

THE IMPORTANCE OF WEBSITE QUALITY  
DIMENSIONS IN DETERMINING CUSTOMER  
SATISFACTION: AN EMPIRICAL STUDY ON AIRLINE  
INDUSTRY

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We hereby declare that:

- 1) This undergraduate research project is the end result of our 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) Equal contribution has been made by each group member in completing the research project.
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Who guide us throughout the completion of this research study.

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## LIST OF ABBREVIATIONS

|      |  |
|------|--|
| DLML | Delone and McLene Information System Success Model |
| IDC  | International Data Corporation                     |
| SPSS | Statistical Package for Social Science             |

## PREFACE

The fast paced evolution in information technology has made e-commerce an important mean for businesses to reach their customers. As a result, e-commerce has become a fundamental business plan for businesses to survive in the highly competitive market. From the business perspective, e-commerce is relatively cost effective than the conventional method as cost of office rental and sales staffs employment could be eliminated. Nevertheless, cost of hosting and maintaining an e-commerce website is astonishing. Henceforth, it is essential to examine the website quality dimensions valued by the customers to ensure that online retailer's spending on website is worthwhile.

The characteristics and features of an e-commerce website differ according to the nature of business conducted. Generally, an online boutique should have attractive website design with vibrant colours whereas a learning based website should be informative. Therefore, the relative importance of each website quality dimension is depends on the type of product or service sold. Research which studies on the general e-commerce websites is thereby unable to generalize to all businesses. Hence, this study proposes to specifically examine on the airline company's website quality dimensions. Airline company is prioritize over other business as airline ticket is the most frequently purchased item among Malaysian online buyers.

Through this research, practitioners and managers would be enlightened on the website quality dimensions which need to be emphasized. This research may serve as a comprehensive reference for online retailer, especially the airline company in the development of their own websites. Other than benefiting the airline company, this research could provide useful insight for website designer who designs website for an airline company.



## ABSTRACT

**Purpose** – This research aims to empirically investigate the relationship between airline company’s e-commerce website quality dimensions and customer satisfaction.

**Theory used-** Theory employed in this research is the DeLone and McLean Information Systems Success Model developed by William H. DeLone and Ephraim R. McLean.

**Findings-** Airline company’s website design, interactivity, reliability, informativeness, security, trust and empathy have positive and significant relationship with customer satisfaction. On the contrary, responsiveness of airline company is found insignificant in determining customer satisfaction.

**Research methodology-** This research is designed as a cross-sectional study. A survey method approach is used in this study. The targeted populations are online buyers of airline tickets who are between 21 and 40 years old. Quota sampling technique is employed to select cases from the population.

Descriptive and inferential analysis will be performed. Inferential analysis consists of Normality test, Pearson Analysis, Reliability test and Multiple Linear Regression.

### **Significance of study-**

#### *Managerial Contribution*

This research provides useful insight for business using e-commerce, especially airline company operated in Malaysia, on how website quality dimensions affect customer satisfaction and subsequently improve the prosperity of business.

#### *Theoretical Contribution*

Online customer satisfaction factors vary across cultures. Delone model is a westernize model and may not be completely applicable in Malaysia. Henceforth, this research is retesting the Delone model in Malaysia context.

## **CHAPTER 1: INTRODUCTION**

### **1.0 Introduction**

This is an introductory chapter which consists of a few parts. Firstly, research background which introduce on the research topic. Secondly, problem statement which discusses issues that warrant in-depth investigation later in the research. Thirdly, research objectives which address the purpose of investigation. Forthly, research questions which guide the research's arguments. Fifthly, significance of the study which explains the contribution of this research. Finally, chapter layout which briefly outlines each chapter of the research report.

### **1.1 Background of the Study**

E-commerce has been burgeoning as a means of doing business. In year 2010, global e-commerce revenue has approached 600 billion US dollars and it will surge to 950 billion by 2015 ("Global B2C E-Commerce," 2011). Asia, including Malaysia, is expected to play a vital role in the development on e-commerce revenue ("Asia B2C E-Commerce," 2011).

Although e-commerce is highly profitable to businesses, it also comes with inherent challenges. Customers are not possible to inspect the product when transactions are conducted in e-commerce context (Jiang & Benbasat, 2007). Eventually, they will judge the product quality based on website quality (Wells, Valacich, & Hess, 2011). Thus, websites quality plays a vital role in the e-commerce context. Moreover, website quality is important because it possesses the same importance as store environment, whereby it can affect customer perceptions towards the retailer (Wells

et al., 2011). Generally, website quality is defined as the quality of website features (Lin, 2007).

Website quality could affect customer perceptions. Likewise, customer satisfaction may be enhanced if the website is good in quality. Customer satisfaction is a measure of customer's evaluation on experience associated with the purchase of a product (Zeithaml, Parasuraman, & Malhotra, 2002). High customer satisfaction leads to customer retention and improves business profits (Lin, 2007).

As customer satisfaction could significantly benefit the business, this research proposes to examine whether website quality could increase customer satisfactions. Moreover, this research will focus on the airline company websites as airline ticket is the most frequently purchased item among Malaysian online buyers (Visa, 2010). Besides, website contributes the most to travelling industry, especially the airline industry (Nielson, 2011).

The fierce competition between airline companies has caused the increasing adoption of website as a mean to generate profit (Harison & Boonstra, 2008). In Malaysia, e-ticketing was launched by Air Asia in year 2002 followed by Malaysia Airlines in 2004. Airline companies are increasingly concern with the importance of website. Hence, heavy investment has been devoted to the operation of website (Razak & Ilias, 2011). Generally, website helps airline company to reduce costs, improves customer management relationship and improves profit (Harison & Boonstra, 2008).

## **1.2 Problem Statement**

E-commerce has become a highly profitable opportunity to business. Nevertheless, online buyers are more demanding in an e-commerce context (Lin, 2007). They demand for more information and want their needs to be fulfilled immediately

(McIvor, 2010). If their expectations are not met, they most likely will change to another competitor (Williams, Hernandez, Petrosky, & Page, 2007).

Hence, past studies have tried to address the problem by examining customer satisfaction factors. The effects of website, the foundation of e-commerce, on customer satisfaction were frequently discussed. Some studies investigated the effects of website quality using Technology Acceptance model and Task Technology Fit model. However, most studies incorporated the DeLone and McLean Information Systems Success Model (2002). DeLone model is a framework which prescribes how website quality dimensions (System Quality, Information Quality, and Service Quality) affects customer satisfaction. Notably, this model provides numerous variables for each website quality dimension.

Most past studies supported the positive effects of website quality dimensions on customer satisfaction. Liang and Chen (2009) found that all three dimensions of website quality significantly improve customer satisfaction. Similar results are supported by Chen, Huang, and Chen (2011). However, service quality is identified as the most significant dimension in this study.

There are some existing studies which looked into how the variables of each website quality dimensions affect customer satisfaction. Mart ín and Camarero (2008) found that antecedents of customer satisfaction include website design and interactivity, which are variables of System Quality dimension. Likewise, variables of System Quality dimension (reliability and ease of use) also found essential by Zeng, Hu, Chen, and Yang (2009).

There is a significant deficiency of past studies because most studies only examine the general effects of each website quality dimension on customer satisfaction. Only few studies looked into the variables incorporated in the three dimensions of website quality. Nevertheless, even if they investigated on the variables, they only chose some of the variables to examine. Research conducted by Lin (2007) did incorporate almost

all of the important variables of website quality dimensions. Nonetheless, important variables of system quality, which are reliability and response time, are not incorporated in this study.

Another deficiency of past studies is that most of them are conducted in countries other than Malaysia. According to Cyr (2008), online customer satisfaction factors vary across culture. Satisfaction factors among Canadians, Chinese (China) and Germans online users are different. Likewise, Cyr, Bonanni, Bowes, and Ilsever (2005) found that customers from different countries prefer dissimilar website design. Therefore, this research proposes to incorporate the complete variables of DeLone model and investigate their importance in determining customer satisfaction in the Malaysia context.

### 1.3 Research Objectives and Questions

Table 1.1: Research Objectives and Research Questions

| <b>Research Objectives</b>  | <b>Research Questions</b>  |
|---|--|
| <p><u>General Objective</u></p> <p>To investigate the relationship between airline company's website quality dimensions and customer satisfaction.</p>  | <p><u>General Question</u></p> <p>Does airline company's website quality dimensions related to customer satisfaction?</p>  |
| <p><u>Specific Objectives</u></p> <p>i. To investigate the relationship between airline company's <i>website design</i> and customer satisfaction.</p> <p>ii. To investigate the relationship between airline company's website <i>interactivity</i> and customer satisfaction.</p> | <p><u>Specific Questions</u></p> <p>i. Does airline company's <i>website design</i> related to customer satisfaction?</p> <p>ii. Does airline company's website <i>interactivity</i> related to customer satisfaction?</p> |

|   |   |
|---|---|
| iii. To investigate the relationship between airline company's website <i>reliability</i> and customer satisfaction.    | iii. Does airline company's website <i>reliability</i> related to customer satisfaction?    |
| iv. To investigate the relationship between airline company's website <i>informativeness</i> and customer satisfaction. | iv. Does airline company's website <i>informativeness</i> related to customer satisfaction? |
| v. To investigate the relationship between airline company's website <i>security</i> and customer satisfaction.         | v. Does airline company's website <i>security</i> related to customer satisfaction?         |
| vi. To investigate the relationship between airline company's website <i>responsiveness</i> and customer satisfaction.  | vi. Does airline company's website <i>responsiveness</i> related to customer satisfaction?  |
| vii. To investigate the relationship between airline company's website <i>trust</i> and customer satisfaction.          | vii. Does airline company's website <i>trust</i> related to customer satisfaction?          |
| viii. To investigate the relationship between airline company's website <i>empathy</i> and customer satisfaction.       | viii. Does airline company's website <i>empathy</i> related to customer satisfaction?       |

Source: Developed for the research

## **1.4 Significance of the Study**

### **1.4.1 Managerial Contribution**

This research provides useful insight for business using website, especially airline company operated in Malaysia, on how website quality dimensions affect customer satisfaction and subsequently improve the prosperity of business.

The development and maintenance costs of website could be astonishing. This research will help airline company to know the effects of each website quality variables on customer satisfaction. Thus, website development and maintenance could be performed by focusing on the salient factors.

According to Delone and McLean (2002), airline company with quality website is able to maintain customer loyalty. Moreover, website helps airline company to reduce one of the main costs, distributing cost. This cost consists of ticketing fees, agent fees, sales office and advertising costs. Eventually, quality website helps to improve an airline company's net profits (Petter, DeLone, & McLean, 2008).

### **1.4.2 Theoretical Contribution**

DeLone model is applied in this research. Notably, a long list of measures was provided for each website quality dimension due to the broadness of each dimension. However, part of these measures overlaps with one another. Hence, this research categorised the important and related measures into variables to examine the effect of each variable on customer satisfaction. This will provide different insight to the effect of website quality on customer satisfaction.

Moreover, this research is retesting the Delone model in Malaysia context. Delone model is a westernise model developed in United States. Nonetheless, online customer satisfaction factors vary across cultures. Hence, it is important to retest the model in Malaysia context as it may not be completely applicable in Malaysia.

## **1.5 Outline of the Study**

This research report consists of three chapters. Chapter one is introduction which consists of research background; research problem statement; research objectives and questions; and significance of the study.

Chapter two is where past literatures are reviewed. It includes the review of theoretical foundation; prior empirical studies; proposed conceptual framework; and hypothesis development.

Chapter three provides the overview of research methodology. It includes research design; population, sample and sampling procedures; data collection method; conceptual framework variables and measurement; data analysis techniques; and analysis on pilot test.

Chapter four is where data is analysed and research findings are discussed. This chapter includes descriptive analysis; assumptions testing; and inferential analysis.

Finally, final discussions and conclusion of this research is discussed in chapter five. This chapter includes the summary of statistical analyses; discussions of major findings; implications of the study; limitations of the study; and recommendations for future research.



## **1.6 Conclusion**

In conclusion, website quality is increasingly important in the business environment. Nevertheless, no research has been devoted to the airline industry by examining the complete Delone and McIene Information Systems Success Model. To better understand the importance of website quality dimensions on customer satisfaction, a review of literature and testing of framework would be discussed in the next chapter of this study.

## **CHAPTER 2: LITERATURE REVIEW**

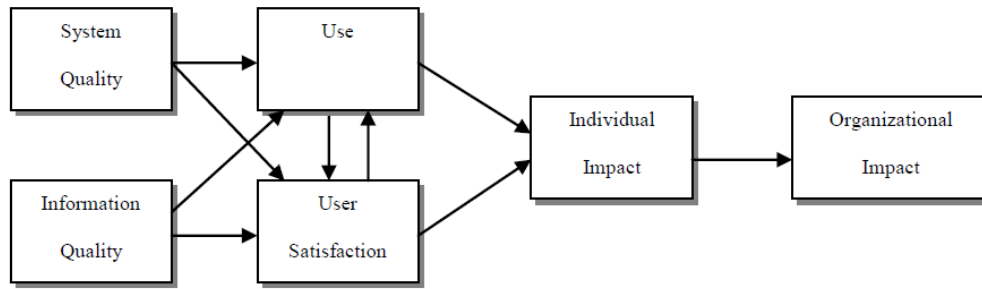
### **2.0 Introduction**

This literature review is divided into a few divisions. Firstly, theoretical foundation which discusses about the relevant theoretical model that serves as a foundation for this research's theoretical framework. Secondly, past literatures which summaries on the related past studies. Thirdly, proposed theoretical framework which explains the relationship between variables. Finally, hypotheses development in which statistically testable hypotheses are discussed.

### **2.1 Theoretical/ Conceptual Foundation**

DeLone and McLean Information System Success Model (DLML) is used as the foundation for this research. The authors of this model are William H. DeLone and Ephraim R. McLean. It was developed in 1992 and updated in 2002 to investigate the determinants and effects of a successful information system (DeLone & McLean, 2002). The model is shown in Figure 1 below.

Figure 2.1: DeLone and McLean Information Systems Success Model (1992)



Adopted from: DeLone, W.H., & McLean, E.R. (1992). Information systems success: The question for the dependent variable. *Information System Research*, 3(1), 60-95

DLML have been used by past studies to examine different e-commerce areas. For instance, it was used by Teo and Choo (2005) to study the effect of internet on competitive intelligence; Palmer (2006) to identify website usability, design and performance metrics; and Kuan, Bock, and Vathanophas (2008) to investigate the importance of website quality in determining customer purchasing behaviour.

DLML proposed two dimensions of website quality (System Quality, Information Quality) and how they affect the use of website, user satisfaction, individual, and organisation (DeLone & McLean, 1992).

### 2.1.1 System Quality

System quality measures how well the hardware and software of information processing works (DeLone & McLean, 2002). At present, the important measures for system quality are usability, flexibility of system, response time, reliability, and adaptability (DeLone & McLean, 2002). The table below shows the complete list of system quality measures as prescribed by DeLone and McLean (2002) as well as Petter, DeLone, and McLean (2008).

Table 2.1: System Quality Measures

|                    |                                  |
|--------------------|----------------------------------|
| Ease of use        | System feature of intuitiveness  |
| System flexibility | System feature of sophistication |
| System reliability | System feature of flexibility    |
| Ease of learning   | System feature of response times |
| Availability       | Adaptability                     |

Source: Developed for the research

### **2.1.2 Information Quality**

Information quality is the quality of the contents generated by the system. At present, the important measures for Information quality include accurate, timely, complete, relevant, easy to understand and in a preferred format (DeLone & McLean, 2002). Table 2.2 shows the complete list of information quality measures as prescribed by DeLone and McLean (2002) as well as Petter et al. (2008).

Table 2.2: Information Quality Measures

|                   |              |
|-------------------|--------------|
| Relevance         | Completeness |
| Understandability | Usability    |
| Accuracy          | Timeliness   |
| Conciseness       | Security     |

Source: Developed for the research

### **2.1.3 System Used**

System used is the quantity and manner of utilisation of the system. Actual use of the system is measured in terms of frequency, extent, and purpose of using (DeLone & McLean, 2002).

### **2.1.4 User Satisfaction**

User satisfaction is defined as user perspectives and experience with the system as well as services provided. User satisfaction is widely used to measure information system success due to its face validity and availability of multiple measurement tools (DeLone & McLean, 2002).

### **2.1.5 Individual and Organisational Impacts**

Individual impact is the effect of information system on user's experience whereas organizational impact measures how the system influences organization. The use of information system and user satisfaction affects individual and organization (DeLone & McLean, 1992).

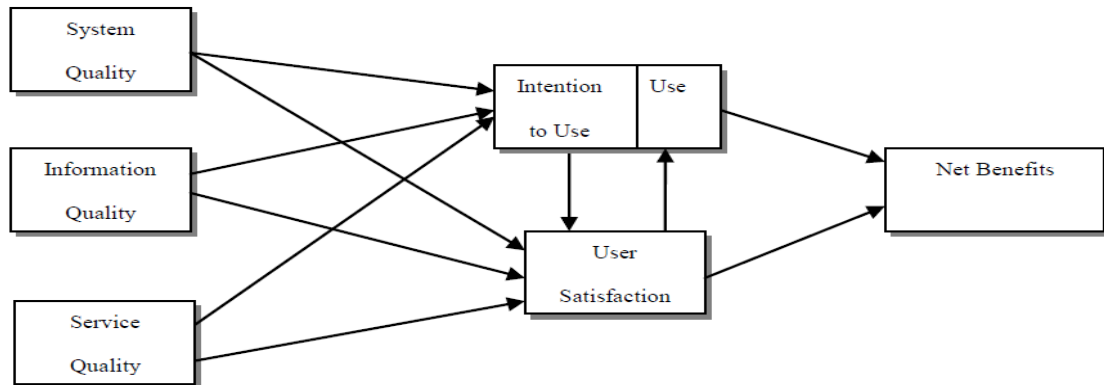
### **2.1.6 Improved DLML model**

In 2002, DLML is updated and two modifications are made. Firstly, service quality dimension is included. Secondly, individual and organization impacts are grouped into a single measure named net benefits, which measures system's overall impact on an organization's stakeholders.

### 2.1.7 Service Quality

Service quality is the support received by users from the website and its staff throughout the transaction. Measures of service quality are tangibility, reliability, responsiveness, assurance, and empathy (DeLone & McLean, 2002). Figure below shows the improved DLML.

Figure 2.2: Improved DeLone and Mclean Information Systems Success Model (2002)



Adopted from: DeLone, W.H., & McLean, E.R. (2002). The Delone and Mclean Model of Information Systems Success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9-30

DLML is employed in this research because it provides a general and comprehensive view on information system success. It classified the measures into six categories and thus creates a multidimensional measuring model. DLML is one of the most cited and commonly used models in information system literature (Chen & Cheng, 2007).

Taking DLML as theoretical foundation, this research proposes that website quality positively affects customer satisfaction. It is because when system

quality is good whereby the website functions and designs are user friendly, customer satisfaction will be improved. Moreover, a website with quality information and secured information processing (information quality) increases customer satisfaction. Customer satisfaction will also increase when good and trusted service is provided promptly.

## **2.2 Review of the Prior Empirical Studies**

### **2.2.1 Definition of Customer Satisfaction**

*Customer Satisfaction* is the collective outcome of perception, assessment and psychological reactions to the consumption experience with a product or service (Roh, Ahn, & Han, 2005). Customer satisfaction is a crucial outcome of buyer–seller interaction because it could lead to customer retention, loyalty and positive word of mouth (Lin, 2007).

### **2.2.2 System Quality and Customer Satisfaction**

#### **2.2.2.1 Definition of Variables in System Quality**

*System quality* is the assessment of how well the system, including hardware and software, processes information (Chen et al, 2011). It is the degree of user friendliness of a website (Lin, 2007). Generally, system quality is categorised into three variables which are website design, interactivity, and reliability (DeLone & McLean, 2002).

*Website design* is the website user interface presentation such as browsing layout, graphic style, colour scheme and navigation features

(Wang & Strong, 1997). A good website design is convenient to access and easy to use (Zhang, Prybutok, Ryan, & Pavur, 2009).

*Interactivity* is the ability of website to dynamically generate outputs based on customer queries and searches (Shankar, Smith, & Rangaswamy, 2003). A well-designed interactive website provides predictable screen changes in response to customer queries. Besides that, an interactive website allows two-way synchronous by providing contact methods and multiple choices for purchasing decisions to the customers (Ba & Johansson, 2008).

*Reliability* is defined as the dependability of website function to perform efficiently at the appropriate timing (Zeng et al., 2009). A reliable website has relatively short response time to process customer's transactions (Lin, 2007).

#### **2.2.2.2 Review of Past Studies on System Quality and Customer Satisfaction**

Previous study of Chen, Huang, and Chen (2011) which focuses on Taiwan online retailing industry has identified *system quality* as an important factor to customer satisfaction. Data was collected by surveying 7-11 online customers with internet-mediated questionnaires. System quality of website is found to be positively related to customer satisfaction. However, customers who make a repeat purchase are less concern about system quality because of their experience in using the system. In fact, they are more concern about the quality of item purchased as well as whether service and information provided are adequate.



Moreover, according to Alam and Yasin (2009), *website design* has momentous relationship with customer satisfaction. Questionnaires were distributed to Malaysian undergraduates who have online purchasing experience with any online retailer. Based on this study, website design is the most significant factors among reliability, time saved, product variety and delivery performance that influence customer satisfaction.

The importance of website *interactivity* in improving customer satisfaction is identified by Lin (2007). This research focuses on the online book trading industry while targeted respondents of survey were Taiwan students. Website which enhances website interactivity will be rewarded with higher customer satisfaction in the B2C e-commerce marketplace. Hence, interactivity of website should be improved by using appropriate feedback mechanism and providing purchase alternatives.

Nevertheless, Ba and Johansson (2008) found that *interactivity* does not necessarily give rise to greater customer satisfaction. This study focuses on the United States online retailing industry. Targeted respondents, university students, were surveyed with questionnaires. This study found that satisfaction is negatively affected when customers feels an increasing need to interact with online retailer. It is because customers most likely will interact with the online retailer when there is a process error. Henceforth, company should not prioritise 'interactivity of website' as providing real time interactivity is also too expensive.

*Reliability* is identified as one of the effectual predictors of customer satisfaction by Zeng et al. (2009). This study focuses on the online banking industry in China. Questionnaires were e-mailed to 4000

subjects who were randomly selected from an email list provided by an email broker. An online retailer is perceived as reliable if it performs service correctly the first time, keeps customers records accurately and delivers products or services to customers on time. Customers are satisfied if the online retailer is reliable. Moreover, this study found that satisfied customers are more likely to have repurchase intention.

## **2.2.3 Information Quality and Customer Satisfaction**

### **2.2.3.1 Definition of Variables of Information Quality**

*Information quality* is the value of output produced by a website as perceived by the customers (Lin, 2007). A high information quality website provides valuable contents which help to reduce likelihood of additional searching (Donthu & Garcia, 1999).

Information quality consists of informativeness and security (DeLone & Mclean, 2002). *Informativeness* is the ability to notify online customers regarding the product details and alternatives (Lin, 2007). An informative website provides accurate, precise, relevant, up-to-date, complete and reliable contents (Wixom & Todd, 2005).

*Security* is the level of customer's confidence on the safety and reliability of online transaction (Lin, 2007). According to Grandinetti (1996), security is the safeguards of information against disclosure to unofficial person or unofficial devastation.

### **2.2.3.2 Review of Past Studies on Information Quality and Customer Satisfaction**

Past study of Liang and Chen (2009) investigated the relationship between *information quality* and customer satisfaction. This research focuses on Taiwan financial services industry. Information quality is found as the most effective factor which enhances customer satisfaction compared to system quality and service quality dimensions. In order to broaden customer relationships, online retailer should provide sufficient and personalised information to help customers in choosing the service they want. In the financial industry, experienced customers usually will gather financial services information from various sources such as investment magazines, books, and word of mouth. However, it is still vital for the website to provide relevant, up-to-date, and complete information to satisfy customer's needs.

Moreover, *informativeness* has momentous relationship with customer satisfaction. This is supported by the study of Chen et al. (2011) in Taiwan. Customers rely on information to engage in the transaction. Hence, information provided by online retailer is critical to affect customer satisfaction. Information provided should be accurate, precise, timely, complete and relevant to the users. Additionally, this study found that customer satisfaction positively affects customer loyalty. They added that, only satisfied customers will turn into loyal customers. A satisfied customer will maintain their loyalty longer and is likely to make a repeat purchase in the future.

Furthermore, Martin and Carmerero (2007) in Spain found that *security* is one of the key factors of customer satisfaction to the users in cyber-centres. Security acts as the signals of the online retailer capacity and goodwill. A website that has mechanism that warranties

secure transmission of users' information will eventually build a strong reputation in the customer mind. However, study of Eid (2010) shows a contradict result. This study focuses on the airline, e-banking and e-auction online buyers in Saudi Arab. *Security* is found to be negatively related to customer satisfaction as Arabians are more risk-tolerant.

## **2.2.4 Service Quality and Customer Satisfaction**

### **2.2.4.1 Definition of Variables of Service Quality**

*Service Quality* refers to the collective outcome of customer perception and assessment on the quality of service provided by online retailers (Santos, 2003). A website with good service quality provides efficient and effective purchasing and product delivery functions (Zeithaml et al., 2002).

Service quality is measured in terms of trust, responsiveness and empathy (DeLone & Mclean, 2002). *Responsiveness* is the willingness of online retailers to provide immediate customer services to the customers (Parasuraman et al., 1988). Lin (2007) defined responsiveness as the degree of helpfulness of service provided by online retailers.

*Trust* is defined as the honesty and credibility of the online retailers (Wen, Prybutok, & Xu, 2011). According to Pavlou (2003), trust is known as the willingness of customers to become vulnerable to online retailers after having taken the retailers' characteristics into consideration.

*Empathy* refers to the provision of care and personalisation by online vendors to the customers. It includes the concern and individualized attention provided by the online vendors (Lin & Sun, 2011). Online vendors show empathy by providing targeted e-mail or personalising website features according to customer needs (Lin, 2007).

#### **2.2.4.2 Review of Past Studies on Service Quality and Customer Satisfaction**

Martin and Carmelelo (2007) examined the relationship between *service quality* and customer satisfaction. This study focuses on online shoppers in Spain. Results showed that service quality positively affects customer satisfaction. Online retailers who comply with promised quality and delivery terms are able to gain higher customer satisfaction.

The significance of *responsiveness* was proven by Lin (2007) in her research. Customers are satisfied if helpful service is provided. This is because customers are willing to tolerate with slower financial transactions provided the transaction is highly secured. Nonetheless, the study of Kassim and Abdullah (2010) showed a contradictory result. This study focuses on overall websites in the Qatar context. They found that responsiveness of online retailers does not improve customer satisfaction. This is because Qatarians are collectivist consumers who are less demanding compared to individualistic customers.

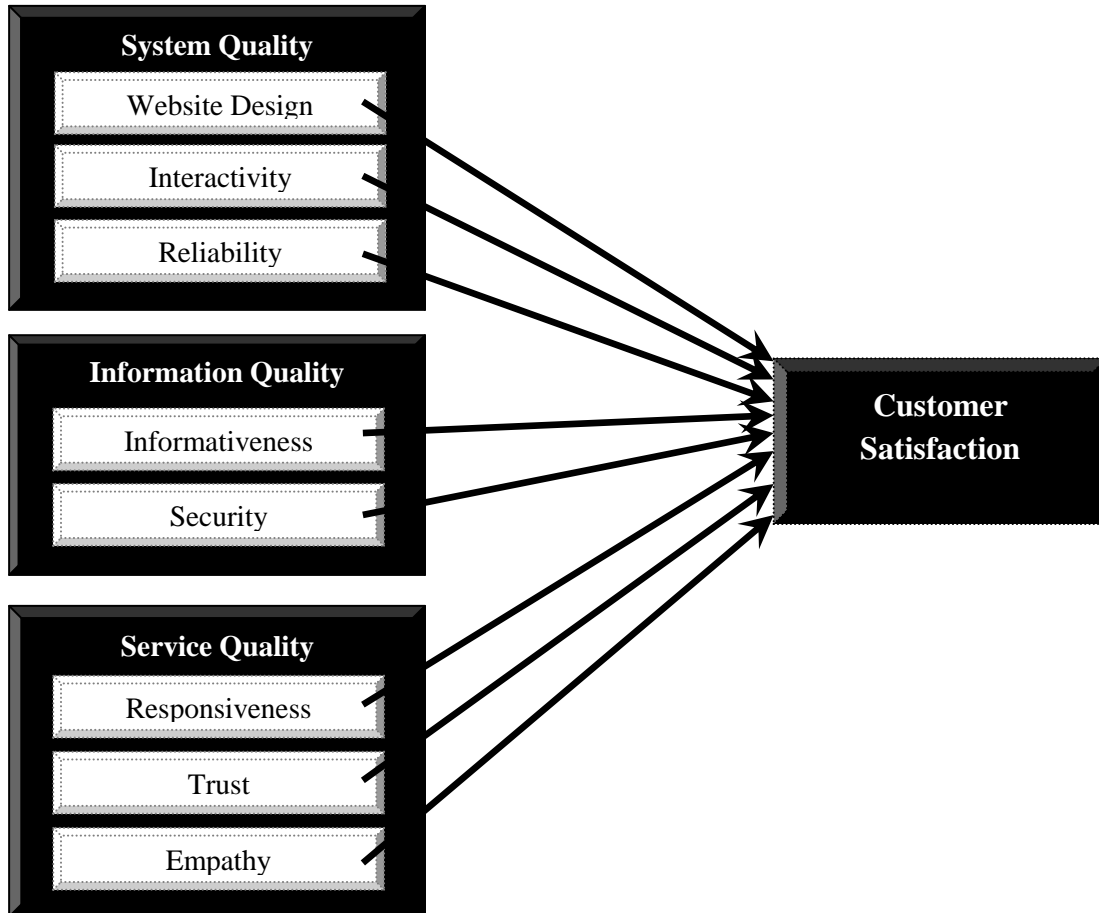
Moreover, *trust* was investigated in the study of Wen et al. (2011). This study focuses on the United States college students who have online purchasing experience with any online retailers. Respondents

were surveyed via questionnaires. Result showed that when customers believe a website to be trustworthy, their satisfaction towards the online retailer increases.

*Empathy* of website was also found vital in the study of Lin and Sun (2009) which studied on any types of websites. Questionnaires were distributed to Taiwan online buyers. The importance of empathy in improving customer satisfaction was identified. Online retailers have to be concerned about customers in order to survive in the competitive e-commerce context. This can be achieved by recommending customers products which suit their preferences or sending targeting e-mail to them.

## 2.3 Proposed Conceptual Framework/Research Model

Figure 2.3: Proposed Theoretical Model



Adapted from: DeLone, W.H., & McLean, E.R. (2002). The Delone and Mclean Model of Information Systems Success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9-30

## 2.4 Hypotheses Development

A website with user-friendly functions, designs and efficient responds can increase customer satisfaction. Thus, the following hypotheses are proposed.

Table 2.3: Hypotheses for System Quality Dimension

|   |
|---|
| System Quality  |
| <p><u>Website Design</u></p> <p>H<sub>0</sub>: There is no relationship between airline company's <i>website design</i> and customer satisfaction.</p> <p>H<sub>1</sub>: There is a relationship between airline company's <i>website design</i> and customer satisfaction.</p> <p><u>Interactivity</u></p> <p>H<sub>0</sub>: There is no relationship between airline company's website <i>interactivity</i> and customer satisfaction.</p> <p>H<sub>1</sub>: There is a relationship between airline company's website <i>interactivity</i> and customer satisfaction.</p> <p><u>Reliability</u></p> <p>H<sub>0</sub>: There is no relationship between airline company's website <i>reliability</i> and customer satisfaction.</p> <p>H<sub>1</sub>: There is a relationship between airline company's website <i>reliability</i> and customer satisfaction.</p> |

Source: Developed for the research



An e-commerce website with complete, precise, relevant information and secured information processing could increase customer level of satisfaction. Hence, the following hypotheses are proposed.

Table 2.4: Hypotheses for Information Quality Dimension

|   |
|---|
| Information Quality   |
| <u>Informativeness</u><br>H <sub>0</sub> : There is no relationship between airline company's website <i>informativeness</i> and customer satisfaction.<br>H <sub>1</sub> : There is a relationship between airline company's website <i>informativeness</i> and customer satisfaction. |
| <u>Security</u><br>H <sub>0</sub> : There is no relationship between airline company's website <i>security</i> and customer satisfaction.<br>H <sub>1</sub> : There is a relationship airline company's website <i>security</i> and customer satisfaction.                              |

Source: Developed for the research

Customer satisfaction enhanced when there is quality, trusted and personalised service. Therefore, the following hypotheses are proposed.

Table 2.5: Hypotheses for Service Quality Dimension

|   |
|---|
| Service Quality   |
| <u>Responsiveness</u><br>H <sub>0</sub> : There is no relationship between airline company's website <i>responsiveness</i> and customer satisfaction. |

H<sub>1</sub>: There is a relationship between airline company's website *responsiveness* and customer satisfaction.

Trust

H<sub>0</sub>: There is no relationship between airline company's website *trust* and customer satisfaction.

H<sub>1</sub>: There is a relationship between airline company's website *trust* and customer satisfaction.

Empathy

H<sub>0</sub>: There is no relationship between airline company's website *empathy* and customer satisfaction.

H<sub>1</sub>: There is a relationship between airline company's website *empathy* and customer satisfaction.

Source: Developed for the research

## 2.5 Conclusion

In conclusion, Delone model is employed in this research. From the findings of past studies, some of the variables of Delone model does not significantly related to customer satisfaction in certain countries. A total of eight independent variables and a dependent variable are incorporated in this research. Research methodology will be discussed in the next chapter.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter comprises of 6 subsections. Firstly, ‘Research Design’ which discusses on the research methods to be performed. Secondly, ‘Population, Sample and Sampling Procedures’ which defines the targeted population, sample as well as sampling technique employed in this research. Thirdly, ‘Data Collection Method’ which clarifies the number of questionnaires and method to collect data. Forthly, ‘Variables and Measurement’ which explains about the original sources, number of items and scaling technique for each variable. Fifthly, ‘Data Analysis’ which describes the computer programs used to analyse the data. Finally, ‘Pilot Test’ in which analysis on the findings of pilot test is discussed.

### **3.1 Research Design**

The purpose of research survey is to investigate the relationship between website quality dimensions of airline company e-commerce website and customer satisfaction. Survey is chosen to collect data because this research covers large numbers of respondents in different geographical areas (Sekaran, 2003). Besides that, research design can be altered during data collection stage of survey (Groves, 1989). Moreover, survey is cost efficient and quick (Zikmund, 2003).

This research survey is designed as a cross-sectional study. Cross-sectional study is performed to evaluate different individuals at a single point of time (Sekaran, 2003). 230 units of analysis made up of online airline ticket buyers are targeted for the survey. Data is collected by distributing self-administered questionnaires to

encourage respondents to participate in the research survey (Saunders, Lewis, & Thornhill, 2007).

### **3.2 Population, Sample and Sampling Procedures**

The population for this research survey is online buyers of airline tickets who are between 21 and 40 years old. It is due to the core age group of online airline tickets buyers is between 21 and 40 years old (International Data Corporation [IDC], 2010).

Sampling is performed in this research survey to select subset from a population to interpret the population (Brunt, 2001). Non-probability sampling is employed because the population number is large and each elements of the population is unknown (Froster, 2001). Among the non-probability sampling techniques, quota sampling against age is used. Quota sampling is reliable and could help to avoid bias, thereby this technique is used in this research (Sekaran, 2003). According to IDC (2010), online buyers between 21 and 25 years old consist of 14.5%; between 26 and 30 years old consist of 19.7%; between 31 and 35 years old consist of 18.7%; between 36 and 40 years old consist of 16.5%.

### **3.3 Data Collection Method**

20 sets of self-administered questionnaires are distributed to online buyers of airline tickets who are between 21 and 40 years old for pilot testing. According to Fink (2003), 30 sets of questionnaires are sufficient to conduct a pilot test. The objective of pilot test is to pretest the questionnaire to ensure that it is understandable and appropriate wordings or measurements are used (Zikmund, Babin, Carr, & Griffin, 2010).

200 sets of self-administered questionnaires are distributed to targeted respondents for the survey. According to Hair, Black, Babin, and Anderson (2010), 200 questionnaires are sufficient to conduct survey. Moreover, according to Hill and Roche (2007), to measure customer satisfaction, 200 sample size is adequate for reliability.

### 3.4 Variables and Measurement

The definition, number of items, sources and measurement for each variable is shown in the table below.

Table 3.1 Variables and Measurements

| <b>Independent variables</b> | <b>Definition</b>  | <b>Number of Items</b> | <b>Sources</b>                 | <b>Measurement</b>   |
|------------------------------|--|------------------------|--------------------------------|----------------------|
| Website Design               | Website user interface presentation such as browsing layout, graphic style, colour scheme and navigation features (Wang & Strong, 1997). | 3                      | Lin, 2007                      | 7-point Likert scale |
| Interactivity                | Ability of website to dynamically generate outputs based on customer queries and searches (Shankar, Smith & Rangaswamy, 2003).           | 2                      | Tsikriktsis, 2006<br>Lin, 2007 | 7-point Likert scale |
| Reliability                  | Dependability of website function to perform efficiently at the appropriate timing (Zeng, Hu, Chen, & Yang, 2009).                       | 2                      | Zeng, Hu, Chen, & Yang, 2009   | 7-point Likert scale |

|                           |  |                        |   |                      |
|---------------------------|--|------------------------|---|----------------------|
| Informativeness           | Ability to notify online customers regarding the product details and alternatives (Lin, 2007).   | 4                      | Lin, 2007   | 7-point Likert scale |
| Security                  | The level of customer's confidence on the safety and reliability of online transaction (Lin, 2007).  | 2                      | Mustafa, 2011<br>Zeng et al., 2009                        | 7-point Likert scale |
| Responsiveness            | Willingness of online retailers to provide immediate customer services to the customers (Parasuraman et al., 1988).                                  | 2                      | Tsikriktsis, 2006<br>Lin, 2007<br>Kassim & Abdullah, 2010 | 7-point Likert scale |
| Trust                     | Honesty and credibility of the online retailers (Ahmed & Khalil, 2011).  | 2                      | Lin, 2007<br>Tsikriktsis, 2006                            | 7-point Likert scale |
| Empathy                   | The provision of care and personalization by online retailers to the customers (Ahmed & Khalil, 2011).   | 3                      | Lin, 2007   | 7-point Likert scale |
| <b>Dependent variable</b> | <b>Definition</b>  | <b>Number of Items</b> | <b>Sources</b>  | <b>Measurement</b>   |
| Customer Satisfaction     | The collective outcome of perception, assessment and psychological reactions to the consumption experience with a product or service (Ha & Im, 2012) | 3                      | Lin, 2007<br>Zeng et al., 2009<br>Mustafa, 2011           | 7-point Likert scale |

Source: Developed for the research

### **3.5 Data Analysis Techniques**

Descriptive and inferential analyses are performed in this research. Descriptive analysis is undertaken to describe the characteristics of sample (Sekaran, 2003). On the other hand, inferential analysis is used to generalise the population characteristics based on sample data (Zikmund et al., 2010).

A few tests are undertaken for inferential analysis. Firstly, normality test is performed to ensure data fulfils the normality assumption (Lesaffre, 1983). Secondly, reliability test is conducted to ensure the reliability and consistency of response (Sekaran, 2003). Thirdly, Pearson analysis is undertaken to measure the correlation between independent variables. It is to ascertain that there is no multicollinearity problem (Lena & Margara, 2010).

Finally, multiple linear regression test is performed. This test is conducted because both independent variables and dependent variable used in this research are interval data, which is a type of parametric data (Gardner, 2007). The following equation is used for this test.

Table 3.2 Equation for Multiple Linear Regression

|  |
|--|
| $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + e$ |
| Y = Customer Satisfaction (dependent Variable)   |
| $\beta$ = The slope of the regression surface (The $\beta$ represents the regression coefficient associated with each $X_i$ )    |
| $X_1$ = Website design (independent variable)  |
| $X_2$ = Interactivity (independent variable)   |
| $X_3$ = Reliability (independent variable)   |
| $X_4$ = Informativeness (independent variable)   |
| $X_5$ = Security (independent variable)  |
| $X_6$ = Responsiveness (independent variable)  |
| $X_7$ = Trust (independent variable)   |
| $X_8$ = Empathy (independent variable)   |
| e = An error term, normally distributed about a mean of 0 (For purpose of computation, the e is assumed to be 0)                 |

Source: Developed for the research

### **3.6 Assumptions Testing for Pilot Test**

Normality test, reliability test and Pearson analysis (test for multicollinearity problem) are performed to ensure data collected from pilot test fulfils normality and reliability assumptions as well as free from multicollinearity problem.



### 3.6.1 Normality Test

In order to conduct parametric test (multiple regression test), data must be proven to have fulfilled normality assumption (DeVaus, 2002). Shapiro-Wilk is chosen over Kolmogorov-Smirnov test because the sample size of this research survey is less than 50 (Drezner & Turel, 2011).

Table 3.3: Table for Normality Test

|                       | Kolmogorov-Smirnov |    |      | Shapiro-Wilk |    |      |
|-----------------------|--------------------|----|------|--------------|----|------|
|                       | Statistic          | df | Sig. | Statistic    | df | Sig. |
| Standardized Residual | .116               | 20 | .200 | .951         | 20 | .375 |

Source: Developed for the research

Table above shows the significance of data under normality test. According to DeVaus (2002), normality is demonstrated when the p-value in Shapiro-Wilk test is more than 0.05. The p-value of pilot test data is 0.375. This indicates that the standardized residual, customer satisfaction, is normally distributed.

### 3.6.2 Reliability Test

Cronbach's Alpha is used to measure the consistency and reliability of independent variables and dependent variable. According to Sekaran (2003), Cronbach's Alpha of at least 0.7 is acceptable as it indicates a satisfactory consistent and reliable level. The closer the Cronbach's alpha value to 1, the greater the internal consistency of the individual variable. The values of

Cronbach's Alpha associated with the interpretations of the value are shown in the table below.

Table 3.4: Table for Cronbach's Rule of Thumb

| <b>Cronbach's Alpha</b> | <b>Strength of Association</b> |
|-------------------------|--------------------------------|
| 0.80- 0.95              | Very Good Reliability          |
| 0.70 - 0.80             | Good Reliability               |
| 0.60 - 0.70             | Fair Reliability               |
| Less than 0.60          | Poor Reliability               |

Source: Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill buildings approach* (5th ed.). Chichester West Sussex: John Wiley & Sons Inc.

Table 3.5: Table for Reliability Test

|                            | <b>Cronbach's Alpha</b> | <b>N of Items</b> |
|----------------------------|-------------------------|-------------------|
| Webpage Design (WD)        | .850                    | 3                 |
| Interactivity (IT)         | .701                    | 3                 |
| Reliability (RL)           | .789                    | 3                 |
| Informativeness (IF)       | .917                    | 4                 |
| Security (SE)              | .863                    | 3                 |
| Responsiveness (RP)        | .720                    | 3                 |
| Trust (TR)                 | .745                    | 3                 |
| Empathy (EP)               | .707                    | 2                 |
| Customer Satisfaction (CS) | .803                    | 3                 |

Source: Developed for the research

Table 3.5 shows the results of reliability test. Informativeness obtained the highest value of Cronbach's Alpha (0.917), followed by security (0.863), webpage design (0.850), customer satisfaction (0.803), reliability (0.789), trust (0.745), responsiveness (0.720), empathy (0.707) and cinteractivity (0.701). Henceforth, all variables have consistent and stable measurements as their Cronbach's Alpha values are between 0.70 and 0.90.

### **3.6.3 Pearson Analysis (Test for Multicollinearity Problem)**

Pearson analysis is conducted to ensure the absence of multicollinearity problem between variables. Multicollinearity problem exists if the correlation between variables is greater than 0.9 (Hair et al., 2010). Table below shows the correlation between each independent variables.

Table 3.6: Table for Pearson’s Correlation Analysis

|                            | WE     | IT     | RL    | IF     | SE     | RP     | TR    | EP   | CS |
|----------------------------|--------|--------|-------|--------|--------|--------|-------|------|----|
| Webpage Design (WE)        | 1      |        |       |        |        |        |       |      |    |
| Interactivity (IT)         | .203   | 1      |       |        |        |        |       |      |    |
| Reliability (RL)           | .663** | .081   | 1     |        |        |        |       |      |    |
| Informativeness (IF)       | .304   | .643** | .262  | 1      |        |        |       |      |    |
| Security (SE)              | .614** | .187   | .550* | .300   | 1      |        |       |      |    |
| Responsiveness (RP)        | .368   | .415   | .332  | .456*  | .373   | 1      |       |      |    |
| Trust (TR)                 | .487*  | .568** | .351  | .627** | .614** | .571** | 1     |      |    |
| Empathy (EP)               | .449*  | .436   | .435  | .642** | .371   | .546*  | .402  | 1    |    |
| Customer Satisfaction (CS) | .311   | .486*  | .509* | .616** | .315   | .524*  | .460* | .382 | 1  |

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

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

Source: Developed for the research

Based on the results, the correlation between each independent variable is less than 0.9. This indicates that independent variables do not overlap with one another. Thus, none of the independent variables should be eliminated.

## **3.7 Conclusion**

This chapter highlighted the research methodology employed in this study. Besides that, findings of pilot test are analysed. In the next chapter, research findings from the survey will be discussed.

## CHAPTER 4: DATA ANALYSIS

### 4.0 Introduction

This chapter analyses on the research findings. ‘Descriptive Analysis’ discusses about the demographic characteristics of survey respondents and the central tendencies measurement of each variable. ‘Assumptions Testing’ describes about the preliminary tests performed. ‘Inferential Analysis’ provides general conclusions regarding the population characteristics.

### 4.1 Descriptive Analysis

#### 4.1.1 Demographic Profile of Target Respondents

The demographic profile of targeted respondents is analysed in terms of gender, age, race, marital status, income or allowance, and education level.

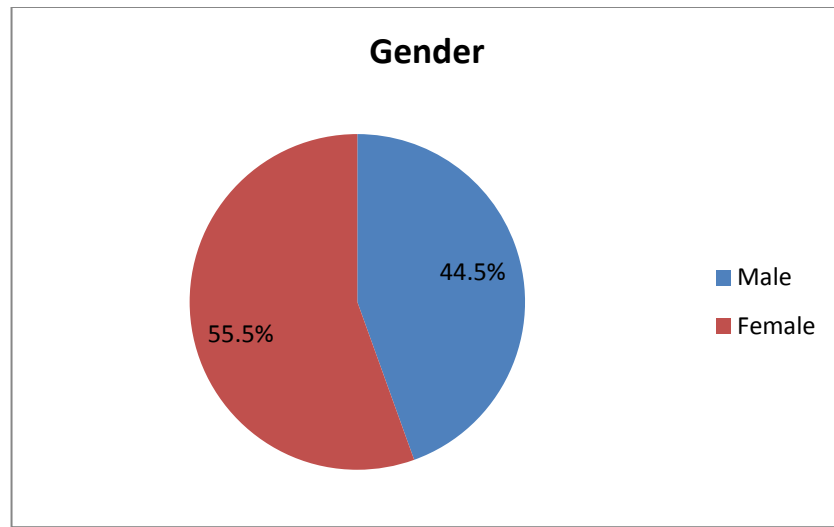
##### 4.1.1.1 Gender

Table 4.1 The Gender of Respondents

|       |        | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|-------|--------|------------------|----------------|----------------------|---------------------------|
| Valid | Male   | 89               | 44.5           | 44.5                 | 44.5                      |
|       | Female | 111              | 55.5           | 55.5                 | 100.0                     |
|       | Total  | 200              | 100.0          | 100.0                |                           |

Source: Developed for the research

Chart 4.1 The Gender of Respondents



Source: Developed for the research

Table 4.1 shows the frequency and percentage of different gender among survey respondents. Based on the results, 44.5% of the respondents are male whereas 55.5% are female. Put differently, out of 200 target respondents, 89 are male whereas 111 are female.

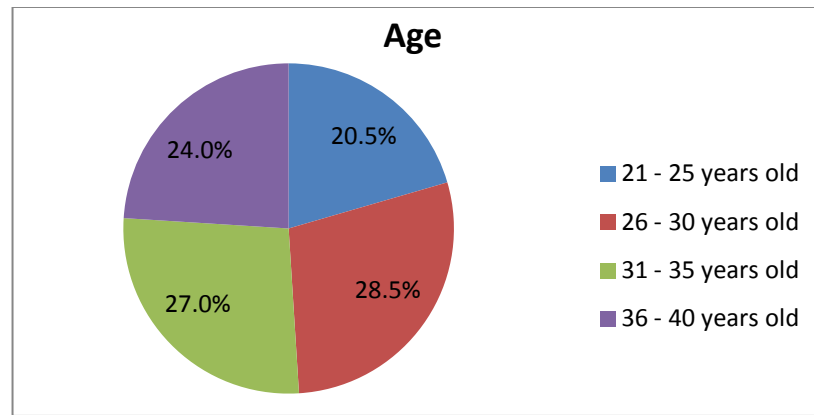
#### 4.1.1.2 Age

Table 4.2 The Age Group of Respondents

|       |                   | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|-------|-------------------|------------------|----------------|----------------------|---------------------------|
| Valid | 21 - 25 years old | 41               | 20.5           | 20.5                 | 20.5                      |
|       | 26 - 30 years old | 57               | 28.5           | 28.5                 | 49.0                      |
|       | 31 - 35 years old | 54               | 27.0           | 27.0                 | 76.0                      |
|       | 36 - 40 years old | 48               | 24.0           | 24.0                 | 100.0                     |
|       | Total             | 200              | 100.0          | 100.0                |                           |

Source: Developed for the research

**Chart 4.2 The Age Group of Respondents**



Source: Developed for the research

Table 4.2 shows the frequency and percentage of different age group among survey respondents. Quota sampling against age is used in this research survey. Majority of respondents fall under the age group of 26-30 years old (28.5% or 57 respondents). The next dominant age group is 31-35 years old (27% or 54 respondents), followed by 36-40 years old (24% or 48 respondents), and 21-25 years old (41 respondents or 20.5%).

**4.1.1.3 Race**

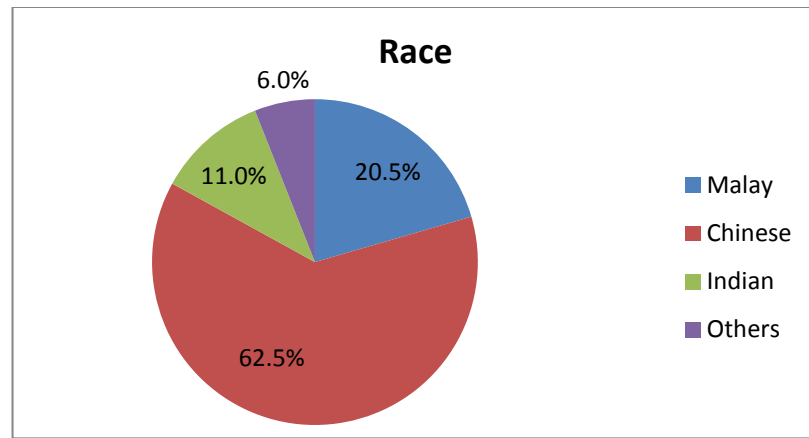
**Table 4.3 The Ethnicity of Respondents**

|       |         | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|-------|---------|------------------|----------------|----------------------|---------------------------|
| Valid | Malay   | 41               | 20.5           | 20.5                 | 20.5                      |
|       | Chinese | 125              | 62.5           | 62.5                 | 83.0                      |
|       | Indian  | 22               | 11.0           | 11.0                 | 94.0                      |
|       | Others  | 12               | 6.0            | 6.0                  | 100.0                     |
|       | Total   | 200              | 100.0          | 100.0                |                           |

Source: Developed for the research



Chart 4.3 The Ethnicity of Respondents



Source: Developed for the research

Table 4.3 shows the frequency and percentage of different ethnicity among survey respondents. From the results, it can be concluded that Chinese is the largest ethnic group among the respondents, which consists of 62.5% (125 respondents). The second largest ethnic group is Malay which consists of 20.5% (41 respondents), followed by Indian which consists of 11% (22 respondents), and other ethnic groups which consists of 6% (12 respondents). Other ethnic groups comprise of Bidayuh, Iban and Dusun.

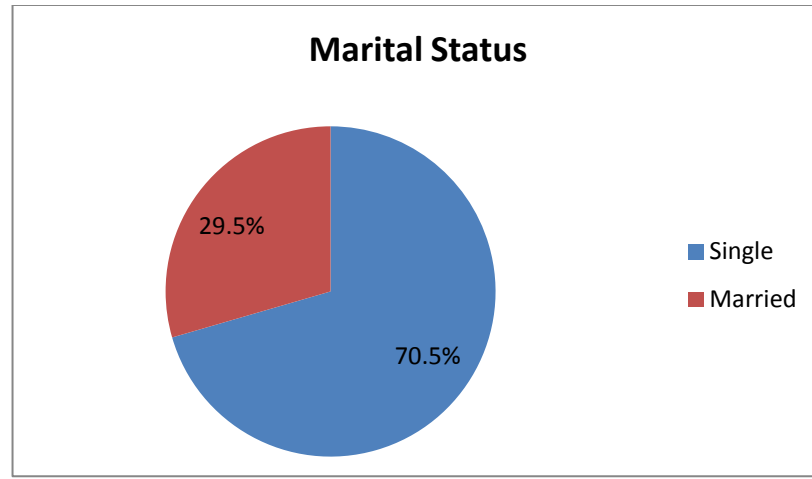
#### 4.1.1.4 Marital Status

Table 4.4 The Marital Status of Respondents

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid Single | 141       | 70.5    | 70.5          | 70.5               |
| Married      | 59        | 29.5    | 29.5          | 100.0              |
| Total        | 200       | 100.0   | 100.0         |                    |

Source: Developed for the research

**Chart 4.4 The Marital Status of Respondents**



Source: Developed for the research

Table 4.4 shows the frequency and percentage of marital status among survey respondents. Based on the results, majority of survey respondents are single, which consists of 70.5% (141 respondents). There are 59 respondents who are married (29.5%).

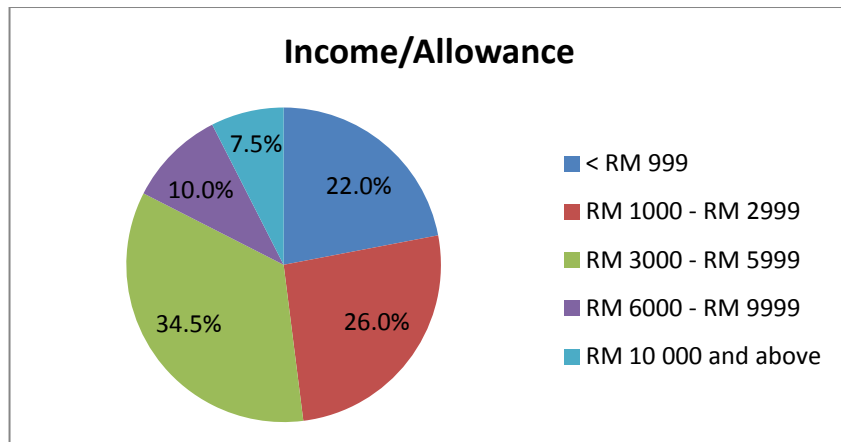
#### 4.1.1.5 Income Allowance

**Table 4.5 The Income or Allowance Respondents**

|                     | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------|-----------|---------|---------------|--------------------|
| Valid < RM 999      | 44        | 22.0    | 22.0          | 22.0               |
| RM 1000 - RM 2999   | 52        | 26.0    | 26.0          | 48.0               |
| RM 3000 - RM 5999   | 69        | 34.5    | 34.5          | 82.5               |
| RM 6000 - RM 9999   | 20        | 10.0    | 10.0          | 92.5               |
| RM 10 000 and above | 15        | 7.5     | 7.5           | 100.0              |
| Total               | 200       | 100.0   | 100.0         |                    |

Source: Developed for the research

Chart 4.5 The Income or Allowance Respondents



Source: Developed for the research

Table 4.5 shows the frequency and percentage of different income or allowance level among survey respondents. Based on the results, majority of respondents (69 respondents or 34.5%) have the income level of RM3000 to RM5999. The second dominant income level is between RM1000 and RM2999 (52 respondents or 26%), followed by the income level of less than RM999 (44 respondents or 22%), income level of RM6000 to RM9999 (20 respondents or 10%), and income level of more than RM10000 (15 respondents or 7.5%).

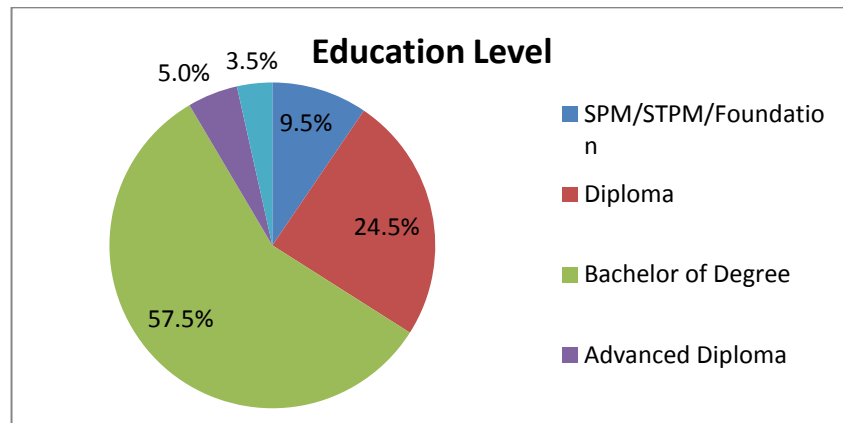
**4.1.1.6 Education Level**

Table 4.6 Education Level of the Respondents

|       |                     | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|---------------------|-----------|---------|---------------|--------------------|
| Valid | SPM/STPM/Foundation | 19        | 9.5     | 9.5           | 9.5                |
|       | Diploma             | 49        | 24.5    | 24.5          | 34.0               |
|       | Bachelor of Degree  | 115       | 57.5    | 57.5          | 91.5               |
|       | Advanced Diploma    | 10        | 5.0     | 5.0           | 96.5               |
|       | Master              | 7         | 3.5     | 3.5           | 100.0              |
|       | Total               | 200       | 100.0   | 100.0         |                    |

Source: Developed for the research

Chart 4.6 Education Level of the Respondents



Source: Developed for the research

Table 4.6 shows the frequency and percentage of education level among survey respondents. Based on the results, majority of respondents are degree holder (115 respondents or 57.5%); followed by diploma holder (49 respondents or 24.5%); SPM, STPM or foundation level (19 respondents or 9.5%); advanced diploma (10 respondents or 5%); and master (7 respondents or 3.5%).

### **4.1.2 Central Tendencies Measurement of Constructs**

Central tendencies and dispersion measurements of variable in terms of mean and standard deviation are calculated using SPSS. The calculation of mean is purposed to measure the average value of all the data. On the other hand, the calculation of standard deviation is to measure the extent of data values spreading around the central tendency (Saunders et al., 2007).

Means scores of a total of 27 items (questions) are generated using SPSS. All of the items are measured using 7-point Likert-scale which comprises of “strongly disagree”, “disagree”, “slightly disagree”, “neutral”, “slightly agree”, “agree”, “strongly agree”.

**4.1.2.1 Website Design**

Table 4.7 Central Tendencies Measurement for Website Design

| <b>Item</b>   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|---|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| WD1<br>The airline company's website is visually appealing.                             | 0.0%                     | 0.5%            | 4.5%                     | 24.0%          | 27.5%                 | 39.0%        | 4.5%                  | 5.1350      | 1.01088                   |
| WD2<br>User interface of the airline company's website has a well-organized appearance. | 0.0%                     | 0.5%            | 4.0%                     | 19.5%          | 33.5%                 | 38.0%        | 4.5%                  | 5.1800      | 0.96554                   |
| WD3<br>The airline company's website is easy to use.                                    | 0.0%                     | 1.5%            | 3.0%                     | 16.5%          | 38.0%                 | 33.5%        | 7.5%                  | 5.2150      | 1.00690                   |

Source: Developed for the research

Table 4.7 shows the percentage, mean, and standard deviation of the responses towards each item of the first independent variable, website design. Most respondents agreed to the third item ( $38.0\%+33.5\%+7.5\%=79\%$ ). Least respondents agreed to the first item ( $27.5\%+39.0\%+4.5\%=71\%$ ).

Among the three items, third item has the highest mean (5.2150) whereas first item has the lowest mean (5.1350). The item with the highest standard deviation is first item (1.01088) whereas the item with the lowest standard deviation is second item (0.96554). Lowest standard deviation indicates that the item has the lowest dispersion compared to another two items (Saunders et al., 2007). Mean for all the three items are more than 4 whereas standard deviation is approximately 1.

**4.1.2.2 Interactivity**

Table 4.8 Central Tendencies Measurement for Interactivity

| <b>Item</b>   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|---|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| IT1<br>The airline company's website gives me a variety of choices for purchasing decisions.                  | 0.0%                     | 1.0%            | 1.5%                     | 14.5%          | 37.5%                 | 37.5%        | 8.0%                  | 5.3300      | 0.94102                   |
| IT2<br>The user interface of airline company's website has natural and predictable screen changes.            | 0.0%                     | 0.5%            | 11.5%                    | 25.0%          | 32.5%                 | 29.0%        | 1.5%                  | 4.8250      | 1.03912                   |
| IT3<br>I able to interact with the airline company in order to get information tailored to my specific needs. | 0.0%                     | 1.5%            | 3.0%                     | 34.0%          | 34.0%                 | 23.0%        | 4.5%                  | 4.8750      | 0.99717                   |

Source: Developed for the research



Table 4.8 shows the percentage, mean, and standard deviation of the responses towards each item of the second independent variable, interactivity. Most respondents agreed to the first item ( $37.5\%+37.5\%+8.0\%=83.0\%$ ). Least respondents agreed to the third item ( $34.0\%+23.0\%+4.5\%=61.5\%$ ).

Among the three items, first item has the highest mean (5.3300) whereas second item has the lowest mean (4.8250). The item with the highest standard deviation is second item (1.03912) whereas the item with the lowest standard deviation is first item (0.94102). Hence, first item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation is approximately 1.

**4.1.2.3 Reliability**

Table 4.9 Central Tendencies Measurement for Reliability

| <b>Item</b>  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|--|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| RL1 The airline company performs the service correctly the first time. | 0.0%                     | 1.0%            | 4.5%                     | 19.5%          | 31.5%                 | 34.5%        | 9.0%                  | 5.2100      | 1.06375                   |
| RL2 My online transactions are always accurate.                        | 0.0%                     | 1.0%            | 5.5%                     | 11.5%          | 28.5%                 | 39.0%        | 14.5%                 | 5.4250      | 1.10475                   |
| RL3 The airline company keeps my records accurately.                   | 0.0%                     | 3.0%            | 0.5%                     | 16.5%          | 25.0%                 | 39.5%        | 15.5%                 | 5.4400      | 1.13261                   |

Source: Developed for the research

Table 4.9 shows the percentage, mean, and standard deviation of the responses towards each item of the third independent variable, reliability. Most respondents agreed to the second item ( $28.5\%+39.0\%+14.5\%=82.0\%$ ). Least respondents agreed to the first item ( $31.5\%+34.5\%+9.0\%=75.0\%$ ).

Among the three items, third item has the highest mean (5.4400) whereas first item has the lowest mean (5.2100). The item with the highest standard deviation is third item (1.13261) whereas the item with the lowest standard deviation is first item (1.06375). Hence, first item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation for all the three items are slightly above 1.

4.1.2.4 Informativeness

Table 4.10 Central Tendencies Measurement for Informativeness

| Item   | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree | Mean   | Standard Deviation |
|--|-------------------|----------|-------------------|---------|----------------|-------|----------------|--------|--------------------|
| IF1 The airline company's website provides up-to-date information. | 0.0%              | 0.5%     | 2.0%              | 9.5%    | 24.5%          | 43.5% | 20.0%          | 5.6850 | 0.995335           |
| IF2 The airline company's website provides accurate information.   | 0.0%              | 0.0%     | 3.0%              | 13.0%   | 25.5%          | 43.5% | 15.0%          | 5.5450 | 0.99646            |
| IF3 The airline company's website provides useful information.     | 0.0%              | 0.0%     | 0.0%              | 22.0%   | 25.5%          | 39.5% | 13.0%          | 5.4350 | 0.97495            |
| IF4 The airline company's website provides complete information.   | 0.0%              | 0.0%     | 3.0%              | 20.5%   | 29.0%          | 39.0% | 8.5%           | 5.2950 | 0.98633            |

Source: Developed for the research

Table 4.10 shows the percentage, mean, and standard deviation of the responses towards each item of the fourth independent variable, informativeness. Most respondents agreed to the first item ( $24.5\%+43.5\%+20.0\%=88.0\%$ ). Least respondents agreed to the fourth item ( $29.0\%+39.0\%+8.5\%=76.5\%$ ).

Among the four items, first item has the highest mean (5.6850) whereas fourth item has the lowest mean (5.2950). The item with the highest standard deviation is second item (0.99646) whereas the item with the lowest standard deviation is third item (0.97495). Hence, third item has the lowest dispersion compared to another two items. Mean for all the four items are more than 4 whereas standard deviation is approximately 1.

**4.1.2.5 Security**

Table 4.11 Central Tendencies Measurement for Security

| <b>Item</b>  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|--|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| SE1 The airline company's website has mechanism to ensure the safe transmission of my information. | 0.0%                     | 3.0%            | 3.5%                     | 16.5%          | 28.5%                 | 36.0%        | 12.5%                 | 5.2850      | 1.16644                   |
| SE2 The electronic payment on the airline company's website is safe.                               | 0.0%                     | 2.5%            | 3.5%                     | 16.5%          | 34.0%                 | 29.5%        | 14.0%                 | 5.2650      | 1.14951                   |
| SE3 I feel safe in the online transactions.  | 1.0%                     | 4.0%            | 4.5%                     | 19.0%          | 32.5%                 | 25.0%        | 14.0%                 | 5.0900      | 1.30399                   |

Source: Developed for the research

Table 4.11 shows the percentage, mean, and standard deviation of the responses towards each item of the fifth independent variable, security. Most respondents agreed to the second item ( $34.0\%+29.5\%+14.0\%=77.5\%$ ). Least respondents agreed to the third item ( $32.5\%+25.0\%+14.0\%=71.5\%$ ).

Among the three items, first item has the highest mean (5.2850) whereas third item has the lowest mean (5.0900). The item with the highest standard deviation is third item (1.30399) whereas the item with the lowest standard deviation is second item (1.14951). Hence, second item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation for all the three items are slightly above 1.

**4.1.2.6 Responsiveness**

Table 4.12 Central Tendencies Measurement for Responsiveness

| <b>Item</b>  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|--|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| RP1 The airline company's website did not take long time to load.      | 3.0%                     | 16.5%           | 20.5%                    | 16.5%          | 22.5%                 | 14.5%        | 6.5%                  | 4.0850      | 1.59073                   |
| RP2 The airline company is prompt in replying to my queries.           | 1.0%                     | 16.0%           | 17.0%                    | 31.0%          | 17.5%                 | 13.0%        | 4.5%                  | 4.0500      | 1.41688                   |
| RP3 I believe the airline company is always willing to help customers. | 0.0%                     | 4.5%            | 8.0%                     | 37.0%          | 24.5%                 | 19.5%        | 6.5%                  | 4.6600      | 1.20067                   |

Source: Developed for the research



Table 4.12 shows the percentage, mean, and standard deviation of the responses towards each item of the sixth independent variable, responsiveness. Most respondents agreed to the third item ( $24.5\%+19.5\%+6.5\%=50.5\%$ ). Least respondents agreed to the second item ( $17.5\%+13.0\%+4.5\%=35.0\%$ ).

Among the three items, third item has the highest mean (4.6600) whereas second item has the lowest mean (4.0500). The item with the highest standard deviation is first item (1.59073) whereas the item with the lowest standard deviation is third item (1.20067). Hence, third item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation for all three items are more than 1.

4.1.2.7 Trust

Table 4.13 Central Tendencies Measurement for Trust

| Item  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree | Mean   | Standard Deviation |
|---|-------------------|----------|-------------------|---------|----------------|-------|----------------|--------|--------------------|
| TR1 I believe the airline company is trustworthy.           | 0.0%              | 1.0%     | 6.0%              | 25.5%   | 30.5%          | 31.0% | 6.0%           | 5.0250 | 1.06774            |
| TR2 The airline company instils confidence in customers.    | 0.0%              | 1.0%     | 1.5%              | 31.0%   | 33.0%          | 28.0% | 5.5%           | 5.0200 | 0.98205            |
| TR3 The airline company keeps my personal information safe. | 0.0%              | 0.0%     | 1.5%              | 33.5%   | 31.5%          | 23.5% | 10.0%          | 5.0700 | 1.01501            |

Source: Developed for the research

Table 4.13 shows the percentage, mean, and standard deviation of the responses towards each item of the seventh independent variable, trust. Most respondents agreed to the first item ( $30.5\%+31.0\%+6.0\%=67.5\%$ ), which has the highest mean of 5.0700. Least respondents agreed to the third item ( $31.5\%+23.5\%+10.0\%=65.0\%$ ), which has the lowest mean of 5.0200.

Among the three items, third item has the highest mean (5.0700) whereas second item has the lowest mean (5.0200). The item with the highest standard deviation is first item (1.06774) whereas the item with the lowest standard deviation is second item (0.98205). Hence, second item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation is approximately 1.

4.1.2.8 Empathy

Table 4.14 Central Tendencies Measurement for Empathy

| Item  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree | Mean   | Standard Deviation |
|---|-------------------|----------|-------------------|---------|----------------|-------|----------------|--------|--------------------|
| EP1 The airline company provides me targeting e-mail.       | 1.5%              | 1.0%     | 4.0%              | 21.0%   | 26.5%          | 33.0% | 13.0%          | 5.2100 | 1.23023            |
| EP2 The airline company provides me free personal homepage. | 2.5%              | 4.5%     | 7.5%              | 34.5%   | 22.5%          | 26.0% | 2.5%           | 4.5800 | 1.28133            |

Source: Developed for the research

Table 4.14 shows the percentage, mean, and standard deviation of the responses towards each item of the eighth independent variable, empathy. Most respondents agreed to the first item ( $26.5\%+33.0\%+13.0\%=72.5\%$ ). Least respondents agreed to the second item ( $22.5\%+26.0\%+2.5\%=51.0\%$ ).

Among the two items, first item has the highest mean (5.2100) whereas second item has the lowest mean (4.5800). The item with the highest standard deviation is second item (1.28133) whereas the item with the lowest standard deviation is first item (1.23023). Hence, first item has the lowest dispersion compared to another two items. Mean for all the two items are more than 4 whereas standard deviation for the two items are above 1.

**4.1.2.9 Customer Satisfaction**

Table 4.15 Central Tendencies Measurement for Customer Satisfaction

| <b>Item</b>   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Slightly Disagree</b> | <b>Neutral</b> | <b>Slightly Agree</b> | <b>Agree</b> | <b>Strongly Agree</b> | <b>Mean</b> | <b>Standard Deviation</b> |
|---|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|-------------|---------------------------|
| CS1<br>The airline company's information contents meet my needs.                      | 0.0%                     | 1.0%            | 3.5%                     | 25.0%          | 26.5%                 | 38.0%        | 6.0%                  | 5.1500      | 1.04063                   |
| CS2<br>The performance of airline company meets my expectation.                       | 0.5%                     | 0.5%            | 11.5%                    | 18.5%          | 27.0%                 | 35.0%        | 7.0%                  | 5.0400      | 1.18551                   |
| CS3<br>Overall, I am very satisfied with the services offered by the airline company. | 0.0%                     | 4.0%            | 3.0%                     | 19.0%          | 26.5%                 | 40.0%        | 7.5%                  | 5.1800      | 1.15945                   |

Source: Developed for the research

Table 4.15 shows the percentage, mean, and standard deviation of the responses towards each item of the dependent variable, customer satisfaction. Most respondents agreed to the third item ( $26.5\%+40.0\%+7.5\%=74.0\%$ ). Least respondents agreed to the second item ( $27.0\%+35\%+7.0\%=69.0\%$ ).

Among the three items, third item has the highest mean (5.1800) whereas second item has the lowest mean (5.0400). The item with the highest standard deviation is second item (1.18551) whereas the item with the lowest standard deviation is first item (1.04063). Hence, first item has the lowest dispersion compared to another two items. Mean for all the three items are more than 4 whereas standard deviation for the three items are above 1.

## **4.2 Assumptions Testing**

Similar to pilot testing, normality test, reliability test and Pearson analysis (test for multicollinearity problem) are performed to ensure data collected from 200 respondents fulfils normality and reliability assumptions as well as free from multicollinearity problem.

### **4.2.1 Normality Test**

Kolmogorov-Smirnov test is conducted to check the normality of data. Kolmogorov-Smirnov test is chosen over Shapiro-Wilk test because the sample size of this research survey is greater than 50 (Drezner & Turel, 2011).

Table 4.16: Table for Normality Test

|                       | Kolmogorov-Smirnov |     |      | Shapiro-Wilk |     |      |
|-----------------------|--------------------|-----|------|--------------|-----|------|
|                       | Statistic          | df  | Sig. | Statistic    | df  | Sig. |
| Standardized Residual | .053               | 200 | .200 | .989         | 200 | .117 |

Source: Developed for the research

Table 4.16 shows the significance of data under normality test. Normality is demonstrated when p-value is more than 0.05 (DeVaus, 2002). In this study, the p-value is 0.200. This indicates that the standardized residual, customer satisfaction, is normally distributed.

#### **4.2.2 Reliability Test**

Cronbach's Alpha is used to measure the consistency and reliability of each variable. Cronbach's Alpha value of at least 0.7 indicates a consistent and reliable level (Sekaran, 2003). The internal consistency of a variable is highest when the Cronbach's alpha value is 1. Table below shows the results of reliability test.



Table 4.17: Table for Reliability Test

| <b>Variables</b>      | <b>Cronbach's Alpha</b> | <b>Number of Items</b> |
|-----------------------|-------------------------|------------------------|
| Customer Satisfaction | 0.910                   | 3                      |
| Website Design        | 0.832                   | 3                      |
| Interactivity         | 0.745                   | 3                      |
| Reliability           | 0.813                   | 3                      |
| Informativeness       | 0.871                   | 4                      |
| Security              | 0.908                   | 3                      |
| Responsiveness        | 0.838                   | 3                      |
| Trust                 | 0.859                   | 3                      |
| Empathy               | 0.741                   | 2                      |

Source: Developed for the research

Dependent variable, Customer Satisfaction, obtained the highest value of Cronbach's Alpha (0.910), followed by Security (0.908), Informativeness (0.871), Trust (0.859), Responsiveness (0.838), Website Design (0.832), Reliability (0.813), Interactivity (0.745) and Empathy (0.741). All the variables have Cronbach's Alpha value of at least 0.70. Therefore, all the independent variables and dependent variable are consistent as well as reliable.

### **4.2.3 Pearson Analysis (Test for Multicollinearity Problem)**

Pearson analysis is conducted to identify multicollinearity problem between variables. A value which greater than 0.9 indicates that there is Multicollinearity problem (Hair et al., 2010). Table below shows the correlation between each independent variables.

Table 4.18: Table for Pearson’s Correlation Analysis

|                            | WD    | IT    | RL    | IF    | SE    | RP    | TR    | EP    | CS |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| Webpage Design (WD)        | 1     |       |       |       |       |       |       |       |    |
| Interactivity (IT)         | .530* | 1     |       |       |       |       |       |       |    |
| Reliability (RL)           | .444* | .482* | 1     |       |       |       |       |       |    |
| Informativeness (IF)       | .436* | .519* | .646* | 1     |       |       |       |       |    |
| Security (SE)              | .503* | .450* | .673* | .552* | 1     |       |       |       |    |
| Responsiveness (RP)        | .351* | .396* | .511* | .586* | .551* | 1     |       |       |    |
| Trust (TR)                 | .412* | .400* | .536* | .624* | .573* | .655* | 1     |       |    |
| Empathy (EP)               | .142* | .224* | .258* | .420* | .265* | .439* | .427* | 1     |    |
| Customer Satisfaction (CS) | .562* | .592* | .672* | .705* | .653* | .605* | .651* | .412* | 1  |

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

Source: Developed for the research

The correlation between each independent variable is less than 0.9. Henceforth, none of the independent variables should be removed as they do not overlap with one another.

### 4.3 Inferential Analysis

Inferential analysis concludes characteristics of population based on collected sample data (Burns & Bush, 2006). It also aims to examine relationship among individual variables.

#### 4.3.1 Pearson Correlation

Table 4.19: Table for Correlations

|       | AveWD               | AveIT    | AveRL    | AveIF    | AveSE    | AveRP    | AveTR    | AveEP    | AveCS |
|-------|---------------------|----------|----------|----------|----------|----------|----------|----------|-------|
| AveWD | 1                   |          |          |          |          |          |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveIT | .530(**)            | 1        |          |          |          |          |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveRL | .444(**)            | .482(**) | 1        |          |          |          |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveIF | .436(**)            | .519(**) | .646(**) | 1        |          |          |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveSE | .503(**)            | .450(**) | .673(**) | .552(**) | 1        |          |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveRP | .351(**)            | .396(**) | .511(**) | .586(**) | .551(**) | 1        |          |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveTR | .412(**)            | .400(**) | .536(**) | .624(**) | .573(**) | .655(**) | 1        |          |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveEP | .142(*)             | .224(**) | .258(**) | .420(**) | .265(**) | .439(**) | .427(**) | 1        |       |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |
| AveCS | .562(**)            | .592(**) | .672(**) | .705(**) | .653(**) | .605(**) | .651(**) | .412(**) | 1     |
|       | Pearson Correlation |          |          |          |          |          |          |          |       |
|       | Sig. (2-tailed)     |          |          |          |          |          |          |          |       |

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

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

Source: Developed for the research

Table 4.19 shows the correlation of an individual variable with another variable. Based on the results, each independent variable is positively and significantly correlated with dependent variable (customer satisfaction) as their p-value is less than 0.05. These independent variables include Website Design ( $r=0.562$ ,  $p<0.05$ ), Interactivity ( $r=0.592$ ,  $p<0.05$ ), Reliability ( $r=0.672$ ,  $p<0.05$ ), Informativeness ( $r=0.705$ ,  $p<0.05$ ), Security ( $r=0.653$ ,  $p<0.05$ ), Responsiveness ( $r=0.605$ ,  $p<0.05$ ), Trust ( $r=0.651$ ,  $p<0.05$ ), and Empathy ( $r=0.412$ ,  $p<0.05$ ).

### 4.3.2 Multiple Linear Regressions

Table 4.20 Table for Multiple Regression Analysis

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .836 | .698     | .686              | .58344                     |

Source: Developed for the research

Table 4.20 shows the analysis for multiple regression test. R value represents the correlation coefficient between dependent variable and independent variables (Cleophas & Zwinderman, 2010). Based on the results, the value of correlation coefficient(R) is 0.836. Hence, there is a positive correlation between all the independent variables and dependent variable.

Besides that, coefficient of determination (R-square) facilitates the explanation of variance (Cavana, Delahaye, & Sekaran, 2001). The R square of this research is 0.698, which indicates that 69.8% of dependent variable can be explained by all the independent variables. However, it still leaves 30.2% (100% - 69.8%) unexplained in this research. Put differently, there are other

variables which are important in explaining customer satisfaction and have not been included in this research.

Table 4.21 Table for ANOVA

| Model |            | Sum of Squares | df  | Mean Square | F      | Sig. |
|-------|------------|----------------|-----|-------------|--------|------|
| 1     | Regression | 150.607        | 8   | 18.826      | 55.305 | .000 |
|       | Residual   | 65.017         | 191 | .340        |        |      |
|       | Total      | 215.624        | 199 |             |        |      |

Source: Developed for the research

Table 4.21 shows the results for Analysis of Variance. F-statistic is valued at 55.305 and is significant at 0.01 level. As the model is significant and the F-statistic is large, it can be concluded that most of the variation is explained and the model is a good descriptor of the relation (Mun, 2006).

Table 4.22 Table for Coefficients

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
|       |            | B                           | Std. Error | Beta                      |        |      |
| 1     | (Constant) | -1.401                      | .347       |                           | -4.035 | .000 |
|       | AveWD      | .182                        | .061       | .150                      | 2.971  | .003 |
|       | AveIT      | .204                        | .066       | .158                      | 3.083  | .002 |
|       | AveRL      | .190                        | .067       | .171                      | 2.816  | .005 |
|       | AveIF      | .247                        | .077       | .199                      | 3.207  | .002 |
|       | AveSE      | .122                        | .056       | .131                      | 2.174  | .031 |
|       | AveRP      | .066                        | .049       | .078                      | 1.353  | .178 |
|       | AveTR      | .163                        | .069       | .142                      | 2.366  | .019 |
|       | AveEP      | .091                        | .043       | .098                      | 2.126  | .035 |

Source: Developed for the research

Table 4.22 shows the coefficient of each independent variable. Based on the results, seven independent variables (Website Design, Interactivity, Reliability, Informativeness, Security, Trust and Empathy) significantly related to dependent variable (Customer Satisfaction) by meeting the requirement of p-value less than 0.05 ( $p < 0.05$ ). Null hypothesis ( $H_0$ ) for the seven independent variables is rejected and alternative hypothesis ( $H_1$ ) is accepted. On the contrary, one of the independent variables (Responsiveness) is not significantly related to dependent variable (customer satisfaction) as its p-value is more than 0.05. Hence, null hypothesis ( $H_0$ ) of Responsiveness is supported.

The eight independent variables are the factors that determine customer satisfaction. This can be represented by the equation in the table below.

Table 4.23 Table for Linear Equation

|  |
|--|
| $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + e$   |
| <p>The regression equation for customer satisfaction (CS) is:</p> $CS = - 1.401 + 0.182(WD) + 0.204(IT) + 0.190(RL) + 0.247(IF) + 0.122(SE) + 0.066(RP) + 0.163(TR) + 0.091(EP)$   |
| <p>Where:</p> <p>Y = Customer Satisfaction (CS)</p> <p>a = Regression Constant</p> <p>X<sub>1</sub>= Website design (WD)</p> <p>X<sub>2</sub>= Interactivity (IT)</p> <p>X<sub>3</sub>= Reliability (RL)</p> <p>X<sub>4</sub>= Informativeness (IF)</p> <p>X<sub>5</sub> = Security (SE)</p> <p>X<sub>6</sub>= Responsiveness (RP)</p> <p>X<sub>7</sub>= Trust (TR)</p> <p>X<sub>8</sub>= Empathy (EP)</p> |

Source: Developed for the research

The regression coefficient of each independent variable is derived from the Beta value (under unstandardized coefficients). The regression coefficient for all the independent variables is positive. Henceforth, there is a positive relationship between each independent variable and dependent variable.

Based on the beta value (under standardized coefficients), informativeness is the most influential independent variable because it has the highest beta value which is 0.199. It is the predictor variable which has the highest contribution to the variation in dependent variable (Customer Satisfaction). The next most influential independent variable is Reliability ( $\beta=0.171$ ), followed by Interactivity ( $\beta=0.158$ ), Website Design ( $\beta=0.150$ ), Trust ( $\beta=0.142$ ), Security ( $\beta=0.131$ ), Empathy ( $\beta=0.098$ ) and Responsiveness ( $\beta=0.078$ ). Responsiveness has least influential on customer satisfaction because it is the only independent variable which has insignificant relationship with Customer Satisfaction.

## **4.4 Conclusion**

The characteristics of respondents are discussed. Survey data is proven to pass the assumptions tests. Inferential analysis is conducted and one independent variable (Responsiveness) is found insignificant to customer satisfaction. The discussions on each variable will be carried out in the next chapter.

## **CHAPTER 5: DISCUSSION, CONCLUSION, IMPLICATIONS**

### **5.0 Introduction**

This chapter is divided into a few parts. ‘Summary of Statistical Analysis’ summaries the research findings presented in Chapter 4. ‘Discussion of Major Finding’ discusses each hypothesis. ‘Implications of the Study’ describes the contributions of this research. ‘Limitations and Recommendations’ acknowledges the limitations in this research as well as proposes recommendations to provide platform for future studies.

### **5.1 Summary of Statistical Analysis**

#### **5.1.1 Summary of Descriptive Analysis**

##### **5.1.1.1 Demographic Profile of Target Respondents**

Out of 200 target respondents, 89 are male whereas 111 are female. Besides that, majority of respondents fall under the age group of 26-30 years old, followed by 31-35 years old, 36-40 years old, and 21-25 years old. The largest ethnic group among the respondents is Chinese, followed by Malay, Indian and other races. Moreover, majority of survey respondents are single. Most respondents have monthly income level of RM3000-RM5999, followed by RM1000-RM2999, less than RM999, RM6000-RM9999 and more than RM10000. In addition, the highest education level pursued by most respondents is degree,



followed by diploma; SPM, STPM or foundation level; advanced diploma; and master.

#### **5.1.1.2 Central Tendencies Measurement of Constructs**

Mean of all the twenty seven items are obtained from the SPSS analysis. Based on the analysis, majority of the respondents agreed with the statements for seven independent variables (Website Design, Interactivity, Reliability, Informativeness, Security, Trust and Empathy). Nevertheless, least respondents agreed with the statements for one of the independent variable (Responsiveness). In fact, most respondents disagreed with the statements for Responsiveness compared to other independent variables.

Moreover, standard deviation for each statement is analyzed using SPSS. Notably, the standard deviation for all statement is approximately 1, which indicates that data values are moderately spread around the central tendency.

### **5.1.2 Summary of Scale Measurement**

Data collected is tested and proven to achieve normality and reliability. Normality is assumed as the p-value in Kolmogorov-Smirnov test is more than 0.05 whereas reliability is assumed as all the variables have Cronbach's alpha value of more than 0.7. Moreover, there is no multicollinearity problem as correlation between each independent variable is less than 0.9. All the pre-requisite assumptions are fulfilled, thereby multiple regression test could be preformed.

### **5.1.3 Summary of Inferential Analysis**

#### **5.1.3.1 Pearson Correlation**

Based on the Pearson analysis, it can be concluded that each independent variable positively and significantly correlated with dependent variable.

#### **5.1.3.2 Multiple Linear Regressions**

Based on the multiple regression analysis, it can be concluded that 69.8% of dependent variable can be explained by all the independent variables. Besides that, results from Anova test indicate that most of the variation is explained and the model is a good descriptor of the relation.

Furthermore, coefficients analysis shows that seven independent variables (website design, interactivity, reliability, informativeness, security, trust and empathy) significantly related to dependent variable (customer satisfaction). On the contrary, one of the independent variables (responsiveness) is not significantly related to dependent variable. In addition, beta value (under standardized coefficients) indicates that informativeness is the most influential independent variable followed by reliability, interactivity, website design, trust, security, empathy and responsiveness.

## **5.2 Discussion of Major Finding**

### **5.2.1 System Quality**

#### **5.2.1.1 Relationship between Website Design and Customer Satisfaction**

Based on the findings, there is a significant positive relationship between website design and customer satisfaction.

This result is in line with the past study of Alam and Yasin (2010) which defined website design as user interface presentation which comprises of browsing layout, graphic style, colour scheme and navigation functions. Splendid website design should be visually appealing, well-organised, easy to use and useful. Compared to other variables such as website's reliability, website design is the most influential factor affecting customer's online buying experience.

Online buying experiences or customer satisfaction is important because it determines whether the customers will repurchase in the future or disseminate positive word-of-mouth to others. Nevertheless, customers who already have experience using a website would have developed a certain level of self-efficacy in navigating the website (Lo & Lin, 2011). Thus, they are less concern about the appearance of website compared to first time users. In fact, they demand for satisfying service and quality information from the online retailer (Chen et al., 2011). Nevertheless, it is still essential for airline companies to emphasise on this feature as website design significantly affects customer satisfaction.

Henceforth, airline companies should ascertain that their website design is attractive yet organised and useful.

### **5.2.1.2 Relationship between Interactivity and Customer Satisfaction**

Based on the findings, there is a significant positive relationship between interactivity and customer satisfaction.

This result is in line with the study of Lin (2007) which defined interactivity as the extent to which online retailer and customers could have two ways communication. High website interactivity could be maintained through the provision of online chat, online forum, feedback mechanisms and purchasing alternatives. Furthermore, the screen changes of website should be natural and predictable. High level of interactivity helps improve an online retailer's online presence as well as customer satisfaction.

However, this result contradicts with the study of Ba and Johansson (2008). Interactivity does not necessarily lead to greater customer satisfaction. It is because customer tends to feel an increasing need to interact with the service provider only when there is a process error. The contradiction in result between this study and study of Ba and Johansson could be due to the dissimilarity in targeted respondents. The study of Ba and Johansson was conducted in United States which has substantially different culture from Malaysia. According to Cyr (2008), online customer satisfaction factors vary across culture. Therefore, the preference of United States online buyers should not be generalised to other countries, including Malaysia.

In conclusion, in order to improve customer satisfaction, airline companies should improve the interactivity level of their websites. Online customers should be allowed to obtain information tailored to their specific needs. Moreover, variety of choices should be provided for customer's purchasing decision.

### **5.2.1.3 Relationship between Reliability and Customer Satisfaction**

Based on the findings, there is a significant positive relationship between reliability and customer satisfaction.

This result is consistent with the past study of Zeng et al. (2009) which suggested reliability as the trustworthiness of online retailer. The ability of online retailer to perform service accurately is a key determinant of the online retailer's trustworthiness. Products and services ordered by customers should be delivered on time and upon customer's request. Besides that, trustworthiness could be demonstrated by keeping customer's information and record accurately.

Website's reliability is the most essential contributor in establishing customers' view of an online retailer's ethics. When customers perceive a website to be ethical, customer loyalty towards the online retailer would be enhanced (Arjoon & Rambocas, 2011).

Therefore, airline companies should aware that reliability of website is significantly correlated to customer satisfaction. Reliability could only be established if the airline company performs services correctly as well as maintains customer's records accurately.

## **5.2.2 Information Quality**

### **5.2.2.1 Relationship between Informativeness and Customer Satisfaction**

Based on the findings, there is a significant relationship between informativeness and customer satisfaction.

The significant relationship between informativeness and customer satisfaction is supported by the study of Chen et al. (2011) which suggested informativeness as the output quality of an information system. Both buyer and seller rely on information to engage in online transaction. Information flowing between both parties is important as it influences consumer satisfaction. Quality information helps to diminish the likelihood of additional searching by online customers and eventually improves their online buying experiences. Therefore, online retailer should proactively provide customers with quality information.

When there is a few websites providing the same product, what may draw users to a particular website are the attributes of information provided (Liang & Chen, 2009). Moreover, providing appropriate amount of information with a suitable format is critical to convert a prospecting customer into purchasing customer. Information related to a product can change over time. Thus, information of a product should be provided in a timely manner to ensure that customers are always updated (Kuan et al., 2008).

Therefore, airline companies should always update and verify their websites' information to ensure that it is accurate, complete and useful for customers in conducting online transactions.

### **5.2.2.2 Relationship between Security and Customer Satisfaction**

The finding in this research shows that security and customer satisfaction has a significant relationship.

This result is consistent with the study of Martin and Carmerero (2007) which defined security as the user's perception toward the safeguard of customer information as well as privacy policies implemented by the online retailer. Security and privacy policies are the signals of an online retailer's goodwill. These signals enhance the credibility of online retailer and indirectly affect customer satisfaction. A secured website provides information regarding their privacy policies. Besides that, the online retailer would respect customer's personal information by not transferring customer's information to third parties.

However, study of Eid (2010) shows an almost negligible relationship between security and customer relationship. This is most probably due to the target respondents of the study are Arabians who are risk takers (Eid, 2010). Malaysian, on the contrary, is risk averse. Henceforth, security of website is a vital aspect to them. This is supported by the study of Haque<sup>1</sup>, Tarofder, Rahman, and Raquib (2009) which identified security as an important factor for Malaysian users to accept e-banking services. Furthermore, Delafrooz, Paim, and Khatibi (2011) found that security is the main factor that prevents Malaysian from online shopping.

Therefore, airline companies should focus on the security feature of their e-commerce website as it is a serious concern of online customers. Moreover, airline companies should have mechanism to ensure secured electronic payment and safe transmission of customer's information.

### **5.2.3 Service Quality**

#### **5.2.3.1 Relationship between Trust and Customer Satisfaction**

Based on the findings, trust has significant relationship with customer satisfaction.

This result is in line with the study of Wen et al. (2011) which defined trust as the consumers' belief in online retailers to fulfill their transactional obligations. The main concern of online customers is whether a website's functionalities could facilitate the purchases of goods and services. Nonetheless, nonfunctional characteristic such as trust is equally important in determining customer satisfaction. Trust plays a crucial role in the e-commerce context compared to conventional business due to increasing uncertainties caused by the distance (Kim, 2008). Therefore, online retailers should be honest, protect customer's privacy and deliver products or services to the customers as promised. In addition to customer satisfaction, a trustworthy e-commerce website could harness positive word-of-mouth articulations about the online retailer.

In order to improve customer satisfaction, airline companies should strengthen their trustworthiness and integrity to minimise customer's negative perceptions on the transaction uncertainty.

#### **5.2.3.2 Relationship between Responsiveness and Customer Satisfaction**

Based on the findings, responsiveness has insignificant relationship with customer satisfaction.



This result is supported by Kassim and Abdullah (2010) who defined responsiveness as the online retailer's ability and willingness to service customers when they are facing difficulty with the website. Moreover, responsiveness is also measured in terms of loading time of a website. The study of Kassim and Abdullah found that Qatar, which is a Collectivist society, does not heavily concern on responsiveness of online retailers. In fact, they are more tolerant and less demanding compared to western online buyers who are individualistic customers. Similarly, Malaysia is also a Collectivist society which practices collectivist values (Keshavarz & Baharudin, 2009). Henceforth, it could be concluded that Malaysian is tolerant and less demanding on the responsiveness of online retailers.

However, this result contradicts with the study of Lin (2007). Although Taiwan is also a collectivist society (Chang, 2009), Taiwanese online buyers are concern about the responsiveness of online retailers, including the time taken by airline company's website to load. The contradiction of result could be due to the fact that Taiwan has high speed internet access. Taiwan's internet access speed is the thrid fastest in the world, compared to Malaysia which ranks ninety-oneth ("Top Ten Countries," 2012). Henceforth, Taiwanese online buyers are very concern about the loading time of a website, which in turn significantly affects their satisfaction. Furthermore, the study of Lin was focused on the online book retailing industry. This could be one of the reasons why the finding of Lin is contradicted with this study which focuses on the airline industry.

Henceforth, there is an insignificant relationship between responsiveness of airline companies and customer satisfaction. However, if airline companies encounter budget constrain issue, other important factors should be prioritised by airline companies.

### **5.2.3.3 Relationship between Empathy and Customer Satisfaction**

Based on the findings, empathy is positively and significantly related to the customer satisfaction.

This positive relationship is consistent with the study of Lin and Sun (2009) who suggested empathy as the personalised treatment and care given by online vendor to the customers. When customers receive quality services such as special treatment benefits, they will be loyal to the online retailer (Li, Liu, & Suomi, 2009). In this highly competitive e-commerce environment, online retailers should first understand the customers group they are serving. Online retailers should incurred effort to analyse their customers buying preference and personal traits. By doing so, they could product or services based on customer's transaction history.

Besides that, according to Kuo, Lu, Huang, and Wu (2005), airline companies can create a communication platform in social network to response to any queries from customers. In addition, airline companies should be aware that feedback should be customised exactly to the customer problem instead of sending out preset answer. Moreover, airline companies' website should possess variety of interactive service features such as site search engine and self-selected frequently asked questions (FAQs). As there is lack of face-to-face contact on website, airline companies should carefully designed their web content to arrange and provide customer service opportunities according to customer needs and navigations behavior (Kuo et al., 2005).

In order to improve customer's online experience, airline companies should provide quality services to their customers. This could be done by providing targeting emails, personalised homepage as well as

prompt response to the customer request.

## **5.3 Implications of the Study**

### **5.3.1 Managerial Implications**

The proliferation of e-commerce websites has made it essential for airline companies to provide quality website as a purchasing means for their customers. A satisfying website could distinguish an airline company from the competition and helps improve customer satisfaction (Kuan et al., 2008). As this study examines the effects of website quality variable on Malaysian customer satisfaction, it could serve as an ideal benchmark for airline companies in Malaysia.

Based on the findings, airline companies should be aware that website's informativeness is the salient factor which contributes to customer satisfaction. Providing useful, complete and appropriate amount of information in a timely manner are the critical factors to ensure the website's informativeness. The second vital variable is the reliability of airline company's website, which could be demonstrated when customer's online transaction is performed correctly. Besides that, interactivity aspect, which is the third important variable, should be focused by airline companies. This could be achieved by providing variety of choices for purchasing decisions as well as natural and predictable screen changes. Moreover, airline companies should have quality website design that is useful and attractive in terms of visual appearance. The next important variable is the trustworthiness of airline company's website in safeguarding customer's information. In addition, security of airline companies' website should be upheld by ensuring the electronic payment is secured. Airline companies should also focus on the empathy variable by

providing targeting e-mail or free personal homepage. Notably, responsiveness of airline company is found insignificant to customer satisfaction. Nevertheless, airline company should not neglect this variable as their customer base is not only restricted to Malaysians.

Nowadays, the cost of maintaining a website could be enormous especially when the company is keeping up with the fast paced evolution in technology. Thus, this research could enlighten airline companies on which factors to focus on. By doing so, airline companies could maximise customer satisfaction by providing the best possible website quality (Liang & Chen, 2009).

Other than benefiting the airline company, this research could provide useful insight for website designer when they are developing website for an airline company (Cyr, 2008). By taking this research as a reference, website designers could develop a website with best possible features.

### **5.3.2 Theoretical Implications**

The model applied in this research is the Delone and McLean Information System Success Model (DLML) which provides numerous measures for each website quality dimension (system quality, information quality and service quality). However, these measures could be categorised into a few variables. Henceforth, this research classifies the measures into eight variables in order to investigate the importance of each variable in determining customer satisfaction. Based on the research results, it is concluded that the classification is acceptable as well as none of the variable overlaps with one another. Future study which uses DLML could refer to this classification to facilitate their research.

Besides that, unlike past studies which only focused on some of the measures in DLML, this research took an approach to examine the effects of all the important measures in DLML on customer satisfaction. Thus, the significance and influential of each measure could be compared.

In addition, customers of different cultures react differently to website quality dimensions (Cyr, 2008). As DLML is a westernised model, it is not necessarily applicable in Malaysia context. Therefore, this research retested the DLML model from the Malaysian perspective to examine the preference of Malaysian online customers. Therefore, this allows airline company to tailor their marketing strategies to fit with the market preferences.

## **5.4 Limitations and Recommendations**

There are several limitations associated with this study. First, the scope for this study is limited to online buyers in Malaysia. Nonetheless, the customers of e-commerce website are not only limited to a country. In fact, airline company's customers comprise online users from all around the world. Henceforth, future study should do a cross country comparison to account for the perceptions of online customers from countries other than Malaysia.

Second, this research allows respondents of survey to answer the questionnaires based on any airline company's e-commerce websites they have used. Nonetheless, factors other than website quality such as brand name would affect online customer satisfaction (Momtaz, Islam, Ariffin, & Karim, 2011). Thus, a controlled website with no specific branding could be used as a reference for respondents to respond to the survey questionnaires.

Third, this research studies the overall airline companies. However, different airline companies have different website features and designs which affect customer

satisfaction in different ways. Therefore, future study should focus on an airline company so that the findings of the study could be particularly useful to that airline company.

Forth, data of survey was collected by distributing self-administered questionnaires. Although this data collection method is budget friendly, detailed comments from customers could hardly be obtained. Therefore, personal interview is recommended. Moreover, future study is recommended to co-operate with airline companies to directly approach the customers during the data collection.

Fifth, the survey only focused on online customers of airline company who aged between 21 and 40 years old. Moreover, this study is only able to cover a very small sample (200 respondents). This age group as well as the small sample size might not be strong enough to represent all the Malaysian. Future research is recommended to expand sample size to better represent the population. In order to reach more customers, survey questionnaire could be requested to be placed in the airline companies' magazines or emails.

Lastly, these limitations are acknowledged but they do not diminish the significance of findings in this study.

## **5.5 Conclusion**

Airline company's website design, interactivity, reliability, informativeness, security, trust and empathy have positive and significant relationship with customer satisfaction. Henceforth, airline companies should focus on these variables in order to improve customer satisfaction. On the contrary, responsiveness of airline company is found insignificant in determining customer satisfaction. Nevertheless, this variable should not be disregarded.

Notably, this research contributes to both the managerial and theoretical contexts regardless of the presence of some limitations. In conclusion, the objectives of this research are fulfilled.

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## APPENDICES

### Appendix A: Past Empirical Studies

#### System Quality Dimension

| <i>Variable</i> | <i>Study</i>              | <i>Country</i> | <i>Data</i>   | <i>Major Findings</i>   |
|-----------------|---------------------------|----------------|---|---|
| System quality  | Chen, Huang, & Chen, 2011 | Taiwan         | Internet questionnaires survey 362 online <i>customers of 7-11 virtual stores.</i>            | <ul style="list-style-type: none"> <li>• System quality of website <i>positively related</i> to customer satisfaction.</li> </ul>   |
| Website design  | Alam & Yasin, 2009        | Malaysia       | Survey 300 Malaysian <i>undergraduates</i> using questionnaires.                              | <ul style="list-style-type: none"> <li>• Website design has <i>momentous relationship</i> with customer satisfaction.</li> <li>• Website design was identified as one of the <i>effectual predictors</i> of customer satisfaction.</li> </ul> |
| Interactivity   | Lin, 2007                 | Taiwan         | Internet questionnaires survey 297 Taiwan students who are the <i>customers of Amazon.com</i> | <ul style="list-style-type: none"> <li>• Interactivity <i>increase</i> customer satisfaction.</li> </ul>  |

|               |                              |       |  |  |
|---------------|------------------------------|-------|--|--|
| Interactivity | Ba & Johansson, 2008         | USA   | Survey 100 university students who are the online customers of <b>retailing industry</b> using questionnaires. | <ul style="list-style-type: none"> <li>• Interactivity <b>does not</b> necessarily <b>give rise</b> to greater customer satisfaction.</li> <li>• It is because customers feel an increasing need to interact with service provider only when there is a <b>process error</b>.</li> </ul> |
| Reliability   | Zeng, Hu, Chen, & Yang, 2009 | China | Survey 4000 subjects from broker email list in <b>online banking industry</b> using questionnaires.            | <ul style="list-style-type: none"> <li>• Website reliability received the most consistent support as the main factor that <b>improves</b> customer satisfaction.</li> </ul>  |

Information Quality Dimension

| <i>Variable</i>     | <i>Study</i>       | <i>Country</i> | <i>Data</i>   | <i>Major Findings</i>  |
|---------------------|--------------------|----------------|---|--|
| Information Quality | Liang & Chen, 2009 | Taiwan         | Internet questionnaires survey 700 customers of Taiwanese <b>Securities Corporation</b> . | <ul style="list-style-type: none"> <li>• Information Quality is the most effective factor to <b>enhance</b> customer satisfaction compared to service quality and system quality.</li> </ul> |

|                 |                           |              |   |  |
|-----------------|---------------------------|--------------|---|--|
| Informativeness | Chen, Huang, & Chen, 2011 | Taiwan       | Internet questionnaires survey 362 customers of <b>7-11 online virtual store</b> .  | •Provision of right information able to <b>enhance</b> customer satisfaction.  |
| Security        | Martin & Carmelelo, 2007  | Spain        | Survey 533 <b>users of cyber-center</b> in Spain using questionnaires.  | •Security is a critical feature to <b>increase</b> customer satisfaction.  |
| Security        | Mustafa, 2010             | Saudi Arabia | Survey 500 <b>tertiary students</b> from King Fahd University of Petroleum and Minerals (KFUPM) and working people coming from all parts of Saudi Arabia (Eastern Province) using questionnaires. | •Security has <b>no direct relationship</b> with customer satisfaction.<br>•This is because Arabian online users are more <b>risk-tolerant</b> . |

Service Quality Dimension

| <i>Variable</i> | <i>Study</i>             | <i>Country</i> | <i>Data</i>  | <i>Major Findings</i>   |
|-----------------|--------------------------|----------------|--|---|
| Service Quality | Martin & Carmelelo, 2007 | Spain          | Survey 533 <b>users of cyber-center</b> in Spain using questionnaires. | • Service quality <b>positively affects</b> customer satisfaction.. |

|                |                           |        |   |  |
|----------------|---------------------------|--------|---|--|
| Trust          | Wen, PryButok, & Xu, 2010 | US     | Survey 230 <i>students</i> from a large southwestern university in US using questionnaires.                         | <ul style="list-style-type: none"> <li>Trustworthiness <i>positively affects</i> customer satisfaction .</li> </ul>  |
| Responsiveness | Lin, 2007                 | Taiwan | Internet questionnaires survey 297 Taiwan <i>students</i> who are the customers of Amazon.com using questionnaires. | <ul style="list-style-type: none"> <li>Responsiveness <i>positively affects</i> customer satisfaction.</li> <li>The reason is because customers expect high responsiveness from the <i>prompt delivery of products.</i></li> </ul> |
| Responsiveness | Kassim & Abdullah, 2010   | Qatar  | Survey 600 respondents in shopping mall and <i>private residence</i> using questionnaires.                          | <ul style="list-style-type: none"> <li>Responsiveness <i>does not positively affect</i> customer satisfaction in Qatar context.</li> <li>This is due to the target respondents are <i>tolerant and less demanding.</i></li> </ul>  |
| Empathy        | Lin & Sun, 2009           | Taiwan | Email and mail questionnaires to Taiwan online <i>users of major shopping website.</i>                              | <ul style="list-style-type: none"> <li>Empathy provided by online retailer did <i>improve</i> customer satisfaction.</li> </ul>  |

**Appendix B: Variables and Measurements**

| <b>Variable</b> | <b>Item</b> | <b>Description</b>   | <b>References</b>            | <b>Measurement</b> |
|-----------------|-------------|--|------------------------------|--------------------|
| Website Design  | WD1         | The airline company's website is visually appealing.   | Lin, 2007                    | Interval           |
|                 | WD2         | User interface of the airline company's website has a well-organized appearance.                       |                              |                    |
|                 | WD3         | The airline company's website is easy to use.  |                              |                    |
| Interactivity   | IT1         | The airline company's website gives me a variety of choices for purchasing decisions.                  | Lin, 2007                    | Interval           |
|                 | IT2         | User interface of the airline company's website has natural and predictable screen changes.            |                              |                    |
|                 | IT3         | I able to interact with the airline company in order to get information tailored to my specific needs. | Tsikriktsis, 2006            |                    |
| Reliability     | RL1         | The airline company performs the service correctly the first time.                                     | Zeng, Hu, Chen, & Yang, 2009 | Interval           |
|                 | RL2         | My online transactions are always accurate.  |                              |                    |

|                 |     |  |                         |          |
|-----------------|-----|--|-------------------------|----------|
|                 | RL3 | The airline company keeps my records accurately.   |                         |          |
| Informativeness | IF1 | The airline company's website provides up-to-date information.                                 | Lin, 2007               | Interval |
|                 | IF2 | The airline company's website provides accurate information.                                   |                         |          |
|                 | IF3 | The airline company's website provides useful information.                                     |                         |          |
|                 | IF4 | The airline company's website provides complete information.                                   |                         |          |
| Security        | SE1 | The airline company's website has mechanism to ensure the safe transmission of my information. | Mustafa, 2011           | Interval |
|                 | SE2 | The electronic payment on the airline company's website is safe.                               |                         |          |
|                 | SE3 | I feel safe in the online transactions.  | Zeng et al., 2009       |          |
| Responsiveness  | RP1 | The airline company's website did not take long time to load.                                  | Tsikriktsis, 2006       | Interval |
|                 | RP2 | The airline company is prompt in replying to queries.  | Kassim & Abdullah, 2010 |          |
|                 | RP3 | I believe the airline company is always willing to help customers.                             | Lin, 2007               |          |



|                       |     |  |                   |          |
|-----------------------|-----|--|-------------------|----------|
| Trust                 | TR1 | I believe the airline company is trustworthy.                                  | Lin, 2007         | Interval |
|                       | TR2 | The airline company instils confidence in customers.                           |                   |          |
|                       | TR3 | The airline company keeps my personal information safe.                        | Tsikriktsis, 2006 |          |
| Empathy               | EP1 | The airline company provides targeting e-mail to customers.                    | Lin, 2007         | Interval |
|                       | EP2 | The airline company provides customers free personal homepage.                 |                   |          |
| Customer Satisfaction | CS1 | The airline company's information contents meet my needs.                      | Lin, 2007         | Interval |
|                       | CS2 | The performance of airline company meets my expectation.                       | Mustafa, 2011     |          |
|                       | CS3 | Overall, I am very satisfied with the services offered by the airline company. | Zeng et al., 2009 |          |

## Appendix C: Permission Letter to Conduct Survey



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

18 April 2012

**To Whom It May Concern**

Dear Sir/Madam

**Permission to Conduct Survey**

This is to confirm that the following students are currently pursuing their *Bachelor of Commerce (HONS) Accounting* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

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


The students are as follows:


| <b>Name of Student</b> | <b>Student ID</b> |
|------------------------|-------------------|
| Lim Shu Pei            | 10ABB02117        |
| Loo Jia Voon           | 10ABB01338        |
| Cheong Kae Yeng        | 10ABB01337        |
| Teh Yew Wei            | 10ABB01941        |
| Ding Yoke Ying         | 10ABB01784        |

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

Thank you.

Yours sincerely

  
.....  
Mahendra Kumar a/l Chelliah  
Head of Department,  
Faculty of Business and Finance  
Email: [mahendra@utar.edu.my](mailto:mahendra@utar.edu.my)

  
.....  
Ezatul Emilia Binti Muhammad Arif  
Supervisor,  
Faculty of Business and Finance  
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**Address:** No.9, Jalan Bersatu 13/4, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia  
**Postal Address:** P O Box 11384, 50744 Kuala Lumpur, Malaysia.  
**Tel:** (603) 7958 2628 **Fax:** (603) 7956 1923 **Homepage:** <http://www.utar.edu.my>



**Appendix D: Survey Questionnaire**



**UNIVERSITI TUNKU ABDUL RAHMAN**

**Faculty of Business and Finance**

**BACHELOR OF COMMERCE ACCOUNTING**

**FINAL YEAR PROJECT**

**TITLE OF TOPIC:**

**The Importance of Website Quality Dimensions in Determining Customer Satisfaction: An Empirical Study on Airline Industry.**

**Survey Questionnaire**

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Dear respondent,

We are final year undergraduate students of Bachelor of Commerce (HONS) Accounting, from Universiti Tunku Abdul Rahman (UTAR). The **purpose** of this survey is to seek your perception on the effects of airline company's website quality dimensions (service quality, information quality, service quality) on customer satisfaction.

Thank you for your participation.

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**Instructions:**

- 1) There are **TWO** (2) sections in this questionnaire. Please answer **ALL** questions in **ALL** sections.
- 2) Completion of this form will take you approximately 10 to 15 minutes.
- 3) Please feel free to share your comments in the space provided. The contents of this questionnaire will be kept **strictly confidential**.

**Section A: Demographic Profile**

**Please place a tick “√” or fill in the blank for each of the following:**

1. Gender:

- Male
- Female

2. Age:

- Below 21 years old
- 21 - 25 years old
- 26 - 30 years old
- 31 - 35 years old
- 36- 40 years old
- 41 years old and above

3. Race:

- Malay
- Chinese
- Indian
- Others, please specify : \_\_\_\_\_

4. Marital status:

- Single
- Married

5. Income/ Allowance (Monthly basic):

- < RM 999
- RM 1000 – RM 2999
- RM 3000 – RM 5999
- RM 6000 – RM 9999
- RM 10 000 and above

6. Highest education completed:

- Diploma
- Bachelor of Degree
- Advanced Diploma
- Master
- PhD

**Section B:**

Please circle your answer to each statement using 7 Likert scale [(1) = strongly disagree; (2) = disagree; (3) = slightly disagree; (4) = neutral; (5) = agree; (6) = slightly agree and (7) = strongly agree]

**System Quality**

| No.                   | Questions  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|-----------------------|--|-------------------|----------|-------------------|---------|----------------|-------|----------------|
| <b>Website Design</b> |  |                   |          |                   |         |                |       |                |
| WD1                   | The airline company's website is visually appealing.   | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| WD2                   | The user interface of airline company's website has a well-organized appearance.                       | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| WD3                   | The airline company's website is easy to use.  | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| <b>Interactivity</b>  |  |                   |          |                   |         |                |       |                |
| IT1                   | The airline company's website gives me a variety of choices for purchasing decisions.                  | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| IT2                   | The user interface of airline company's website has natural and predictable screen changes.            | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| IT3                   | I able to interact with the airline company in order to get information tailored to my specific needs. | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| <b>Reliability</b>    |  |                   |          |                   |         |                |       |                |
| RL1                   | The airline company performs the service correctly the first time.                                     | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| RL2                   | My online transactions are always accurate.  | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| RL3                   | The airline company keeps my records accurately.   | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |

**Information Quality**

| No.             | Questions  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|-----------------|--|-------------------|----------|-------------------|---------|----------------|-------|----------------|
| Informativeness |  |                   |          |                   |         |                |       |                |
| IF1             | The airline company's website provides up-to-date information.                                 | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| IF2             | The airline company's website provides accurate information.                                   | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| IF3             | The airline company's website provides useful information.                                     | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| IF4             | The airline company's website provides complete information.                                   | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| Security        |  |                   |          |                   |         |                |       |                |
| SE1             | The airline company's website has mechanism to ensure the safe transmission of my information. | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| SE2             | The electronic payment on the airline company's website is safe.                               | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| SE3             | I feel safe in the online transactions.  | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |

**Service Quality**

| No.            | Questions   | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|----------------|---|-------------------|----------|-------------------|---------|----------------|-------|----------------|
| Responsiveness |   |                   |          |                   |         |                |       |                |
| RP1            | The airline company's website did not take long time to load. | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| RP2            | The airline company is prompt in replying to my queries.      | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |

|         |   |   |   |   |   |   |   |   |
|---------|---|---|---|---|---|---|---|---|
| RP3     | I believe the airline company is always willing to help customers.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Trust   |   |   |   |   |   |   |   |   |
| TR1     | I believe the airline company is trustworthy.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| TR2     | The airline company instils confidence in customers.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| TR3     | The airline company keeps my personal information safe.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Empathy |   |   |   |   |   |   |   |   |
| EP1     | The airline company provides me targeting e-mail.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|         | <i>*Targeting e-mail: e-mail which informs customers about flights/ services which frequently purchased by customers.</i> |   |   |   |   |   |   |   |
| EP2     | The airline company provides me free personal homepage.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Customer Satisfaction**

| No.                   | Questions  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|-----------------------|--|-------------------|----------|-------------------|---------|----------------|-------|----------------|
| Customer Satisfaction |  |                   |          |                   |         |                |       |                |
| CS1                   | The airline company's information contents meet my needs.                      | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| CS2                   | The performance of airline company meets my expectation.                       | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |
| CS3                   | Overall, I am very satisfied with the services offered by the airline company. | 1                 | 2        | 3                 | 4       | 5              | 6     | 7              |

**Comments:**

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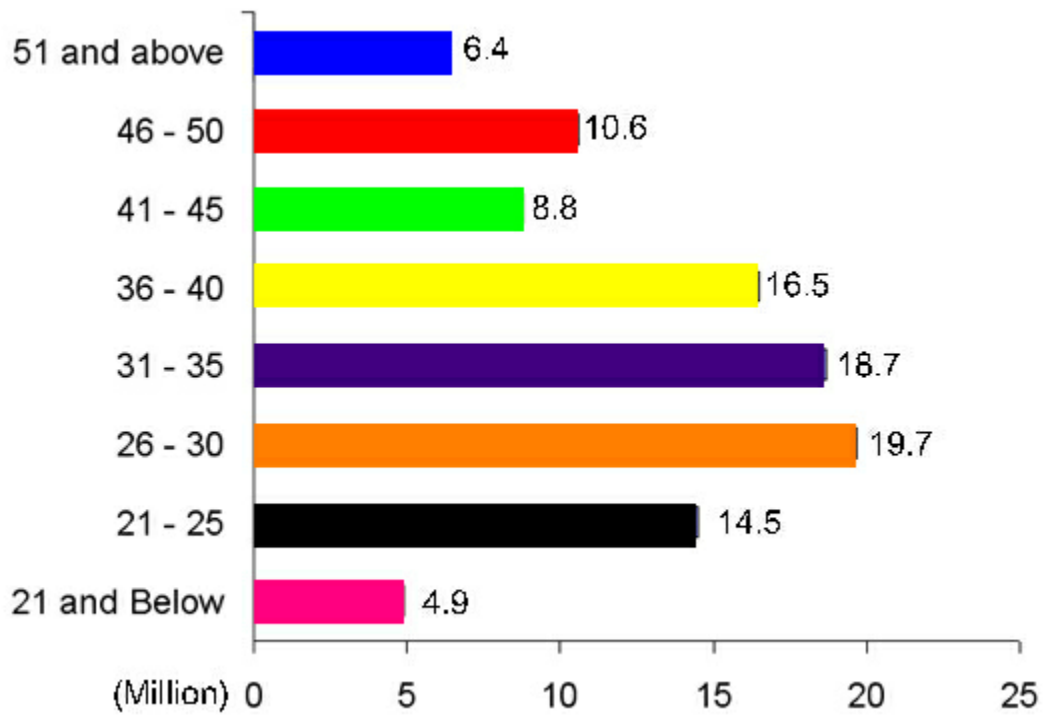
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*Thank you for your time, opinion and comments.  
~ The End ~*



**Appendix E: Online Shopping Statistics in Malaysia**



**Appendix F: Normality Test**

**Case Processing Summary**

|                       | Cases |         |         |         |       |         |
|-----------------------|-------|---------|---------|---------|-------|---------|
|                       | Valid |         | Missing |         | Total |         |
|                       | N     | Percent | N       | Percent | N     | Percent |
| Standardized Residual | 200   | 100.0%  | 0       | .0%     | 200   | 100.0%  |

**Descriptives**

|                       |                                  |             | Statistic | Std. Error |
|-----------------------|----------------------------------|-------------|-----------|------------|
| Standardized Residual | Mean                             |             | .0000000  | .06927478  |
|                       | 95% Confidence Interval for Mean | Lower Bound | -.1366069 |            |
|                       |                                  | Upper Bound | .1366069  |            |
|                       | 5% Trimmed Mean                  |             | .0182321  |            |
|                       | Median                           |             | .0907715  |            |
|                       | Variance                         |             | .960      |            |
|                       | Std. Deviation                   |             | .97969332 |            |
|                       | Minimum                          |             | -2.62069  |            |
|                       | Maximum                          |             | 2.08378   |            |
|                       | Range                            |             | 4.70448   |            |
|                       | Interquartile Range              |             | 1.42840   |            |
|                       | Skewness                         |             | -.254     | .172       |
|                       | Kurtosis                         |             | -.431     | .342       |

**Tests of Normality**

|                       | Kolmogorov-Smirnov <sup>a</sup> |     |       | Shapiro-Wilk |     |      |
|-----------------------|---------------------------------|-----|-------|--------------|-----|------|
|                       | Statistic                       | df  | Sig.  | Statistic    | df  | Sig. |
| Standardized Residual | .053                            | 200 | .200* | .989         | 200 | .117 |

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## Standardized Residual

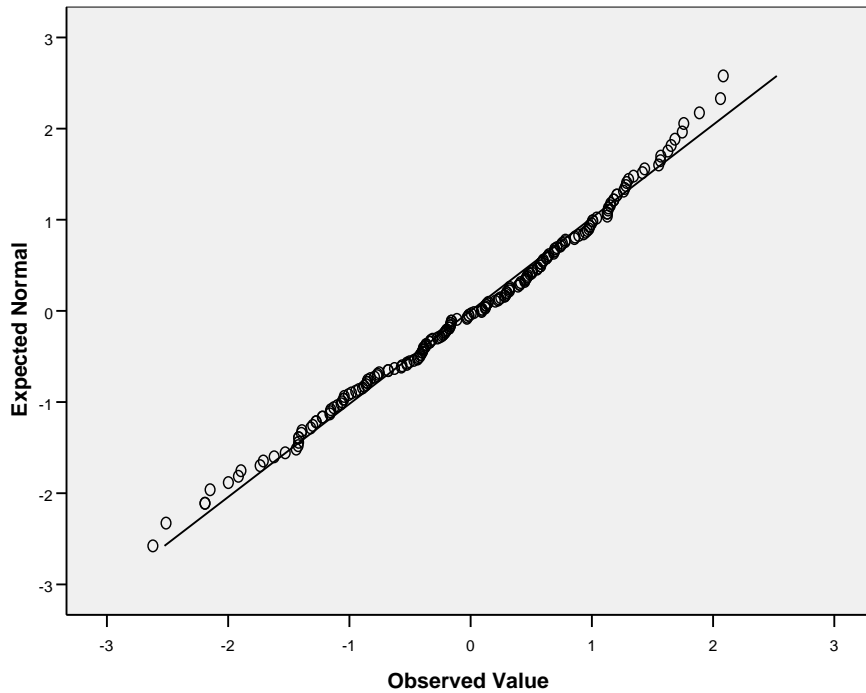
Standardized Residual Stem-and-Leaf Plot

| Frequency | Stem & | Leaf   |
|-----------|--------|--|
| 2.00      | -2 .   | 56   |
| 3.00      | -2 .   | 111  |
| 7.00      | -1 .   | 5677899                                      |
| 24.00     | -1 .   | 000000111112222333344444                     |
| 22.00     | -0 .   | 5555566667777888888999                       |
| 39.00     | -0 .   | 00001111111111112222222333333333333333444444 |
| 35.00     | 0 .    | 00000111111222222223333344444444444          |
| 35.00     | 0 .    | 55555555556666666667777778889999999          |
| 22.00     | 1 .    | 0001111111112222223344                       |
| 9.00      | 1 .    | 555666778                                    |
| 2.00      | 2 .    | 00   |

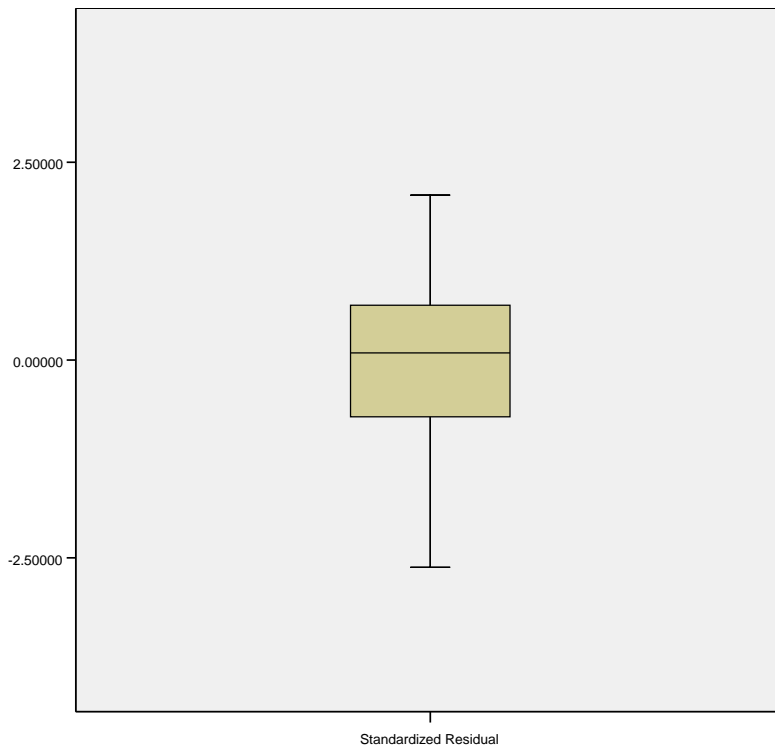
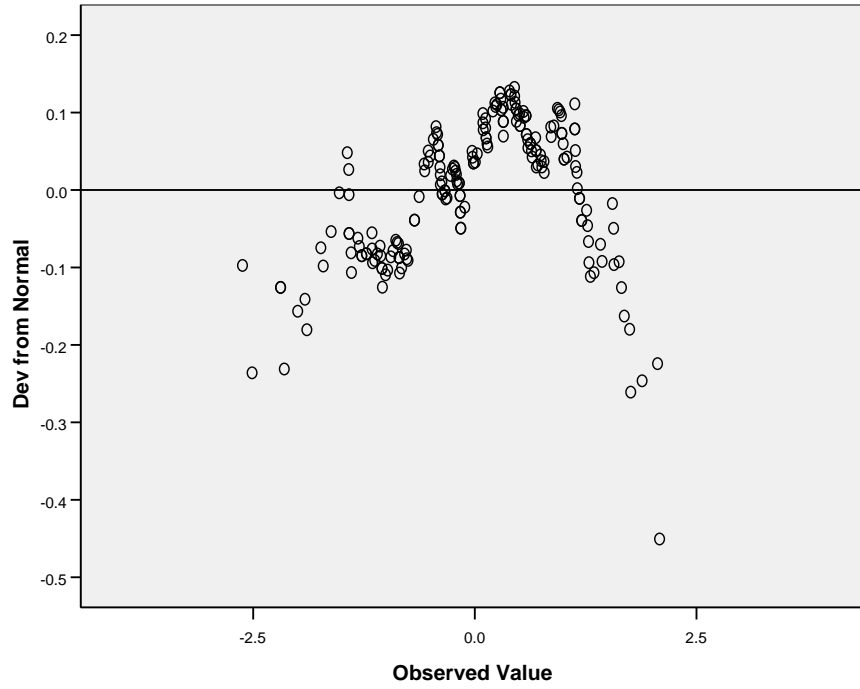
Stem width: 1.00000

Each leaf: 1 case(s)

Normal Q-Q Plot of Standardized Residual



**Detrended Normal Q-Q Plot of Standardized Residual**



**Appendix G: Reliability Test**

**Scale: WD**

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .832             | .833   | 3          |

**Inter-Item Correlation Matrix**

|     | WD1   | WD2   | WD3   |
|-----|-------|-------|-------|
| WD1 | 1.000 | .670  | .539  |
| WD2 | .670  | 1.000 | .663  |
| WD3 | .539  | .663  | 1.000 |

## Scale: IT

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .745             | .747   | 3          |

### Inter-Item Correlation Matrix

|     | IT1   | IT2   | IT3   |
|-----|-------|-------|-------|
| IT1 | 1.000 | .481  | .537  |
| IT2 | .481  | 1.000 | .469  |
| IT3 | .537  | .469  | 1.000 |

## Scale: RL

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .813             | .813   | 3          |

### Inter-Item Correlation Matrix

|     | RL1   | RL2   | RL3   |
|-----|-------|-------|-------|
| RL1 | 1.000 | .595  | .448  |
| RL2 | .595  | 1.000 | .729  |
| RL3 | .448  | .729  | 1.000 |

**Scale: IF**

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .871             | .871   | 4          |

**Inter-Item Correlation Matrix**

|     | IF1   | IF2   | IF3   | IF4   |
|-----|-------|-------|-------|-------|
| IF1 | 1.000 | .757  | .592  | .418  |
| IF2 | .757  | 1.000 | .706  | .664  |
| IF3 | .592  | .706  | 1.000 | .629  |
| IF4 | .418  | .664  | .629  | 1.000 |



**Scale: SE**

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .908             | .911   | 3          |

**Inter-Item Correlation Matrix**

|     | SE1   | SE2   | SE3   |
|-----|-------|-------|-------|
| SE1 | 1.000 | .847  | .700  |
| SE2 | .847  | 1.000 | .775  |
| SE3 | .700  | .775  | 1.000 |

## Scale: RP

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .838             | .843   | 3          |

### Inter-Item Correlation Matrix

|     | RP1   | RP2   | RP3   |
|-----|-------|-------|-------|
| RP1 | 1.000 | .700  | .589  |
| RP2 | .700  | 1.000 | .633  |
| RP3 | .589  | .633  | 1.000 |

## Scale: TR

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .859             | .860   | 3          |

### Inter-Item Correlation Matrix

|     | TR1   | TR2   | TR3   |
|-----|-------|-------|-------|
| TR1 | 1.000 | .843  | .587  |
| TR2 | .843  | 1.000 | .583  |
| TR3 | .587  | .583  | 1.000 |

## Scale: EP

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .741             | .741   | 2          |

### Inter-Item Correlation Matrix

|     | EP1   | EP2   |
|-----|-------|-------|
| EP1 | 1.000 | .589  |
| EP2 | .589  | 1.000 |

## Scale: CS

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

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

### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .910             | .911   | 3          |

### Inter-Item Correlation Matrix

|     | CS1   | CS2   | CS3   |
|-----|-------|-------|-------|
| CS1 | 1.000 | .793  | .723  |
| CS2 | .793  | 1.000 | .806  |
| CS3 | .723  | .806  | 1.000 |

**Appendix H: Multiple Linear Regression Test**  
**Regression**

**Variables Entered/Removed<sup>a</sup>**

| Model | Variables Entered   | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1     | AveEP,<br>AveWD,<br>AveRL,<br>AveIT,<br>AveRP,<br>AveTR,<br>AveSE,<br>AveIF | .                 | Enter  |

- a. All requested variables entered.
- b. Dependent Variable: AveCS

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .836 <sup>a</sup> | .698     | .686              | .58344                     |

- a. Predictors: (Constant), AveEP, AveWD, AveRL, AveIT, AveRP, AveTR, AveSE, AveIF
- b. Dependent Variable: AveCS

**ANOVA<sup>b</sup>**

| Model |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1     | Regression | 150.607        | 8   | 18.826      | 55.305 | .000 <sup>a</sup> |
|       | Residual   | 65.017         | 191 | .340        |        |                   |
|       | Total      | 215.624        | 199 |             |        |                   |

- a. Predictors: (Constant), AveEP, AveWD, AveRL, AveIT, AveRP, AveTR, AveSE, AveIF
- b. Dependent Variable: AveCS

**Coefficients<sup>a</sup>**

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
|       |            | B                           | Std. Error | Beta                      |        |      |
| 1     | (Constant) | -1.401                      | .347       |                           | -4.035 | .000 |
|       | AveWD      | .182                        | .061       | .150                      | 2.971  | .003 |
|       | AveIT      | .204                        | .066       | .158                      | 3.083  | .002 |
|       | AveRL      | .190                        | .067       | .171                      | 2.816  | .005 |
|       | AveIF      | .247                        | .077       | .199                      | 3.207  | .002 |
|       | AveSE      | .122                        | .056       | .131                      | 2.174  | .031 |
|       | AveRP      | .066                        | .049       | .078                      | 1.353  | .178 |
|       | AveTR      | .163                        | .069       | .142                      | 2.366  | .019 |
|       | AveEP      | .091                        | .043       | .098                      | 2.126  | .035 |

a. Dependent Variable: AveCS

**Residuals Statistics<sup>a</sup>**

|                                   | Minimum  | Maximum | Mean    | Std. Deviation | N   |
|-----------------------------------|----------|---------|---------|----------------|-----|
| Predicted Value                   | 2.4810   | 7.3335  | 5.1233  | .86995         | 200 |
| Std. Predicted Value              | -3.037   | 2.541   | .000    | 1.000          | 200 |
| Standard Error of Predicted Value | .067     | .248    | .120    | .031           | 200 |
| Adjusted Predicted Value          | 2.5548   | 7.3560  | 5.1264  | .86911         | 200 |
| Residual                          | -1.52902 | 1.21576 | .00000  | .57159         | 200 |
| Std. Residual                     | -2.621   | 2.084   | .000    | .980           | 200 |
| Stud. Residual                    | -2.734   | 2.129   | -.003   | 1.005          | 200 |
| Deleted Residual                  | -1.66359 | 1.28246 | -.00310 | .60124         | 200 |
| Stud. Deleted Residual            | -2.781   | 2.149   | -.003   | 1.009          | 200 |
| Mahal. Distance                   | 1.631    | 34.863  | 7.960   | 4.879          | 200 |
| Cook's Distance                   | .000     | .073    | .006    | .010           | 200 |
| Centered Leverage Value           | .008     | .175    | .040    | .025           | 200 |

a. Dependent Variable: AveCS

## Charts

### Scatterplot

Dependent Variable: AveCS

