONG SMEs IN MALAYSIA

Authors	Abstract	EPS	OG	HR	LI
(Tien Minh et al., 2022)	Factors Affecting E-Logistics Service: A Case of Vietnam's Northern Key Economic Region.	+	+	+	+
(Tran et al., 2023)	Factors Influencing the Satisfaction of E-logistic Customers in Vietnam: The Mediating Role of Information Technology.	+			
(Miraz et al., 2020)	Factors Affecting e-logistics in Malaysia: The Mediating Role of Trust	+		+	+
(Mahbubul Hye et al., 2020)	Factors Affecting on E-Logistic: Mediating Role of ICT & Technology Integration in Retail Supply Chain in Malaysia.	+	+	+	
(Wiranto & Sanjaya, 2022)	E-Logistic Optimization for MSME's To Prepare the New Normal Era (Conceptual Framework).	+		+	

Table 2.7: Summary the factors Of Adoption of e-logistic Among SMEs in Malaysia

(Electronic Payment System (EPS0, Organization and Governance (OG), Human Resources (HR) and Legal Infrastructure (LI))

('+' = Positive Relationship)

CHAPTER 3

REASEARCH METHODOLOGY

3.1 INTRODUCTION

The research methodology that was employed to achieve the study's objectives was covered by the researcher in this chapter. The theoretical framework, hypothesis testing, research design, and research methodology used in this study were all explained by the researcher. Additionally, the researcher discussed the creation of a variable-filled questionnaire. In addition, the researcher discussed the sample frame, data gathering methods, and data analysis tools that were utilized to examine the information acquired. Researchers provided illustrations of data analysis tool details in this chapter.

3.2 THEREOTICAL FRAMEWORK

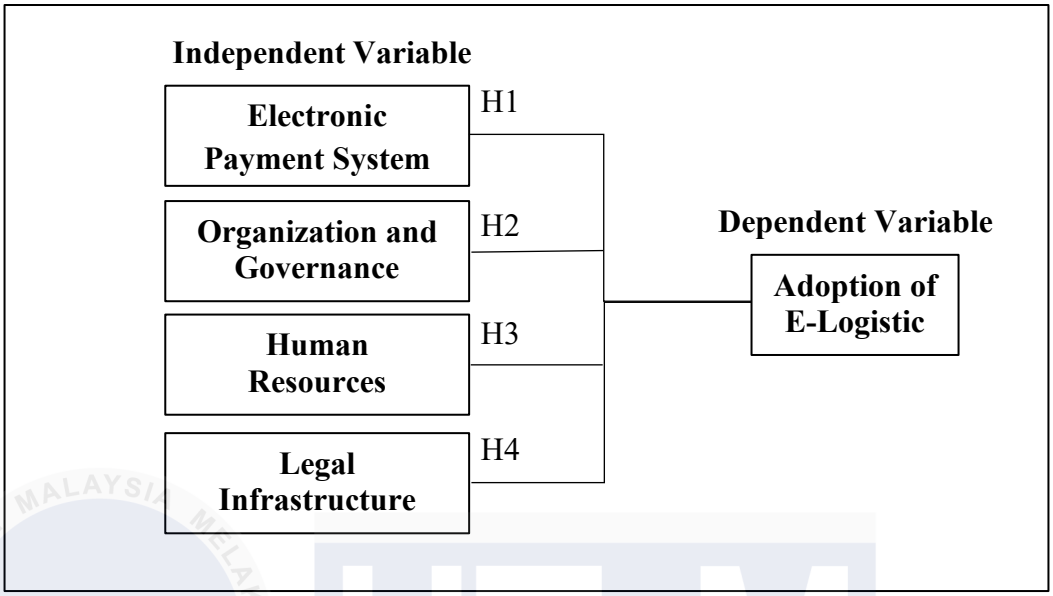

Figure 3.2: Conceptual Framework of the Research

Tien Minh et al., (2022) research served as the basis for the development and modification of the research framework depicted in Figure 3.2. This theoretical framework is applied to investigate the elements influencing e-logistic deployment among Malaysian SMEs. Adoption of e-logistic is the dependent variable and the independent variables, Electronic Payment System (EPS), Organization and Governance (OG), Human Resources (HR), and Legal Infrastructure (LI), are covered in the preceding few paragraphs. In short, the proposed framework in this study helps the public and readers to obtain a deeper understanding of the factors affecting the Implementation of e-logistic among Small medium-sized enterprise (SMEs) in Malaysia.

3.2.1 Hypothesis Testing

There were 4 hypotheses which can help to solve the factor of affecting the Implementation of e-logistic among Small medium-sized enterprise (SMEs) in Malaysia will illustrate as below:

Hypothesis 1

Electronic Payment System

H1 $_1$: There is significant relationship between electronic payment system toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H1 $_0$: There is no significant relationship between electronic payment system toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

Hypothesis 2

Organization and Governance

H2 $_1$: There is significant relationship between organization and governance toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H2 $_0$: There is no significant relationship between organization and governance toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia

Hypothesis 3

Human Resource

H3 $_1$: There is significant relationship between human resource toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H3 $_0$: There is no significant relationship between human resource toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

Hypothesis 4

Legal Infrastructure

H4 $_1$: There is significant relationship between legal infrastructure toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H4 $_0$: There is no significant relationship between legal infrastructure toward Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

3.3 RESEARCH DESIGN

The research design provided the researcher with an overview of this study for better understanding. According to (Saunders et al., 2019), a key component of comprehending the researcher's entire approach to conducting research was understanding the research design, which outlined how the researcher answered research questions to meet research objectives. There were three different kinds of study designs: descriptive, explanatory, and exploratory. The significance of research design lay in the researcher's ability to select the sources for data collection and the best methods for obtaining and analysing data from target respondents. It enabled the researcher to obtain more valuable information and assisted in decision-making during the project's investigation.

The researcher employed a descriptive research design in this study to obtain more precise and accurate data regarding the investigation. It was viewed as a notion that comprised observing and assessing the objects, features, and actions without making any changes to them. Descriptive research designs were therefore crucial for providing a summary or describing salient characteristics of the occurrences of interest that affected the target population (Loeb et al., 2017). This was because the descriptive research strategy allowed for the determination of information about a particular issue or problem. After that, it was utilized to discover the variables influencing the use of e-logistics by small and medium-sized businesses (SMEs) in Malaysia.

Additionally, a causal analysis was used in this study to assist in identifying the root cause of certain problems and offering solutions. The researcher identified the level of factors that affected the application of e-logistics among small and medium-sized enterprises (SMEs) in Malaysia in this study. The researcher was able to identify the most important factors influencing the application of e-logistics among SMEs in Malaysia by conducting a causal analysis. In addition, a structured questionnaire was used to apply a quantitative methodology and assess the statistical hypotheses related to the analytic questions. According to Saunders et al. (2019), the survey methods facilitated the collection of standardized data from respondents, hence enabling direct comparisons. The conclusions drawn from the data analysis were well understood by

the researcher. Descriptive research design was therefore the most appropriate research design to use for this kind of investigation.

3.3.1 Research Approach

The phases of the research technique included everything from broad hypotheses to steps for data collection, analysis, and interpretation. The two components of this research approach were the data collection strategy and the data interpretation strategy. As deductive reasoning frequently started with a theory-driven premise that guided data collection and analysis, it was used in this study. Measurement and evaluation of the relationship between independent and dependent variables were conducted using this method.

According to (Zalaghi & Khazaei, 2016), the deductive approach could be established as unique to a general form of reasoning. It was used to identify existing theories and investigate whether the theories were effective in specific circumstances, as well as to explain the means of hypotheses. The deductive approach began with a predicted pattern that was tested against observations, while induction began with observations and attempted to identify a pattern within them. Thus, the deductive approach was a step-by-step, rational, and structured method that focused on deducing conclusions from propositions or premises (Sekaran & Bougie, 2013).

3.3.2 Questionnaire Development

The main findings for this study were gathered quantitatively using a survey questionnaire. For quantitative analysis, a sizable sample of target respondents was given the exact same set of questions from the questionnaire survey, allowing for an in-depth exploration of respondents' experiences, thoughts, and feelings (Saunders et al., 2019). This study on the factors impacting e-logistics implementation among SMEs in Malaysia distributed its questionnaire both online and offline to maximize reach and convenience. Google Forms powered the online survey, making data collection via email, social media, and other means easy. Users accessed the survey on tablets, smartphones, or PCs. Participants received offline, printed questionnaires at industry events or their workplaces. A mixed-method approach ensured accessibility and inclusion, while online data collection allowed accurate data transfer into Excel for analysis.

The questionnaire form consisted of three sections: Section A, Section B, and Section C. Section A emphasized the general information of respondents. In Section B, the questions were related to the independent variables, which were the Electronic Payment System (EPS), Organization and Governance (OG), Human Resources (HR), and Legal Infrastructure (LI) were the key factors affecting the implementation of e-logistics among small and medium-sized enterprises (SMEs) in Malaysia. Section C focused on the dependent variable, which was the adoption of e-logistics among SMEs in Malaysia from the respondents' point of view. This survey form was created with the aim of addressing and achieving all the research questions and objectives, and it was based on past studies conducted by other researchers.

Table 3.3.2: Sections in Questionnaire

Section A	General Information of Respondents.
Section B	The Level and Relation Between Factors Affecting the Implementation of e-logistic Among Small medium-sized enterprise (SMEs) In Malaysia
Section C	The most significant factors affecting the implementation of e-logistics among SMEs in Malaysia.

Based on the questionnaire design, the respondents answered the questions using a Likert scale ranging from 1 to 5 based on their opinions regarding the adoption of e-logistics intentions among small and medium-sized enterprises (SMEs) in Malaysia. The respondents selected the most suitable and appropriate answer scale for each question. There were five rating marks, starting from 1, which represented 'strongly disagree,' followed by 'disagree,' 'neutral,' 'agree,' and 5, which represented 'strongly agree.

Figure 3.3.2: Likert Scale

3.3.3 Operational Construct

Table 3.3.3: Operationalization of Construction

Section B: Independent Variable

Constructs	No of Items	Scale of Measurement
Electronic Payment System (EPS)	**5**	Likert Scale (1-5)
Organization and Governance (OG)	**5**	Likert Scale (1-5)
Human Resources (HR)	**5**	Likert Scale (1-5)
Legal Infrastructure (LI)	**5**	Likert Scale (1-5)

Section C: Dependant Variable

Constructs	No of Items	Scale of Measurement
SECTION C		
Investigate the Effect (IE)	**5**	Likert Scale (1-5)

3.3.4 Variables

Table 3.3.4: The Variables

Section B

Electronic Payment System

Label	Items	Source
EPS	**Electronic Payment System**	(Wong et al., 2019)
EPS 1	Our company has a reliable electronic payment system in place.	
EPS 2	The implementation of an electronic payment system has reduced transaction times.	
EPS 3	Our electronic payment system integrates well with our logistics operations.	
EPS 4	We have experienced fewer errors in transactions since adopting an electronic payment system.	
EPS 5	The effectiveness of electronic payment systems in streamlining logistics processes is high.	

Organization and Governance

Label	Items	Source
OG	**Organization and Governance**	(Carter et al., 2015)
OG 1	Our organization has a clear strategy for implementing e-logistics.	
OG 2	There is effective communication between departments regarding logistics operations.	
OG 3	Management actively supports the adoption of e-logistics technologies.	
OG 4	Our organizational structure facilitates the implementation of e-logistics.	
OG 5	There are established policies in place that guide the use of e-logistics in our company.	

Human Resources

Label	Items	Source
HR	**Human Resources**	(Becker & Huselid, 2006)
HR 1	Our employees receive regular training on e-logistics systems.	
HR 2	There is enough staff to manage e-logistics operations.	
HR 3	Employees are motivated to adopt new technologies in logistics.	
HR 4	Our company encourages feedback from employees regarding e-logistics processes.	
HR 5	The skills of our workforce align with the requirements of e-logistics operations.	

Legal Infrastructure

Label	Items	Source
LI	**Legal Infrastructure**	(Kengue Mayamou & Michel, 2020)
LI 1	The legal framework in Malaysia supports the use of electronic logistics.	
LI 2	Our company is compliant with all legal requirements related to e-logistics.	
LI 3	We have access to legal resources that help us navigate e-logistics regulations.	
LI 4	Our company proactively updates its practices to align with changes in e-logistics laws and regulations.	
LI 5	Our company regularly reviews its legal obligations regarding e-logistics.	

Section C

Investigate the Effect

Label	Items	Source
IE	**Investigate the Effect**	(Petridis, 2015)
IE 1	Our company has fully adopted e-logistics practices.	
IE 2	The adoption of e-logistics has improved our supply chain efficiency.	
IE 3	E-logistics has helped us reduce operational costs.	
IE 4	Our company is competitive in the market due to the adoption of e-logistics.	

3.3.5 Pilot Analysis

Pilot testing was one of the most important components of research that used a questionnaire form to collect data. This was because the pilot testing ensured that the research had a good response rate and a realistic sample size. Small-scale studies were preferred to increase the viability of the questionnaires and thereby improve the overall performance of the research study. While actual respondents did not encounter any issues answering the survey, this process aided researchers in improving the items created in the questionnaire (Saunders et al., 2019). Furthermore, it enabled the investigator to enhance the soundness of research inquiries and the dependability of gathered data, ultimately leading to a successful investigation.

To conduct a pilot test and pre-test on the questionnaire, the researcher distributed the survey form to 30 respondents, depending on the sample size. To complete the questionnaire and determine whether it was reasonable, the researcher gathered and documented the respondents' comments and responses. Thus, before the questionnaire was sent to the final respondents, the researcher improved and altered its design by changing the phrasing or scale of certain statements. After that, the completed questionnaire was improved and used for the actual survey in this research project.

3.4 DATA COLLECTION

This research utilized a quantitative approach to examine the variables impacting the adoption of e-logistics by small and medium-sized businesses (SMEs) in Malaysia. To gather quantitative data, representatives of SMEs were given structured questionnaires. Participants were drawn from a range of sources, including professional networks and local business associations. Data were gathered anonymously, and confidentiality was always upheld to protect respondents' privacy. By quantitatively analysing the linkages and effects of various factors on SMEs' adoption of e-logistics, this quantitative approach sought to provide a clear and impartial explanation of these influences.

This study suggested that both primary and secondary data were collected during the data collection procedure. The main data was intended to collect firsthand knowledge for the purpose of determining the study by examining the relevant variables. Primary data was defined as information that was directly obtained from a data source without going through any pre-existing sources, according to the Formplus Blog websites (2021). The distribution of the questionnaire to respondents helped to ensure data dependability without compromising the integrity of the findings. The findings were either essential to the investigation or not.

Furthermore, this study employed secondary data as a means of gathering the necessary information. A wide variety of information that could be found in reading materials such as journals, books, articles, newspapers, and other online sources made up the secondary data. Following Bell's (2010) assertion, researchers could obtain essential information and knowledge by consulting previous studies undertaken by other researchers. As a result, documents that were significant and helpful for this research study were chosen and gathered from the ScienceDirect, Google Scholar, and Emerald Insight databases.

3.4.1 Sampling Technique

According to (Lagares Barreiro & Puerto Albandoz, n.d.) identified three categories of sampling strategies: (1) Random or probability sampling: every sample has an equal chance of being selected. (2) Purpose sampling, or sample selection based on the researcher's research objective. (3) It is improbable that every sample in non-probability or no-rule sampling was selected in the same manner. Simple random, systematic random, stratified random, cluster, and multi-stage processes are the five methods used in probability sampling.

The process of choosing a suitable component, such as the population, target population, and sample, to fulfil the goals of the study was known as sampling. By choosing data from a subset rather than all available examples or components, the sampling approach minimized the amount of data that the researcher needed to collect (Saunders et al., 2019). Using a computer or random number tables, simple random sampling, also referred to as random sampling, entailed choosing a sample at random from the sampling frame (Saunders et al., 2019).

In quantitative approaches, simple random sampling was often used to select people who could provide representative data relevant to the research topic. Random sampling was utilized to find and recruit participants for this study, which focused on the factors influencing small and medium-sized businesses' (SMEs') adoption of e-logistics in Malaysia. A thorough list of SMEs was used to choose participants at random, ensuring a representative and diverse sample. Statistically significant data on the challenges and roadblocks associated with e-logistics deployment were gathered using this approach. Our methodology ensured that a range of viewpoints were included in the sample, providing a broad and objective understanding of the factors affecting e-logistics adoption, given the spatial spread of SMEs in Malaysia.

3.4.2 Sampling Size

This study used probability sampling, also referred to as stratified random sampling. It was more likely to control the sampling units that were included in each sample, as well as the likelihood that each sample would be recognized as a probability sample. This helped researchers completely avoid the formulas. The outcomes of one set of these computations were shown in Figure 3.4.2. Almost any study could utilize it to calculate the right sample size.

According to the 2022 report from the Malaysian Department of Statistics, there were 1,173,601 SMEs operating in Malaysia (*Financing SMEs and Entrepreneurs 2024*, 2024). At 384 sampling respondents, the sample size was expected to reach saturation. SMEs were handed questionnaires to gather their thoughts on e-logistic use. As the employees who use the application, the E-Logistic administrators were encouraged to respond to the survey. The respondents were distributed via Google Form for the online survey to small businesses in Malaysia, where they were employed in a variety of areas, including marketing, sales, administrative support, and the owner himself. However, due to limitations and difficulties in reaching the target number, the researcher was only able to obtain 173 respondents.

	Margin of Error			
Population	5%	3%	2%	1%
50	44	48	49	50
100	79	91	96	99
150	108	132	141	148
200	132	168	185	196
250	151	203	226	244
300	168	234	267	291
400	196	291	434	384
500	217	340	414	475
750	254	440	571	696
1,000	278	516	706	906
2,000	**322**	696	1091	1655
5,000	357	879	1622	3288
10,000	370	964	1936	4899
100,000	383	1056	2345	8762
1,000,000	384	1066	2395	9513
10,000,000	384	1067	2400	9595

Figure 3.4.2: Sample Sizes for Different Sizes Population

3.4.3 Key Informants

The study's primary sources of information were e-logistics implementation-related representatives from Malaysia's small and medium-sized businesses (SMEs). Several factors, including the kind of SME, the representative's position within the organization, years of experience, industry sector, and the degree of e-logistics deployment, were taken into consideration when choosing the replies. The main goal was to learn from people with different experiences and viewpoints to comprehend the elements influencing the use of e-logistics in small and medium-sized enterprises.

3.5 DATA ANALYSIS

To produce findings for this study, all the data that was gathered from respondents had to be examined. The Statistical Package for Social Sciences (SPSS) is a system that exists because of modern technology. With the aid of this computer software, the research may analyse and interpret the findings depending on the information gathered for this report. Because this research was using a quantitative approach, SPSS is used in this report. Large-scale data management is made easy with SPSS, which may also expedite the tabulation and assessment procedures.

Pallant (2010) claims that to determine the validity, reliability, and quality of the data collected, SPSS use basic multiple regression. During the questionnaire's administration, SPSS might be utilized to verify the provided hypotheses. Furthermore, a standard multiple regression analysis will assist in assessing the gathered data to enhance and reinforce the validity of the variables. Additionally, SPSS can assist the researcher in conducting hypothesis testing by examining the relationship between all the variables. Then, there were 4 data analysis techniques which is descriptive, validity and reliability, Pearson corelation and Multiple Regression Analysis that will need to do for this research (Habib et al., 2021).

3.5.1 Descriptive Analysis

Without drawing conclusions or forecasts, descriptive analysis consisted of summarizing and explaining a dataset's features. The researcher's study aimed to investigate the factors that influenced the deployment of e-logistics among small and medium firms (SMEs) in Malaysia. To offer a thorough overview of the data collected, descriptive analysis was employed. Measures including frequencies, percentages, means, and standard deviations were used in this research to characterize the respondents' demographics and the important factors pertaining to the deployment of e-logistics. Descriptive statistics were used to find distributions, trends, and patterns in the data, providing important information about the sample and setting the stage for further research (Vetter, 2017).

Range of Mean	Level
0.00 – 1.67	Low
1.68 – 3.33	Medium
3.34 – 5.00	High

Table 3.5.1: Mean score

3.5.2 Validity and Reliability Analysis

One of the key components of a quantitative study that researchers had to conduct to guarantee the highest level of research quality was the validity and reliability analysis. Reliability tests were used in this study to ensure that all the independent variables and the dependent variable had internal consistency in reliability. In addition, for all the variables in this research study to be associated, they needed to share the same underlying structure. On the other hand, the accuracy and precision of the measure were the focus of the validity test. By using consistent and precise measurements, researchers could provide data that was believable.

Cronbach's Alpha was used in this study to determine the average correlation of every measurement item across all variables. It was typically applied to assess data

consistency. The alpha coefficient's value fell between 0 and 1. According to the findings of (Shams et al., 2015), an alpha coefficient value of 0.5 or higher indicated that the measure was suitable for demonstrating the dependability of all variables. The internal consistency and Cronbach's Alpha Coefficient Range were displayed in Table 3.5.2. A Cronbach's Alpha of more than 0.7 was regarded as satisfactory, more than 0.8 as outstanding, and 0.9 and above as exceptional. This investigation employed both dependent and independent variables to ascertain the validity and reliability of the findings.

Cronbach's Alpha Coefficient	**Internal Consistency**
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Table 3.5.2: Cronbach's Alpha Coefficient Range and Strength of Association.

3.5.3 Pearson Correlation Analysis

To investigate the presence and degree of relationships between dependent and independent variables, Pearson Correlation Analysis was employed. According to some, this analysis was a very important method because it could show whether there was a likely relationship between the two variables. The square was demonstrated by the study's result, which ranged from 0 (random) to 1 (perfect linear link) or -1 (perfect negative association). The larger the departure of the data from the best-fit line, the closer the correlation coefficient, r, was to zero (0). The variance data from the best-fit line was less the closer the correlation coefficient, r, was to 1 /-1. The Pearson Correlation Coefficient Range was shown in Table 3.5.3.

Coefficient Range	Strength of Correlation
± 0.00 to ± 0.30	Weak
± 0.40 to ± 0.60	Moderate
More than ± 0.70	Strong

Table 3.5.3: Pearson Correlation Coefficient Range

3.5.4 Multiple Regression Analysis

Multiple regression analysis could be used to determine the relationship between two variables, if one had ever wondered what it was. This approach could be used to look at the trajectory, research intensity, and overall strength of a relationship. Guilford's rule of thumb could be applied to gauge the degree of closeness between two people in a low-key relationship. Furthermore, multiple regression analysis anticipated and computed the regression equation and correlation of several determinations using multiple independent variables (Saunders et al., 2019). This was one of the most helpful tools for data analysis in quantitative research. Outcomes could be estimated by using a set of independent factors on the dependent variable.

The general form of the multiple regression equation was as follow: -

$$\boldsymbol{Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4}$$

Where:

Y	Dependent variable (Adoption of e-logistic among SMEs in Malaysia)
A	Constant
b_1	Influence of X_1 (Electronic Payment System)
b_2	Influence of X_2 (Organization and Governance)
b_3	Influence of X_3 (Human Resource)
b_4	Influence of X_4 (Legal Infrastructure)
X_1, X_2, X_3, X_4,	Independent variables

Table 3.5.4: Equation of Multiple Linear Regression Analysis

3.6 SUMMARY

Table 3.6: Summary of Research Questions, Research Objectives, Research Hypothesis and Data Analysis

Research Objective	Research Question	Research Hypothesis	Data Analysis
RO1: To measure the level factors that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia.	RQ1: What is the level of the factors that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia.		Descriptive Analysis, Mean, Standard Deviation, Crosstabulation, Cronbach's alpha
RO2: To examine the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.	RQ2: What is the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.		Pearson Correlation Analysis

RO3: To identify the most factor that affecting toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.	RQ3: What is the most affecting factor toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.	H1: There is significant relationship between electronic payment system towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia. H2: There is significant relationship between organization and governance towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia. H3: There is significant relationship between human resource towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia. H4: There is significant relationship between legal infrastructure towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.	Multiple Regression Analysis

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter presents the analysis and interpretation of data collected through a distributed questionnaire using SPSS version 29, with results displayed in simple tables and charts. A pilot test, multiple regression analysis, descriptive statistical analysis, and Pearson correlation are all included in the analysis. Before the main survey, a subject specialist and an academic lecturer assessed a pre-test questionnaire, and a pilot test with 30 respondents was carried out to calculate the Cronbach Alpha. The questionnaire was given to respondents in Malaysia, and the results were summarized using frequency tabulation. For clarity and readability, the chapter starts with a review of the respondents' demographic data and their familiarity with the E-logistic. This is followed by a thorough analysis of the independent and dependent variables, with the results arranged from most to least significant.

4.2 PILOT TEST

To make sure the questionnaire was error-free and understandable, the researcher pre-tested it. A lecturer and an expert in a related field examined the questionnaire to find any possible problems with its layout, including typography, spelling, and sentence structure. By minimizing respondents' perplexity throughout the survey, this pre-test lowered the possibility of erroneous analytical results. A pilot test with 30 volunteers was also carried out.

The Cronbach's Alpha of pilot test showed in the Table 4.2 below:

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Table 4.2(1): Case Processing Summary

(**Source**: SPSS Output)

Reliability Statistics

Cronbach's Alpha	N of Items
.964	5

Table 4.2(2): Reliability Statistics

(**Source**: SPSS Output)

The pilot test's show in terms of Cronbach's Alpha is 0.953. Based on this test, electronic payment system (EPS), organization and governance (OG), human resource (HR) and legal infrastructure (LI) is a relevant variable to achieve the objective. So, based on the reliability by Cronbach's alpha, 0.964 is acceptable level.

Table 4.2(3): Summarized Reliability Statistics Result

(**Source**: SPSS Output)

Variables	N of Item	Cronbach's Alpha	Result
Electronic Payment System (EPS)	5	0.843	Good
Organization And Governance (OG)	5	0.823	Good
Human Resource (HR)	5	0.785	Acceptable
Legal Infrastructure (LI)	5	0.853	Good
Implementation of E-logistic	5	0.798	Acceptable

4.3 DESCRIPTIVE STATISTICS ANALYSIS

4.3.1 RESPONDENT PROFILE

The respondents' demographic data was collected in this section of the questionnaire so that it could be used in the data analysis. A total of 181 people took part in the survey.

4.3.1.1 AGE

Table 4.3.1.1: Frequency and Percentage of Age
(**Source:** SPSS Output)

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	5.2	5.2	5.2
	2	29	16.8	16.8	22.0
	3	62	35.8	35.8	57.8
	4	57	32.9	32.9	90.8
	5	16	9.2	9.2	100.0
	Total	173	100.0	100.0	

The frequency and percentage distribution of respondents by age are shown in Table 4.3.1.1 and Figure 4.3.1.1. The bulk of the 173 responders, and 62 people, were in the 35-44 age range (35.80%). The second-largest group consisted of 57 respondents (32.90%), who were between the ages of 45 to 54. Thirdly, consisted of 29 respondents (16.80%), which is 25- to 34-year-old. The lowest group of respondents, 9 respondents (5.20%), were those under 25-year-old, while 16 respondents (9.20%) were between the ages of 55 and above.

4.3.1.2 GENDER

Table 4.3.1.2: Frequency and Percentage of Gender

(**Source:** SPSS Output)

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	74	42.8	42.8	42.8
	2	99	57.2	57.2	100.0
	Total	173	100.0	100.0	

The 181 responders in all are shown in Table 4.3.1.2 and Figure 4.3.1.2. Male respondents made up 42.80% (74 respondents), while female respondents made up the majority 57.20% (99 respondents).

4.3.1.3 EDUCATION LEVEL

Table 4.3.1.3: Frequency and Percentage of Education Level

(**Source:** SPSS Output)

EDUCATION_LEVEL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	5.2	5.2	5.2
	2	39	22.5	22.5	27.7
	3	87	50.3	50.3	78.0
	4	27	15.6	15.6	93.6
	5	11	6.4	6.4	100.0
	Total	173	100.0	100.0	

The data on respondents' education levels highlights a diverse range of qualifications. The majority, 50.30%, held a bachelor's degree, reflecting the prevalence of undergraduate education among participants. This was followed by 22.50% with a diploma, showcasing a significant number with technical or vocational qualifications. Respondents with a master's degree accounted for 15.60%, indicating a considerable proportion with postgraduate education, while 6.40% held a doctorate, representing a small but notable group of highly educated individuals. The smallest

group, 5.20%, comprised respondents with only a high school education. Overall, the data demonstrates a wide variety of educational backgrounds, with a strong representation of higher education levels.

4.3.1.4 JOB TITTLE/POSITION

Table 4.3.1.4: Frequency and Percentage of Job Tittle/Position

(**Source:** SPSS Output)

POSITION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	19.7	19.7	19.7
	2	29	16.8	16.8	36.4
	3	36	20.8	20.8	57.2
	4	10	5.8	5.8	63.0
	5	12	6.9	6.9	69.9
	6	7	4.0	4.0	74.0
	7	12	6.9	6.9	80.9
	8	12	6.9	6.9	87.9
	9	4	2.3	2.3	90.2
	10	4	2.3	2.3	92.5
	11	7	4.0	4.0	96.5
	12	6	3.5	3.5	100.0
	Total	173	100.0	100.0	

The distribution of job titles shows that the most common positions are Marketing (20.80%, 36 individuals) and Human Resource (19.70%, 34 individuals), followed by Admin (16.80%, 29 individuals). Roles such as Finance (5.80%, 10 individuals), Project Manager, Customer Service Representative, and Operations Manager each account for 6.60% (12 individuals). Product Manager and Account Manager each represent 4% (7 individuals), while Business Development Executive and IT Support Specialist are less common at 2.30% (4 individuals each). Lastly, Event Planner accounts for 3.50% (6 individuals), reflecting the diversity of roles across the respondents.

4.3.1.5 YEAR OF EXPERIENCE

Table 4.3.1.5: Frequency and Percentage of Year of Experience

(**Source:** SPSS Output)

YEAR_OF_EXPERIANCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	10.4	10.4	10.4
	2	51	29.5	29.5	39.9
	3	44	25.4	25.4	65.3
	4	42	24.3	24.3	89.6
	5	18	10.4	10.4	100.0
	Total	173	100.0	100.0	

The years of experience of the interviewees reveal a wide variety of job lengths. A sizable percentage of comparatively early-career professionals are represented by the largest category, 29.50% (51 respondents), who have 1-3 years of experience. Following this, there is a balanced representation of people in their mid-career, with 25.40% (44 respondents) having 4-6 years of experience and 24.30% (42 respondents) having 7-9 years. For a less than a year's experience and over 10 years of experience had a same percentage which is 10.40% (18 respondents). This distribution demonstrates that the respondent pool included a range of early-, mid-, and seasoned professionals.

4.3.1.6 INDUSTRY TYPE

Table 4.3.1.6: Frequency and Percentage of Industry Type

(**Source:** SPSS Output)

INDUSTRY_TYPE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	40	23.1	23.1	23.1
	2	50	28.9	28.9	52.0
	3	18	10.4	10.4	62.4
	4	11	6.4	6.4	68.8
	5	7	4.0	4.0	72.8
	6	47	27.2	27.2	100.0
	Total	173	100.0	100.0	

According to the respondents' distribution across different industry types, the automotive sector is the most represented in the sample, accounting for 27.20% of the total, followed by retail at 28.90%. Food & beverage makes up 23.10% and the engineering sector 9.90%, which are both moderate contributions. More specialized industries are indicated by the smaller segments, such as Electrical (6.40%) and Logistics (4%). All things considered, the data shows a wide variety of industries, with retail and automotive emerging as the most popular among respondents.

4.3.1.7 NUMBER OF EMPLOYEES

Table 4.3.1.7: Frequency and Percentage of Number of Employees

(**Source:** SPSS Output)

NUMBER_OF_EMPLOYEES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	25	14.5	14.5	14.5
	2	31	17.9	17.9	32.4
	3	107	61.8	61.8	94.2
	4	10	5.8	5.8	100.0
	Total	173	100.0	100.0	

The frequency and percentage of employees in various ranges are as follows as 14.50% of businesses employ fewer than ten people, and 17.90% of businesses employ between 10 to 49 people. Most businesses (61.80%) have between 50 and 99 employees. 5.80% of businesses employ between 100-200, and employees above 200 will not take into this because they are not a small medium enterprise. An overview of the distribution of business sizes according to staff count is provided by these percentages.

4.4 DESCRIPTIVE ANALYSIS OF THE RELATION VARIABLES

4.4.1 DESCRIPTIVE ANALYSIS FOR ALL VARIABLES

Table 4.4.1: Descriptive Analysis for All Variable

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IV1	173	7.60	19.00	15.3457	3.63101
IV2	173	7.20	19.80	15.2786	3.57924
IV3	173	7.20	20.00	14.9688	3.51623
IV4	173	7.60	20.80	15.2405	3.83490
DV	173	7.80	20.00	15.4231	3.55389
Valid N (listwise)	173				

Table 4.4.1 show the descriptive analysis for all variables. It starts from independent variables which is electronic payment system, organization and governance, human resource and legal infrastructure, while dependent variable is implementation of E-logistic. This descriptive analysis is included mean and standard deviation from the variables of the 173 respondents. Mean value for all variables is the first one is electronic payment system is 15.3457, organization and governance is 15.2786, human resource is 14.9688, legal infrastructure is 15.2405 and implementation of E-logistic is 15.4231. Finally, we can observe that most of the respondents agree with the assertion. The standard deviation is then described using descriptive analysis. It scores electronic payment system is 3.63101, organization and governance are 3.57924, human resource is 3.51623, legal infrastructure is 3.83490 and implementation of E-logistic is 3.55389. All these variables are acceptable.

4.4.2 DESCRIPTIVE ANALYSIS FOR EACH VARIABLES

4.4.2.1 ELECTRONIC PAYMENT SYSTEM

Table 4.4.2.1: Descriptive Analysis for Electronic Payment System

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EPS1	173	1	5	3.81	1.212
EPS2	173	1	5	3.45	1.236
EPS3	173	1	5	3.50	1.124
EPS4	173	1	5	3.86	1.091
EPS5	173	1	5	3.66	1.207
Valid N (listwise)	173				

From Table 4.4.2.1, the findings reveal that the maximum Electronic Payment System value was (M=3.86) with the items on "EPS4". The standard deviation value is 1.091. Meanwhile, the lowest mean value shows the item on "EPS2', which the value (M=3.45) and the standard deviation was 1.236. The minimum rating scale for each item was 1 and the higher rating scale was 5.

4.4.2.2 OORGANIZATION AND GOVERNANCE

Table 4.4.2.2: Descriptive Analysis for Organization and Governance

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
OG1	173	1	5	3.58	1.137
OG2	173	1	5	3.62	1.178
OG3	173	1	5	3.71	1.206
OG4	173	1	5	3.69	1.112
OG5	173	1	5	3.42	1.215
Valid N (listwise)	173				

From Table 4.4.2.2, the findings reveal that the maximum Organization and Governance value was (M=3.71) with the items on "OG3". The standard deviation value is 1.206. Meanwhile, the lowest mean value shows the item on "OG5', which the value (M=3.42) and the standard deviation was 1.215. The minimum rating scale for each item was 1 and the higher rating scale was 5.

4.4.2.3 HUMAN RESOURCE

Table 4.4.2.3: Descriptive Analysis for Human Resource

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
HR1	173	1	5	3.41	1.191
HR2	173	1	5	3.76	1.055
HR3	173	1	5	3.71	1.077
HR4	173	1	5	3.38	1.273
HR5	173	1	5	3.54	1.269
Valid N (listwise)	173				

From Table 4.4.2.3, the findings reveal that the maximum Human Resource value was (M=3.76) with the items on "HR2". The standard deviation value is 1.055. Meanwhile, the lowest mean value shows the item on "HR4', which the value (M=3.38) and the standard deviation was 1.273. The minimum rating scale for each item was 1 and the higher rating scale was 5.

4.4.2.4 LEGAL INFRASTRUCTURE

Table 4.4.2.4: Descriptive Analysis for Legal Infrastructure

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LI1	173	1	5	3.65	1.165
LI2	173	1	5	3.46	1.362
LI3	173	1	5	3.58	1.253
LI4	173	1	5	3.86	1.160
LI5	173	1	5	3.49	1.232
Valid N (listwise)	173				

From Table 4.4.2.4, the findings reveal that the maximum Legal Infrastructure value was (M=3.86) with the items on "LI4". The standard deviation value is 1.160. Meanwhile, the lowest mean value shows the item on "LI2', which the value (M=3.46) and the standard deviation was 1.362. The minimum rating scale for each item was 1 and the higher rating scale was 5.

4.4.2.5 IMPLEMENTATION OF E-LOGISTIC

Table 4.4.2.5: Descriptive Analysis for The Implementation of E-Logistic

(**Source:** SPSS Output)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DV1	173	1	5	3.54	1.301
DV2	173	1	5	3.76	1.120
DV3	173	1	5	3.68	1.210
DV4	173	1	5	3.71	1.160
DV5	173	1	5	3.68	1.171
Valid N (listwise)	173				

From Table 4.2.2.5, the findings reveal that the maximum The Implementation of E-Logistic value was (M=3.76) with the items on "DV2". The standard deviation value is 1.120. Meanwhile, the lowest mean value shows the item on "DV1", which the value (M=3.54) and the standard deviation was 1.301. The minimum rating scale for each item was 1 and the higher rating scale was 5.

4.5 INFERENTIAL ANALYSIS

4.5.1 PEARSON'S CORRELATION ANALYSIS

The Pearson Correlation Coefficient is a measure of how well two variables are related. The correlation coefficient's strength is indicated in the table below.

Coefficient Range	Strength of Correlation
± 0.00 to ± 0.30	Weak
± 0.40 to ± 0.60	Moderate
More than ± 0.70	Strong

Table 4.5.1(1): Strength of The Correlation Coefficient

The independent and dependent variable use in this study is as follow:

a) **Independent Variable:** Electronic Payment System, Organization and Governance, Human Resource and Legal Infrastructure.
b) **Dependant Variable:** Implementation of E-logistic

Table 4.5.1(2): Result of Correlations Analysis for All Variable

(**Source:** SPSS Output)

Correlations

		IV1	IV2	IV3	IV4	DV
IV1	Pearson Correlation	1	.745**	.716**	.726**	.799**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	173	173	173	173	173
IV2	Pearson Correlation	.745**	1	.687**	.723**	.777**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	173	173	173	173	173
IV3	Pearson Correlation	.716**	.687**	1	.800**	.795**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	173	173	173	173	173
IV4	Pearson Correlation	.726**	.723**	.800**	1	.796**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	173	173	173	173	173
DV	Pearson Correlation	.799**	.777**	.795**	.796**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	173	173	173	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

Remarks:

IV1: Electronic Payment System

IV2: Organization and Governance

IV3: Human Resource

IV4: Legal Infrastructure

DV: Implementation of E-logistic

The Pearson Correlation Coefficient Analysis of independent variables and dependent variables is shown in Table 4.5.1(2). Every independent variable, such as electronic payment system, organization and governance, human resource and legal infrastructure, has a significant two-tailed connection with internet of things adoption at 0.01 levels. First, electronic payment system is having correlation with implementation of e-logistic with value 0.799. So, it shown the result is perfect positive. Second is organization and governance. organization and governance have a correlation with implementation of e-logistic with value 0.777 which is it have strong positive. Third is human resource. Human resource has a correlation with implementation of e-logistic with value 0.795 which is it have a perfect positive. Finally, is legal infrastructure. Legal infrastructure has a correlation with implementation of e-logistic with value 0.796 which is facilitating conditions have a perfect positive. All these independent variables and dependent variables are needed to achieve the objectives. According to the correlations research, the most significant association between independent factors and implementation of e-logistic is electronic payment system (0.799), followed by legal infrastructure (0.796). Thirdly is human resource (0.795) and organization and governance have the lowest link between independent factors and implementation of e-logistic (0.777).

4.5.1.1 RELATIONSHIP BETWEEN ELECTRONIC PAYMENT SYSTEMA AND ORGANIZATION AND GORVENANCE

Table 4.5.1.1: Correlation between Electronic Payment System and Organization and Governance

(**Source:** SPSS Output)

Correlations

		IV1	IV2
IV1	Pearson Correlation	1	.745**
	Sig. (2-tailed)		<.001
	N	173	173
IV2	Pearson Correlation	.745**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This table shows the relationship between the independent variables of electronic payment system and organization and governance. The correlation value in the table above is 0.745, which is a positive correlation coefficient value. Organization and governance are substantially connected with electronic payment system, and it is positively correlated with organization and governance.

4.5.1.2 RELATIONSHIP BETWEEN ELECTRONIC PAYMENT SYSTEM AND HUMAN RESOURCE

Table 4.5.1.2: Correlation between Electronic Payment System and Human Resource

(**Source:** SPSS Output)

Correlations

		IV1	IV3
IV1	Pearson Correlation	1	.716**
	Sig. (2-tailed)		<.001
	N	173	173
IV3	Pearson Correlation	.716**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This table shows the relationship between the independent variables of electronic payment system and human resource. The correlation value in the table above is 0.716, which is a positive correlation coefficient value. Electronic payment system has a large and positive relationship with human resource.

4.5.1.3 RELATIONSHIP BETWEEN ELECTRONIC PAYMENT SYSTEM AND LEGAL INFRASTRUCTURE

Table 4.5.1.3: Correlation between Electronic Payment System and Legal Infrastructure

(**Source:** SPSS Output)

Correlations

		IV1	IV4
IV1	Pearson Correlation	1	.726**
	Sig. (2-tailed)		<.001
	N	173	173
IV4	Pearson Correlation	.726**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This is the relationship between electronic payment system and legal infrastructure, which are independent factors. The correlation value in the table above is 0.726, which is a positive correlation coefficient value. legal infrastructures are highly connected with electronic payment system, and the two are favourably correlated

4.5.1.4 RELATIONSHIP BETWEEN ORGANIZATION AND GORVENANCE AND HUMAN RESOURCE

Table 4.5.1.4: Correlation between Organization and Governance and Human Resource

(**Source:** SPSS Output)

Correlations

		IV2	IV3
IV2	Pearson Correlation	1	.687**
	Sig. (2-tailed)		<.001
	N	173	173
IV3	Pearson Correlation	.687**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This is the correlation between independent variables which is organization and governance and human resource. Table above showcase the correlation value is 0.687, which is a value for positive correlation coefficient. Organization and governance are correlated significantly to human resource and its positively correlated.

4.5.1.5 RELATIONSHIP BETWEEN ORGANIZATION AND GORVENANCE AND LEGAL INFRASTRUCTURE

Table 4.5.1.5: Correlation between Organization and Governance and Legal Infrastructure

(**Source:** SPSS Output)

Correlations

		IV2	IV4
IV2	Pearson Correlation	1	.723**
	Sig. (2-tailed)		<.001
	N	173	173
IV4	Pearson Correlation	.723**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This table shows the relationship between two independent variables which are organization and governance and legal infrastructure. The correlation value in the table above is 0.723, which is a positive correlation coefficient value. organization and governance are substantially connected with legal infrastructure, and the two are favourably correlated.

4.5.1.6 RELATIONSHIP BETWEEN HUMAN RESOURCE AND LEGAL INFRASTRUCTURE

Table 4.5.1.6: Correlation between Human Resource and Legal Infrastructure (**Source:** SPSS Output)

Correlations

		IV3	IV4
IV3	**Pearson Correlation**	1	.800**
	Sig. (2-tailed)		<.001
	N	173	173
IV4	**Pearson Correlation**	.800**	1
	Sig. (2-tailed)	<.001	
	N	173	173

**. Correlation is significant at the 0.01 level (2-tailed).

This table shows the relationship between the independent variables of human resource and legal infrastructure. The correlation value in the table above is 0.800, which is a positive correlation coefficient value. Human resource has a significant and positive relationship with legal infrastructure.

4.5.2 MULTIPLE REGRESSION ANALYSIS

Table 4.5.2(1): Model Summary

(**Source:** SPSS Output)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.784	.779	1.66936

a. Predictors: (Constant), IV4, IV2, IV1, IV3

b. Dependent Variable: DV

Table 4.4.2(1) shows that the R is 0.886, indicating that the independent variables (Electronic Payment System, Organization and Governance, Human Resource and Legal Infrastructure) were associated and relevant to the association with implementation of e-logistic to meet the study's goals. Furthermore, the R square value is 0.790, implying that the overall variation in achieving the objectives with E-logistic implementation is 78.40%. Only 21.60% of the population was not affected.

Table 4.5.2(2): Coefficient

(**Source:** SPSS Output)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.672	.615		1.094	.275
	IV1	.280	.059	.286	4.716	<.001
	IV2	.229	.059	.231	3.911	<.001
	IV3	.266	.064	.263	4.128	<.001
	IV4	.195	.062	.211	3.167	.002

a. Dependent Variable: DV

Based on Table 4.5.2(2), the beta for electronic payment system, organization and governance, human resource and legal infrastructure are 0.280, 0.229, 0.266 and 0.195 respectively. Based on beta, all variables have a positive relationship as, the researcher notice that there is no independent variable with negative sign, which has negative relationship with implementation of e-logistic. The constant is 0.5. Therefore, the researcher formed the following equation:

$$\boldsymbol{Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4}$$

Where:

Table 4.5.2(3): Equation of Multiple Linear Regression Analysis

Y	Dependent variable (Adoption of e-logistic among SMEs in Malaysia)
A	Constant
b_1	Influence of X_1 (Electronic Payment System)
b_2	Influence of X_2 (Organization and Governance)
b_3	Influence of X_3 (Human Resource)
b_4	Influence of X_4 (Legal Infrastructure)
X_1, X_2, X_3, X_4,	Independent variables

Implementation of E-logistic = 0.672 + 0.280 (Electronic Payment System) + 0.229 (Organization and Governance) + 0.266 (Human Resource) + 0.195 (Legal Infrastructure)

When the Electronic Payment System increases one unit and the other variables remain constant, the linear equation shows that the implementation of e-logistic will grow 0.280 units. Following that, when Organization and Governance increases by one unit and the others stay same, e-logistic adoption will grow by 0.229 units. Furthermore, when Human Resource improves by one unit, but the other predictor remains the same, implementation of e-logistic increases by 0.266 units. Lastly, implementation of e-logistic will increase 0.195 units when Legal Infrastructure increase one unit with condition the rest of the independent variable unchanged.

Table 4.5.2(4): ANOVA

(**Source:** SPSS Output)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	1704.213	4	426.053	152.885	<.001[b]
	Residual	468.175	168	2.787		
	Total	2172.388	172			

a. Dependent Variable: DV

b. Predictors: (Constant), IV4, IV2, IV1, IV3

F = 152.885 with p = <0.001 according to the ANOVA table. As a result, the model's fit has been confirmed. The entire regression model, which includes four constants: electronic payment system, organization and governance, human resource and legal infrastructure, has done a good job of explaining adoption variation.

4.6 HYPOTHESIS ANALYSIS

In this regression analysis, independent variables included electronic payment system, organization and governance, human resource and legal infrastructure, whereas dependent variables included implementation of E-logistic. Because the significance value is less than 0.05, the hypothesis can be maintained. Finally, if the significance value for the independent variable is greater than 0.05, the independent variable has no effect on the dependent variable

Hypothesis 1

Electronic Payment System

$H1_1$: There is significant relationship between electronic payment system towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

$H1_0$: There is no significant relationship between electronic payment system towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

Based on Table 4.5.2(2), the relevant value of electronic payment system is <0.001, which is below p-value of 0.05. From that electronic payment system has significant relationship on Implementation of e-logistic. Moreover, alternative hypothesis $H1_1$ is accepted.

Hypothesis 2

Organization and Governance

H2 $_1$: There is significant relationship between organization and governance towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H2 $_0$: There is no significant relationship between organization and governance towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia

Based on Table 4.5.2(2), the relevant value of organization and governance is <0.001, which is below p-value of 0.05. From that organization and governance has significant relationship on Implementation of e-logistic. Moreover, alternative hypothesis $H1_1$ is accepted.

Hypothesis 3

Human Resource

H3 $_1$: There is significant relationship between human resource towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H3 $_0$: There is no significant relationship between human resource towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

Based on Table 4.5.2(2), the relevant value of human resource is <0.001, which is below p-value of 0.05. From that human resource has significant relationship on Implementation of e-logistic. Moreover, alternative hypothesis $H1_1$ is accepted.

Hypothesis 4

Legal Infrastructure

H4 $_1$: There is significant relationship between legal infrastructure towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

H4 $_0$: There is no significant relationship between legal infrastructure towards Implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

Based on Table 4.5.2(2), the relevant value of legal infrastructure is 0.002, which is below p-value of 0.05. From that legal infrastructure has significant relationship on Implementation of e-logistic. Moreover, alternative hypothesis H1$_1$ is accepted.

INDEPENDENT VARIABLE	SIGNIFICANT VALUE	RESULT
Electronic Payment System	<0.001	Accepted
Organization and Governance	<0.001	Accepted
Human Resource	<0.001	Accepted
Legal Infrastructure	0.002	Accepted

Table 4.6: Hypothesis Testing Analysis

4.7 CONCLUSION

The researcher utilised SPSS software version 29 to accomplish all the data analysis and interpretation in this chapter. There are 173 respondents in the data that must be analysed. The association between electronic payment system, organization and governance, human resource and legal infrastructure for Implementation of e-logistic was found to be adequate. As a result, the four hypotheses provided in this study were explained. In the next chapter, we'll go over more facts and have a conversation.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The information gathered in Chapter 4 is briefly discussed in this chapter. The results were examined to evaluate the degree to which the research questions and the study's goals aligned and to ascertain whether the hypotheses that were put forth were supported. It highlights the study's main implications for theoretical contributions, managerial techniques, and policymaking, outlines the descriptive analysis, and looks at the findings. Three sections, each addressing the research objectives of the study, review the findings and provide an explanation based on prior research.

RO1:

To measure the level factors that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia.

RO2:

To examine the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.

RO3:

To identify the most factors that affecting toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

5.2 SUMMARY OF OBJECTIVES

5.2.1 Objective 1:

To measure the level factors that affecting the Implementation of e-logistic among Small medium-sized enterprises (SMEs) at Malaysia.

The primary objective of this investigation is to measure the variables affecting Malaysian small and medium-sized businesses' (SMEs') adoption of e-logistics. The Electronic Payment System, Organization and Governance, Human Resources, and Legal Infrastructure are the four main independent variables that the study specifically aims to comprehend. These factors are thought to influence the dependent variable, which measures how much e-logistics is used by Malaysian SMEs.

The data gathered for each variable is summarized in the descriptive statistics table 4.4.1, which sheds light on the levels and variations of each variable among the 173 participating SMEs. The Electronic Payment System mean value is 15.35 with a standard deviation of 3.63, suggesting a modest average level and some variation in the adoption or use of electronic payment systems by SMEs. Comparably, the Organization and Governance mean is 15.28, indicating how much internal organizational structures and governance procedures facilitate the implementation of e-logistics.

With a mean score of 14.97, Human Resources evaluates how competent and prepared staff in SMEs are to manage and deploy e-logistics solutions. This element is essential since the workforce's ability to adapt and be skilled is a major factor in the successful adoption of new technology. The significance of legal frameworks and regulations in supporting e-logistics is highlighted by Legal Infrastructure, which has a mean value of 15.24. To ensure smooth implementation, SMEs must manage legal compliance and take use of helpful policies.

Lastly, the average score of 15.42 for the dependent variable, the Implementation of e-logistics, indicates the general degree of adoption among SMEs.

A degree of balance in the factors' contributions to the deployment of e-logistics is suggested by the comparatively constant mean scores across the variables. Nonetheless, the variation revealed by standard deviations draws attention to variations in how various SMEs view or experience these elements.

The information in the table serves as the basis for further analysis in this study, including examining the connections between the independent and dependent variables. The study intends to offer useful insights for policymakers and SMEs looking to improve the adoption of e-logistics in Malaysia by determining which factors have the biggest impact. In the end, the results may lead to more effective and efficient logistics systems for SMEs by directing changes in workforce training, organizational procedures, and legal frameworks.

5.2.2 Objective 2:

To examine the relationship between the factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia.

The research objective of this study is to examine the relationship between various factors and the implementation of e-logistics among Small and Medium-sized Enterprises (SMEs) in Malaysia. The electronic payment system, organization and governance, human resources, and legal infrastructure are the four main aspects considered in this study. Each of these elements is examined to ascertain how much of an impact it has on the successful use of e-logistics, which is the study's dependent variable.

Each independent variable and the dependent variable have strong positive correlations, according to the Pearson correlation values at table 4.5.1(2). The following are these correlations:

1. Implementation of E-logistics and Electronic Payment System have a strong and positive link, as indicated by the correlation of 0.799. This implies that SMEs in Malaysia are more likely to successfully embrace and execute e-logistics solutions if they have sophisticated electronic payment systems. This link emphasizes how crucial effective payment systems are to enabling seamless logistics operations, especially when it comes to e-commerce and digital transactions (Kanapathipillai et al., 2024).

2. A correlation of 0.777 indicates that SMEs' governance and organizational structure have a major impact on how e-logistics are implemented. Aligning business strategy with information systems planning is essential for SMEs to enhance their competitive advantage and operational efficiency (Kamariotou et al., 2021). A robust governance structure contributes to the overall success of the digital transformation in logistics by offering the leadership and decision-making procedures required to guarantee the successful execution of e-logistics initiatives.

3. A substantial correlation between SMEs' human resource capabilities and the effective use of e-logistics is indicated by the correlation of 0.795. SMEs are better prepared to manage and run e-logistics systems when their personnel are knowledgeable and skilled. workforce training is a significant barrier to the digitalization of supply chains among Malaysian SMEs, indicating that human resource factors such as training, experience, and adaptability are crucial for the effective management and utilization of e-logistics technologies (Sued, 2020).

4. The deployment of e-logistics and legal infrastructure have a strong beneficial link, as indicated by the correlation of 0.796. This suggests that the effective implementation of e-logistics in SMEs depends on a strong legal environment. Legal considerations, such as laws pertaining to data security, e-commerce, and digital transactions, offer the security and credibility required for SMEs to embrace and use e-logistics systems with assurance (Suhaiza et al., 2009). Trust among customers and other stakeholders is fostered by the legal environment, which guarantees that firms may operate with little risk.

All four independent variables (Electronic Payment System, Organization and Governance, Human Resource, and Legal Infrastructure) have a substantial link with the effective use of e-logistics in SMEs, according to the Pearson correlation data. These results highlight how crucial these elements are in determining how well Malaysian SMEs can use and profit from e-logistics systems. SMEs must therefore concentrate on strengthening three crucial areas to fully utilize e-logistics: making sure that electronic payment systems are reliable, upgrading organizational and governance structures, investing in qualified human resources, and making sure that pertinent regulatory frameworks are followed. Addressing these aspects will greatly improve the efficacy of e-logistics deployment inside Malaysian SMEs, according to the study's strong positive associations.

5.2.3 Objective 3:

To identify the most factor that affecting toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

To determine the most important elements impacting Malaysian SMEs' adoption of e-logistics, the study was conducted. The unstandardized beta coefficients offer important information about the relative significance of these factors based on the findings of multiple regression analysis at table 4.5.2(2).

1) **Electronic Payment Systems** (β = 0.280): This factor demonstrates the strongest influence, underscoring the necessity of robust and reliable payment systems for facilitating e-logistics adoption.

2) **Human Resource** (β = 0.266): This highlights the critical role of skilled and capable human resources in managing and implementing e-logistics operations effectively.

3) **Organization and Governance** (β = 0.229): This factor emphasizes the importance of internal organizational structures and governance mechanisms in supporting e-logistics.

4) **Legal Infrastructure** ($\beta = 0.195$): Although this factor shows a relatively smaller influence, it signifies the relevance of clear legal frameworks and regulations to ensure secure and compliant e-logistics practices

According to the study's findings, Electronic Payment Systems (EPS) indicates that they are essential to the adoption of e-logistics among SMEs in Malaysia. By facilitating safe and easy financial transactions and cutting down on mistakes and delays, EPS improves operational effectiveness. By providing dependable payment methods, which are necessary to maintain online logistics operations, they also foster client trust. EPS is essential for the development of e-logistics since it supports digital procurement systems, supports Malaysia's efforts to create a cashless society, and lowers operating expenses for SMEs, SMEs in Malaysia's use of cashless payments has a major influence on company performance, highlighting the significance of EPS in contemporary corporate operations (Samat et al., 2024).

5.3 LIMITATION

During the research, there are few limitations that researcher need to face. Researcher have a problem between time management or time given. The researcher needs to find a better platform to spread the survey and the researcher need about two months to complete the survey. This research required about 180 respondents. Next, the respondents come from diverse background and some of them are not proficient in English. They may not understand the vocabulary and sentence constructs by the researcher. Thus, this insufficient could make the information collected not accurate and runaway from what the researcher ambitious to achieve.

Second, it was difficult to locate and get in touch with Malaysian SMEs that actively employ e-logistics. It took a lot of work to get appropriate answers because there were no easily accessible, centralized databases. Furthermore, it was challenging to create a representative sample due to the diversity of SMEs in terms of size, industry, and degree of digital adoption. The time allotted for other crucial study components, including evaluating the findings or conducting interviews for further in-depth understanding, was significantly diminished by these difficulties.

Finally, there were problems with respondents' understanding of the survey. Some participants struggled to comprehend e-logistics-related technical concepts, which resulted in responses that were either insufficient or possibly incorrect. Despite efforts to clarify and simplify the terminology, respondents' differing degrees of digital literacy led to discrepancies in the data gathered. This restriction might have impacted the findings' dependability and the capacity to make accurate inferences on the variables affecting the adoption of e-logistics.

Notwithstanding these difficulties, the study offers insightful information about the variables influencing Malaysian SMEs' use of e-logistics. Future studies should, however, think about investing more time, using reliable techniques to find qualified SMEs, and pre-testing survey instruments to guarantee improved understanding and data accuracy.

5.4 RECOMMENDATION

Based on the study's limits and findings, several recommendations are put forth to help small and medium-sized businesses (SMEs) in Malaysia successfully adopt e-logistics. These suggestions seek to remove the obstacles found during the study and encourage the SME sector to embrace e-logistics technologies more successfully.

The first step in closing the knowledge gap among SMEs is to offer focused training and support initiatives. Many SMEs don't fully get how e-logistics might improve their business processes. To provide workshops, training sessions, and awareness campaigns that are suited to the needs of SMEs, government agencies, trade groups, and private organizations should cooperate. These courses ought to concentrate on real-world uses including order tracking, inventory control, delivery optimization, and digital tool integration. By equipping SMEs with the necessary skills, the adoption of e-logistics can be accelerated.

Second, to help SMEs find and implement appropriate solutions, a centralized e-logistics resource platform ought to be created. Information about e-logistics service providers, available technology, and their advantages may be provided on this platform. To assist SMEs in navigating their alternatives, it should also include case studies, success stories, and easily navigable instructions. A unified platform can serve as a one-stop shop, making it easier for SMEs to make decisions.

Lastly, it is important to promote cooperation between SMEs and industry participants. SMEs can exchange resources, expertise, and e-logistics platforms by forming industry clusters or alliances. These partnerships can save expenses and make it easier for smaller businesses that might find it difficult to embrace innovative logistics solutions on their own. Policymakers, business executives, and SMEs themselves may overcome the obstacles to e-logistics adoption and create a more creative and effective logistics environment for Malaysia's SME sector by putting these suggestions into practice.

5.5 CONTRIBUTION

This research provides significant contributions to the body of knowledge on e-logistics implementation among small and medium-sized enterprises (SMEs) in Malaysia, benefiting academia, industry stakeholders, and policymakers.

First off, by filling a knowledge vacuum about the variables affecting the adoption of e-logistics in the SME sector in developing nations, this study adds to the body of academic literature. It adds to the theoretical framework of technology adoption models in emerging economies by highlighting important obstacles such low digital literacy, resource limitations, and infrastructure difficulties.

Second, by emphasizing doable tactics to get over obstacles to e-logistics adoption, the report provides SMEs with useful insights. To improve their operational effectiveness and competitiveness in the market, SMEs can use the research's insights to inform resource allocation, personnel training, and the choice of appropriate e-logistics solutions.

Thirdly, by offering data-driven proof of the difficulties SMEs encounter while implementing e-logistics, the study aids in the creation of policies. This data backs the creation of focused government programs, including financial incentives, infrastructure development, and capacity-building activities, to encourage the SME sector's wider adoption of e-logistics.

Finally, by determining the unique requirements and preferences of SMEs, this study helps e-logistics service providers better satisfy the needs of this industry by customizing their offerings.

5.6 IMPLICATION

The findings of this study have several implications for practice, policy, and future research, which are outlined as follows:

1. **Practical Implications**

   According to the findings, SMEs should engage in staff training and capacity building to solve internal issues including a lack of technical know-how and reluctance to change. These insights can be used by e-logistics providers to provide affordable, approachable systems that are tailored to the requirements of SMEs, especially those with low levels of digital literacy.

2. **Policy Implications**

   To guarantee fair access to e-logistics, the study emphasizes the necessity for legislators to give priority to enhancing digital infrastructure, especially in rural and neglected areas. To lower the financial obstacles related to the adoption of technology, financial incentives like tax breaks or subsidies should also be implemented. The advantages of e-logistics for SMEs should also be promoted by policymakers through awareness campaigns.

3. **Social Implications**

   By increasing the efficiency and sustainability of the SME sector, e-logistics adoption on a larger scale can support Malaysia's overall economic expansion and employment creation. E-logistics-enabled supply chains that are optimized may also lessen waste and its negative effects on the environment, encouraging environmentally friendly corporate practices.

4. **Implications for Future Research**

   By examining the use of e-logistics in other developing nations or contrasting regional variations within Malaysia, future research could broaden the focus of this study. To investigate the long-term effects of e-logistics adoption on SME performance and growth, longitudinal studies could also be carried out. Additionally, studies might investigate how new technologies like blockchain, and artificial intelligence can help SMEs improve their e-logistics skills.

5.7 CONCLUSION

This research was conducted to obtain a deeper understanding of the factors that affecting toward the implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia. This research has achieved the research objectives proposed in the early stage with success. The researcher has revealed the limitations encountered while doing the research during the data gathering period in this chapter. These constraints prompted the researcher to come up with a few suggestions for further research. According to past research, the researcher also outlined the objectives one by one. Finally, all the independent variables, such as electronic payment system, organization and governance, human resources, and legal infrastructure, are critical in ensuring the seamless implementation of e-logistic among Small medium-sized enterprises (SMEs) in Malaysia.

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APPENDIX

A

GANTT CHART FYP I

WEEK/ ACTIVITIES	Gantt Chart of Final Year Project (FYP) 2															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FYP Talk								MID SEMESTER BREAK								
Search for FYP topic																
Meeting with Supervisor																
Topic Discussion																
Tittle Confirmation																
RO & RQ Construction																
Writing Chapter 1																
Writing Chapter 2																
Writing Chapter 3																
First Draft FYP 1																
FYP 1 Submission																
Presentation FYP 1																
Revised of FYP 2																

B

GANTT CHART FYP II

WEEK/ ACTIVITIES	Gantt Chart of Final Year Project (FYP) 2															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Finalise Report									M I D S E M E S T E R B R E A K							
Meeting with Supervisor																
Pilot Test																
Actual Survey																
Data Collection																
Data Analysing																
Writing Chapter 4																
Writing Chapter 5																
Compiling FYP 1 and 2																
FYP 2 Submission																
FYP 2 Presentation																
Revised of FYP 2																

C

QUESTIONNAIRE

FACULTY OF TECHNOLOGY MANAGEMENT AND TECHNOPRENEURSHIP

QUESTIONNAIRE

FACTORS AFFECTING THE IMPLEMENTATION OF E-LOGISTIC AMONG SMALL MEDIUM-SIZED ENTERPRISE (SMES) IN MALAYSIA

My name is Muhammad Amin Zulhilmi, and I am a final-year student at Universiti Teknikal Malaysia Melaka (UTeM), pursuing a Bachelor's Degree in Technology Management (Supply Chain Management and Logistics). As part of my Final Year Project (2024/25) at UTeM, I am conducting a survey to explore the factors influencing the adoption of e-logistics among SMEs in Malaysia. Your participation in completing this survey would be immensely valuable to my research. Rest assured that all information you provide will be treated with the utmost confidentiality.

Thank you in advance for your time and support

Please contact:

Name: MUHAMMAD AMIN ZULHILMI BIN ABD RAHIM

Contact Number:

Email Address:

Supervisor Name: MADAM NURSHAMIMAH BINTI SAMSUDDIN

Contact Number:

Email Address:

QUESTIONAIRE

SECTION A: General Information

This section is related to your background in brief. Please answer and the information will keep strictly confidential.

SECTION B: Independent Variables

GENERAL INFORMATION	
Age	□ Under 25 □ 25-34 □ 35-44 □ 45-54 □ 55 and above
Gender	□ Male □ Female
Educational Level	□ High School □ Diploma □ Bachelor's Degree □ Master's Degree □ Doctorate
Job Title / Position	
Years Of Experience	□ Less than 1 year □ 1-3 years □ 4-6 years □ 7-9 years □ More than 10 years
COMPANY INFORMATION	
Company Name	
Industry Type	
Number Of Employees	□ Less than 10 □ 10-49 □ 50-99 □ 100-200 □ 200 and above

This section is seeking on your opinion regarding to the determinants that affect the implementation of e-logistic on your company.

Please tick (/) appropriately in the box given to indicate the extent of your

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

QUESTIONS		Likert Scale				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Electronic Payment System (EPS)						
1	Our company has a reliable electronic payment system in place.	□ 1	□ 2	□ 3	□ 4	□ 5
2	The implementation of an electronic payment system has reduced transaction times.	□ 1	□ 2	□ 3	□ 4	□ 5
3	Our electronic payment system integrates well with our logistics operations.	□ 1	□ 2	□ 3	□ 4	□ 5
4	We have experienced fewer errors in transactions since adopting an electronic payment system.	□ 1	□ 2	□ 3	□ 4	□ 5
5	The effectiveness of electronic payment systems in streamlining logistics processes is high.	□ 1	□ 2	□ 3	□ 4	□ 5

Please tick (/) appropriately in the box given to indicate the extent of your

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

Organization and Governance (OG)						
1	Our organization has a clear strategy for implementing e-logistics.	□ 1	□ 2	□ 3	□ 4	□ 5
2	There is effective communication between departments regarding logistics operations.	□ 1	□ 2	□ 3	□ 4	□ 5
3	Management actively supports the adoption of e-logistics technologies.	□ 1	□ 2	□ 3	□ 4	□ 5
4	Our organizational structure facilitates the implementation of e-logistics.	□ 1	□ 2	□ 3	□ 4	□ 5
5	There are established policies in place that guide the use of e-logistics in our company.	□ 1	□ 2	□ 3	□ 4	□ 5

Please tick (/) appropriately in the box given to indicate the extent of your

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

Human Resource (HR)						
1	Our employees receive regular training on e-logistics systems.	□ 1	□ 2	□ 3	□ 4	□ 5
2	There is enough staff to manage e-logistics operations.	□ 1	□ 2	□ 3	□ 4	□ 5
3	Employees are motivated to adopt new technologies in logistics.	□ 1	□ 2	□ 3	□ 4	□ 5
4	Our company encourages feedback from employees regarding e-logistics processes.	□ 1	□ 2	□ 3	□ 4	□ 5
5	The skills of our workforce align with the requirements of e-logistics operations.	□ 1	□ 2	□ 3	□ 4	□ 5
Legal Infrastructure (LI)						
1	The legal framework in Malaysia supports the use of electronic logistics.	□ 1	□ 2	□ 3	□ 4	□ 5
2	Our company is compliant with all legal requirements related to e-logistics.	□ 1	□ 2	□ 3	□ 4	□ 5
3	We have access to legal resources that help us navigate e-logistics regulations	□ 1	□ 2	□ 3	□ 4	□ 5
4	Our company proactively updates its practices to align with changes in e-logistics laws and regulations.	□ 1	□ 2	□ 3	□ 4	□ 5
5	Our company regularly reviews its legal obligations regarding e-logistics.	□ 1	□ 2	□ 3	□ 4	□ 5

SECTION C: Dependent Variables

Please indicate your level of agreement with the following statements regarding the Implementation of e-logistic in your company:

Please tick (/) appropriately in the box given to indicate the extent of your

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

	Implementation of E-Logistic					
1	Our company has fully adopted e-logistics practices.	□ 1	□ 2	□ 3	□ 4	□ 5
2	The adoption of e-logistics has improved our supply chain efficiency.	□ 1	□ 2	□ 3	□ 4	□ 5
3	We have seen an increase in customer satisfaction due to e-logistics adoption.	□ 1	□ 2	□ 3	□ 4	□ 5
4	E-logistics has helped us reduce operational costs.	□ 1	□ 2	□ 3	□ 4	□ 5
5	Our company is competitive in the market due to the adoption of e-logistics.	□ 1	□ 2	□ 3	□ 4	□ 5