THE LOGISTICS FACTORS THAT AFFECTING THE BUSINESS PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES (SMEs) IN MALAYSIA: EVIDENCE FROM PERAK

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(CORPORATE MANAGEMENT)

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BY

KENNY KEOK YUN KIET

A research project submitted in partial fulfillment of the
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DECLARATION

I hereby declare that:

(1) This postgraduate research project is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 9852 words.

Name of Student: Student ID: Signature:

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Date: _____

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LIST OF ABBREVUATIONS

BP   Business Performance

CEO   Chief Executive Officer

CM   Corporate management

DV   Dependent Variable

FL   Flexibility

GDP   Gross domestic product

IV   Independent variable

LC   Logistics cost

MP   Malaysia Plan

RES   Responsiveness

REL   Reliability

SQ   Service Quality

SMEs   Small Medium Enterprises

UTAR   Universiti Tunku Abdul Rahman

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PREFACE

This postgraduate project is submitted as a fulfilment of the requirement of pursuit of the postgraduate of Master of Business Administration (Corporate Management).With a time of about 13 weeks to accomplishment. I selected "***The logistics factors that affecting the Business Performance of Small and Medium Enterprises (SMEs) in Malaysia: Evidence from Perak***" as my topic. There are total five independent variables which will be tested in this project are flexibility, logistics cost, service quality, business performance, reliability and responsiveness. And the dependent variable for this research is Business Performance of Small and Medium Enterprises (SMEs) in Malaysia.

The logistics factors always play an important role in the SMEs which will affect their competitiveness as well as their business performance. Throughout the years, SMEs was the major contributors to the Malaysia economic growth. But it's also showing a high rate of failure in SMEs business. Therefore, it should be a topic for me to investigate, that find out what are the factors that would help the SMEs to growth better and help them to improve in their business performance. Therefore, when a company can perform better and shows a strong performance in their business, it would help a business continues to grow and perform in the market.

ABSTRACT

Small and Medium Enterprise in Malaysia has played an important role in contributing the economic and help in developing and provides lot of job opportunities. The main objective in this study is to find out whether the five major logistics factors; flexibility, logistics cost, service quality, reliability and responsiveness will affect the business performance of the SMEs in Malaysia. In this project, the major area of study to target is only focus in Perak, it's because due to the time constraint of only 13 weeks. A total of 228 respondents' data have been collected. The data was analyzed by using IBM SPSS Statistics 21. Descriptive analysis, reliability testing, Pearson's Correlation Analysis and Multiple Relationship Analysis was carried out to test the relationship between the logistics factors and business performance. The results show all the factors have positive relationship with the business performance except logistics cost.

This research allows investors, government, SMEs and students gain more foresight of what are the logistics factors that would affect the business performance. I hope that this research would help to improve the overall Business Performance of SMEs in Malaysia and continue contribute to the economic in Malaysia. Besides, there are several limitations in this research and some recommendations have been highlighted to future researcher in order for them to have a better view and improvement in future research.

Keywords: Business performance, Logistics factors, SMEs.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

The overview of this chapter will consists total four parts, which included research background, problem statement, research objective and significance of study.

1.1 Research Background

Over 97% of the businesses in Malaysia are small and medium sizes. These businesses contributed 36% of the GDP, 65% of the employment in Malaysia. (World Bank, 2016). Therefore, small and medium enterprises (SMEs) are very important to Malaysia. Based on the 11th Malaysia plan (11MP), the target GDP contribution of SMEs need to be increased to 41% at the year 2020 and annul growth of SMEs is around 8.7%. (SMEcorp, 2015)

One of the factors to drive the SMEs in Malaysia is depending on the logistics factors in Malaysia, like the logistics facilities, logistics networks and logistics technologies, especially for the SMEs who have implemented the E-commerce in their business (SMEcorp, 2015). Where E-commerce would help to deal with the clients internationally as well as the quality and speed that the logistics providers provide is very important to them to receive or deliver the goods or important document.

Logistics factors have becoming one of the important issues that determine the business performance of the SMEs in Malaysia. The logistics help to boost the connectivity between different people and with the effective and efficient delivery would affect the performance of the SMEs.

Based on the data given by SME Corp, Perak has about 60 thousand of SMEs, and contributed about 9.3 % of the total SMEs in Malaysia, and Perak also the fourth largest state that have total established of SMEs in Malaysia that after Selangor, W.P Kuala Lumpur and Johor. Perak can be considered one of the important states that having a large number of SMEs in Malaysia.

In the others hand, the failure rate of SMEs is around 60% in Malaysia. Based on the finding, the failure of SMEs is determined by various factors, which included internal and external factors. Internal factors included lack of experience, poor management, less functional skill. When look into the external factor, it's included the cost of distribution, rising cost and poor of financial support (Nik, Yaakub & Subhan, 2016).

1.1.1 Explanation of Term Used

Normally, the definition of category has been classified into micro, small and medium, figure 1.1 shows the definition of SMEs in Malaysia:

Figure 1.1 Definitions of SMEs in Malaysia
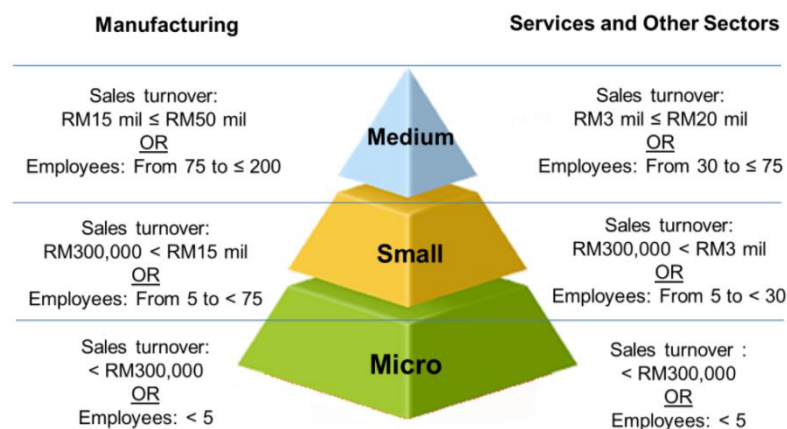
Sources: SME Corp. Malaysia, 2017

Classification of sectors

'Manufacturing' – refer to Physical or chemical transformation of materials or components into new products.

'Services' – refer to all services including hotels and restaurants; private education and health; distributive trade; business, professional and ICT services; entertainment; financial intermediation; and manufacturing-

related services such as research and development (R&D), logistics, warehouse, engineering etc.

'Others'- refer 3 key economic activities namely: Primary Agriculture, Construction and Mining & quarrying.

<u>Sources:</u> Bank Negara Malaysia, 2017

1.2 Problem Statement

There are some of the logistics problem that faced by Malaysia companies. Although, the export and import trade is keep increasing, But most of the time, Malaysia logistics progress has failed to keep it track with a strong growth of trade. The region countries in south-east Asia have a faster progress in developing the infrastructure in logistics, and it has become the essential point in competitive advantage over Malaysia. Especially, for the high cost in logistics, due the poor logistics infrastructure, incomplete transportation, slow and costly procedures for trade, and these has became a problem for the companies in Malaysia. (Bakar & Jaafar, 2016).

Latest figures that come from department of statistic, there were total 907, 065 of SMEs are in micro-size, and represent 98.5% in SMEs that establishment in Malaysia, and these company are lacing of fund to expand their business. (Zazali, 2017a). So, SMEs in Malaysia has facing many challenges, especially in logistics factors.

Furthermore, Malaysia logistics industry was now facing the shortage of truck drive of about 20 to 30 %. And logistics industry is one of the sectors that determine the economic growth. Even though, many of the logistics firm are giving the good pay for truck driver. But because of the working environment, there are not many would like to become a truck driver. Therefore, because of the logistics issues, it would directly or indirectly affect the business performance of SMEs in Malaysia, (Zazali, 2017b).

1.3 Research Question

Question will be constructed as below, and to be answered after the completion of this research:

1.3.1 Specific Question

In order to know insight and achieve the research objectives, these are the questions to be asked in this research.

1. Does logistics cost affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia?

2. Does service quality affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia?

3. Does responsiveness affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia?

4. Does flexibility affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia?

5. Does reliability affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia?

1.4 Research Objective

Based on the research question, the research objectives are formed as below.

1.4.1 Specific Objective

1. To examine whether logistics cost will affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia.
2. To examine whether service quality will affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia.

3. To examine whether responsiveness will affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia.

4. To examine whether flexibility will affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia.

5. To examine whether reliability will affect the business performance of the Small Medium Enterprises (SMEs) in Malaysia.

1.5 Significance of the Study

This research examines the logistics factors that will affect the business performance of Small Medium Enterprises (SMEs), providing the benchmarking for SMEs to understand when they make the logistics decision, Logistics is such an important factor to the SMEs in Malaysia to continue to stay competitiveness.

The purpose of this research is to find out the logistics factors in order that would affect and to make to better the business performance of Small and Medium Enterprises (SMEs). And this would be useful for government, as this can be used as the information on the logistics area to make the further improvement and help the SMEs to continue to growing and developing over the SMEs. Government can also allocate some funding to the SMEs for improve the logistics in an organization as well as their business performances (Tan, Ng, Fong, Chong & Sukumaran, 2016).

The results of this finding can also help students to understand the obstacles that will be faced by the SMEs and can be used as the valuable information to for them, Therefore, Students can understand more in what are the logistics factors that would affect the business performance and can be used it for future research.

Besides that, This research also will be an valuable information to managers in the SMEs, Besides, logistics provider also can use this research to understand what are the factors that will determine the business performance, so that it would help them to lower down the mistake and focus on the area that to be improved, because that would be the factors that determine the business performance.

Lastly, For SMEs themselves, they can understand want would be the logistics factors, that would affect their business performance, so that they can make some remedy and focus on what are logistics factor there are lacing for, and make some correction and improvement in order to increase the business performance.

1.6 Chapter layout

There are total five chapters in this research which included introduction, literature review, research methodology, research result, discussion and conclusion.

Chapter 1 is an introduction of the chapter which will give a review on the logistics factors that would determine the business performance of the SMEs. It covers on research background, problem statement, research objective, research question and significance of the research.

Chapter 2 will be delivered the theoretical model in this research. And summary of the literature review will be based on the area of studies and use to support the study. In addition, a conceptual framework will be carried out in this chapter.

Chapter 3 is the discussion about the research methodology as well as the method of gathers the information and data.

Chapter 4 is to delivers the statistical result based on the data that have been collected and this chapter is consist descriptive analysis, scale measurement and inferential analysis.

Chapter 5 is to delivers the summary of analysis, discussion, statistics and findings. This chapter will be explaining on the limitations and providing the recommendations of the studies for future researcher.

1.7 Conclusion

Lastly, this chapter is to provide the fundamental understanding of the study. Which is the logistics factors that affecting the business performance of SMEs in Malaysia. This chapter helps to develop and provide the direction for researcher to have better understanding on the issues. Further discussion will carries out in the following chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, a literature review will be summarized from all the related information and data that collected from books, journals and articles. The literature review will act as a base for the framework and theoretical model for the forming of hypothesis. In this chapter, it will discuss on the independent variables (IV) that will affecting the dependent variable (DV). Lastly, the hypothesis statement will be formed to test whether there is a significant relationship between each of the independent variables (IV) and dependent variable (DV).

2.1 Review of Literature

2.1.1 Business Performance

Business performance is mainly use in and organization to calculate the performance. According to Venkatraman and Ramanujam (1986), Business performance can be classified in to two dimensions, which the first dimension is focusing on the financial and operational performance; the second dimension is focusing on the data sources from the primary and secondary (financial data, operational indicators and market share). On the other hand, performance may include different aspects such as order fulfillment rate, safety stock, obsolete product as well as the number of warranty claim (Fabbe-costes & Jahre, 2007).

Figure 2.1 Business Performance Matrix
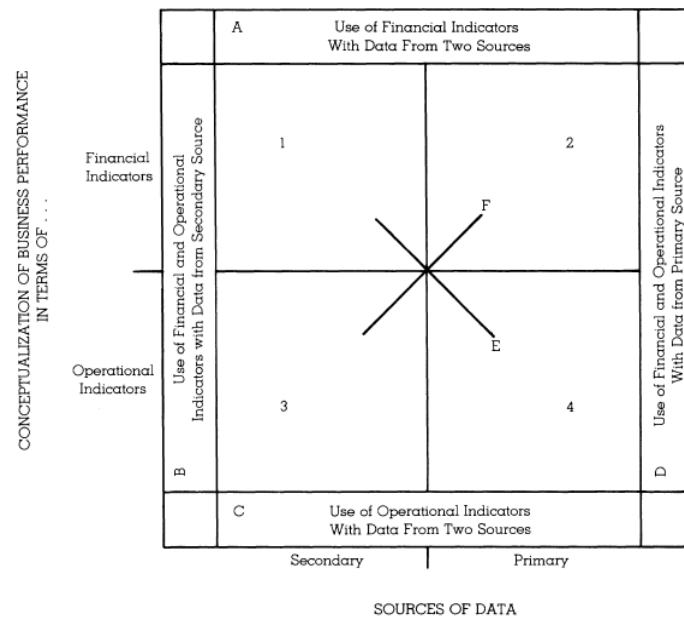
Sources: Venkatraman and Ramanujam (1986)

During the year 2000, Business performance measure has became the multi-million industry for most of the firms in US and the firms ask for calculate the business performance in their business. They were using many new methods to calculate, just like activity-based costing, accounting and shareholder analysis. Some of them are using the new measurement framework, mostly by having the balance scorecard and business excellence model to measure the business performance. This method is to calculate the internal performance and external benchmark with the external parties. (Neely, 2002).

Some of the studies have more focused on business performance in small and medium enterprises. Mišanková (2013) has discussed that there are many way to evaluating the business performance. First, which is also the simplest way for evaluating business performance which is to based on the company's own goals; second is to based on the financial analysis and different financial indicator, and last method is to combine the first two ways to analysis the business performance by calculate the average, coefficient analysis and summarize the indices and express the results.

2.1.2 Logistics Cost

It is important to know that cost is one of the important factors in an organization. That are many researches has highlighted logistics cost have significant impact toward the business performance. In order to improve the performance, the SMEs should implement the logistics improvement tools to reduces the cost and focus on few areas, like storing, distribution, customer cost and services , and because the large organization would have more capabilities to manage the logistics in organization as compare to SMEs. So there would be having more impact to the SMEs compare to large organization (Muskimin, Suryadi & Ardiansyah, 2015).   The business also will gain the competitive advantage by having the lower logistics cost (Saraja, 2013). But there is some of the study have discuss that it have lacking in rectify on cost are the inflected if business performance. (Bakar, Azlan, Jaafar, Faisol & Muhammad, 2014).

2.1.3 Service Quality

Service quality is always a big issue for SMEs because normally they are always lack of resource which lowers down the services quality in logistics that notable to make the customer not satisfy (Muskimin, Suryadi, & Ardiansyah, 2015). Furthermore, the key indicators of the services quality can be defined as product quality and process quality, and will influence their business performance. (Mansidão & Coelho, 2014). Based on Mutua (2013) Inventory quality and control had influence to greatly to the business performance as compare to others factors.

2.1.4 Responsiveness

Responsiveness can be defined as the ability to response to the customer requirement in short period of time or required time. (Bowerrsox & Closs, 1996). Besides that, responsiveness which also can mention as to give what the customer wants in shortest period of time (Peason & Olhager,

2002). An explanation from Kirby and Brosa (2011). Responsiveness is the speed at mission that performed or in which logistics delivers products which included order fulfilment, delivery and planning cycle time.

One of the factors to create responsiveness is the ability to share information that enables company to reacts the customer need and gain better loyalty (Ramayah & Omar, 2010) and have faster react in the changes of marketing (Frey, 1998).

2.1.5 Flexibility

Based on the literature review from Bowerson and Closs (1996), indicates of the flexibility in performance measure system is respond of change in exceptional customer order and environment. Flexibility is one of the strategies in business that able to increase in competitive advantage in SMEs. Because the Size of SMEs is small therefore, SMEs have more flexibility as compare to large organization (Dagayach & Deshmukh, 2001). They can easily to adapt with any changes in both efficiency and effetely in their operation (Muskimin, Suryadi & Ardiansyah, 2015).

2.1.6 Reliability

Basically, reliability in logistics is defined as the delivery is on time without error and meets the customer satisfaction (Nowakowski, 2009). On the other hand, reliability can be measured as the ability of an item to operate without adjustment and repaid (Nowakowski & Werbińska, 2007). Thomas and Kopczak (2005) used the 'reliability interference theory' to test the reliability of the business operation such as the immediate responsive in operation. That reliability also has the benefit to maintain the relationship between business and customers, the level of relationship can improve the integration and yet lower down the cost between customer and supplier (Selnes & Sallis, 2003).

2.2 Review of Relevant Theoretical/ Past Conceptual Frameworks

2.2.1 Review of Relevant Theory

2.2.1.1 Resources-Based View (RBV) Theory

Resources-Based View Theory (RBV) has been widely used as the researcher in business and management context. RBV is primary use to indentify the competitive advantage of the firm by combined with both valuable tangible and intangible resources (Kraaijenbrink, Spender, & Groen, 2010). From the short-run competitive advantage can be transform into a continuous long-term competitiveness it requires those valuable resources that cannot be replaced by others (Wernerfelt, 1984).

Some has been used RBV as the based framework for previous research and mainly to focus on indentified the factors that affecting the business performance in tourism industry as to find out the resources that affecting the business performance of the firm (Tan, Ng, Fong, Chong, & Sukumaran, 2016).

Once the firm have those strategies that against to the competitors that will bring a strong business performance results as compare to the competitors in the same industry and it can be considered as the competitive advantage (Tan, Ng, Fong, Chong, & Sukumaran, 2016).The resources should be valuable, rare and non inimitable by others (Barney et al., 2001). But then some have said that as long as the resources can bring the strong performance as it can be defined as resources of the firm (Wernefelt, 1984).

Resources can be classified as both tangible and intangible assets. Tangible resources are those resources which in physical form like machine and building and also financial capital like retained earnings and capital. Besides that, intangible resources like network, culture and learning capabilities which is something intangible that lead to the firm competitive advantage (Kraja & Osmani, 2013)

Besides, there were some of the studies use RBV theories to test the competitive advantage of the SMEs to adapting environmental changes, that's included physical resources, human resources capabilities, and organizational resources and capabilities, and financial resources in there testing (Husso & Nybakk, 2010). Tan, Ng, Fong, Chong and Sukumaran, (2016) also did a research that factors that affecting the SMEs performance, by using RBV theories, and the factors are including government support, social media, Business Planning and innovation practices.

Figure 2.2 Resources-Based View Frameworks
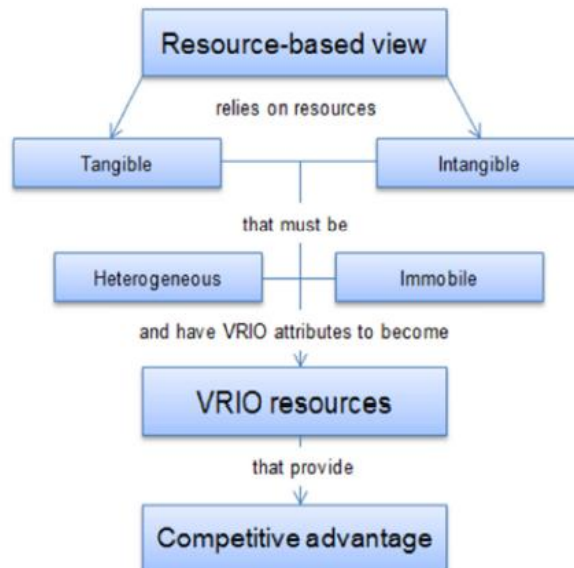
Sources: Tan, Ng, Fong, Chong, & Sukumaran, 2016.

2.3 Proposed Conceptual Framework

Figure 2.3: The Theoretical Framework
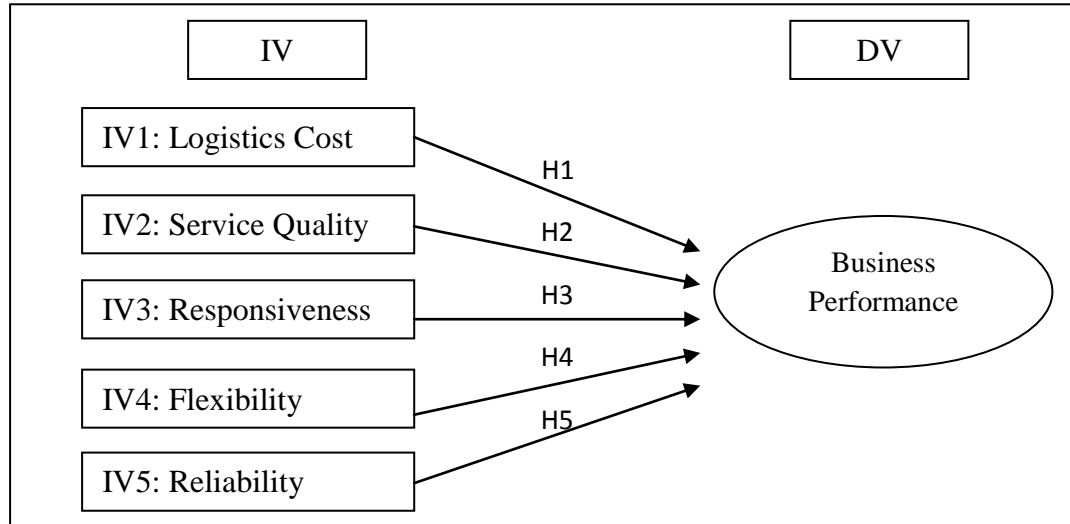
Sources: Developed from Research

2.4 Hypotheses Development

2.4.1 Logistics Cost

Logistics cost is an import factor that would affected the business performance of SMEs. According to Muskimin, Suryadi, & Ardiansyah (2015) Introduce of logistics improvement tools to reduce the logistics cost with focus on certain area like storing, distribution, customer cost and services, will impact on logistics operation and financial performance. Besides that, logistics factor such as low cost and good quality will become as the manufacturing strategy, employer will base on these as the indices of logistics behaviour and leads to performance difference (Shang & Marlow, 2007). Therefore, a hypothesis is formed as below.

H1: Logistics cost has negative relationship with the business performance of SMEs in Malaysia.

2.4.2 Service Quality

SMEs need to improve in product and services quality such as the trust, information system and incentive that will improve organization competitiveness that lead to strong business performance (Peres-Arostegui, 2011). Besides, Ellinger et al. (2000) stated that strategic vector in company such as the service quality will have significant impact toward the business profitability. Therefore, a hypothesis is formed as below.

H2: Service quality has positive relationship with the business performance of SMEs in Malaysia.

2.4.3 Responsiveness

Green, Whitten and Imman (2008) found out that the relationship between logistics responsiveness in delivery will influence marketing performance that has also an effect on the sales growth and profitability. Responsiveness is process to increase in logistics operation as well as the just-in-time deliveries to support manufacturing and buyer will be satisfied and lead to grow in business (Zhu & Sarkis, 2004). Which that measure has finished testing and validated in Zhu & Sarkis (2004); Morash (1996) Therefore, a hypothesis is formed as below.

H3: Responsiveness has positive relationship with the business performance of SMEs in Malaysia.

2.4.4 Flexibility

By having more ability in term of flexibility in SMEs, SMEs would have much more easy to adapt with any changes and gain in operation and improve both efficiency and effectiveness (Dagayach and Deshmukh, 2001). In the research of agro-food product also mention that the flexibility of the logistics will determinants of logistics and business performance (Aramyan et al, 2007). Therefore, a hypothesis is formed as below.

H4: Flexibility has positive relationship with the business performance of SMEs in Malaysia.

2.4.5 Reliability

There is some researcher to test the supply chain performance that using reliability. And reliability in supply chain is success factor that ensure the smooth flow of goods and services and lead to strong business performance (Kinyua, 2013). Besides, there is also been found out that there is high level of reliability and usability and has positive correlation to financial and nonfinancial performance (Leković & Marić, 2015). Therefore, a hypothesis is formed as below.

H4: Reliability has positive relationship with the business performance of SMEs in Malaysia.

2.5 Conclusion

In nutshell, this chapter cover the reviews of study area through secondary data and formed a research framework for the relationship between IVs and DV. In the following chapters, methodology of research will be discussed.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, it will be focused on the methods to test the viability of different variable. That can be used to carry out the research, data collection, sampling design, validity and reliability of the instruments and data analysis.

3.1 Research Design

Research Design refers to the method and the process use for analysis and collection relevant information during the research. (Burns & Bush, 2009). In this research, sampling design will be used, as it is more suitable to analysis and measure the objective in this study. In this research, qualitative approach method will be used to identified what are the variable will affect the business performance of SMEs. Therefore, in this research, it was appropriate for me to utilize questionnaires for collecting sampling data from the large amount of target respondents.

3.2 Data Collection Method

In this study, primary data method is to be used in collecting the responds. In this research, I am focusing on study from the perspective in Perak region. Therefore, the whole primary data will be collected from the whole Perak. The targeted respondent will be the SMEs in Perak region, and there is total about 60, 028 SMEs established in Perak. (Ecinsider, 2013). The data will be collected in between June till August 2017, and it takes less than 3 months to complete. During this period of time, email and walk-in survey is the main method to collect the data. And it would allow me to target wider range of respondents and get better precise data.

3.3 Sampling Design

3.3.1 Target Population

Target population of this study is mainly focusing on the SMEs in Perak, Malaysia. Based on the data found it from Malaysia Department, Perak have 60, 028 SMEs established. And these SMEs would be my target population in this research.

3.3.2 Sampling Frame and Sample Location

The sampling frame is a representation of the components in the population which the sample is drawn. In this research, there is no sampling frame applicable in this research, because unable to collect the full list of all the SMEs in Perak. The data provided in the SMEcorp (2017) is without the full list of information, there are many companies only shows the name, but without further information such as the address, and telephone no. Therefore, no sampling frame is use in this study.

The sampling location for this research is set at Perak, Malaysia. And Perak is the one of the largest states that has total of 9.3 % of contribution of the total SMEs with a total number of 60, 028 (Wong, 2013). So, it would allow me to collect the data easily and shows more reliable results to represent whole Malaysia. Especially, when Perak is located at the middle of the two major cities between Klang Valley and Penang, it has a lot of opportunists and with bright future, that bring the more capital and investors to Investing in SMEs in perak, said by Menteri Perak, Dato Seri Diraja Zambry Abdul Kadir (Jeyarai, 2016). Many coming in project also has been planned in Perak, including renewable Energy, Utilities, Trading, Infrastructure, and many more that would continues to attract more people come and visit Perak, that create more opportunities for SMEs in Perak.

3.3.3 Sampling Element

The focus of respondents in this research will be the owner, CEO, Managing director, Manager or similar managerial position of the firm from the Perak SMEs. Because they are the person who's understand the company internal performance and results.

3.3.4 Sampling Technique

Mostly, researcher use sampling method to become a subset of a population, use it as to represent the whole population (Sekaran & Bougie, 2009). It would be time wasting and consuming if study all the respondent of all the targeted population. Sampling can be divided into probabilities and non- probabilities sampling. In this case, non- probabilities sampling is used, that because I have not using any sampling frame to assigned them to become the subject in the sample (Sekaran & Bougie, 2010).

Convenience sampling is used in this research, which is under the non-probabilities sampling. This method is used because to allow me to distribute the questionnaire in more convenient and time saving.

3.3.5 Sampling Size

A large population should be using a large sample size in order to help researcher to have more reliable, significant and accurate result (Thayer-Hart, Dykema, Elver, Schaeffer & Stevenson, 2010). Roscoe (1975) said a sample size in between 30 to 500 is sufficient enough to the research. Besides that, Hill and Alexander (2000), suggest that respondents in between 200 to 500 are sufficient to a research. By considering the limitation of time, minimum 200 set of sample will be consider as to measure in a research project. Therefore, in order to make sure the there is less probabilities error in this research, 250 of the questionnaires have been distributed, 200 set is to make sure it obtain the correct results, extra 50 set of data is to take consideration of probabilities that the total number to be

collected will under minimum amount of 200 respondents if some fail to answer all the question. At the end, a total number of 250 have distributed, and 234 received, 6 rejected, only 228 set are valid.

Table 3.1 Response Rate

Target Population	Questionnaires				Respond rate
	Distributed	Received	Rejected	Usable	
250	250	234	6	228	91.2%

3.4 Research Instrument

3.4.1 Questionnaires

Questionnaire is used to collecting and recording the useful information in the research studies. The entire questions that ask in questionnaire need to be ensure that it's related to the objective in the studies (Kothari, 2004).

3.4.2 Questionnaire Design

Section A of the questionnaire will ask about the demographics of the target respondent, which includes gender, age, race, education level, industry group, company size, and no of year in operation. This section will be applied nominal scale.

Section B of the questionnaire will ask about the dependent and independent variable of the research. This section includes business performance, logistics cost, service quality, responsiveness, and flexibility. This section will be used five-point likert scale, which includes from strongly disagree, disagree, neuter, agree and strongly agree. The scale is used because easy for respondent to answer and easier for me to analyse the results in coming chapter.

3.4.3 Pilot Test

Before distribute the questionnaire and run the pilot testing, my supervisor has reviewed the question and did some amendment and correction on the question. Afterward, A Pilot test will be distributed as a small scale of trial run of an amount of 30 set to test the reliabilities and effectiveness of the questionnaire, wording and reliabilities. The feedback of the testing has found some errors and has made some adjustment about the sentences. Table 3.2 is the changes made to questionnaires during pre-test and validity.

Table 3.2 Changes made to questionnaires during pre-test and Validity.

Section and Variable	Validity & pre-test	Natural and changes
Section A	Age range	Reduce the choices
Section A	Industry group	Reduce the choices to 5
Section B	Business performance	Make some correction on the grammatical errors.
Section B	Flexibility	Rewording

3.5 Constructs Measurement

3.5.1 Origin of Constructs measurement

The entire construct in section B, will be using five-point likert scale to measure. Table 3.3 as below shows the origin of construct that taken from.

Table 3.3 Origin of Constructs

Variable	Adapted from
Business Performance	Tan, Ng, Fong, Chong, & Sukumaran (2016).
Logistics Cost	Muskimin, Suryadi & Ardiansyah (2015); (Saraja, 2013).
Service Quality	Peres-Arostegui et al (2011); Ellinger et al. (2000)
Responsiveness	Green , whitten and Imman (2008); Zhu & Sarkis, (2004); Morash (1996)
Flexibility	Dagayach and Deshmukh (2001); Aramyan et al (2007).
Reliability	Selnes & Sallis, (2003); Thomas & Kopczak (2005)

Source: Developed for the research.

3.5.2 Nominal Scale

Nominal scale is use in this research, and it allow researcher to measure the characteristics in a simple way, such as yes or no, male and female (Fife-Schaw, 2006). In this research, there are total of seven questions that ask in section a are in nominal scale.

3.5.2 Interval Scale

Likert scale is a very comment use method that use by researcher to conduct the primary research, which helps to collect the respond in a form of scale method. It normally will have minimum five responds that measure from low to high; disagree to agree (Bowling, 1997). In this research, the fixed responded have design strongly disagree, disagree, neuter, agree and strongly agree a five-point likert scale.

3.6 Data Processing

Data processing is use to describe the data process preparation, which included data checking, editing, coding, transcribing and etc to ensure all the data collected is in accurate and completed.

3.6.1 Data Checking

Data checking is needed before distribute the questionnaire to the target respondent, a set of 30 questions have tested to ensure that the entire question that ask is valid and enhanced. It would help to reduce the error and mistake of content before distributed the whole set of the questionnaire.

3.6.2 Data Editing

Data editing have done before distributed the 250 set of the questionnaire, my supervisor has reviewed the question and did some amendment and correction on the question. Furthermore, the unrelated respondent will be filtered out before I run the data analysis.

3.6.3 Data Coding

Data coding, a set of numerical value that collected from the target respondents in the questionnaire will be collected and run the analysis data, that allow researcher to converted it into numeric code and readable by researcher, a computer software will be used IBM SPSS Statistics 21 to analyse the data that have been collected by me.

3.6.4 Data Transcription

Data transcription is to transfer the data that have been collected to IBM SPSS Statistics 21 and to run the reliability testing.

3.7 Data Analysis

To analyse the data, IBM SPSS Statistics 21software will be used in this study, in the process of data analysing, with are included two main requirements, which are

process editing and coding. Data analysis is to turn the raw data that collected from the target respondents and make it into useful and informative and allow me to know is there any relationship between the dependent variable (Business Performance) and independent variable (logistics cost, service quality, responsiveness, flexibility and reliability). And it would be presented by statistical diagram and table.

3.7.1 Descriptive Analysis

Descriptive Analysis is to shows a situation analysis, that can be summarized into useful data that can be used and presented the demographic and respondents in a form of histogram, bar or pie chart that can represent the variable (Zikmund, 2003). It can measure of mean, standard deviation and variance of the data that have been collected, and to figure out the central tendency, and describe the essential characteristics.

3.7.2 Scale Measurement

3.7.2.1 Reliability Test

Reliability test is to test the accuracy and reliability of the data collected. Cronbach's Alpha is use in this research to measure how strong reliability in the item group (Zikmund, Babin, Carr,& Griffin, 2010). And table 3.4 below shows the value's rules of the reliability value.

Table 3.4 Cronbach's Alpha Coefficient Value

Alpha Coefficient Range	Strength
0.0 - <0.6	Poor
0.6 - < 0.7	Moderate
0.7 - < 0.8	Good
0.8 - < 0.9	Very Good
0.9 - 1.0	Excellent

Source: (Zikmund, Babin, Carr & Griffin, 2010).

3.7.2.2 Normality Test

Normality test is to test the sample size has been described from normal distribute population, and try to complete how likely from a random variable to the data set to be normally distributed. Based on Garson (2012), the distributed data that are normally skewness and kurtosis acceptable range should be within -2 to +2.

3.7.3 Inferential Analysis

3.7.3.1 Pearson's Correlation Analysis

The reason to use "Pearson's Correlation Analysis" is to analysis the strength of the linear relationship between two variables (Kreinovich, Nguyen & Wu, 2013). The range of person Correlation Analysis is between -1 to +1, it would results in to show whether both have a negative or positive relationship. If the data showing result of "+1", which mean both have a perfect positive relationship; if the result shows "-1", that mean both have a perfect negative relationship; if the result shows is in "0", that mean both have no relationship. And table 3.5 shows the table of guideline of the strength of coefficient relationship.

Table 3.5 Pearson's Strength of Coefficient Relationship

Correlation Coefficient	Strength of Correlation
±0 to ± 0.2	Slight or None
±0.21 to ± 0.4	Weak
±0.41 to ±0.7	Moderate
±0.71 to± 0.9	Strong
±0.91 to ±1.0	Very Strong

Sources: (Kreinovich, Nguyen & Wu, 2013)

3.7.3.2 Linear Regressions Analysis

linear regression analysis is the way that researcher use it as the way to find out how dependent variable and independent variable are related, this is the method use to estimate the qualifying impact of each factor (Zikmund & Babin, 2003).

R^2 value is use to explain the strength of relationship between both IV and DV, when the value of R2 is high, it shows that the IV will have higher influence to the DV.

3.8 Conclusion

Chapter 3 is basically as the research technique that use for secondary data, and it also will use as the guidance in during chapter 4.

CHAPTER 4: DATA ANAYSIS

4.0 Introduction

In this chapter, I will analysis the results and the finding, I will using IBM SPSS Statistics 21 to interpret the results. After I collected and filtered all the data, there are a total of 228 sets of questionnaires, and I will use this data to further discuss and interpret.

4.1 Pilot Test

4.1.1 Normality Test (Pilot Test)

Table 4.1.1 Normality Test (Pilot Test)

Variable	Item	Skewness	Kurtosis
Business Performance	BP1	0.141	-2.127
	BP2	-0.583	-1.784
	BP3	0.409	-0.770
	BP4	0.214	-1.019
	BP5	0.210	-0.234
Logistics cost	LC1	-1.112	-0.824
	LC2	0.040	-0.081
	LC3	0.499	-0.781
	LC4	0.635	-0.453
	LC5	-0.50	-0.699
Service Quality	SQ1	-0.356	-0.343
	SQ2	-0.671	0.053
	SQ3	-0.105	-0.744
	SQ4	-0.358	-0.755
Responsiveness	RES1	-0.046	-0.343
	RES2	-0.261	0.269
	RES3	0.409	-0.770
	RES4	-0.159	-0.833

Flexibility	FL1	-0.955	0.165
	FL2	-1.169	2.618
	FL3	0.055	-1.089
	FL4	0.159	-0.243
	FL5	-0.009	-0.952
Reliability	REL1	-0.054	-0.352
	REL2	0.107	-0.557
	REL3	-0.170	-0.715
	REL4	0.338	-0.170

Source: Developed from the research

Normality test has been tested by using skewness and kurtosis. All the items are under the value of between -2 to +2 as under the normality range, except BP1 with the value of -2.127 and FL2 with the value of 2.618 in kurtosis. But it is consider as the acceptable normal range of between -10 to +10 (Kline, 2005)

4.1.2 Reliability Test

Table 4.1.2 Reliability Test (Pilot-Test)

Scale: ALL VARIABLES

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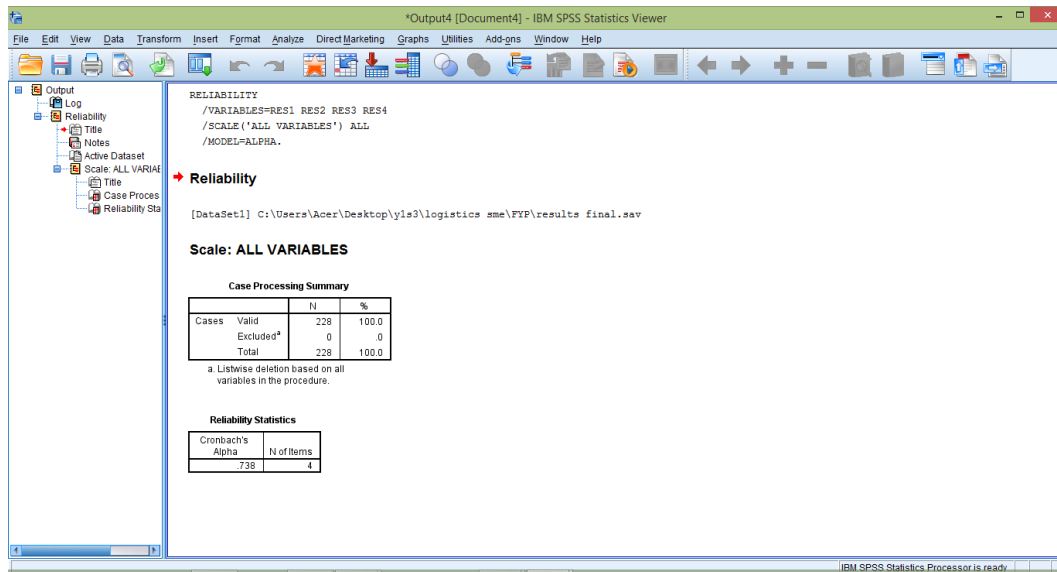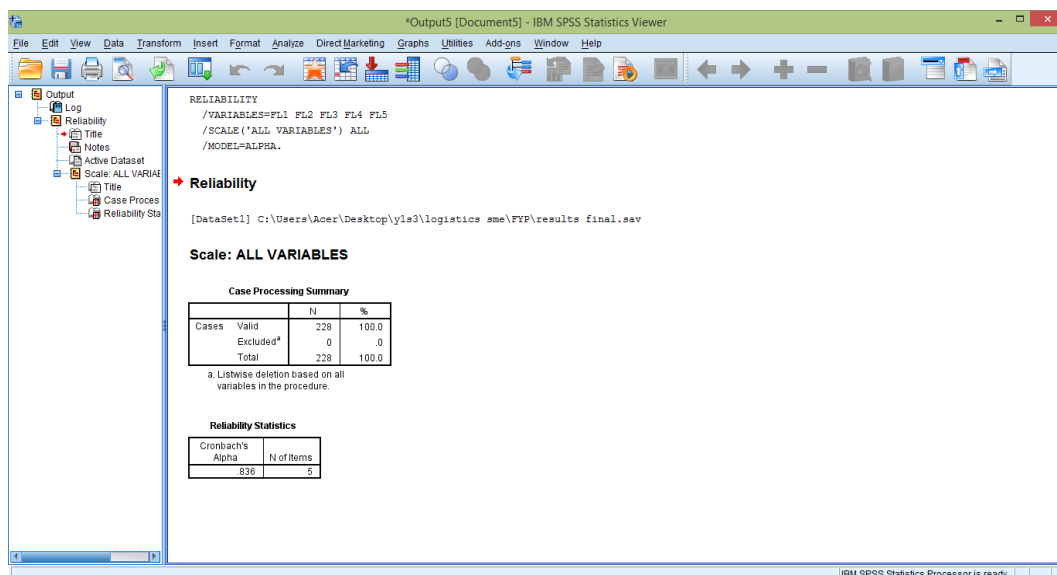
		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.708	6

Source: Developed from the research

Based on the table 4.1.2, the cronbach's alpha value of this pilot testing is 0.708, and it can be considered reliable in pilot testing.

4.2 Descriptive Analysis

4.2.1 Respondents Demographic Profile

The information that shows in this section is the respondent's profile of demographic, which consists of gender, age, race, education level, industry group, and company size and company years of operation

4.2.1.1 Gender

Based on table 4.2.1, shown the total 188 (82.46%) of the respondents in this research is male, where the rest of 40 (17.54%) respondents is female.

Table 4.2.1 Respondent's Gender

Gender	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
Male	188	82.46	188	82.46
Female	40	17.54	228	100.00

Source: Developed from research

4.2.1.2 Age

Based on table 4.2.2, it shown an age range of our respondents in Perak, Malaysia. Among the 228 respondents, there are only 13 respondents (5.7 %) that are less than 25 years old. Follow is age between 25 years old to 34 years old which have a total of 40 respondents (17.55%). Follow by the majority of respondents who are age in between 35 to 44 years old which have a total of 127 respondents (55.7%) in this age range. Lastly,

the age that is more and equal to 45 years old have a total consists of 48 respondents (21.05%).

Table 4.2.2 Respondent's Age Group

Age Range	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
< 25 years	13	5.70	13	5.70
25 - 34 years	40	17.55	53	23.25
35 - 44 years	127	55.70	180	78.95
≥ 45 years	48	21.05	228	100.00

Source: Developed from research

4.2.1.3 Race

Based on the table 4.2.3 that shown below, there are total of 68 respondents (29.82%) is Malay. Follow by the majority of the respondents which is Chinese, which consists of total 129 respondents (56.58%). Next is the Indian, which consists of total 29 respondents (12.72%). Lastly, there are only 2 respondents is from other race.

Table 4.2.3 Respondent's Race

Race	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
Malay	68	29.82	68	29.82
Chinese	129	56.58	197	86.4
Indian	29	12.72	226	99.12
Others	2	0.88	228	100.00

Source: Developed from research

4.2.1.4 Education Level

Based on table 4.2.4, there are total of 10 respondents (4.39%) which have the primary school education level. Follow by secondary school education level that consists of 179 respondents (78.51%). Meanwhile, the diploma education level consists of 19 respondents (8.33%). 16 of the respondents

(7.02%) have bachelors level. Lastly is level of Master and above, which consists of 4 respondents (1.75%).

Table 4.2.4 Respondent's Education level

Education Level	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
Primary school	10	4.39	10	4.39
Secondary school	179	78.51	189	82.9
Diploma	19	8.33	208	91.23
Bachelors	16	7.02	224	98.25
Master and above	4	1.75	228	100.00

Source: Developed from research

4.2.1.5 Industry Group

Based on table 4.2.5, among the 180 respondents (78.95%) is in service industry. Follow by manufacturing industry, there are 35 respondents in this industry (15.35%). And there are 9 respondents (3.95%) in Agriculture industry. And 3 respondents (1.32%) are in construction industry. And lastly only 1 respondents in Mining & quarrying industry.

Table 4.2.5 Respondent's Industry Group

Industry group	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
Service	180	78.95	180	78.95
Manufacturing	35	15.35	215	94.30
Agriculture	9	3.95	224	98.25
Construction	3	1.32	227	99.57
Mining & Quarrying	1	0.43	228	100.00

Source: Developed from research

4.1.1.6 Company Size

Based on table 4.2.6 below, it shows the respondent's company size. There are total of 172 respondents (75.44%) response that there are in micro size. And there are total of 48 respondents (21.05%) are in small company size.

Lastly, there are only 8 respondents (3.51%) is working in medium size company.

Table 4.2.6 Respondent's Company Size

Company size	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
Micro	172	75.44	172	75.44
Small	48	21.05	220	96.49
Medium	8	3.51	228	100.00

Source: Developed from research

4.2.1.7 Company Years of Operation

Based on the table 4.2.7, it shows the company years of operation. There are total 28 respondents (12.28%) mentions that their company are operated less than 1 year. Where 49 respondents (21.49%) mention there company have operated in between 1 to 2 years. Meanwhile, there is 48 respondents (21.05%) mention that there have operated in between 3 to 5 years. Next, there is total of 36 respondents (15.79%) responded that they have operated in between 6 to 10 years. And 31 respondents (13.60%) have operated in between 11 to 15 years. Lastly, there are total of 36 respondents (15.79%) that operated more than 15 years.

Table 4.2.7 Respondent's Company Years of Operation

Year in operation	Frequency	Percent (%)	Cumulative frequency	Cumulative percent (%)
< 1 year	28	12.28	28	12.28
1-2 years	49	21.49	77	33.77
3-5 years	48	21.05	125	54.82
6-10 years	36	15.79	161	70.61
11-15 years	31	13.60	192	84.21
> 15 years	36	15.79	228	100.00

Source: Developed from research

4.2.2 Central Tendencies Measure of Constructs

Central tendency is the central value in a probability distribution, or it can be call as an average of the value. A mean and standard deviation will be used to describe the data. (Saunders, Lewis & Thornhill, 2009).

4.2.2.1 Business Performance

Table 4.3.1 Central Tendencies Measure of Business Performance

Descriptive Statistics

	N	Mean	Std. Deviation
BP1	228	4.2807	.79102
BP2	228	4.3421	.70027
BP3	228	3.6974	.83986
BP4	228	3.5175	.85239
BP5	228	3.3904	.84023
Valid N (listwise)	228		

Source: Developed from research

Table 4.3.1 shows the mean and standard deviation value of Business performance, in this case, BP2 has the highest mean with a value of 4.3421 and standard deviation of 0.70027.Besides, BP5 has the lowest mean with a value of 3.3904 and standard deviation of 0.84023.

4.2.2.2 Logistics Cost

Table 4.3.2 Central Tendencies Measure of Logistics Cost

Descriptive Statistics

	N	Mean	Std. Deviation
LC1	228	3.7982	.63910
LC2	228	3.9035	.68937
LC3	228	3.7632	.64763
LC4	228	3.6447	.64427
LC5	228	3.7149	.51612
Valid N (listwise)	228		

Source: Developed from research

Table 4.3.2 shows the mean and standard deviation value of logistics cost. In this case, LC2 has the highest mean with a value of 3.9035 and standard deviation of 0.68937.Besides, LC4 has the lowest mean with a value of 3.6447 and standard deviation of 0.64427.

4.2.2.3 Service Quality

Table 4.3.3 Central Tendencies Measure of Service Quality

Descriptive Statistics

	N	Mean	Std. Deviation
SQ1	228	3.7544	.89109
SQ2	228	3.7193	1.07440
SQ3	228	3.5175	.99985
SQ4	228	3.0614	.99590
Valid N (listwise)	228		

Source: Developed from research

Table 4.3.3 shows the mean and standard deviation value of service quality. In this case, SQ1 has the highest mean with a value of 3.7544 and standard deviation of 0.89109. Besides, SQ4 has the lowest mean with a value of 3.0614 and standard deviation of 0.99590.

4.2.2.4 Responsiveness

Table 4.3.4 Central Tendencies Measure of Responsiveness

Descriptive Statistics

	N	Mean	Std. Deviation
RES1	228	3.4649	.83618
RES2	228	3.5307	.87245
RES3	228	3.4342	.90523
RES4	228	3.2807	.90528
Valid N (listwise)	228		

Source: Developed from research

Table 4.3.4 shows the mean and standard deviation value of responsiveness. In this case, RES2 has the highest mean with a value of 3.5307 and standard deviation of 0.87245. Besides, RES4 has the lowest mean with a value of 3.2807 and standard deviation of 0.90528.

4.2.2.5 Flexibility

Table 4.3.5 Central Tendencies Measure of Flexibility

Descriptive Statistics

	N	Mean	Std. Deviation
FL1	228	3.5263	.76499
FL2	228	3.5746	.99278
FL3	228	3.4956	.99999
FL4	228	3.3596	.90644
FL5	228	3.6360	.97724
Valid N (listwise)	228		

Source: Developed from research

Table 4.3.5 shows the mean and standard deviation value of flexibility. In this case, FL2 has the highest mean with a value of 3.5746 and standard deviation of 0.99278. Besides, FL4 has the lowest mean with a value of 3.3596 and standard deviation of 0.90644.

4.2.2.6 Reliability

Table 4.3.6 Central Tendencies Measure of Reliability

Descriptive Statistics

	N	Mean	Std. Deviation
REL1	228	3.8026	.76865
REL2	228	3.8026	.62305
REL3	228	3.7588	.65616
REL4	228	3.6404	.83563
Valid N (listwise)	228		

<u>Source:</u> Developed from research

Table 4.3.6 shows the mean and standard deviation value of reliability. In this case, both REL1 and 2 and has the highest mean with a value of 3.8026 and standard deviation of REL1 is 0.76865 and REL2 is 0.62305. Besides, REL4 has the lowest mean with a value of 3.6404 and standard deviation of 0.83563.

4.3 Scale Measurement of Research

4.3.1 Normality testing

<u>Table 4.4 Normality Testing</u>

Variables	Items	Skewness	Kurtosis
Business Performance	BP1	-1.029	0.751
	BP2	-0.898	0.715
	BP3	-0.035	-0.742
	BP4	-0.141	-0.595
	BP5	0.436	0.246
Logistics cost	LC1	0.204	-0.636
	LC2	0.128	-0.885
	LC3	0.273	-0.699
	LC4	0.493	-0.673
	LC5	-0.259	-0.562
Service Quality	SQ1	-0.250	-0.681
	SQ2	-0.797	-0.022
	SQ3	-0.089	-1.048
	SQ4	0.254	-0.764
Responsiveness	RES1	-0.093	0.090
	RES2	-0.215	-0.267
	RES3	-0.108	-0.496
	RES4	0.134	-0.820
Flexibility	FL1	0.268	-0.312
	FL2	-0.535	-0.107

	FL3	0.025	-1.053
	FL4	0.192	-0.727
	FL5	0.127	-1.128
Reliability	REL1	-0.945	-0.945
	REL2	-0.545	-0.545
	REL3	-0.737	-0.737
	REL4	-0.674	-0.674

Source: Developed from research

4.3.2 Internal Reliability Testing

This study will use Cronbach's Alpha to test the reliability, and which is a common measurement of internal consistency.

Table 4.5 Cronbach's Alpha Reliability Test

Construct	Cronbach's Alpha Value	Number of Item	Strength
Business performance (BP)	0.764	5	Good
Service Quality (SQ)	0.782	4	Good
Responsiveness (RES)	0.738	4	Good
Flexibility (FL)	0.836	5	Very Good
Reliability (REL)	0.754	4	Good

Source: Developed for the research

As the results that show in table 4.3.1, this table has shown only the construct with good reliability. Although that value that this research get is not under excellence, but based on the research that has been done in chapter 3, which the entire construct is still consider reliable. Furthermore, all the variable value is more than 0.7 and except logistics cost, that logistics cost have a Cronbach's Alpha Value less than 0.6. And it's poor results.

4.4 Inferential Analyse

4.4.1 Pearson's Correlation Analysis

Table 4.6 Pearson's Correlation Analysis

Correlations		BP AVERAGE	LC AVERAGE	SQ AVERAGE	RES AVERAGE	FL AVERAGE	REL AVERAGE
BP AVERAGE	Pearson Correlation	1	.149*	.798**	.464**	.738**	.549**
	Sig. (2-tailed)		.024	.000	.000	.000	.000
	N	228	228	228	228	228	228
LC AVERAGE	Pearson Correlation	.149*	1	.173**	.182**	.202**	.128
	Sig. (2-tailed)	.024		.009	.006	.002	.054
	N	228	228	228	228	228	228
SQ AVERAGE	Pearson Correlation	.798**	.173**	1	.371**	.812**	.560**
	Sig. (2-tailed)	.000	.009		.000	.000	.000
	N	228	228	228	228	228	228
RES AVERAGE	Pearson Correlation	.464**	.182**	.371**	1	.379**	.267**
	Sig. (2-tailed)	.000	.006	.000		.000	.000
	N	228	228	228	228	228	228
FL AVERAGE	Pearson Correlation	.738**	.202**	.812**	.379**	1	.280**
	Sig. (2-tailed)	.000	.002	.000	.000		.000
	N	228	228	228	228	228	228
REL AVERAGE	Pearson Correlation	.549**	.128	.560**	.267**	.280**	1
	Sig. (2-tailed)	.000	.054	.000	.000	.000	
	N	228	228	228	228	228	228

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Source: Developed for the research

Before look into the correlation value, the significant value also known as P-value help us to determent the significant of results in this research. Based on the table 4.4, it showing that all the value has significant and it's less that the value of 0.05. Therefore, it can be concluded that all the probabilities for the hypothesis is true. (Kreinovich, Nguyen & Wu, 2013).

Besides, table 4.4 that show above is showing the Pearson's Correlation between all IVs and DV, There is total 6 components in this table, when the results is more and equal 0.2 and above, it can be considered have correlation in between 2 item, and when the rate is less than 0.2 is consider there is none or slight correlation between 2 variable. Based on the table that shows above, most of the value is more than 0.2, except for some of the variable. But since logistic cost have a negative relationship with others, Therefore, the test should be proceed and test for multiple relationship analysis.

4.4.1 Linear Regression Analysis

Table 4.7 Linear regression Analysis

Independent Variable	R^2	β	F	Sig
LC	0.022	0.149	5.144	0.024
SQ	0.638	0.798	397.509	0.000
RES	0.216	0.464	62.166	0.000
FL	0.544	0.738	269.549	0.000
REL	0.549	0.549	97.547	0.000

Source: Developed for the research

H1: There is no evident to shows that logistics cost has negative relationship with the business performance of SMEs in Malaysia.

Based on the reference from table 4.7, H1 has the F-value of 5.144 and the P-value is 0.024 <0.05. When the P-value is less than 0.05 significant levels, which mean there is a significant relationship between DV and IV. Besides, R square value is 0.022. This means that the DV (Business performance) can be explained 2.2% of variation by logistics cost. Furthermore, it's predicted that the Business performance is equal to 2.996 + 0.226 unit for every unit logistics cost is measure. Business performance will be increased 0.226 for every unit logistics cost. Lastly, the regression has shown a positive relationship between of logistics cost and business performance. Therefore, H1 is rejected.

H2: Service quality has positive relationship with the business performance of SMEs in Malaysia.

Based on the reference from table 4.7, H2 has the F-value of 397.509 and the P-value is 0.000 <0.05. When the P-value is less than 0.05 significant levels, which mean there is a significant relationship between DV and IV. Besides, R square value is 0.638. This means that the DV (Business performance) can be explained 63.8% of variation by service quality.

Furthermore, it's predicted that the Business performance is equal to 1.743 + 0.108 unit for every unit logistics cost is measure. Business performance will be increased 0.108 for every unit of service quality. Lastly, the regression has shown a positive relationship between service quality and business performance. Therefore, H2 is accepted.

H3: Responsiveness has positive relationship with the business performance of SMEs in Malaysia.

Based on the reference from table 4.7, H3 has the F-value of 62.166 and the P-value is 0.000 <0.05. When the P-value is less than 0.05 significant levels, which mean there is a significant relationship between DV and IV. Besides, R square value is 0.216. This means that the DV (Business performance) can be explained 21.6% of variation by responsiveness. Furthermore, it's predicted that the Business performance is equal to 2.447 + 0.408 unit for every unit of responsiveness is measure. Business performance will be increased 0.408 for every unit of responsiveness. Lastly, the regression has shown a positive relationship between responsiveness and business performance. Therefore, H3 is accepted.

H4: Flexibility has positive relationship with the business performance of SMEs in Malaysia.

Based on the reference from table 4.7, H4 has the F-value of 269.549 and the P-value is 0.000 <0.05. When the P-value is less than 0.05 significant levels, which mean there is a significant relationship between DV and IV. Besides, R square value is 0.544. This means that the DV (Business performance) can be explained 54.4% of variation by flexibility. Furthermore, it's predicted that the Business performance is equal to 1.774 + 0.589 unit for every unit of flexibility is measure. Business performance will be increased 0.589 for every unit of flexibility. Lastly, the regression has shown a positive relationship between flexibility and business performance. Therefore, H4 is accepted.

H5: Reliability has positive relationship with the business performance of SMEs in Malaysia.

Based on the reference from table 4.7, H4 has the F-value of 97.547 and the P-value is 0.000 <0.05. When the P-value is less than 0.05 significant levels, which mean there is a significant relationship between DV and IV. Besides, R square value is 0.549. This means that the DV (Business performance) can be explained 54.9% of variation by reliability. Furthermore, it's predicted that the Business performance is equal to 1.682 + 0.577 unit for every unit of reliability is measure. Business performance will be increased 0.577 for every unit of reliability. Lastly, the regression has shown a positive relationship between reliability and business performance. Therefore, H5 is accepted.

4.5 Conclusion

In nutshell, Chapter 4 is basically interpreting the result and concludes the data finding. In this chapter, all the analysis was conducted by using IBM SPSS Statistics 21. Based on the result that has been conducted, all the IVs have the significant relationship with business performance except logistics cost. Furthermore, the coming chapter will continue to discuss about the research finding, recommendation for others researcher and etc.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

Chapter five will keep on discussion on based on the finding in previous chapter, and this chapter will include the discussion, limitation and recommendation of the research and etc.

5.1 Discussion of Major Finding

H1: There is no evident to shows that logistics cost has negative relationship with the business performance of SMEs in Malaysia.

Although Logistics cost show a negative relationship with the business performance of SMEs in Malaysia. According to Muskimin, Suryadi, & Ardiansyah (2015) Logistics tools like low logistics operating cost that would increase the financial performance and improve business operation. Besides, logistics cost and quality also will become as a manufacturing strategy, and lead to strong performance (Shang & Marlow, 2007). But due to the results that run above shows an insignificant results. Therefore, it can be concluded that logistics cost is not the factor that will affect the business performance of SMEs.

H2: Service quality has positive relationship with the business performance of SMEs in Malaysia.

Service quality shows a positive relationship with the business performance of SMEs in Malaysia. SMEs that improve in service quality such as trust and incentive will improve organization competitiveness and lead to strong business performance. (Peres-Arostegui, 2011). A company that have strategy in service quality will have significant impact toward the business profitability (Ellinger et

al., 2000). Therefore, it can be concluded that service quality is the factor that will affect the business performance of SMEs.

H3: Responsiveness has positive relationship with the business performance of SMEs in Malaysia.

Responsiveness shows a positive relationship with the business performance of SMEs in Malaysia. Researcher found out that logistics responsiveness will influence marketing performance and also have an effect on the sales growth and profitability (Green, whitten and Imman, 2008). Furthermore, Responsiveness such as Just-in-time deliveries to support manufacturing will provide the satisfaction to customers and will increase buyer buying intention, which will lead to grow in business (Zhu & Sarkis, 2004). Therefore, it can be concluded that responsiveness is the factor that will affect the business performance of SMEs.

H4: Flexibility has positive relationship with the business performance of SMEs in Malaysia.

Flexibility shows a positive relationship with the business performance of SMEs in Malaysia. By having more flexibility in SMEs, SMEs would have more easy to adapt with any changes in operation and improve effectiveness and efficiency (Dagayach and Deshmukh, 2001). Besides, researchers found in agro-food product flexibility of logistics will determinants of logistics and business performance (Aramyan et al, 2007). Therefore, it can be concluded that flexibility is the factor that will affect the business performance of SMEs.

H5: Reliability has positive relationship with the business performance of SMEs in Malaysia.

Reliability shows a positive relationship with the business performance of SMEs in Malaysia. Where some researcher test logistics supply chain performance by using reliability, it ensure that the smooth flow of goods and services and lead to

strong business performance (Kinyua, 2013). There is also some researcher found out that the high level of reliability and usability has positive correlation to financial and non financial performance (Leković & Marić, 2015). Therefore, it can be concluded that reliability is the factor that will affect the business performance of SMEs.

5.2 Implication of the Study - Managerial Implication

In this research, Business performance was influences by the 4 variable. The results shows from the data collected is valuable for helping the SMEs in Malaysia understand that what are the factors that will influence the business performance and try improve on these factors .

In order to increase the business performance in the SMEs, The SMEs in Malaysia should continue to improve on their services quality in order to make to make customer satisfied. And it would able to help the business continue to grow. In this finding, most of the respondents are under micro industries. And the business age is between 1-2 years. And this is the time to test whether the business can be survived in the cruel world, and if they survived, they can continue to grow and become larger company in coming future.

To satisfy the customers, the manager or CEO should continue to have employees' development and improving on their service quality such as provide better after sales service and continue to train employees, it would make sure it will increase in service quality, and improve on business performance.

Responsiveness and flexibility also one of the important factors in an organization, such as to provide better choices for customer to choose for, and quick respond with the customer order the products. Besides, company should continue to look for logistics provider that in low cost and look for the material or products provider that in reliable that makes sure all the goods they sent is without damage.

Even those the companies is small, as compare to the large firm in the market, and the competiveness is lower as compare to them, therefore, company should always

look for the different approach that help to increase the competitiveness of the company. Although the SMEs in Malaysia don't have many resources like capital as compare to large or multinational company.

Last but not lease, the major finding has showing the factor that would affect the business performance, besides this four factors, the manager or CEO, should not avoid to look into different approach that would affect the business performance, such as macroeconomic, company should always sensitive with the changes of the business environment and continue make adjustments that based on the need of the customer to improve on the business performance.

5.3 Implication of the Study – Government Implication

Based on this research study, government will be known that the company business performance will be influenced by these 4 logistics factors. Therefore, based on these 4 factors, government should continue investigate on these factors and to help the SMEs in Malaysia enhance the business performance.

Government should allocate more budgeting on the SMEs, and it would help them to grow, this is because most of the SMEs is lacking of funds to make more changes, and enhance the logistics factors. One of the examples is service quality. SMEs need more fund in order to provide more training for the employees or even investing in automated machine and latest technology in the businesses process, and help the organization to act faster to compete with others.

Besides, government should also upgrade in logistics infrastructure, like roads, ports, railway. To make sure all the delivery will be reach on time, and in quality without breakdown, this would help to make sure responsiveness and reliability on the SMEs will be able to enhance. That some of the time, delay or damage in goods is during the way of delivery and indirectly affect the business performances of SMEs.

As Malaysia is a country that focusing in export in goods especially in electrical and electronic (E&E) products and palm oil and palm oil based products. (Star, 2017). The government should encourage more SMEs to growth, and continue to enhance the export activities, not just only focus in few areas, but try to diversify

into different area and to lower down the risks of being taken by other countries. Government should continue to give more encourage and reward to those SMEs that having the innovation, flexibility and dare to transform the business activities, by giving some of the tax incentive, and helps them to promote the products or services into different market. That would be able to helps company to growth, enhance the business performance and yet government able to be the long-term survival in the export market.

5.4 Limitation of Study

This research has several limitations. First, it would be the time constraint, due to the requirement of this research; I only have three months to complete this study. Therefore, there are many things in this research might not able to cover in this research.

Second, it would be the geographical dispersion problem. Therefore, this study is only focus in Perak, rather than the whole Malaysia. Due to this problem, the focus in Perak might not able to reflect the real situation in whole Malaysia.

I am also facing some of the difficulty during distribution of questionnaire, it was because my target respondents is mainly focusing on managerial level or and above. Due to this reason, I have to take some time to look for them, and sometime, they are not around and I have to come back on different day to get the thing done.

5.5 Recommendation for Future Studies.

The discussion on limitation led to the recommendation for future studies. This allows future researcher in that would like to conducts in Malaysia as well as different countries to gain better research in the coming future.

First of all, the data that collected might need to focus in every place in a country. As mention in limitation, the focusing in one area might not reflect the whole satiation in a country. Therefore, I am encourage the future researcher have to take

some time and effort to have a target respondent in whole country, to have a more accurate data in the research.

Second, if there is sufficient of time, try to add the mediators or moderators in the future research, it can be used to have a intervention in research progress. And it would help the research have more value in investigation. It would take extra time when add in these.

5.6 Conclusion

In a conclusion, this research is aim to examine the relationship between all IVs and DV. That has been discussed in this chapter. With the summary of the finding, it shows the factor relationship with the business performance of SMEs in Malaysia. Furthermore, this research also point out the limitation of the study and some recommendations for future studies that might conduct by researchers.

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APPENDICES

Appendix 3.1 Permission Letter

UNIVERSITI TUNKU ABDUL RAHMAN
Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

UTAR
UNIVERSITI TUNKU ABDUL RAHMAN

21ˢᵗ June 2017

To Whom It May Concern

Dear Sir/Madam,

Permission to Conduct Survey

This is to confirm that the following student is currently pursuing the *Master of Business Administration (Corporate Management)* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

We would be most grateful if you could assist the student by allowing the student to conduct the research at your institution. All information collected will be kept confidential and used only for academic purposes.

The student name is Kenny Keok Yun Kiet and the student registration number is 16ABM07438.

If you need further verification, please do not hesitate to contact us.

Thank you.

Yours sincerely,

....
Dr Ahmad Nazri Bin Wahidudin
Head of Department,
Faculty of Business and Finance
Email: nazriw@utar.edu.my

....
Encik Mohamad Fared bin Mohamad Makmor
Supervisor,
Faculty of Business and Finance
Email: faredm@utar.edu.my

Address: Jalan Sg. Long, Bandar Sg. Long, Cheras, 43000 Kajang, Selangor D.E. **Postal Address:** P O Box 11384, 50744 Kuala Lumpur, Malaysia
Tel: (603) 9086 0288 **Fax:** (603) 9019 8868 **Homepage:** http://www.utar.edu.my

Appendix 3.2 Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN

Faculty of Business Finance

The logistics factors that affecting the business performance of

Small and Medium Enterprise (SMEs) in Malaysia: Evidence from Perak

Survey questionnaire

Dear Respondents,

I am UTAR student who are currently studying Master in Business Administration (corporate Management). The purpose of this survey is to understand the logistics factors affecting business performance of Small and Medium Enterprise (SMEs) in Malaysia: Evidence from Perak.

My intended respondents are the owner /CEO/ managing director / manager of the firm selected from the Perak SMEs.

If you have any question regarding this survey, please feel free to contract my mobile: **+60149042243** or email at **kennykeok@1utar.my** or my supervisor, Mr. Mohamad Fared bin Mohamad Makmor contact email **faredm@utar.edu.my**. Kindly provide your valuable responses to all the statement listed in this questionnaire. All responses will be kept confidential. There are no correct or incorrect responses to the statements.

Thank you for your participation

_____
_____

Instruction

1. There are total **TWO (2)** Sections in this questionnaire. Pleases answer **ALL Questions**.

2. It takes you approximately 10 to 15 minutes to complete this questionnaire.

3. This questionnaire will be kept strictly **CONFIDENTIAL.**

_____

Section A: Demographic profile

1. What is your gender?

□Male   □Female

2. What is your age range?

□ Less than 25 years

□ 25 -34 years

□ 35 - 44 years

□ 45 years and more

3. What is your race?

□ Malay

□ Chinese

□ Indian

□ Others

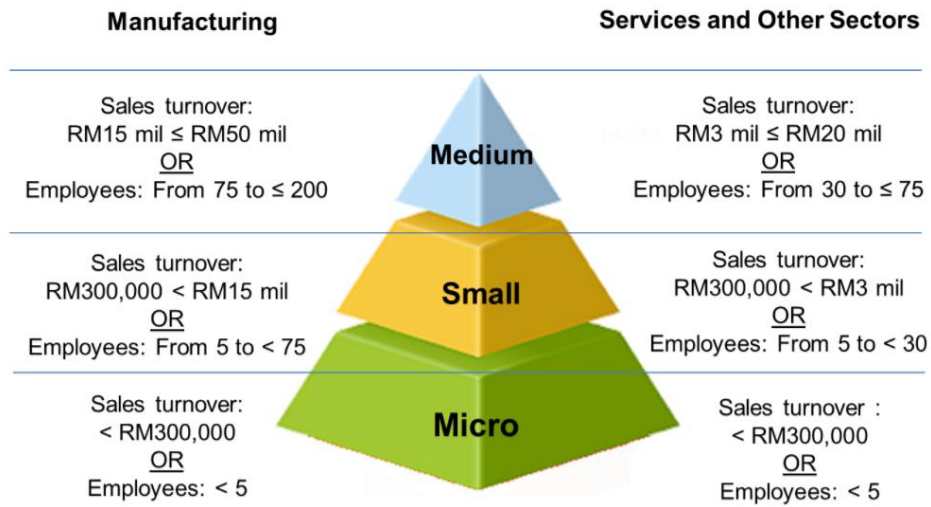**4. What is your education level?**

□ Primary school   □ Secondary school   □ Diploma   □ Bachelors   □ Master and Above

5. in what Industry group does your company belongs to?

□ Services-

□ Manufacturing

□ Agriculture

□ Construction

□ Mining & Quarrying

□Others: _____

6. What is the size of your company? (Please refer image below to choose firm size)

□Micro

□Small

□Medium

7. No of years in operation?

□ 1 year and below   □ 1-2 Years   □ 3-5 Years

□ 6-10 Years   □ 11-15 Years   □ 15years And Above

Section B:

Please Circle one number per line to indicate the extent to which you agree or disagree with the following statement.

[**1** = strongly disagree (SD); (**2**) = Disagree (D); (**3**) = Neutral (N); (**4**) = Agree (A); (**5**) = strongly agree (SA)]

Business performance

No.		SD	D	N	A	SA
1	We have strong annual growth in revenue and sales earning.	1	2	3	4	5
2	We have the ability to earn profit.	1	2	3	4	5
3	We have the efficient use of resources to gain profit from investment. (Return on investment)	1	2	3	4	5
4	We have strong cash flow that represents the operation performance.	1	2	3	4	5
5	We have ability to grab the market share.	1	2	3	4	5

Logistics Cost

No.		SD	D	N	A	SA
1	We don't have low cost of input	1	2	3	4	5
2	We don't have low cost of delivery	1	2	3	4	5
3	We are not able to achieve in low in distribution cost	1	2	3	4	5
4	We are not able to achieve in cost saving.	1	2	3	4	5
5	We are not able to avoid non related cost in distribution.	1	2	3	4	5

Service Quality

No.		SD	D	N	A	SA
1	Our products/ Services to customers always in good condition	1	2	3	4	5
2	We provide the after sales services to customers.	1	2	3	4	5
3	We rarely receive customer complain in services quality	1	2	3	4	5
4	We able to satisfied customers in service quality.	1	2	3	4	5

Responsiveness

No.		SD	D	N	A	SA
1	The products/ Services can be used by customers quickly.	1	2	3	4	5
2	Our company are able to solve the customer problem in a short period of time.	1	2	3	4	5
3	Our products/ Services can be used without any delay.	1	2	3	4	5
4	We are capable of delivering expedited to meet customer need.	1	2	3	4	5

Flexibility

No.		SD	D	N	A	SA
1	We are capable to arranging the flexible solution.	1	2	3	4	5
2	We are able to provide the flexible needs to customers.	1	2	3	4	5
3	We are able to deal with the changes from the customer requirement.	1	2	3	4	5
4	We are able to adjust/ change to the customers various /specific need.	1	2	3	4	5
5	We are products/ services can be change accordingly.	1	2	3	4	5

Reliability

No.		SD	D	N	A	SA
1	The products/ services that sold to customer are in good condition.	1	2	3	4	5
2	The high probability of delivery on time without any order incorrectness.	1	2	3	4	5
3	Our products / services is long lasting as compare to others competitor.	1	2	3	4	5
4	The customers' retention rate is high.	1	2	3	4	5

Personal Data Protection Statement

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-

   - For assessment of any application to UTAR
   - For processing any benefits and services
   - For communication purposes
   - For advertorial and news
   - For general administration and record purposes
   - For enhancing the value of education
   - For educational and related purposes consequential to UTAR
   - For the purpose of our corporate governance
   - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfil our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at dhr@utar.edu.my.

Appendix 4.1 Pilot test

		Respoonse Sex	BP1	BP2	BP3	BP4	BP5	LC1	LC2	LC3	LC4	LC5	SQ1	SQ2	SQ3
N	Valid	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skewness		1.580	.141	-.583	.409	.214	.210	-1.112	.040	.499	.635	-.050	-.356	-.671	-.105
Std. Error of Skewness		.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427
Kurtosis		.527	-2.127	-1.784	-.770	-1.019	-.234	-.824	-.081	-.781	-.453	-.699	-.343	.053	-.744
Std. Error of Kurtosis		.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833

SQ4	RES1	RES2	RES3	RES4	FL1	FL2	FL3	FL4	FL5	REL1	REL2	REL3	REL4
30	30	30	30	30	30	30	30	30	30	30	30	30	30
0	0	0	0	0	0	0	0	0	0	0	0	0	0
.358	-.046	-.261	.409	-.159	-.955	-1.169	.055	.159	-.009	-.054	.107	-.170	-.338
.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427	.427
-.755	-.343	.269	-.770	-.833	.165	2.618	-1.089	-.243	-.952	-.352	-.557	-.715	-.170
.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833	.833

Appendix 4.2.1Reliability Statistics of Business Performance

Appendix 4.2.2 Reliability Statistics of Logistics Cost

Appendix 4.2.3 Reliability Statistics of Service Quality

Appendix 4.2.4 Reliability Statistics of Responsiveness

Appendix 4.2.5 Reliability Statistics of Flexibility

Appendix 4.2.6 Reliability Statistics of Reliability

Appendix 4.3 Normality test

RES1	RES2	RES3	RES4	FL1	FL2	FL3	FL4	FL5	REL1	REL2	REL3	REL4
228	228	228	228	228	228	228	228	228	228	228	228	228
0	0	0	0	0	0	0	0	0	0	0	0	0
-.093	-.215	-.108	.134	-.268	-.535	.025	.192	.127	.178	.164	.298	.073
.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161
.090	-.267	-.496	-.820	-.312	-.107	-1.053	-.727	-1.128	-.945	-.545	-.737	-.674
.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321

Statistics

		BP1	BP2	BP3	BP4	BP5	LC1	LC2	LC3	LC4	LC5	SQ1	SQ2	SQ3	SQ4
N	Valid	228	228	228	228	228	228	228	228	228	228	228	228	228	228
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skewness		-1.029	-.898	.035	-.141	-.436	.204	.128	.273	.493	-.259	-.250	-.797	-.089	.254
Std. Error of Skewness		.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161	.161
Kurtosis		.751	.715	-.742	-.595	.246	-.636	-.885	-.699	-.673	-.562	-.681	-.022	-1.048	-.764
Std. Error of Kurtosis		.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321	.321

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Appendix 4.4 Correlation Matrix

Appendix 4.5.1 linear regression - Logistics cost

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.149^a	.022	.018	.57313

a. Predictors: (Constant), LC AVERAGE

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.690	1	1.690	5.144	.024^b
	Residual	74.236	226	.328		
	Total	75.926	227			

a. Dependent Variable: BP AVERAGE
b. Predictors: (Constant), LC AVERAGE

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.996	.377		7.954	.000
	LC AVERAGE	.226	.100	.149	2.268	.024

a. Dependent Variable: BP AVERAGE

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Appendix 4.5.2 linear regression - Service Quality

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798[a]	.638	.636	.34896

a. Predictors: (Constant), SQ AVERAGE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.405	1	48.405	397.509	.000[b]
	Residual	27.520	226	.122		
	Total	75.926	227			

a. Dependent Variable: BP AVERAGE

b. Predictors: (Constant), SQ AVERAGE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.743	.108		16.138	.000
	SQ AVERAGE	.599	.030	.798	19.938	.000

a. Dependent Variable: BP AVERAGE

Appendix 4.5.3 linear regression - Responsiveness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464[a]	.216	.212	.51330

a. Predictors: (Constant), RES AVERAGE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.379	1	16.379	62.166	.000[b]
	Residual	59.546	226	.263		
	Total	75.926	227			

a. Dependent Variable: BP AVERAGE

b. Predictors: (Constant), RES AVERAGE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.447	.181		13.554	.000
	RES AVERAGE	.408	.052	.464	7.885	.000

a. Dependent Variable: BP AVERAGE

Appendix 4.5.4 linear regression - Flexibility

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738ᵃ	.544	.542	.39143

a. Predictors: (Constant), FL AVERAGE

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.299	1	41.299	269.549	.000ᵇ
	Residual	34.627	226	.153		
	Total	75.926	227			

a. Dependent Variable: BP AVERAGE

b. Predictors: (Constant), FL AVERAGE

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.774	.129		13.766	.000
	FL AVERAGE	.589	.036	.738	16.418	.000

a. Dependent Variable: BP AVERAGE

Appendix 4.5.4 linear regression - Realibility

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549ᵃ	.301	.298	.48442

a. Predictors: (Constant), REL AVERAGE

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.891	1	22.891	97.547	.000ᵇ
	Residual	53.035	226	.235		
	Total	75.926	227			

a. Dependent Variable: BP AVERAGE

b. Predictors: (Constant), REL AVERAGE

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.682	.221		7.598	.000
	REL AVERAGE	.577	.058	.549	9.877	.000

a. Dependent Variable: BP AVERAGE