



An Investigation of Service Quality at Phuket International Airport:
An Assessment from the Passengers' Viewpoint

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ชื่อวิทยานิพนธ์ การศึกษาคุณภาพการให้บริการของท่าอากาศยานนานาชาติภูเก็ต:
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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ (1) ศึกษาทัศนคติของผู้โดยสารต่อคุณภาพการให้บริการของท่าอากาศยานนานาชาติภูเก็ต (2) ศึกษาความคาดหวังและการรับรู้ของผู้โดยสารด้านคุณภาพการให้บริการของท่าอากาศยานนานาชาติภูเก็ต (3) ระบุและลำดับความสำคัญของงานบริการที่จำเป็นต้องปรับปรุงเพื่อพัฒนาคุณภาพการให้บริการ (4) เสนอแนะแนวทางการแก้ปัญหาที่เหมาะสมเพื่อการพัฒนาคุณภาพการให้บริการและความพึงพอใจของผู้โดยสาร ณ ท่าอากาศยานนานาชาติภูเก็ต ผู้วิจัยใช้วิธีเก็บแบบสอบถามจากกลุ่มตัวอย่างผู้โดยสารชาวต่างชาติจากนอกประเทศ จำนวน 400 ตัวอย่าง โดยใช้วิธีสุ่มตัวอย่างตามความสะดวกเพื่อให้ได้กลุ่มตัวอย่างที่ต้องการศึกษา กลุ่มตัวอย่างส่วนใหญ่เป็นนักท่องเที่ยวจากทวีปเอเชียและยุโรปที่เดินทางมาเพื่อพักผ่อน

การศึกษานี้ได้นำแนวคิดจากทฤษฎี “Gap Theory” และ “SERVQUAL” โดย พาราสุรามาน, ซีทรม, และ แบร์ (1998) และแนวคิดการศึกษาคุณภาพการบริการ (Services Quality Model) ของท่าอากาศยาน โดย เดล ฟอร์ดเนส (2009) ซึ่งกล่าวว่าความพึงพอใจของผู้โดยสารในคุณภาพการบริการของท่าอากาศยานจำแนกได้เป็น 3 ประเภทหลักคือ ความพึงพอใจต่อสิ่งอำนวยความสะดวกหรือบริการระหว่างดำเนินการเรื่องการเดินทาง (Servicescape) ความพึงพอใจต่อกิจกรรมสันทนาการหรือบริการระหว่างรอการเดินทาง (Services) และความพึงพอใจต่อการบริการของพนักงานการท่าอากาศยาน (Service Personnel) มาปรับใช้ในการศึกษาคุณภาพการให้บริการของท่าอากาศยานนานาชาติภูเก็ต นอกจากนี้การศึกษานี้ได้ใช้แบบวิเคราะห์ Importance-Performance Analysis (IPA) เพื่อประเมินความคิดเห็นของผู้โดยสารชาวต่างชาติซึ่งใช้บริการของท่าอากาศยานนานาชาติภูเก็ตต่อปัจจัยการบริการในด้านความสำคัญและระดับผลการปฏิบัติงานหรือระดับบริการที่ได้รับรวม 34 ปัจจัย

ผลการศึกษาพบว่าผู้ตอบแบบสอบถามให้ความสำคัญต่อปัจจัยเหล่านี้สูงเป็นสามลำดับแรก คือ ความปลอดภัย ความสะอาดของห้องน้ำ และประสิทธิภาพของเจ้าหน้าที่เช็คอินบัตรโดยสาร และผู้ตอบแบบสอบถามรู้สึกพึงพอใจต่อปัจจัยการให้บริการทุกปัจจัย ยกเว้นปัจจัยการอำนวยความสะดวกด้านโทรศัพท์ อินเทอร์เน็ตและสารสนเทศ ความคุ้มค่าเงินของร้านอาหาร และความคุ้มค่าเงินของแหล่งช้อปปิ้ง นอกจากนี้ทำอากาศยานนานาชาติก็ควรพิจารณาปรับปรุงปัจจัยการบริการใน 5 ปัจจัยหลักดังนี้ (1) การคัดกรองความปลอดภัย (2) บรรยากาศของท่าอากาศยาน (3) ระยะเวลาการรอคอยระหว่างตรวจเข้าเมือง (4) ระยะเวลาการรอคอยระหว่างการเช็คอินบัตรโดยสาร และ (5) ความสะอาดของห้องน้ำ จากการวิเคราะห์ปัจจัยคุณภาพการบริการตามแนวคิดการศึกษาคุณภาพการบริการท่าอากาศยานของฟอดเนส (Fodness, 2008) พบว่ามีข้อจำกัดด้วยหลักการของฟอดเนสไม่สามารถจำแนกปัญหาออกเป็นหมวดหมู่จากกันได้เด็ดขาด เนื่องจากปัจจัยการบริการบางปัจจัยอาจจำแนกได้มากกว่าหนึ่งหมวดหมู่ เช่น บรรยากาศของท่าอากาศยานอาจเป็นได้ทั้ง สิ่งอำนวยความสะดวกหรือบริการระหว่างดำเนินการเรื่องการเดินทาง (Servicescape) และ กิจกรรมสันทนาการหรือบริการระหว่างรอการเดินทาง (Services) เป็นปัจจัยที่มีผลต่อการประเมินค่าความพึงพอใจของผู้โดยสารตลอดระยะเวลาของการใช้บริการของท่าอากาศยาน

แนวทางการแก้ไขปัญหาเพื่อพัฒนาคุณภาพการให้บริการซึ่งผู้บริหารท่าอากาศยานนานาชาติก็ควรให้ความสำคัญในการแก้ไขปรับปรุงปัจจัยการบริการจำนวน 5 ปัจจัยที่กล่าวมาข้างต้นซึ่งผู้โดยสารให้ความสำคัญสูงสุดแต่ความพึงพอใจคุณภาพการบริการอยู่ในระดับที่ต่ำซึ่งนับว่าเป็นปัจจัยที่เป็นจุดอ่อนขององค์กรทางด้านบริการในปัจจุบัน ดังนี้ สิ่งอำนวยความสะดวกหรือบริการระหว่างดำเนินการเรื่องการเดินทาง (Servicescape) ที่ท่าอากาศยาน ได้แก่ การตรวจเช็คความปลอดภัยอย่างถี่ถ้วน ระยะเวลาการรอคอยระหว่างการเช็คอินบัตรโดยสารและพิธีการตรวจคนเข้าเมือง ดังนั้นการปรับปรุงการให้บริการเพื่อให้เป็นที่พึงพอใจของลูกค้าซึ่งให้ความสำคัญต่อเวลา ท่าอากาศยานควรเพิ่มประสิทธิภาพของผู้ให้บริการรวมถึงอุปกรณ์เครื่องมือที่เกี่ยวข้องในขั้นตอนคัดกรองความปลอดภัย การเช็คอินผู้โดยสาร พิธีการตรวจคนเข้าเมือง นอกจากนี้บรรยากาศของท่าอากาศยานและปัจจัยความสะอาดทั่วไปโดยเฉพาะอย่างยิ่งความสะอาดของห้องน้ำมีผลอย่างมากต่อระดับความพึงพอใจโดยรวมด้านคุณภาพการบริการต่อผู้โดยสารเนื่องจากการบริการที่ผู้โดยสารส่วนใหญ่ใช้บริการระหว่างรอการเดินทาง ฉะนั้นการปรับปรุงคุณภาพด้านบรรยากาศของการท่าอากาศยานนานาชาติก็ควรจะมีการขยาย (Expansion) และซ่อมแซมบูรณะ (Renovation) ตัวอาคารท่าอากาศยานให้มีสภาพแวดล้อมโดยรวมอยู่ในสภาพที่ดี ปลอดภัย มีมาตรฐานทัดเทียมท่าอากาศยานนานาชาติอื่นๆ และประการต่อมาปัจจัยความสะอาดของห้องน้ำ

ท่าอากาศยานนานาชาติภูเก็ตควรเพิ่มความใส่ใจเป็นพิเศษเรื่องความสะดวก สุขอนามัยและความเพียงพอของสุขภัณฑ์เครื่องใช้ในห้องน้ำ เช่นกระดาษชำระ สบู่เหลวล้างมือ

การเสริมสร้างกิจกรรมสนทนากการหรือบริการระหว่างรอการเดินทาง (Services) รวมถึงกิจกรรมเสริมต่างๆ เช่น พื้นที่เพื่อการพักผ่อน บรรยากาศ ร้านอาหารเครื่องดื่ม หรือแม้แต่กิจกรรมยามว่าง เช่น การเชื่อมต่ออินเทอร์เน็ต การดูหนัง ฟังเพลง หรือช้อปปิ้ง ช่วยให้ผู้ใช้โดยสารผ่อนคลาย และสามารถใช้เวลาว่างระหว่างที่กำลังรอขึ้นเครื่อง และการปรับปรุงสมรรถนะในการให้บริการของบุคลากรของท่าอากาศยานภูเก็ตทั้งในแง่ปริมาณและคุณภาพงาน เช่น การสื่อสารโดยใช้ภาษาต่างประเทศ การใช้อุปกรณ์เครื่องมือ ระยะเวลาในการอ่านตรวจสอบเอกสาร และผลสัมฤทธิ์ของงาน

คำสำคัญ: คุณภาพการบริการ, การวิเคราะห์ความสำคัญ-ผลการปฏิบัติงาน (IPA), ท่าอากาศยานนานาชาติภูเก็ต

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ABSTRACT

This paper aims to (1) analyze the factors which are crucial to service quality perception; (2) examine importance and performance of service quality at Phuket International Airport; (3) identify and prioritize service areas requiring managerial attention and action to ensure an improving service quality; and (4) propose possible solutions to improve service quality and customer satisfaction at Phuket International Airport. Questionnaires were collected from 400 respondents who were the international passengers and had experienced the service of Phuket International Airport by using the Convenience Sampling to select the samples for the study. The majority of the respondents were leisure tourists from Asia and Europe.

This research employed the theoretical concepts of “Gap Theory” and “SERVQUAL or service quality” by Parasuraman, Zeithaml, and Berr’s (1998) and the Airport Services Quality Model by Fodness (2009) that explained the factors affected on the passenger’s satisfaction including servicescapes, services and service personnel for the study of the service quality at Phuket International Airport. In addition, Importance-Performance Analysis had been used to examine the perception of the passengers towards 34 service attributes in terms of importance and performance at Phuket International Airport.

The study results revealed that the respondents placed high importance on “Feeling of being safe”, “Cleanliness of restrooms”, and “Efficiency of check-in staff” as the top three rank of the most importance attributes of service quality at Phuket International Airport and they were satisfied with the performance of all service attributes at high level, except the operation of “Phone/ Internet/ IT facilities”, “Value for money of restaurant/ eating”, and “Value for money of shopping” that ranged moderately. In addition, Phuket International Airport should consider to

improving 5 service attributes, namely thoroughness of security inspection, ambience of the airport, waiting time for immigration procedure, waiting time in check-in queue and cleanliness of restroom. According to the analysis of service quality attributes from the study of service quality at the airport by Fodness (2008), the researcher found the limitation that the dimension of some Fodness's 34 service attributes could not be completely separated into such particular aspect. For example; 'Ambience of Airport' can be categorized to 'Servicescape' and/or 'Services' which are subjects affected on the passengers' satisfaction assessment throughout the period of their airport usage.

The management team of Phuket International Airport should give importance to improve the five service attributes of thoroughness of security inspection, ambience of the airport, waiting time for immigration procedure, waiting time in check-in queue and cleanliness of restroom that the respondents placed the importance at the highest level but the satisfaction of their performance were at the low level. These factors are the service weaknesses of the organization. The following measures are the solutions to the problems in order to improve the service quality of Phuket International Airport. Servicescape including thoroughness of security inspection, waiting time for immigration, and waiting time in check-in queue is the factors that facilitate customer action during the service encounter and enhance their overall service quality perception. The airport should provide an efficient arrangement of machinery and equipment to serve the passengers properly in order to minimize time of waiting during whatever process of airport services. Further an expansion and renovation of the airport are recommended in order to meet the satisfaction of passengers by improving 'Ambience of the airport' factors. Secondly, another most importance factor being more sensitively taken care by the organization is cleanliness, especially the cleanliness of restroom. Phuket International Airport should pay more attention to the cleanliness, hygiene and the adequacy of amenities used in the rest room such as tissue paper and soap dispensers. The provision of services and other activities such as the recreation area, atmosphere, restaurants and entertainment (Internet, movie, music hall or shopping) would facilitate the passenger to relax and spend their precious time of waiting at the airport. Lastly, the service personnel's competency of both quantity and quality should be enhanced such as communicative skills in foreign languages, the use of machinery and equipment, time to approve the documents and effectiveness of work.

Key Words: Service quality, Importance Performance Analysis (IPA), Phuket International Airport

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LIST OF ABBREVIATIONS AND SYMBOLS

AAT	Airport Authority of Thailand
ACI	Airport Council International
AGA	Action Grid Analysis
ASQ	Airport Service Quality
AOT	Airport of Thailand
AIP	Integrated Aeronautical Information Publication
BOI	Board of Investment
CBI	Country Brand Index
FAA	Federal Aviation Administration
IATA	International Air Transport Association
IPA	Importance-Performance Analysis
LCC	Low Cost Carrier Terminal
LCCs	Low Cost Carriers
LOS	Level of service
PIA	Phuket International Airport
TAT	Tourism Authority of Thailand

CHAPTER 1

INTRODUCTION

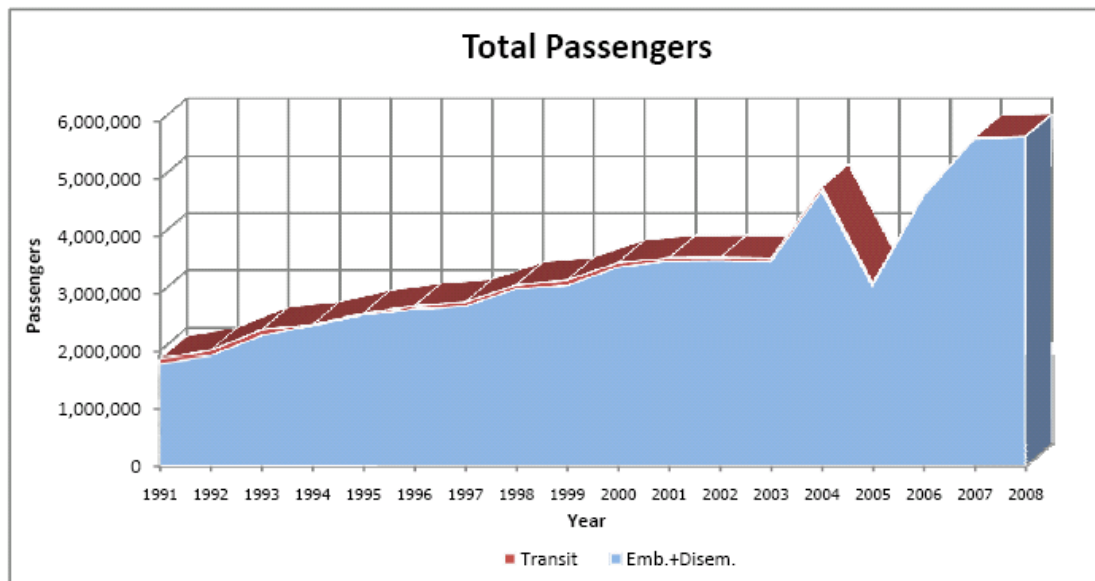
1.1 Statement of the Problem

Thailand has been named by World Trade Market in London the *Best Country Brand for Value for Money* by Country Brand Index (CBI) (TAT, 2008). This result suggests that Thailand has become the leading tourist destination for those seeking value-for-money holidays.

Phuket, Thailand's largest island, is located in the Andaman Sea, just off the coast of Phang-Nga in the South of Thailand. With its geography and natural resources, Phuket has become one of the world's most famous tourist destinations, attracting both Thai and foreign tourists from every corner of the globe.

The tourism industry in Phuket and the neighboring provinces along the coast of the Andaman Sea has grown enormously, and attracts a large number of Thai and foreign tourists. In 2007, about 5,000,000 foreign and domestic tourists visited Phuket, of whom 2,631,968 tourists arrived by plane (Domestic Tourism Statistics: Phuket, 2007). The trend of arrivals in Phuket was predicted to increase reflecting an increase in number of passengers using Phuket International Airport every year as shown in figure 1.1. Airport of Thailand (2008) or AOT reveals the total number of passengers traveling through was 5,730,748, including 2,409,305 international passengers and 3,321,443 domestic passengers. However, due to the impact of the global economic crisis and other factors, such as domestic political instability, the number of passengers increased by only 0.46% compared to 5,704,365; the number of passengers in 2007 (Airports of Thailand, 2008). Tourism in Phuket hence grew more slowly, resulting in a fall in air travel at Phuket International Airport, see the rigid increase in figure 1.1.

Figure 1.1 Trend of passengers using Phuket International Airport



Source: Airport of Thailand (2008)

Rendeiro (2006) stated that *tourism services* are a commodity whose quality depends on an efficient transport infrastructure. An efficient transport infrastructure must be provided to guarantee a high service quality. For transport services, reliability becomes the core of service quality.

An airport serves as a first point of entry to a country, so its appearance could significantly influence the impression of a place. Airport activities have to be designed in such a way as to minimize travel time, and hence to increase leisure time available to passengers. It is also desirable, from the airport's point of view, to encourage passengers to spend some of their time and money in the commercial area of the airport at the end of their holiday.

Airports of Thailand (AOT), a leader in Thailand's airport business, operates six international airports at different locations throughout the country, housing both domestic and international flights: Suvarnabhumi International Airport, Don Mueang International Airport, Chiang Mai International Airport, Chiang Rai International Airport, Hat Yai International Airport, and Phuket International Airport. The AOT has two main source of income: Aeronautical revenue, that is, landing charges, parking charges, passenger service charges and aircraft service charges; and non-aeronautical revenue, consisting of concession revenue, office and real estate property rent and service revenues. At most airports, the passenger service charges are usually rated per

departing passenger, with a lower charge for domestic passengers reflecting the lower income generation associated with this type of passenger (Department of Civil Aviation, 2008). As table 1.1 shows, the charges collected from passengers who depart to foreign destinations are currently a maximum of 700 baht per person. This is higher than charges paid by domestic passengers.

Table 1.1 Thailand Airports' Passengers Service Charges

Thailand Airports	Foreign Destination	Domestic Destination
Airports operated by AOT	≤ 700 Baht	≤ 100 Baht
Samui and Sukhothai	≤ 500 Baht	≤ 400 Baht
Trat	≤ 400 Baht	≤ 200 Baht
Others	≤ 400 Baht	≤ 50 Baht

Source: Integrated Aeronautical Information Publication (AIP), Department of Civil Aviation (2008)

Phuket International Airport plays the role of the main transport infrastructure and host as the gate welcoming tourists upon arrival to their holiday destination and also facilitating them on their departure back home. Some may argue the airport is not a tourism destination, it is just a transit point like Fodness (2008) mentioned. However as the host, it is worthy of note that the first and last perceptions of tourism service quality take place at the airport. As a consequence, to the tourist destination (Phuket), realizing customer satisfaction is one of the most important factors to help strengthen its competitive advantage.

One major aspect which has gained considerable interest among businesses and academics is the focus of this study: service quality. Service quality becomes the key to differentiating the competitive provision of business standard, not only in the hospitality industry but also in other firms. Quality has become essential as a tool to maintain business standards and to differentiate among service providers (Kandampuly, 2002). Hence, service quality and customer satisfaction are the key consideration of this study. The relationship between these two components is clear in terms of the potential for sustainable competitive advantages in the hospitality business. However, there is no concrete theoretical concept to confirm that all service quality improvements will be able to make customers satisfied.

Based on the above arguments, this study investigated the operation of Phuket International Airport and whether or not the customers were satisfied about service quality

standards there. Referring to the long experience of ACI who specialize in airport management and employed the Airport Service Quality (ASQ) measure, created by Airport Council International (ACI), 34 attributes of service quality were used to assess the passengers' perception of service quality at the airport, each relevant to the needs of the passengers who use the service. Further, to analyze the results, Importance Performance Analysis (IPA) and a model for airports service quality by Fodness (2008) were selected for data analysis. The former, IPA was performed to analyze whether services at Phuket International Airport meet the need of Passengers, while the latter one was used for the assessment and development challenges based on information collected in the survey.

As the research is about service quality at Phuket International Airport, the study should not only be beneficial for academic purposes, but also for the airport organization, to help it improve the service quality of its operation.

1.2 Related Literature

1.2.1 Significance of Service Quality

Most organizations, including tourism organizations, now recognize customer satisfaction as an important element in their long-term success. Furthermore, satisfied customers are recognized as giving an organization the opportunity to achieve their company's goals, whether in the area of customer loyalty, returning custom, or providing positive word-of-mouth references.

Service defines the production of essentially intangible benefits, either as a significant element of a tangible product, or through some form of exchange that satisfies an identified need (Palmer, 2001). The definition above suggests that most products are made up of a combination of tangible goods and intangible services.

Quality in service is a critical element in service offerings (goods). The intangible service standard provided by the organization forms a quality standard which will hopefully be accepted by the potential customer. When boarding a flight, for example, a customer will perceive the service satisfaction which is provided by the airport, and hence will be able to assess the quality service standard of the airport's staff performance. There is no universal, clear-cut definition of the term "Service Quality". Service quality is subjective, meaning different things to

different people, at different times and on different occasions. There have been numerous attempts to define service quality, and the closely related concept of customer satisfaction (Schneider, 2004).

Among various concepts of service quality, the most well known researchers, namely Parasuraman, Zeithaml, and Berr (1998), as cited in Kandampully, Mok, Spark (2001) propose that the model of service quality is the assumption model of the quality based on the result of gaps between people's expectations and their perceptions of service performance. The model's five core components of service quality include reliability, assurance, tangibles, empathy and responsiveness. First, Tangibles involve physical facilities, equipment, personnel and communication materials. Second, Reliability is the ability to perform the promised service dependably and accurately. Third, Responsiveness means willingness to help customers and to provide prompt service, whilst capturing the notion of flexibility and the ability to customize the service to customer needs. Fourth, Assurance means competence and courtesy of employees and their ability to convey trust and confidence. (This category includes the measured components; namely competence, courtesy, credibility and security). The last one, Empathy represents provision of caring and individualized attention to customers, including access, communication and understanding the customer.

1.2.2 Concept of Airport Management

An airport is perceived as a key point in the air transport system. Rendeiro (2006) said of a tourist destination, the first and the last perception of service quality takes place at the airport, whereas Fodness (2009) said the airport is not a destination for the air traveler but a transition point. While Graham (2003) states the airports provide all the infrastructure needed to enable passengers and freight to transfer from ground-based to air transportation.

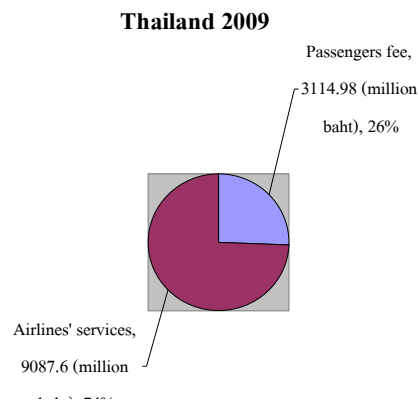
The efficiency and efficacy of airport processes are critical. In order to satisfy the airport's customers, it is important to provide the best service, according to customer's needs. In addition, to achieve the desired service quality, it needs to be measured. The reason why the airport should understand the customer satisfaction is to improve its service quality in order to exceed the customer's expectations.

The customers of an airport can be divided into five main groups: airlines, passengers, concessionaires (stores and on-site businesses), visitors and non-travelers (Badanik,

2009). According to Fodness (2009), airport customers are varied including passengers, airlines, employees, concessionaires, tenants and others. Passengers are the largest group. Beside the passengers, the airlines are another key customer of airports, because they pay for the services provided by the airport (e.g., runways, terminal facilities, office space, technical facilities). Below figure 1.2 shows the aeronautical revenue of Airport of Thailand (AOT). AOT has gained 12,202.57 million baht or 56% as the majority revenue from aeronautical revenues of loading charges, parking charges, passenger service charges and aircraft service charges. Therefore, to develop good relationships with airlines is critical, as ultimately this will largely determine the air services on offer at the airport (Badanik, 2009). The huge amount of customers mentioned above is evidence of the airport's growth; therefore to study customer satisfaction is a vital key to improve service quality, in order to retain their competitive advantage at the airport. However, this study is only focusing on passengers - the end users of airport facilities.

Figure 1.2 Sources of Airport of Thailand's Aeronautica revenues

Sources of Aeronautica Revenue by Airport of



Source: Annual Report of 2009, Airport of Thailand.

An additional challenge of airport service quality is that the overall service produced is a result of the combined activities of various different organizations such as airlines, immigration officials, concessionaires and so on. These different factors may have different ultimate objectives and conflicting views on what determines satisfactory or good services (Lemer, 1992 as cited in Graham, 2003). Consequently, each area of responsibility needs to be clearly identified, and the airport operator must define a common goal for all as regards to service

quality. The airport operator only has partial control of all the processes that make up the final product delivered to the customers.

1.2.2.1 Concept of Airport service quality

Many service industries increasingly emphasize quality management, which began in the 1980s. Service quality, which had evolved as a concept related to manufacturing products, began to be replaced by customer-focused notions. This required close consideration regarding the customers' needs, wants, and how their needs could be met by the different service dimensions. Therefore, new approaches, such as continuous improvement programs and quality management, have been applied by increasing numbers of service industries.

Most service industries are facing a particular problem in measuring the quality of service because of the characteristic of uneven spread of demand. For instance, the terminal in the airports will look and feel very different at quiet times, such as in rainy or low season, compared to at busy and crowded times, such as the Christmas and New Year holiday week.

This study investigates the services of Phuket International Airport facilities as an approximation of the service quality given to the customers. There are several services while the passengers are processed by airports, such as check-in, passport, security control when departing, passport control when arriving, and the baggage claims service. These service facilities should be provided to the customers in an efficient way, to minimize wasted time, and to permit passengers to enjoy their shopping and leisure time in the commercial area at the airport.

The relationship between airport infrastructure and airport service quality mentioned by Graham (2003) is that if airport infrastructure cannot attend to all services efficiently, airport service quality will be low, and tourist perception of the airport becomes negative. Meanwhile, if the level of service is low, the perception of airport service quality will decline. An example of a low level of service could include excessive time spent by the customer at the ticket counter, who will hence have less time to enjoy the airport leisure area or other leisure activities.

As mentioned above there is a variance in the airport service quality, which has a major role in influencing the passengers' perception of the quality of services provided. These may be some of reasons why airports throughout the world participate in non-profit aviation association such as Airports Council International (ACI), and International Air Transport Association (IATA) in order to improve their airport management and operation by customer-focused methods to improve service quality at the airports.

1.2.2.2 Differentiation of service levels

Chang et al. (2008) mentioned that there are a variety of reasons, including increased demands and congested infrastructures, indicating a rising dissatisfaction with service quality offered by air transport. The aviation industry has seen continuous growth of about 5-6 percent in the last 20 years (Graham, 2003). However the growth was dramatically halted recently due to 9/11 and the global economic down turn of 2008 and 2009 (Fodness, 2009).

Once the world economic has recovered, additional expanded airport capacity, such as runways, terminal, access road, safety, security and so on, are required to significantly impact the airport business.

Airports tend to serve passengers with very different expectations, and of course it is very difficult to please everyone so the emphasis on customers' satisfaction is more critical. Significantly, the level of segmentation was then increased to serve the different groups which may be categorized by their behaviors, expectations of airport experience depending on the type of traveler, purpose of trip and his or her circumstances.

Despite the differentiation of expectations and the segmentation of customers in terms of airport service quality, most airports and airlines try to offer a common set of services and facilities with very minor segmentation. The most notable differentiation was separated check-in for economy and business class passengers (Graham, 2008). A small degree of segmentation has taken place in the airport by arranging separate checking-in counters for economy and business-class passengers.

This research provides some cases and concepts of the significant segments includes business and economy class passengers, and low cost carriers (LCCTs) which are relevant to this study.

Graham (2008) mentioned some samples of passenger segmentation that have taken place at the airport. Some airports provide business class passengers access to 'fast-track' systems which guide them swiftly through various processes such as immigration and customs. Likewise the use of airlines lounges for premium class and frequently flying passengers has expanded rapidly. However it is not just business class passengers who can now benefit from special facilities, any passenger can have access to that special facilities by paying additional fees. The other special facilities include special lounges for babies and children; such as baby care lounges, seating for the rest of family, play area etc. Additional payments for a security fast lane ticket is also available for all passengers at Liverpool Airport (Graham, 2008).

The emergence of the no-frill or low cost carrier (LCC) industry has created a new challenge for airport considering splitting up their services by refurbished existing and dedicating new terminal facilities to offer different products and services to different airline types. Due to increased demand and the needs of LCCs' being different from the conventional carriers to attract the investment of no-frill airlines businesses airports have to ensure the availability of airport offerings such quick turnaround time, more productivity, and cutting down costs (cost-effective) (Graham, 2008). Graham (2008) also gives a note for the airports which serve both full services and LCCs that it is difficult to meet the different and often conflicting needs of these two airline types. She recommended to charge for the simple design with lower standard than expected in conventional/full service terminal, and further International Air Transport Association (2007 as cited in Graham, 2008) mentions that airports must clearly justify some costs of processes such as *security process* which will be difficult to reduce for low cost terminal.

Regarding the Low Cost Carrier Terminal (LCCT) in the Asia Pacific region, Kuala Lumpur International Airport is an example that decided to have a LCCT for Air Asia which rapidly increased its passengers within a few years from 0.6 million to over 5 million in 2006-2007. The terminal was designed and built to suit the low cost carrier business model that requires basic terminal facilities and amenities. The terminal is designed to facilitate the passengers' movement of international and domestic departures and arrivals within a single floor operation area, although escalators and aerobridges are still required. The terminal opened on 23rd March 2006 and within the same year KL International Airport was voted as CAPA Low Cost

Airport of the Year in the CAPA Aviation Awards for Excellence. Overall in 2006, 18 percent of all passengers were related to LCCs (Malaysia Airport, 2009).

In addition, there is a general issue related to non-aeronautical revenues. Although the low cost terminal has commercial facilities, the revenues from this terminal may be lower than what would have been generated in the full service or the main terminal because of a more limited retail offering and also because the basic terminal may not create the right atmosphere and experience to encourage travelers to shop (Graham, 2008).

Similarly, airline lounges have separated business class passengers from leisure travelers. It is not only the airlines which provide the above service, but nowadays there are some airports, for instance London Heathrow, which ask for a fee from the passengers to provide upgraded products such as a special lounge, express security clearance, shower facilities, hot and cold drinks, and so on. These provisions can be counted as a source of revenue for the airport. Despite the above development, most airports try to offer products to passengers who may want to get through airport as quickly as possible in order to enjoy the opportunity of being able to shop and take refreshments. Meanwhile, Graham (2003) mentioned that the increased emphasis on security due to the 11th September 2001 incident has impacted service quality regarding the queuing and waiting process. Graham (2003) mentioned that some airports look at ways to keep the customers satisfied. For example, some airports have employed dedicated entertainment managers, and some employed actors to entertain the passengers during the security check process.

1.2.2.3 Measuring the level of service quality

The nature of the expectation and perception of airport service quality is unclear. Both academic and industry researchers have designed several tools to measure passengers, perception of service quality.

One approach is the widely accepted gap-theory model which was created by Parasuraman et al. (1998 as cited in Kandampully, Mok, & Sparks, 2001) for measuring service quality for other areas in hospitality industry. With the exception of the service quality at the airport Fodness (2009) probed service quality outcomes, satisfaction and other intangibles of airport expectation, along with facilities other tangible aspects of the airports's physical setting. The most regularly used metric is the overall level of service (LOS) including the

measurement of passengers perception of airport service quality, for instance; air transportation agencies; FAA-Federal Aviation Administration, Transport of Canada (Correia & Wirasinghe, 2007). Fodness (2009) mentioned that his research is distinguished from the mainstream of service quality perspective (eg. Gap model) for his research focuses on quality at the attribute level. He largely ignored the gap-theory of service quality, in which marketing and service concepts have focused little attention on airports or on passengers. Remarkably, passengers in transit spend extended periods of time in complicated servicescape where they find themselves as the result of a highly limited process of decision making. As a result, while it is possible to describe passenger experiences from issues ranging from airport signage to restroom cleanliness, there is neither common accepted theory-based model of airport service quality nor a comprehensive profile of the experience.

This study is largely based on the study of Fodness (2009), that explains the model of airport service quality expectations comprising of three primary dimensions; servicescape, interaction, and services. Likewise, to apply the Airport Service Quality (ASQ) is the vital key to this research. The ASQ survey, measuring delivered level of service by ACI has been used by ACI at 130 airports including 47 airports in Europe. 34 services attributes were rated by over 220,000 passengers per year while waiting at the gate (ACI, 2008). The huge amount of ACI's members and passengers above creates a reliable measuring tool for airport service quality. The above mixed method supports the reliability of this research in terms of the measuring and analysis of this study.

This work analyses the level of service quality at Phuket International Airport. The next section examines the researchers who have developed models of airport service quality relevant to this study, in order to gain a thorough understanding of service quality.

1.2.2.4 Models of airport service quality measuring

This research employed 2 models related to the Airport Services Quality includes; Airport Council International Model and Dale Fodness Model. The first model, Airport Council International (ACI), examines the perception of the passengers towards 34 service attributes in terms of importance and performance at Phuket International Airport. The latter model is from Fodness (2009) that explained the factors affected on the passenger's satisfaction

including servicescapes, services and service personnel for the study of the service quality at Phuket International Airport.

****ACI: Airport Council International***

This study not only provides academic research, industry research is also available through the study of airport service quality. Airports Council International, a non profit association of the world's airports, whose principal purpose is to advance the interests of airports and to promote professional excellence in airport management and operations, counts 597 members operating over 1679 airports in 177 countries and territories. In 2008, airports worldwide welcomed 4.9 billion arriving and departing passengers and handled 86 million tonnes of cargo. Therefore a survey was developed and undertaken solely by ACI in 2006 called Airport Service Quality (ASQ).

Many airports joined ASQ not only to get passenger opinions on a specific issues, but also to get other airports' ratings plus to analyze passengers' important perceptions regarding airport service quality. Over 130 airports currently participate, including 47 in Europe (ACI, 2008). In addition every year over 220,000 passengers are interviewed and asked to rate their experience of the airports. The list of Thirty-four services is listed as follows; Thoroughness of security, Feeling safe and secure, Passport inspection, Walking distances, Courtesy of airport staff, Courtesy of check-in staff, Courtesy of security staff, Efficiency of check-in staff, Cleanliness of terminal, Flight into screens, Overall Satisfaction, Customs inspection, Arrivals passport inspection, Availability of toilets, Ease of connecting, Ground transportation, Waiting at security, Ease of finding your way, Cleanliness of toilets, Business lounges, Ambience of airport, Baggage carts, Waiting at check-in, Baggage delivery, Comfortable waiting areas, Restaurant facilities, Shop opening hours, Parking facilities , Bank and ATM facilities, Value of money of restaurant facilities , Internet/IT facilities, Shopping facilities, Value of money of Shopping, and Value of money of parking.

In addition Graham (2003) states that small airports with a single terminal provide higher levels of service quality not only because smaller airports seem more personal but also because they usually serve the smaller national and regional populations. Furthermore, some passengers are likely to complain more than others. In the case of the United Kingdom, Maiden, (2002) as cited in Graham (2003) mentions business travelers, frequent

travelers, and male passengers tend to be far more critical than foreign leisure travelers, first-time users, and female passengers.

Another critical challenge of airport service quality is that the overall service produced is a result of the combined activities of various different organizations such as airlines, immigration officials, concessions and so on. These factors may have different ultimate objectives and conflicting views on what constitutes satisfactory service (Lemer, 1992 cited in Graham, 2003). Consequently, their areas of responsibility needs to be clearly identified and the airport operator must define a common goal for all as regards to service quality because in effect, the airport operator only has partial control of all the processes making up the final product for the customers.

Airports tend to serve passengers with very different expectations, and of course it is very difficult to please everyone. The small segmentation has taken place in the airport by the separation of checking-in which splits economy and business-class passengers. The use of airline lounges has also helped to separate business and leisure travelers. It is not only the airlines which provide the above service: nowadays there are some airports, for instance, London Heathrow in 2000 asked a fee from the passengers so they could have access to the airport's upgrade products such as special lounge, express security clearance, shower facilities, hot and cold drink and so on. Providing the above can be counted as a source of revenue for the airport. Despite the above development, most airports try to offer one overall product to the passengers who may want to get through airport as quickly as possible in order to enjoy the opportunity of being able to shop and take refreshments. Meanwhile, Graham (2003) mentioned, due to the 11th September 2001 incident, the increased emphasis on security have affected service quality regarding the queuing and the waiting process. Some airports have looked at ways to keep the customers happy, for example, for some there is manager of entertainment, and some employs actors to entertain the passengers during the process of security check.

****Dale Fodness***

The first researcher named Fodness developed a conceptual model of service quality in airport via an empirical investigation of passengers for his research (Figure 1.3). The basic concept of Fodness's (2009) research is composed of three primary dimensions - servicescape, interaction, and service.

Figure 1.3 Preliminary conceptual model for airport service quality



Source: Fodness (2009)

1st dimension# Servicescape

Servicescape covers all the objective factors controllable by the service provider that facilitate customer action during the service encounter and enhance their overall service quality perception. By improving in these areas, Phuket International Airport would help to boost not only its own performance and profits, but also the wealth of Phuket as a whole, due to the increased number of tourist visits that would result.

Airportscape may consist of the arrangement and relationship of machinery, equipment and furnishing, and the ability of servicescape to satisfy customer service goals. Of 34 attributes ; “Thoroughness of security inspection” Passengers felt the security checks were superficial and inadequate, making them feel unsafe. “Waiting time for immigration procedure” Immigration queues are too long reflecting to customer satisfaction, therefore additional immigration desks and officials should be installed. “Waiting time in check-in queue” check-in queue is often slow, additional desks should be installed.

“Ambience” includes temperature, lighting, noise, music and scent and so on, that affect the passengers’ perception is also included in airportscape as well. Therefore an airport should be clean, should have soothing music playing throughout its facilities and terminal with as much natural light through windows, skylights, etc. as possible. An airport’s decor should match the local culture of the city at which it located, an airport should display art and/or have modern decor. In other settings, ambient conditions have been found to have either stressful or relaxing effects on customers mentioned by Miliman (1982, 1986), and Yalch and Spartenberg (1988) was cited in Fodness, 2009. Fodness (2009) combines the *ambience* which is related to the

'feeling' as a part of *the first* (servicescape) and *the third factors* (services) of airport service quality dimensions. These first and third factors contain items of ambience scale which are more tangible, including temperature, lighting, noise, music and scent and so on, that affect perceptions of an environment. Apart from the above, the ambience was described as the 'decor' of the airport. Therefore the decoration of airport is crucial to the passengers' perception of service quality at Phuket International airport. The recommendations for improving this service attribute are: an airport should be clean, should have soothing music playing throughout its facilities and terminal with as much natural light through windows, skylights, etc. as possible. An airport's decor should match the local culture of the city at which it located. An airport should display art appropriate to the current decor. In other settings, ambient conditions have been found to have either stressful or relaxing effects on customers (Miliman, 1982; 1986, and Yalch and Spartenberg, 1988 cited in Fodness, 2009). The above can be a guideline for airport management to play a role in helping to meet expectations underlying passengers' service quality perceptions of the airport.

Moreover airportscape covers signs and symbols, explicit communication (eg., posted labels, directions and rules), which are provided to enable customers to make convenient connections. The relationship between servicescape (Airport facilities) and airport service quality as mentioned by Graham (2003) is, if servicescape cannot attend to all service efficiently, airport service quality will be low, and tourist perception of airport becomes negative. Similarly Chang et al. (2008) theorized failed service encounters (airportscape) will result in the dissatisfaction of airport passengers. Meanwhile, if the level of service is low, their perception of airport service quality will decline, for example low level of service; time spent by the customer at the ticket counter, having less of time to enjoy the airport leisure area.

"Cleanliness of toilet facilities" is one of the most crucial attributes which always affects the passengers' perception while they are using the public facilities like airport. The cleanliness of the airport and toilet facilities is included in the airportscape category. One aspect of this concerns research into the cleanliness of toilet facilities found that toilet paper dispensers and soap dispensers were considered by the customers to be often empty (Cintas.com, 2008). Customers also considered that the toilets were often unacceptably dirty. It would be better if the toilets were regularly cleaned and re-stocked by staff. This study analyzed the relationship

between passengers' demographics and the perceptions of the physical environments of waiting areas, applying the summarized indices of passengers' satisfaction with physical environments in the waiting areas. What was determined is that women were less satisfied with the cleanliness of the physical environments. Normally, women take more responsibility for a general cleanliness at home, which might imply that women have higher expectations of cleanliness than men. In addition, in terms of restroom environment, trash tends to accumulate much faster in women's restrooms than in men's restrooms (BMC Health Services Research , 2007). Based on the above research into the improvement of restrooms by the medical industry, the researcher suggest that the airport housekeeping staff check and clean the restrooms more frequently to sustain higher comfort levels for female customer use.

2nd dimension# Services

Services - defined as any activities or services that the airport can offer to facilitate how passengers choose to use their precious time spent waiting as airport experiences often demand a significant time commitment. Therefore other services or activities which are not related to above proposal would not count in this category. Airport services is a necessity for passengers needing to be physically present in the airport and empahsizes issues of time and of how time is spent. Once a passenger has entered the terminal, Darko (1990) cited in (Fodness, 2009) found that the time passengers spent waiting at the airport was on average in excess of one hour sometimes caused by factors such as flight delays and cancellations due to security, breakdowns and weather etc. Referring to the reseach of Fodness (2009), he has highlighted the importance of time spent waiting at the airport, as well as, given the value of time spent waiting to many passengers, more favourable perceptions of airport service quality provided to them.

Productivity, maintenance, and leisure; three activities that people do with their time spent waiting at the airport. First, productive activities consist of work or study. Second, maintenance activities are directed to people's bodies (e.g., eating, resting, grooming) and their possessions (e.g., housework, shopping). The last activities, leisure includes three main parts; media consumption such as watching television, listening to music or reading; conversation; and more active leisure, incuding hobbies, sports, exercise, going out to restaurants, movies and going to the mall. It can be inferred that people like leisure time; they don't like to waste time as the three scholars, Graham (2003) and Rendeiro (2006) and Fodness (2009) said.

3rd dimension# Service Providers (Staffs)

Service Providers (Interactions with service personal) This partially resembles the original Parasuraman et al.(1998) SERVQUAL construct. The themes generated by passengers in this study were clearly identifiable as SERVQUAL dimensions including; tangibles, (for instance, (“the way an airport employee is dressed should easily identify their function”), Responsiveness, (eg. “Employees at an airport should never be too busy to respond to customers question promptly”), Assurance (“I expect employees at an airport to be courteous”), and Emphathy, (“There should be employees at an airport available to offer me individualized attention”). The service provider dimension created by Fodness (2009) does contain elements of the original Parasuraman et al. (1988) consumer perceptions of their interactions with service providers included the following factors; attitudes, behavior, and expertise of the service provider.

1.2.3 The Relation of Maslow’s Hierarchy of need and Security Charges

Abraham Maslow, the inventor of a well-known theory, Maslow’s Hierarchy of need, states people are driven in particular need and time. The need of people are arranged in a hierarchy begin with the most pressing to the least pressing as following respectively; Physiological need, Safety need, Social need, Esteem need, and Self-actualization need (Kotler, 2000).

Obviously the ‘Safety need’ become the second most important need which people have at any particular time. Airport is the place that anyone can access and making transport activity, likewise it is always heard that Airport are like the sensible place of illegal activities and terrorism. Since September 11, 2001 it comes up to the Airports throughout of the world considers the whole issue of airport security has become a top priority. Many airports have been enhancing security levels since airport security was introduced; particularly to Safety and Security; the topic of safety and security in the tourism industry is of vital importance globally. Both academics and practitioners have started to look into crisis management issues seeking workable solutions in order to diminish the negative impacts of safety and security incidences in the tourism industry and affected destinations (Mansfeld el al, 2005). Given the major role that safety and security plays in making travel choices, it is demonstrated quite clearly that peace is the best friend of travel and tourism while war and insecurity are among its worst enemies (JohnRose, 2009).

Therefore it is seen that many areas of airport have security points to all entrances, gates, or any areas which is sensible to criminal activities for security awareness, therefore in rush time or traffic, the queuing and the waiting process of ticket check-in, baggage check, immigration session and so on may reflect the passengers' service quality due to each session may take several times for the customer to wait for. There is a case in United States of America, where US Airlines have had to raise passengers' air tickets in order to cover the cost of the criminal security. It was revealed that US Airlines face to handle a huge amount of security fee \$2.44 billion to the US government. To increase in the number of people carrying their luggage on flights is costing taxpayers, the airlines; include Delta Air Lines Inc., AMR Corp., American Airlines, United Continental Holdings Inc. and Southwest Airlines (InCT, 2011). The United States of America government has considered increasing the 9/11 airline security fee in order to cover the added costs that the airline should handle, to inspect the increased number of carry on bags (John, 2011). The US President is proposing that airports be allowed to raise passenger ticket fees to a maximum of \$7 from the current \$4.50. On business point of view, an additional security fees discourage passengers from buying tickets (Medina, 2011), cites a spokeswoman's statement for the Air Transport Association airline trade group in Washington, Ray LaHood.

Differences from country to country consider responsibility for provision and financing of airport security. The provision of security service may be formed by its' airport staffs, a security's outsource under contract to airport, the airlines, or the government. There are many cases that the responsibility may share among these different parties that cause to vary of the financed security measures. The finance for security may be paid for by the government via general taxation or via a special government departure tax. Some other countries security costs may be financed directly by the airport operator that may charge for additional security charge or include in passengers' fare ticket.

United States states, the responsibility has been changed from private security contractor to federal employee controlled by US government after 11 September 2001 (Graham, 2003). In the present, the passengers' air fare has been included USD2.5, the security charged per each (John, 2011). The trend of security charged has been increased every year as John (2011) reveals the US president; Obama has proposed the security fee to USD4 a passenger in 2012, to rise to \$ 4 and \$5.50 in 2013 and 2014 respectively.

1.2.4 Overview of Airports of Thailand (AOT)

The Airports of Thailand Public Company Limited (AOT) was corporative from a state enterprise, namely the Airports Authority of Thailand (AAT), to be a public company on 2002 with the head registered office in Bangkok, Thailand.

AOT is the leading airport business operator. Its main business lines are managing, operating and developing airports. Presently, AOT has 6 international airports under its responsibility: Don Muang, Phuket, Chiang Mai, Hat Yai, Chiang Rai and Suvarnabhumi, all of which accommodate both domestic and international flights.

Passenger charges are the main source of aeronautical revenue (Airports of Thailand, 2009); the charges are most commonly levied per departing passenger. At most airports, there tends to be a lower charge for domestic passengers to reflect the lower costs associated with these types of passengers (Graham, 2003).

In the management of airport operations, AOT has to acquire external operators to provide some required ground services for passengers as agreed under contracts with AOT (AOT, 2010). They are, for example, Thai Airways International Public Company Limited and Thai Airports Ground Services Company Limited. Operators of retail shops, warehouse facilities, limousines, parking services and other conveniences have to pay for concession fees, rent and service charges. Other non-contract tenants running services within AOT airports pay rent and service charges to the AOT.

The AOT management team has accumulated lot of experience in airport, management (including airport development planning and airport improvement) to meet required international standards and to be able to respond to various clients' needs. To enhance AOT's competitive edge in the international arena and to achieve the ambition to set Thailand as an aviation hub in Southeast Asia, AOT developed the following strategy: The commencement of Suvarnabhumi Airport.

1.2.5 Overview of Phuket International Airport

All over the world, most international airports are provided with excellent public transport facilities which are commodity category of *tourism services* and as Rendeiro (2006) stated that quality depends on an efficient transport infrastructure. Likewise in Thailand at almost all airports, buses, trains, shared taxis, minibuses, songthaews, and shuttlebuses are available,

running between the airport and all local destinations. However, there is, at present, fewer public transport facilities available from Phuket airport to Nai Yang, Nai Thon, Patong, Surin, Kamala, Rawai, Kata, or Karon. Instead, these routes are served by private taxis and limousines, charging very high prices. Unlike normal taxis, the drivers refuse to allow tourists to share taxis. Many of the limousine and taxi drivers also take tourists to unwanted destinations, such as hotels and shops from which the drivers receive a commission. Many tourists are very unhappy with this level of service. By stamping out such practices, and instead introducing a cheap, regular bus service from Phuket International Airport (PIA) to Patong and Rawai – similar to the present bus service which runs regularly between the airport and Phuket Town – tourists' perceptions of *service quality*, both on arrival and on departure from Phuket, would be greatly improved. Recently PIA has approved more metered taxis, to use 65 vehicles in the airport in total, which required an external operator to operate under agreement of Airport of Thailand Company (AOT, 2009).

Phuket International Airport serves Phuket Province Thailand. It is located in the north of Phuket Island, 32 kilometres from the centre of Phuket City. The airport plays a major role in Thailand's tourism industry in promoting travel and tourism in the southern region as well as throughout the kingdom, as Phuket Island is a popular resort destination. It is the second busiest airport in Thailand in terms of passengers, after Suvarnabhumi Airport in the Bangkok metropolitan area. Millions of passengers each year visit Phuket to enjoy a wide range of tourist services, natural beauty including of the world famous Phuket beaches and other fascinating tourist attractions.

Phuket International Airport (HKT) is second only to Suvarnabhumi International Airport in Bangkok in terms of cargo and passenger traffic and is served by 22 airlines. Phuket International Airport handled almost six million passengers last year, 2.5 million of them flying in from overseas, most of whom were tourists. Flights go between Phuket and Bangkok, Singapore, Chiang Mai, Kuala Lumpur, Hong Kong, Pattaya and other destinations, including direct charter flights from Europe. Airlines serving Phuket include Thai Airways International, Bangkok Airways, Silk Air, Malaysia Airlines and the local budget services Air Asia, and Nok-Air. (Airports of Thailand, 2010).

Phuket International Airport is located approximately 15 minutes from Bang Tao beach, 40 minutes from Patong beach and an hour from Phuket City. The airport has three floors, with arrivals on the ground floor and departures on the second floor; each floor is separated into domestic and international. The third floor contains a restaurants and airline offices. Facilities in Phuket International Airport include: two car hire booths; four currency exchange counters and ATMs; lost and found; information; a post office and a telegraph office; a tour service counters; and a Muslim prayer room. Facilities for disabled patrons are provided in the car park, elevators and toilets, and there are telephones for the hearing impaired. Shops consist of multiple duty-free outlets and souvenir shops selling gifts, books and packaged local foods.

1.2.6 Concept of Importance-Performance Analysis (IPA)

Martilla and James first introduced IPA in 1977 which stands for Importance-Performance Analysis, as an instrument to understand customer needs and customer satisfaction including how to offer suitable responses which lead to better decision making by management. The main idea of IPA is to find out what customers think about important and proper performance toward product and service. It was supported and called the Action Grid Analysis (AGA). The Likert scale has been brought up to measure the importance and performance score. Due to its ease of application, IPA has been used to assess service performance in a number of fields within the hospital industry. Therefore it is suggested that by substituting suitable measures, the IPA technique can be used to investigate the relationship between customers' perceived importance and a firm's existing performance level. Wade and Eagle (2003) proposed the IPA procedures as follows:

1. List of the available 'important' product
2. Formulate questionnaire, by applying Likert scale
3. List of the appropriate 'performance', and rate by Likert scale
4. Plot score on IPA matrix (shown in figure 1.4)
5. Translate the graph

Figure 1.4 Importance-Performance Matrix

I M P O R T A N C E	I	II
	High Importance	High Importance
	Low Performance	High Performance
	III	IV
	Low Importance	Low Importance
	Low Performance	High Performance
	P E R F O R M A N C E	

Source: Wade and Eagle (2003).

IPA table analyze

- I) Concentrate here = Need improvement
- II) Keep up the good work = Keep up the good job
- III) Low priority = Not important
- IV) Possible overkill = Waste cost for not important issue

However, IPA disregards the relative performance against other competitors; IPA only addresses the company's strengths and weaknesses. The approach of IPA is a less complicated, empirical process and could be one of the best documented methods. There are the good points of the ability to come up with necessary information for management teams, in terms of, customer satisfaction measurement and the appropriate allocation of service attributes. It allows managers to identify the importance of each item and the priority of it.

1.3 Objectives

1.3.1 To analyze the factors which are crucial to service quality perception of the passengers using Phuket International Airport;

1.3.2 To examine passengers' perception on importance and performance of service quality at Phuket International Airport;

1.3.3 To identify and prioritize service areas requiring managerial attention and action to ensure and improve service quality and customer satisfaction;

1.3.4 To propose possible solutions to improve service quality and customer satisfaction at Phuket International Airport.

1.4 Significance of the Study

1.4.1 The study introduces the main aspects of service quality management in the hospitality industry, with specific reference to the airport industry.

1.4.2 The study enlightens the relationship between customer perception and provision of service quality in order to develop a sustainable competitive advantage at Phuket International Airport

1.4.3 The study proposes possible recommendations to the organization to develop itself to be one of the most renowned international airports in Thailand.

1.4.4 The study is useful for Phuket International Airport to acknowledge any airport services which need to be improved.

1.5 Limitation of the Study

Due to time limitations, the survey was conducted among international passengers using Phuket International Airport only. Therefore the future research in Airport Service Quality domains, it is recommended to investigate both international and domestic users, as both are also potential passengers. In addition, to be more beneficial to the airport industry, especially for Phuket International airport, all categories of airport customers, including airlines, concessionaires (stores, businesses), employees, tenants and others should be consulted in order to know what they expect, and to measure the actual airport service quality performance. This would provide a guideline for airport organizations to improve their services to meet their customers' expectations.

1.6 Definition of Key Terms

International Airport is defined as an airport typically equipped with customs and immigration facilities to handle international flights to and from other countries.

Service Quality is defined as an assumption model of the quality based on the result of gaps between people's expectations and their perceptions of service performance.

Airport Service Quality is defined as passengers' perception of services dimensions which provided by airport industry to be satisfied on their needs, wants, and how their needs could be met.

Importance-Performance Analysis (IPA) is defined as a tool used for positioning a product by evaluating performance of the product's features and its importance to the customer.

CHAPTER 2

METHODOLOGY

2.1 Population, sample size and sampling method

2.1.1 Population

The survey was conducted only at departure gates at Phuket International Airport, and completed by international departing passengers, who have done all the major essential processes which makes the measuring of their opinions consistent, reliable and up-to-date (Graham, 2003)

Table 2.1 International Passenger Movement at Phuket International Airport in 2008

Passengers	Number of Passengers
International	2,409,305 (42%)
Domestic	3,321,443 (58%)
Total	5,730,748 (100%)

Source: AOT, 2008

Table 2.1 shows the passengers movement at Phuket International Airport in 2008. In obtaining a more detailed understanding of the service quality at Phuket International Airport, a descriptive cross-sectional study approach was applied in this study. Based on the integrative economic model of aeronautical revenue from passenger service charges, the charges usually pertain to each departing passenger. Passenger service charges have become the major revenue of the airport. The charges are collected from passengers who depart to foreign destinations at the rate of 7 times higher than charges to domestic passengers. Consequently, domestics have less potential for generating commercial revenues (Department of Civil Aviation, 2008). This leads to the crucial issue that the airport needs to keep foreigner passengers in order to enjoy the massive revenues. This is why the researcher emphasized mainly upon the study of international passenger satisfaction. Therefore a survey questionnaire was used to collect opinions from 400 passengers at the international departure terminal.

2.1.2 Sample size and Sampling Method

The sample size method of Yamane (1967) was applied to this research in order to estimate the sample size of the tourists responding to questionnaires. According to the statistical information of international passengers' volume at Phuket International Airport by AOT (2008), 2,409,305 international passengers used Phuket International Airport in 2008.

The formula of Yamane will be used for calculating the sample size as below:

$$n = N / (1 + Ne^2)$$

Where: n is the sample size,

N is the population size which is the number of international passengers of Phuket International Airport,

e is the inconsistency from sampling at 95% confidence level and ± 5 precision levels are assumed (Confidence interval = 0.05)

$$\begin{aligned} n &= N / (1 + Ne^2) \\ &= 2,409,305 / \{1 + 2,409,305 * (0.05)^2\} \\ &= 2,409,305 / 6,023.27 \\ &= 399.99 \end{aligned}$$

Thus from the formula calculation the sample size was 400 in total. Then, 400 questionnaires were distributed to international passengers at the International Departure lounge by using convenient sampling; one of the non-probability sampling methods, to select the samples from the total population.

2.2 Research Instruments

The research methodology is the survey method mutually employed the models following; Airport Service Quality (ASQ) measure created by Airport Council International (ACI), 34 attributes of service quality were used to assess the passengers' perception of service quality at the airport, each relevant to the needs of the passengers who use the service. Further, to analyze the results, Importance Performance Analysis (IPA) and a model for airports service quality by Fodness (2008) were selected for data analysis.

2.2.1 Questionnaire Design

The questionnaire was designed to be relevant to achieve the three research objectives (1st, 2nd, and 3rd objectives), which are to investigate the current customers perception, to analyze the factors that are crucial to service quality perception of customers and also to identify and prioritize service areas requiring managerial attention and action in order to improve service quality and customer satisfaction at Phuket International Airport.

The questionnaire provided the general view and opinions about the airport, service quality, satisfaction and perception of tourists using the Airport. Therefore, this research combines both open-ended and closed questions which are multiple choice, check list, and Likert score.

Part 1: Tourists' experience of services at Phuket International Airport. Firstly, passengers were asked to answer 4 multiple choices questions about their experience.

Part 2: In order to develop the questionnaires to the service quality at the airport it is crucial to evaluate customers' perception. The instrument acts as a management tool for airports themselves to understand internal strengths and weakness and where to concentrate efforts as well as to check the performance of suppliers or partners. The 34 attributes were adapted from Airport Service Quality model (ASQ) (ACI, 2008) to apply as the research instrument of this study for measuring the key variables in service quality at Phuket International Airport (Table 2.2).

Table 2.2 Airport services attribute adapted from ASQ model developed by ACI

ACI	Adapted for PIA	Note
Thoroughness of security	/	
Feeling safe and secure	/	
Passport inspection	/	
Walking distances	/	
Courtesy of airport staff	/	
Courtesy of security staff	/	
Efficiency of check-in staff	/	
Cleanliness of terminal	/	
Flight into screens	/	
Overall Satisfaction	/	
Customs inspection	/	
Arrivals passport inspection	-	Departure passengers ONLY
Availability of toilets	/	
Ease of connecting	/	
Ground transportation	/	
Waiting at security	/	
Ease of finding your way	/	
Cleanliness of toilets	/	
Business lounges	/	
Ambience of airport	/	
Baggage carts	/	
Waiting at check-in	/	
Baggage delivery	/	
Comfortable waiting areas	/	
Restaurant facilities	/	
Shop opening hours	/	
Parking facilities	/	
Bank/ATM facilities	/	
Restaurant facilities VFM	/	
Internet/IT facilities	/	
Shopping	/	
Shopping VFM	/	
Parking VFM	/	
Waiting at immigration		

Adapted from Source: ACI (2008)

Respondents' perceptions of the importance and performance of airport services at Phuket International Airport were measured using a 5-point Likert rating scale which ranged from 1 to 5 points as follows:

Extremely Important / Very Good Performance	5	points
Important / Good Performance	4	points
Moderately Important / Moderate Performance	3	points
Unimportant / Unsatisfactory Performance	2	points
Extremely Unimportant / Worst Performance	1	points

Part 3: Comments and Suggestions. This part consisted of one closed question and three open-ended questions asking tourists to describe which services performances were satisfactory, thereby showing those services which require improvement.

Part 4: Personal Information. There are six questions asking tourists about their personal information; gender, age, education, occupation, and place of stay. Five are multiple choices and one is open-ended.

2.3 Data Collection

2.3.1 Secondary Data

This study used data from Airports of Thailand Public Company Limited to estimate the sample size, and also collected information about airport service quality from books, journal, and internet.

2.3.2 Primary Data

A survey questionnaire was used to collect opinions from 400 passengers using airport at the international departure terminal during February to March 2010.

2.4 Data Analysis-Statistics used to analyze the data

The questionnaire data collected were coded and analyzed by using the Statistical computer software. The data was analyzed initially by using descriptive statistics. The mean, standard deviation and frequency were calculated to find out the distribution and ranking of each attribute.

The average range of importance and performance analysis (IPA) of each attribute was ranged by finding the interval range.

$$\begin{aligned} \text{Interval range} &= \frac{\text{Range}^4}{\text{Number of ranges}} \\ &= (5 - 1) / 5 \\ &= 0.8 \end{aligned}$$

Thus, the criteria for deciding the result of importance and performance of service quality analysis at Phuket International Airport is an average value as follows:

Average range between 4.21 - 5.00 points, interpretation is 'very high importance / performance'.

Average range between 3.41 - 4.20 points, interpretation is 'high importance / performance'.

Average range between 2.61 - 3.40 points, interpretation is 'moderate importance /performance'.

Average range between 1.81 - 2.60 points, interpretation is 'low importance / performance'.

Average range between 1.00 - 1.80 points, interpretation is 'very low importance / performance'.

Moreover, the crucial criterion to analysis how possible resolution would be handled for the 34 service attributes by prior to categorize the 34 key attributes (ACI, 2008) to be 3 dimensions (Fodness, 2009) which included servicescape, interaction, and services are crucial for airport service quality perception of passengers could be concluded as below Table 2.3 and Figure 2.1

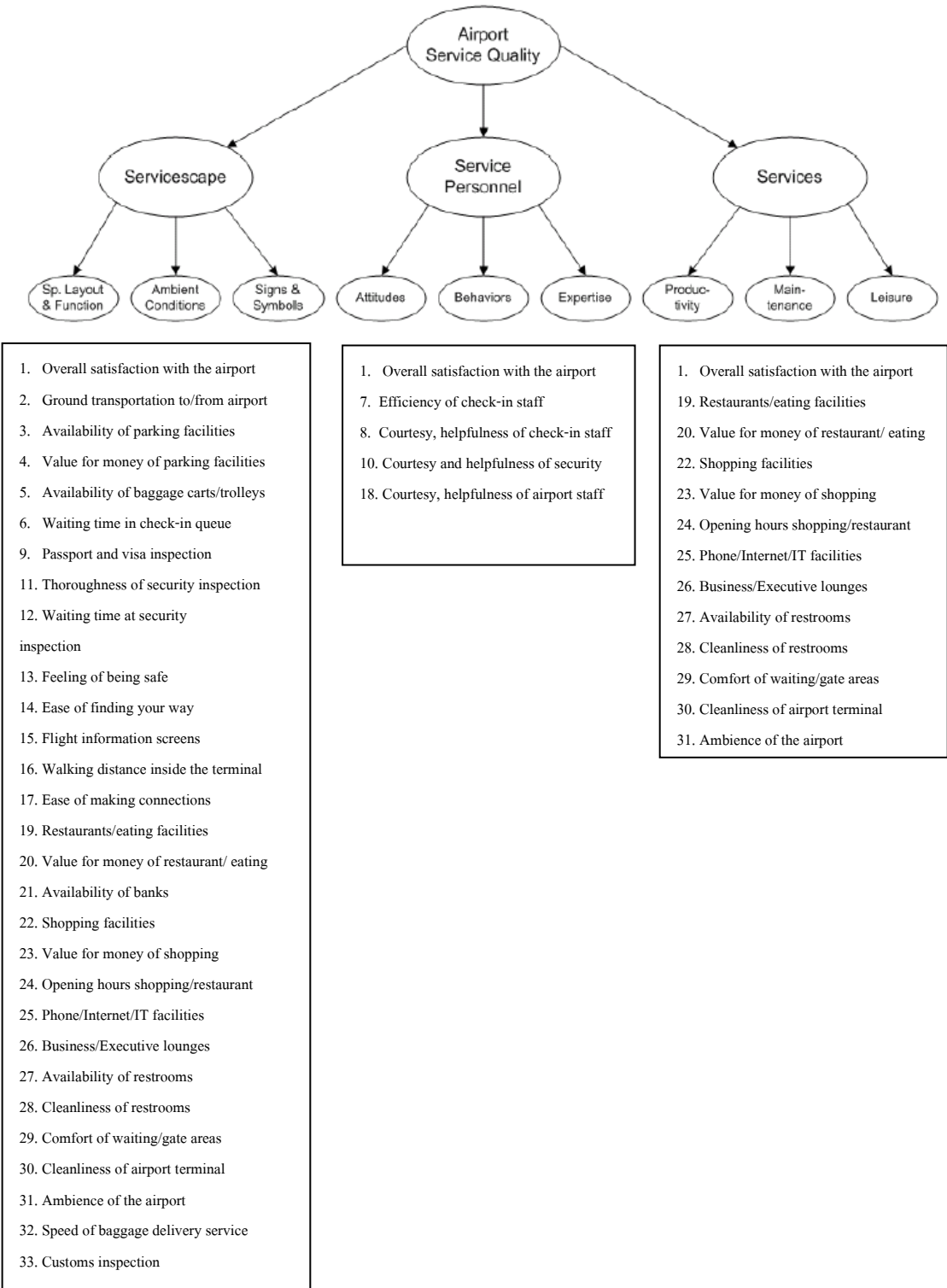
Table 2.3: Airport Service attributes

Airport Service Attributes Delivered Services (Applied the ASQ model of ACI)	Fodness's Service Quality Measurement						
	Services cape	Service personnel					Services
		Tangible	Reliable	Responsiveness	Assurance	Empathy	
1. Overall satisfaction with the airport	X	X	X	X	X	X	X
2. Ground transportation to/from the	X						
3. Availability of parking facilities	X						
4. Value for money for parking	X						
5. Availability of baggage	X						
6. Waiting time in check-in queue	X						
7. Efficiency of check-in staff					X		
8. Courtesy, helpfulness of check-in					X		
9. Passport and visa inspection	X						
10. Courtesy and helpfulness of security					X		
11. Thoroughness of security inspection	X						
12. Waiting time at security	X						
13. Feeling safe/secure	X						
14. Ease of finding your way	X						
15. Flight information screens	X						
16. Walking distance inside the	X						
17. Ease of making connections	X						
18. Courtesy, helpfulness of airport staff						X	
19. Restaurants/eating facilities	X						X
20. Value for money of restaurant/	X						
21. Availability of banks	X						
22. Shopping facilities	X						X
23. Value for money of shopping	X						X
24. Opening hours shopping/restaurant	X						X
25. Phone/Internet/IT facilities	X						X
26. Business/Executive lounges	X						X
27. Availability of restrooms	X						X
28. Cleanliness of restrooms	X						X
29. Comfort of waiting/gate areas	X						X
30. Cleanliness of airport terminal	X						X
31. Ambience of the airport	X						X
32. Speed of baggage delivery service	X						
33. Customs inspection	X						
34. Waiting time for immigration	X						

Adapted from: Fodness (2009), ACI (2008), and Parasuraman et al, (1998)

*some of airport services may imply more than 1 categories (1,19,22,23,24,25,26, 27, 28, 29,30 and 31).

Figure 2.1 Adaptation of mixed concepts between ASQ model by ACI and Model for Airport service quality by Fodness (2008)



Adapted from Sources: Fodness (2009) and ACI (2008)

CHAPTER 3

RESULTS

The results of this research are shown as follows:

3.1 Demographic and Services Experience of Respondents

3.2 International Perception of Service Quality at Phuket International Airport

3.2.1 Passengers' Importance of Service Quality

3.2.2 Passengers' Performance of Service Quality

3.2.3 Statistical Comparisons of Passengers' Importance and Performance of Service Quality at Phuket International Airport between the Passengers' Demographic Characteristics.

- Gender
- Frequency of visit
- Age
- Nationality
- Occupation

3.2.4 Importance-Performance Analysis of Service Quality (IPA)

3.1 Demographics and Services Experience of Respondents

A comprehensive socio-economic and demographic characteristic of the respondents is presented in Table 3.1, which is used to provide an overall background of the respondents. It includes gender, age, profession, and place of residence.

Of the 400 respondents, there were 65.0% male and 35.0% female. The majority of the respondents (62.8%) were 26-45 years old, 17.5% of them were 46-60 years old and 15.5% were 18-25 years old.

Business owners, salespersons and others such as teachers, divers, and consultants were the three major occupation categories (65.6%). While the minority groups of the respondents (34.4%) were 10.8% student, 6.3% hospitality industry staff, 5.5% housewife, and 1.3% agricultural.

Asian passengers accounted for 35.0% of the total respondents, followed by European (30.0%) while Oceania and Australia emerged as the third significant market to Phuket, representing 22.5%. The minority groups of the respondents were from America (5.5%), 3.3% from Middle east and Africa, and 3.8% from other regions. In addition the survey revealed that the majority of passengers came to Phuket for leisure and vacation (89.75%).

Table 3.1 Demographic Information of the Respondents (n=400)

	Demographic Data	Frequency	%
Gender	male	260	65
	female	140	35
Age	18-25 years	62	15.5
	26-45 years	251	62.8
	46-60 years	70	17.5
	above 60 years	17	4.3
Profession	government/state enterprise	43	10.8
	student	43	10.8
	business owner	84	21.0
	salesperson	47	11.8
	housewife	22	5.5
	hospitality industry staffs	25	6.3
Profession	agricultural	5	1.3
	others	131	32.8
Place of Residences	Asia	140	35.0
	Europe	120	30.0
	Middle East & Africa	13	3.3
	America	22	5.5
	Oceania & Australia	90	22.5
	Others	15	3.8
Main purpose of visiting to Phuket	Relaxation/Vacation/Recreation	359	89.8
	Business	22	5.5
	Other	19	4.8

As shown in Table 3.2, a significant percentage came to Phuket for business (5.5%). First time users and repeated users of the Airport are roughly equal in number as follows 53.25% and 46.75%. As anticipated, 94.0% of the respondents used Phuket International Airport for the purposes of arrival and departure.

Table 3.2 Used of Phuket International Airport (n=400)

Used of PIA	Frequency	%
Typical of airport usage		
Arrival and Departure	376	94.0
Departures only	22	5.50
Arrivals only	0	0
Transit	2	0.5
Number of airport usage		
1 st time of usage Phuket Int'l Airport	213	53.3
Repeated usage	187	46.8

3.2 International Perception of Service Quality at Phuket International Airport

The overall analysis was conducted, using questionnaires to investigate the perception of airport services. Tourists were asked to evaluate 34 attributes designed to assess the importance of airport services as well as to evaluate the performance of Phuket International Airport. Therefore, the average importance of attributes and the average level of performance were calculated from the respondents.

3.2.1 Passengers' perception on Importance of Service Quality

Table 3.3 determined, the mean scores of each airport service attributes. The respondents placed highly important on "Feeling safe" (Mean = 4.38), "Cleanliness of restrooms" (Mean = 4.32) ranked second and the third was "Efficiency of check-in staff" (Mean = 4.29). "Courtesy, helpfulness of check-in staff" (Mean = 4.25), "Ease of finding your way" (Mean = 4.24) and "Waiting time in check-in queue" (Mean = 4.22) ranked forth, fifth and sixth respectively.

3.2.2 Passengers' perception on Performance of Service Quality

Table 3.4 raises the question of how Phuket International Airport is performing its service quality. The spread between the high (Walking distance inside the terminal) and the low (Value for money of shopping) ranked factor is insubstantial. The mean scores ranged from a high of 4.03 to a median of 3.32. According to the results, Phuket International Airport was seen to perform well in most airport service attributes, except for "Phone/ Internet/ IT facilities" (Mean = 3.37), "Value for money of restaurant/ eating" (Mean = 3.37) and "Value for money of shopping" (Mean = 3.32) that scored moderately.

Table 3.3 Passengers' perception on Importance of Service Quality at Phuket International Airport

Service Attributes	Importance		
	N	Mean	Importance level
Feeling of being safe	400	4.38	very high
Cleanliness of restrooms	400	4.32	very high
Efficiency of check-in staff	400	4.29	very high
Courtesy, helpfulness of check-in staff	400	4.25	very high
Ease of finding your way	400	4.24	very high
Waiting time in check-in queue	400	4.22	very high
Availability of restrooms	400	4.19	high
Comfort of waiting/gate area	400	4.19	high
Cleanliness of airport terminal	400	4.19	high
Flight information screens	400	4.18	high
Ground transportation to/from airport	400	4.11	high
Waiting time for immigration procedure	400	4.11	high
Courtesy, helpfulness of airport staff	400	4.11	high
Speed of baggage delivery service	400	4.11	high
Passport and Visa inspection	400	4.10	high
Overall satisfaction with the airport	400	4.10	high
Thoroughness of security inspection	400	4.06	high
Courtesy and helpfulness of security staff	400	4.06	high
Waiting time at security inspection	400	4.04	high
Ease of making connections	400	4.02	high
Customs inspection	400	3.96	high
Ambience of the airport	400	3.93	high
Walking distance inside the terminal	400	3.82	high
Availability of baggage carts/trolleys	400	3.79	high
Value for money of restaurants/eating	400	3.76	high
Restaurants/eating facilities	400	3.71	high
Availability of bank	400	3.67	high
Phone/Internet/IT facilities	400	3.63	high
Opening hours shopping/restaurant	400	3.53	high
Value for money of shopping	400	3.52	high
Shopping facilities	400	3.47	high
Business/Executive lounges	400	3.08	moderate
Availability of parking facilities	400	3.04	moderate
Value for money of parking facilities	400	3.02	moderate
Grand mean	400	3.92	high

Table 3.4 Passengers' perception on Performance of Service Quality at Phuket International Airport

Service Attributes	Performance		
	N	Mean	Performance level
Walking distance inside the terminal	400	4.03	high
Feeling of being safe	400	3.97	high
Ease of finding your way	400	3.96	high
Efficiency of check-in staff	400	3.92	high
Overall satisfaction with the airport	400	3.92	high
Courtesy, helpfulness of airport staff	400	3.92	high
Courtesy, helpfulness of check-in staff	400	3.92	high
Availability of restrooms	400	3.90	high
Cleanliness of airport terminal	400	3.88	high
Speed of baggage delivery service	400	3.87	high
Ease of making connections	400	3.83	high
Availability of baggage carts and trolleys	400	3.82	high
Passport and Visa inspection	400	3.80	high
Flight information screens	400	3.80	high
Waiting time at security inspection	400	3.79	high
Customs inspection	400	3.77	high
Ground transportation to and from airport	400	3.76	high
Comfort of waiting and gate area	400	3.76	high
Courtesy and helpfulness of security staff	400	3.73	high
Cleanliness of restrooms	400	3.72	high
Waiting time in check-in queue	400	3.72	high
Waiting time for immigration procedure	400	3.71	high
Thoroughness of security inspection	400	3.70	high
Ambience of the airport	400	3.68	high
Business/Executive lounges	400	3.65	high
Opening hours shopping/restaurant	400	3.58	high
Restaurants/eating facilities	400	3.52	high
Availability of bank	400	3.52	high
Shopping facilities	400	3.50	high
Availability of parking facilities	400	3.50	high
Value for money of parking facilities	400	3.43	high
Value for money of restaurants/eating	400	3.37	moderate
Phone/Internet/IT facilities	400	3.37	moderate
Value for money of shopping	400	3.32	moderate
Grand mean	400	3.72	high

3.2.3 Statistical Comparisons of Passengers' perception on Importance and Performance of Service Quality at Phuket International Airport between the Passengers' Demographic Characteristics.

An independent sample t-test and one-way ANOVA were used to investigate the differences between International passengers' perception on importance and performance of service quality for each characteristic of the respondents (e.g. gender, age, nationality, occupation, and service experience at Phuket International Airport). The t-test was used to assess whether the mean of two groups were statistically different from each other whereas the ANOVA and multiple comparisons were used to determine the difference across several groups.

Gender

As illustrated in table 3.5, International passengers' perception on importance and performance of service quality between genders, the mean scores of each airport service attributes. Both male and female respondents placed the most importance on "Feeling of being safe" Mean = 4.32 (Male), 4.47 (Female), and placed the least on "Value for money of parking facilities" Mean = 2.97 (Male), 2.97 (Female). According to the results, Phuket International Airport was seen to perform highly in most areas. The male respondents placed the most emphasis on "Walking distance inside the terminal" (Mean = 4.07), while the female respondents focused on "Efficiency of check-in staff" and "Ease of finding way" (Mean = 3.99). Whereas the lowest performance of service quality were placed on "Phone/Internet/IT facilities" (Mean = 3.28) and on "Value for money of restaurant and eating" (Mean = 3.36) by male respondents. Both the lowest attributes were interpreted as moderately good.

There were significant differences between male and female respondents' perception on importance as follows; ground transportation to and from airport, courtesy and helpfulness of check-in staff, passport and visa inspection, courtesy and helpfulness of security staff, thoroughness of security inspection, feeling safe, and flight information screens. While there were significant differences in perception between male and female on the performance of ground transportation to and from the airport, availability of parking facilities, Phone/Internet/IT facilities, and airport ambiance. Above results indicated female respondents' perception on importance and performance of these services were higher than male respondents.

Table 3.5 Variation in International Perception of Service quality by Gender

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Male	Female	t-value	p-value	Male	Female	t-value	p-value
1. Overall satisfaction with the airport	4.14	4.04	1.42	0.16	3.9	3.96	-0.93	0.35
2. Ground transportation to/from airport	4.05	4.23	-2.11	<u>0.04*</u>	3.69	3.89	-2.06	0.04
3. Availability of parking facilities	2.98	3.15	-1.3	0.19	3.41	3.65	-2.63	<u>0.01*</u>
4. Value for money of parking facilities	2.97	2.97	-0.93	0.35	3.4	3.49	-1.12	0.26
5. Availability of baggage carts/trolleys	3.73	3.9	-1.68	0.09	3.77	3.92	-1.75	0.08
6. Waiting time in check-in queue	4.2	4.25	-0.5	0.62	3.68	3.78	-0.93	0.35
7. Efficiency of check-in staff	4.29	4.29	0.08	0.94	3.88	3.99	-1.24	0.22
8. Courtesy, helpfulness of check-in staff	4.19	4.37	-2.36	<u>0.02*</u>	3.89	3.96	-0.74	0.46
9. Passport and Visa inspection	4.03	4.23	-2.15	<u>0.03*</u>	3.75	3.87	-1.14	0.26
10. Courtesy and helpfulness of security staff	3.97	4.21	-2.75	<u>0.01*</u>	3.72	3.76	-0.43	0.67
11. Thoroughness of security inspection	3.98	4.22	-2.75	<u>0.01*</u>	3.69	3.71	-0.2	0.84
12. Waiting time at security inspection	3.99	4.13	-1.54	0.12	3.8	3.77	0.33	0.74
13. Feeling of being safe	4.32	4.47	-1.99	<u>0.05*</u>	3.98	3.96	0.15	0.88
14. Ease of finding your way	4.19	4.33	-1.72	0.09	3.94	3.99	-0.63	0.53
15. Flight information screens	4.12	4.29	-1.94	<u>0.05*</u>	3.82	3.75	0.75	0.45

Table 3.5 (Continue)

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Male	Female	t-value	p-value	Male	Female	t-value	p-value
16. Walking distance inside the terminal	3.8	3.84	-0.38	0.71	4.07	3.96	1.41	0.16
17. Ease of making connections	3.96	4.12	-1.75	0.08	3.84	3.79	0.6	0.55
18. Courtesy, helpfulness of airport staff	4.06	4.19	-1.61	0.11	3.88	3.98	-1.17	0.24
19. Restaurants/eating facilities	3.7	3.74	-0.39	0.7	3.47	3.63	-1.69	0.09
20. Value for money of restaurant/ eating	3.74	3.79	-0.46	0.65	3.37	3.36	0.05	0.96
21. Availability of bank	3.66	3.69	-0.29	0.77	3.55	3.47	0.83	0.41
22. Shopping facilities	3.44	3.53	-0.82	0.41	3.49	3.53	-0.44	0.66
23. Value for money of shopping	3.48	3.6	-1.09	0.28	3.27	3.41	-1.57	0.12
24. Opening hours shopping/restaurant	3.53	3.53	0.02	0.98	3.55	3.64	-1.16	0.25
25. Phone/Internet/IT facilities	3.69	3.51	1.66	0.1	3.28	3.53	-2.76	<u>0.01*</u>
26. Business/Executive lounges	3.12	3.01	0.82	0.41	3.52	3.9	-1.7	0.09
27. Availability of restroom	4.16	4.24	-0.94	0.35	3.85	3.98	-1.54	0.13
28. Cleanliness of restroom	4.29	4.36	-0.86	0.39	3.72	3.72	0.01	0.99
29. Comfort of waiting/gate areas	4.17	4.22	-0.73	0.47	3.73	3.81	-1.01	0.31
30. Cleanliness of airport terminal	4.14	4.27	-1.76	0.08	3.84	3.96	-1.41	0.16

Table 3.5 (Continue)

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Male	Female	t-value	p-value	Male	Female	t-value	p-value
31.Ambiance of the airport	3.88	4	-1.41	0.16	3.61	3.81	-2.34	0.02
32.Speed of baggage delivery service	4.1	4.12	-0.28	0.78	3.92	3.79	0.44	0.66
33. Customs inspection	3.93	4.02	-1.02	0.31	3.75	3.8	-0.64	0.53
34. Waiting time for immigration procedure	4.13	4.06	0.77	0.44	3.7	3.73	-0.29	0.77
Total Grand Mean	3.89	3.97	-0.96	0.32	3.70	3.77	-0.79	0.39

Note: t-test two tail probability <0.05

*Indicates statistically significant differences between groups at $p \leq 0.05$

Service experience at Phuket International Airport

In table 3.6 the mean scores of each airport service are illustrated. First time and return passengers placed the most importance on “Feeling safe” (Mean = 4.40, 4.35), while “Value for money of parking facilities” (Mean = 3.07, 2.96) as was only moderately important. According to the results, the first time and return passengers placed great emphasis on the highest perception on “Walking distance inside the terminal” (Mean = 4.08, 3.98). Whereas the first time service experience respondents placed the lowest perception on “Value for money of restaurant and eating” (Mean = 3.32) and “Value for money of shopping” (Mean = 3.31) was placed by the repeat passengers.

As shown in table 3.6, the only significant difference between first time and repeat passengers’ perception on importance factor was “Courtesy and helpfulness of security staff”. For first time respondents’ perception on importance of this service attribute was significantly higher than returning passengers. Whereas there were significant differences between first time and repeat respondents’ perception of “Waiting time at security inspection”, “Comfort of waiting/gate areas and Airport Ambience”. Repeat passengers’ perceptions of these services were higher than first time respondents.

Table 3.6 Variation in International Perception of Service quality

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Number of visit		t-value	p-value	Number of visit		t-value	p-value
	1st	Many			1st	Many		
1. Overall satisfaction with the airport	4.07	4.13	-0.86	0.39	3.93	3.9	0.45	0.66
2. Ground transportation to/from airport	4.12	4.1	0.24	0.81	3.8	3.71	0.97	0.33
3. Availability of parking facilities	3.08	2.98	0.79	0.43	3.53	3.46	0.81	0.42
4. Value for money of parking facilities	3.07	2.96	0.88	0.38	3.42	3.45	-0.32	0.75
5. Availability of baggage carts/trolleys	3.83	3.74	0.86	0.39	3.86	3.78	0.84	0.4
6. Waiting time in check-in queue	4.24	4.2	0.44	0.66	3.77	3.65	1.19	0.23
7. Efficiency of check-in staff	4.29	4.3	-0.14	0.89	3.98	3.85	1.41	0.16
8. Courtesy, helpfulness of check-in staff	4.3	4.2	1.34	0.18	3.96	3.86	1.23	0.22
9. Passport and Visa inspection	4.11	4.09	0.24	0.81	3.87	3.7	1.72	0.09
10. Courtesy and helpfulness of security staff	4.13	3.97	2	<u>0.05*</u>	3.78	3.67	1.17	0.24
11. Thoroughness of security inspection	4.04	4.09	-0.63	0.53	3.73	3.65	0.94	0.35
12. Waiting time at security inspection	4.02	4.06	-0.46	0.64	3.89	3.68	2.18	<u>0.03*</u>
13. Feeling of being safe	4.4	4.35	0.67	0.51	4.02	3.92	1.25	0.21
14. Ease of finding your way	4.29	4.18	1.42	0.16	3.95	3.96	-0.11	0.91

Table 3.6 (Continue)

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Number of visit		t-value	p-value	Number of visit		t-value	p-value
	1st	Many			1st	Many		
15. Flight information screens	4.21	4.15	0.82	0.42	3.77	3.82	-0.59	0.56
16. Walking distance inside the terminal	3.84	3.78	0.69	0.49	4.08	3.98	1.28	0.2
17. Ease of making connections	4.02	4.02	0.03	0.98	3.83	3.82	1.29	0.2
18. Courtesy, helpfulness of airport staff	4.11	4.1	0.13	0.9	3.95	3.88	0.19	0.85
19. Restaurants/eating facilities	3.71	3.72	-0.17	0.87	3.54	3.51	1	0.32
20. Value for money of restaurant/ eating	3.77	3.75	0.21	0.83	3.32	3.42	0.35	0.73
21. Availability of bank	3.71	3.63	0.69	0.49	3.45	3.6	-1.78	0.08
22. Shopping facilities	3.55	3.38	1.7	0.09	3.55	3.45	1.1	0.27
23. Value for money of shopping	3.54	3.51	0.31	0.76	3.33	3.31	0.23	0.82
24. Opening hours shopping/restaurant	3.55	3.51	0.46	0.64	3.63	3.53	1.35	0.18
25. Phone/Internet/IT facilities	3.67	3.58	0.91	0.36	3.37	3.36	0.1	0.92
26. Business/Executive lounges	3.18	2.97	1.8	0.07	3.57	3.74	-0.79	0.43
27. Availability of restroom	4.18	4.2	-0.2	0.84	3.93	3.86	0.81	0.42
28. Cleanliness of restroom	4.37	4.26	1.38	0.17	3.85	3.58	1.51	0.13
29. Comfort of waiting/gate areas	4.18	4.19	-0.08	0.94	3.84	3.66	2.17	<u>0.03*</u>
30. Cleanliness of airport terminal	4.21	4.16	0.61	0.54	3.95	3.81	1.83	0.07

Table 3.6 (Continue)

Service Attributes	Expectation				Perception			
	Mean		t-test		Mean		t-test	
	Number of visit		t-value	p-value	Number of visit		t-value	p-value
	1st	Many			1st	Many		
31.Ambience of the airport	3.91	3.94	-0.38	0.71	3.76	3.59	2.19	<u>0.03*</u>
32.Speed of baggage delivery service	4.12	4.09	0.3	0.76	4	3.72	1.08	0.28
33. Customs inspection	3.99	3.93	0.71	0.48	3.82	3.7	1.53	0.13
34. Waiting time for immigration procedure	4.13	4.09	0.51	0.61	3.76	3.66	1.08	0.28
Total Grand Mean	3.94	3.89	0.51	0.55	3.76	3.68	0.87	0.35

Note: t-test two tail probability <0.05

*Indicates statistically significant differences between groups at $p \leq 0.05$

Age

Table 3.7 depicts the mean of respondents' perception importance on and performance of service quality at Phuket International Airport among difference age, group range respondents includes 18-25 years, 26-45 years, 46-60 years, and above 60 years.

The results show that all ages had very high importance for "Feeling safe" at the highest Mean 4.53. Almost had high importance of service quality, except "Availability of parking facilities" (Mean =3.03, 3.00, 3.20, 3.00), "Value for money of parking facilities" (Mean = 3.08, 2.89, 3.34, 3.24), and "Business Executive lounges" (Mean = 3.02, 3.02, 3.29, 3.29) that ranged moderate importance. The performance of airport service quality between different ages, as illustrated in table 3.7, the mean scores of each airport service attributes. Almost all age ranges respondents had high performance level of service quality at Phuket International Airport, except on "Value for money of restaurant and eating" (Mean = 3.16) was the lowest perceived by 18-25 years respondents. And the results also show that "Phone/Internet/IT facilities" (Mean = 3.23), and "Value for money of shopping" (Mean = 3.27) were moderate performance by the not over 45 years respondents. Furthermore the respondents above 60 years had higher importance (Grand Mean = 4.07) and performance (Grand Mean = 3.96) than other ages range.

In addition, one-way ANOVA (analysis of variance) test was used to indicate the significance (Significant level = ≤ 0.05) among the different age-groups. As shown in table 3.7, there were significance among age-groups' importance of services as follows; "Value for money of parking facilities" (p value equal 0.04), "Restaurant and eating facilities" (p value equal 0.02), and "Waiting time for immigration procedure" (p value equal 0.01). There was significance in terms of the performance of service attributes among the differences age respondents as follow; "Overall satisfaction with the airport" (p value equal 0.05), "Value money of parking facilities" (p value equal 0.00), "Availability of baggage carts/trolleys" (p value equal 0.04), "Efficiency of check-in staff" (p value equal 0.03), "Courtesy, helpfulness of check-in staff" (p value equal 0.04), "Passport and visa inspection" (p value equal 0.01), "Ease of making connections" (p value equal 0.03), "Shopping facilities" (p value equal 0.02), "Phone/Internet/IT facilities" (p value equal 0.00), "Business/Executive lounges" (p value equal 0.05), "Ambiance of the airport" (p value equal 0.02), and "Waiting time for immigration procedure" (p value equal 0.01).

Table 3.7 Variation in International Perception of Service quality by Age

Service Attributes	Expectation						Perception			
	Mean				ANOVAs		Mean		Anova	
	18-25	26-45	46 - 60	>60	F-value	p-value	18-25	26-45	F-value	p-value
1. Overall satisfaction with the airport	4.1	4.13	4.03	4	0.54	0.66	3.89	3.86	2.62	<u>0.05*</u>
2. Ground transportation to/from airport	4.11	4.12	4.1	4	0.13	0.94	3.82	3.69	1.19	0.31
3. Availability of parking facilities	3.03	3	3.2	3	0.47	0.7	3.52	3.43	1.56	0.20
4. Value for money of parking facilities	3.08	2.89	3.34	3.24	2.76	<u>0.04*</u>	3.5	3.33	4.56	<u>0.00*</u>
5. Availability of baggage carts/trolleys	3.71	3.73	3.99	4.18	2.31	0.08	3.92	3.75	2.72	0.04
6. Waiting time in check-in queue	4.18	4.2	4.26	4.59	1.13	0.34	3.68	3.64	2.23	0.08
7. Efficiency of check-in staff	4.23	4.3	4.3	4.3	0.19	0.9	3.79	3.88	3.12	<u>0.03*</u>
8. Courtesy, helpfulness of check-in staff	4.29	4.24	4.23	4.35	0.19	0.9	3.74	3.89	2.83	<u>0.04*</u>
9. Passport and Visa inspection	4.24	4.04	4.14	4.29	1.25	0.29	3.77	3.7	3.60	<u>0.01*</u>
10. Courtesy and helpfulness of security staff	4.19	4.03	4.03	4.03	0.71	0.54	3.77	3.67	1.11	0.34
11. Thoroughness of security inspection	3.9	4.06	4.16	4.35	1.67	0.17	3.68	3.65	1.24	0.29
12. Waiting time at security inspection	3.94	4.06	3.99	4.29	0.91	0.43	3.89	3.73	1.82	0.14
13. Feeling of being safe	4.53	4.34	4.33	4.53	1.59	0.19	4.02	3.93	0.76	0.52
14. Ease of finding your way	4.31	4.21	4.29	4.29	0.43	0.73	3.94	3.9	1.95	0.12
15. Flight information screens	4.19	4.16	4.19	4.35	0.3	0.82	3.73	3.78	1.22	0.30

Table 3.7 (Continue)

Service Attributes	Expectation						Perception			
	Mean				ANOVAs		Mean		Anova	
	18-25	26-45	46 - 60	>60	F-value	p-value	18-25	26-45	F-value	p-value
16. Walking distance inside the terminal	3.84	3.76	3.97	3.94	1.47	0.22	4.18	3.98	1.54	0.20
17. Ease of making connections	3.98	3.98	4.11	4.24	0.82	0.49	3.94	3.74	2.97	<u>0.03*</u>
18. Courtesy, helpfulness of airport staff	4.08	4.1	4.17	4.12	0.2	0.9	3.92	3.86	2.06	0.10
19. Restaurants/eating facilities	3.44	3.72	3.89	3.88	3.26	<u>0.02*</u>	3.55	3.45	1.60	0.19
20. Value for money of restaurant/ eating	3.66	3.78	3.69	4.12	1.32	0.27	3.16	3.36	1.95	0.12
21. Availability of bank	3.76	3.63	3.7	3.94	0.72	0.54	3.34	3.53	1.47	0.22
22. Shopping facilities	3.19	3.5	3.59	3.59	2.07	0.1	3.56	3.41	3.24	<u>0.02*</u>
23. Value for money of shopping	3.26	3.54	3.66	3.65	1.84	0.14	3.27	3.27	1.72	0.16
24. Opening hours shopping/restaurant	3.24	3.59	3.53	3.76	2.34	0.07	3.58	3.52	2.33	0.07
25. Phone/Internet/IT facilities	3.66	3.65	3.54	3.59	0.2	0.9	3.53	3.23	6.10	<u>0.00*</u>
26. Business/Executive lounges	3.02	3.02	3.29	3.29	1.04	0.37	3.65	3.46	2.70	<u>0.05*</u>
27. Availability of restroom	4.24	4.18	4.16	4.29	0.22	0.88	4.06	3.83	1.79	0.15
28. Cleanliness of restroom	4.34	4.33	4.2	4.47	0.76	0.52	3.71	3.69	0.18	0.91
29. Comfort of waiting/gate areas	4.18	4.18	4.2	4.18	0.01	1	3.84	3.68	2.35	0.07
30. Cleanliness of airport terminal	4.18	4.16	4.19	4.53	1.37	0.25	3.92	3.81	2.25	0.08

Table 3.7 (Continue)

Service Attributes	Expectation				Perception					
	Mean				ANOVAs		Mean		Anova	
	18-25	26-45	46 - 60	>60	F-value	p-value	18-25	26-45	F-value	p-value
31.Ambience of the airport	3.77	3.95	3.94	4.06	1.02	0.38	3.81	3.58	3.52	<u>0.02*</u>
32.Speed of baggage delivery service	3.95	4.13	4.07	4.41	1.55	0.2	3.71	3.92	0.11	0.96
33. Customs inspection	3.79	3.97	4.01	4.24	1.56	0.2	3.69	3.71	2.33	0.07
34. Waiting time for immigration procedure	3.77	4.18	4.11	4.35	4.04	<u>0.01*</u>	3.52	3.66	3.79	<u>0.01*</u>
Total Grand Mean	3.86	3.91	3.96	4.07	1.19	0.45	3.72	3.66	2.25	0.17

*Indicates statistically significant differences between groups at $p \leq 0.05$

Place of Residence

Table 3.8 illustrates the mean of respondents' perception importance on and performance of service quality at Phuket International Airport among place of residences/regions. The results show that among the different regions, 4 regions and others (non-specific region) placed lots of value on "Feeling safe"; Asia (Mean = 4.35), Europe (Mean = 4.33), America (Mean = 4.23), and Oceania and Australia (Mean = 4.53). The low values were mostly placed on "Availability of parking facilities" at the lowest (Mean = 2.68) and "Value for money of parking facilities" (Mean = 2.87) by Oceania and Australia. From table 3.8, the respondents from difference regions gave very high performance scores (between 3.41-4.20) for "Overall satisfaction with the airport", "Availability of baggage cart/trolleys", "Feeling safe", "Courtesy and helpfulness of airport staff", and "speed of baggage delivery". And the moderate performance scores (between 2.61-3.40) of respondents from difference regions were found for "Value for money of parking facilities", "Value money of shopping", "Availability of parking facilities", "Phone/Internet/IT facilities", "Restaurant and eating facilities".

In addition, one-way ANOVA (analysis of variance) test was used to indicate the significance of both importance and performance of airport services attributes (Significant level = ≤ 0.05). Among the different place of resident; there were significance of importance service quality as followed; "Ground transportation to/from airport" (p value equal 0.01), "Availability of parking facilities" (p value equal 0.00), "Value money of parking facilities" (p value equal 0.01), "Waiting time in check-in queue" (p value equal 0.01), and "Courtesy and helpfulness of security staff" (p value equal 0.03), "Feeling of being safe" (p value equal 0.05), "Courtesy and helpfulness of airport staff" (p value equal 0.02), "Value for money of restaurant/eating" (p value equal 0.05), "Business/Executive lounges" (p value equal 0.00), "Availability of restroom" (p value equal 0.01), "Comfort of waiting/gate areas" (p value equal 0.02), and "Custom Inspection" (p value equal 0.04).

Relating to respondents' perception on importance of service attributes, the question is raised of how Phuket International Airport is performing in its service quality among the differences regions. There were some significant results in terms of performance of airport service quality as follows; "Overall satisfaction with the airport" (p value equal 0.00), "Availability of parking facilities" (p value equal 0.00), "Value money of parking facilities" (p

value equal 0.01), “Waiting time in check-in queue” (p value equal 0.01), “Efficiency of check-in staff” (p value equal 0.01), “Courtesy, helpfulness of check-in staff” (p value equal 0.00), “Passport and visa inspection” (p value equal 0.01), “Courtesy and helpfulness of security staff” (p value equal 0.00), and “Thoroughness of security inspection” (p value equal 0.04), “Feeling of being safe” (p value equal 0.00), “Walking distance inside the terminal” (p value equal 0.04), “Ease of making connection” (p value equal 0.03), “Courtesy and helpfulness of airport staff” (p value equal 0.01), “Available of restroom” (p value equal 0.01), “Speed of baggage delivery service” (p value equal 0.01), “Custom inspection” (p value equal 0.01), and “Waiting time for immigration procedure” (p value equal 0.02).

Table 3.8 Variation in International Perception of Service quality by Place of Residence

Service Attributes	Expectation								Perception							
	Mean						ANOVAs		Mean						ANOVAs	
	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value
1. Overall satisfaction with the airport	4.05	4.09	4.38	4.32	4.10	4.13	1.03	0.40	3.79	3.88	4.31	4.27	3.98	4.27	3.94	<u>0.00*</u>
2. Ground transportation to/from airport	3.92	4.13	4.15	4.18	4.32	4.33	3.12	<u>0.01*</u>	3.41	3.82	3.85	3.82	4.10	4.33	8.69	7.90
3. Availability of parking facilities	3.09	2.96	3.77	3.55	2.68	4.00	5.11	<u>0.00*</u>	3.29	3.59	4.15	3.64	3.64	3.93	4.36	<u>0.00*</u>
4. Value for money of parking facilities	3.01	2.88	3.69	3.45	2.87	3.73	2.98	<u>0.01*</u>	3.30	3.41	3.77	3.55	3.50	4.00	3.14	<u>0.01*</u>
5. Availability of baggage carts/trolleys	3.74	3.78	3.69	3.86	3.84	3.93	0.25	0.94	3.54	3.95	4.23	3.82	3.93	4.47	7.14	2.07
6. Waiting time in check-in queue	4.09	4.24	3.69	4.09	4.43	4.60	3.28	<u>0.01*</u>	3.48	3.74	3.77	3.86	3.99	3.80	3.14	<u>0.01*</u>
7. Efficiency of check-in staff	4.19	4.31	4.00	4.32	4.41	4.53	1.54	0.18	3.71	3.97	4.08	3.95	4.11	4.20	3.14	<u>0.01*</u>
8. Courtesy, helpfulness of check-in staff	4.20	4.23	3.92	4.14	4.40	4.47	1.74	0.12	3.71	3.99	3.46	3.82	4.13	4.40	5.16	<u>0.00*</u>
9. Passport and Visa inspection	4.04	4.15	3.62	4.05	4.21	4.13	1.34	0.25	3.62	3.75	3.54	3.95	4.10	3.93	3.07	<u>0.01*</u>
10. Courtesy and helpfulness of security staff	3.94	4.03	3.85	3.91	4.28	4.33	2.59	<u>0.03*</u>	3.53	3.71	3.69	3.91	3.96	4.20	3.46	<u>0.00*</u>
11. Thoroughness of security inspection	4.01	4.02	3.85	4.00	4.22	4.20	1.06	0.38	3.66	3.55	3.69	3.73	3.86	4.20	2.32	<u>0.04*</u>
12. Waiting time at security inspection	3.95	4.08	3.85	3.82	4.12	4.53	1.90	0.09	3.67	3.80	3.69	3.91	3.93	3.93	1.03	0.40
13. Feeling of being safe	4.35	4.33	4.00	4.23	4.53	4.60	2.27	<u>0.05*</u>	3.78	3.99	3.85	3.95	4.21	4.33	4.14	<u>0.00*</u>
14. Ease of finding your way	4.16	4.24	4.00	4.14	4.37	4.53	1.59	0.16	3.96	4.04	3.85	3.77	3.91	3.93	0.59	0.71

Table 3.8 (Continue)

Service Attributes	Expectation								Perception							
	Mean						ANOVAs		Mean						ANOVAs	
	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value
15. Flight information screens	4.07	4.26	4.00	4.14	4.30	4.07	1.35	0.24	3.72	3.83	3.62	3.82	3.88	3.87	0.52	0.76
16. Walking distance inside the terminal	3.83	3.83	3.92	3.64	3.83	3.67	0.38	0.86	3.93	4.18	3.77	3.82	4.04	4.27	2.30	<u>0.04*</u>
17. Ease of making connections	3.95	4.00	4.08	3.82	4.18	4.07	1.07	0.38	3.66	3.88	3.92	3.73	3.96	4.13	2.44	<u>0.03*</u>
18. Courtesy, helpfulness of airport staff	4.00	4.19	4.08	3.77	4.28	3.93	2.69	<u>0.02*</u>	3.74	3.92	4.23	4.05	4.08	4.20	3.40	<u>0.01*</u>
19. Restaurants/eating facilities	3.68	3.58	3.62	3.82	3.92	3.80	1.81	0.11	3.49	3.49	3.23	3.82	3.58	3.53	0.83	0.53
20. Value for money of restaurant/ eating	3.68	3.64	3.85	3.73	4.02	3.80	2.21	<u>0.05*</u>	3.34	3.31	3.54	3.68	3.39	3.40	0.75	0.59
21. Availability of bank	3.75	3.48	3.85	4.00	3.66	3.93	1.70	0.13	3.51	3.43	3.77	3.73	3.60	3.33	1.02	0.41
22. Shopping facilities	3.56	3.31	3.62	3.64	3.46	3.67	1.17	0.32	3.41	3.58	3.77	3.59	3.48	3.47	0.81	0.54
23. Value for money of shopping	3.51	3.42	3.54	3.45	3.67	3.67	0.67	0.65	3.24	3.38	3.31	3.64	3.32	3.13	1.10	0.36
24. Opening hours shopping/restaurant	3.54	3.37	3.69	3.73	3.67	3.53	1.24	0.29	3.46	3.63	3.85	3.77	3.58	3.73	1.61	0.16
25. Phone/Internet/IT facilities	3.67	3.48	3.85	4.05	3.67	3.40	1.49	0.19	3.31	3.26	3.62	3.55	3.44	3.73	1.53	0.18
26. Business/Executive lounges	3.34	2.66	3.54	3.73	2.98	3.20	5.97	<u>0.00*</u>	3.45	3.94	3.62	3.68	3.52	3.93	0.79	0.56
27. Availability of restroom	4.13	4.05	4.15	4.50	4.42	4.07	3.02	<u>0.01*</u>	3.70	3.98	4.00	4.09	3.96	4.27	3.09	<u>0.01*</u>
28. Cleanliness of restroom	4.29	4.26	4.15	4.32	4.48	4.27	1.01	0.41	3.79	3.68	3.62	3.95	3.60	3.93	0.26	0.93
29. Comfort of waiting/gate areas	4.15	4.17	3.62	4.14	4.37	4.13	2.83	<u>0.02*</u>	3.68	3.81	3.46	3.91	3.74	4.20	1.71	0.13
30. Cleanliness of airport terminal	4.17	4.12	4.00	4.23	4.33	4.07	1.25	0.28	3.76	3.97	3.77	4.00	3.90	4.20	1.69	0.14

Table 3.8 (Continue)

Service Attributes	Expectation								Perception							
	Mean						ANOVAs		Mean						ANOVAs	
	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value	1.00	2.00	3.00	4.00	5.00	6.00	F-value	p-value
31.Ambience of the airport	3.99	3.82	3.69	4.00	3.98	4.00	1.01	0.41	3.59	3.72	3.77	3.73	3.70	4.00	0.97	0.43
32.Speed of baggage delivery service	4.11	4.12	3.69	3.86	4.26	3.80	1.96	0.08	3.61	3.82	4.00	5.95	3.78	4.20	3.20	<u>0.01*</u>
33. Customs inspection	3.86	3.90	3.62	4.14	4.20	4.07	2.72	<u>0.02*</u>	3.57	3.78	3.85	4.00	3.96	3.93	3.24	<u>0.01*</u>
34. Waiting time for immigration procedure	4.03	4.15	3.77	4.27	4.18	4.20	0.98	0.43	3.55	3.63	3.92	4.05	3.92	3.87	2.76	<u>0.02*</u>
Total Grand Mean	3.88	3.86	3.85	3.97	4.02	4.04	1.95	0.22	3.59	3.75	3.78	3.90	3.82	3.98	2.57	0.50

*Indicates statistically significant differences between groups at $p \leq 0.05$

Purpose of visit

The purpose of visit influenced customer expectation and perception. There are three types purpose of visit follows; for traveling (tourists), for business, and other. Table 3.9 clearly illustrates the mean. Tourists were most interested in feeling safe (Mean = 4.39), while visitors on business were concerned about the cleanliness of the airport's restroom (Mean = 4.32). The results also indicate the moderate importance placed on "Value of money of parking facilities" for both of tourists (Mean = 3.01) and others (Mean = 3.00). Meanwhile travelers on business placed the lowest importance on "Availability of parking facilities" (Mean = 2.91). The perception of service quality varied according to the purpose of the visit. Tourists had the highest perception on "Walking distance inside the terminal" (Mean = 4.04) as the high performance attribute. Whereas business and other respondents placed the highest perception on a different service attributes; "Courtesy, helpfulness of airport staff" (Mean = 4.00) and "Feeling of being safe" which were perceived by the former and the latter respectively. The lowest perception of tourists (Mean = 3.33) and others (Mean = 3.11) were placed on the same attribute: "Value for money for shopping", but business people (Mean = 3.32) had very little interest in "Thoroughness of security inspection" and "Cleanliness of restrooms".

One-way ANOVA (analysis of variance) test was again used to indicate the significance (Significant level ≤ 0.05) among the differences purposive visiting Phuket respondents' expectation and perception of service quality at Phuket International Airport. As shown in table 3.9 there were significant results among the different kinds of visitors; "Ground transportation to/from airport" (p value equal 0.03), "Waiting time in check-in queue" (p value equal 0.02), "Thoroughness of security inspection" (p value equal 0.01), and "Availability of bank" (p value equal 0.02). While among the 34 attributes of airport service quality, the only one significance performance was "Availability of parking facilities" (p value equal 0.03).

Table 3.9 Variation in International Perception of Service quality by Purpose of visit

Service Attributes	Expectation					Perception				
	Mean			ANOVAs		Mean			ANOVAs	
	Relaxing	Business	Others	F-value	p-value	Relaxing	Business	Others	F-value	p-value
1. Overall satisfaction with the airport	4.11	4.14	3.95	0.52	0.6	3.92	3.95	3.89	0.04	0.96
2. Ground transportation to/from airport	4.14	4.14	3.63	3.56	<u>0.03</u>	3.79	3.68	3.32	2.46	0.09
3. Availability of parking facilities	3.04	2.91	3.16	0.2	0.82	3.51	3.68	3	3.68	<u>0.03</u>
4. Value for money of parking facilities	3.01	3.05	3	0.01	0.99	3.42	3.73	3.26	2.01	0.14
5. Availability of baggage carts/trolleys	3.8	3.77	3.58	0.45	0.64	3.85	3.64	3.58	1.52	0.22
6. Waiting time in check-in queue	4.25	4.18	3.68	3.74	<u>0.02</u>	3.72	3.77	3.47	0.60	0.55
7. Efficiency of check-in staff	4.3	4.27	4.16	0.29	0.75	3.93	3.73	3.95	0.58	0.56
8. Courtesy, helpfulness of check-in staff	4.26	4.14	4.16	0.47	0.63	3.93	3.82	3.79	0.40	0.67
9. Passport and Visa inspection	4.14	3.77	3.84	2.76	0.06	3.81	3.73	3.63	0.34	0.71
10. Courtesy and helpfulness of security staff	4.08	3.95	3.79	1.28	0.28	3.74	3.59	3.74	0.26	0.77
11. Thoroughness of security inspection	4.1	3.55	3.95	4.63	<u>0.01</u>	3.72	3.32	3.63	2.23	0.11
12. Waiting time at security inspection	4.06	4	3.68	1.69	0.18	3.8	3.82	3.68	0.14	0.87
13. Feeling of being safe	4.39	4.14	4.37	1.31	0.27	3.97	3.86	4.16	0.72	0.49
14. Ease of finding your way	4.24	4.32	4.21	0.13	0.87	3.97	3.68	3.95	1.34	0.26
15. Flight information screens	4.18	4.18	4.16	0.01	0.99	3.79	3.68	4	0.71	0.49

Table 3.9 Variation in International Perception of Service quality by Purpose of visit

Service Attributes	Expectation					Perception				
	Mean			ANOVAs		Mean			ANOVAs	
	Relaxing	Business	Others	F-value	p-value	Relaxing	Business	Others	F-value	p-value
16. Walking distance inside the terminal	3.81	3.64	4.11	1.78	0.17	4.04	3.86	4	0.56	0.57
17. Ease of making connections	4.02	4	4.05	0.02	0.98	3.83	3.77	3.74	0.19	0.83
18. Courtesy, helpfulness of airport staff	4.11	4.18	3.89	0.82	0.44	3.91	4	3.95	0.15	0.86
19. Restaurants/eating facilities	3.72	3.59	3.79	0.29	0.75	3.53	3.55	3.37	0.28	0.76
20. Value for money of restaurant/ eating	3.78	3.36	3.84	2.26	0.11	3.37	3.41	3.26	0.15	0.86
21. Availability of bank	3.71	3.09	3.58	3.91	<u>0.02</u>	3.52	3.55	3.53	0.01	0.99
22. Shopping facilities	3.51	3.18	3.05	2.91	0.06	3.51	3.55	3.26	0.78	0.46
23. Value for money of shopping	3.54	3.5	3.21	0.91	0.4	3.33	3.41	3.11	0.73	0.48
24. Opening hours shopping/restaurant	3.55	3.41	3.32	0.67	0.51	3.58	3.55	3.58	0.03	0.97
25. Phone/Internet/IT facilities	3.61	3.73	3.84	0.53	0.59	3.36	3.41	3.37	0.03	0.97
26. Business/Executive lounges	3.05	3.14	3.47	1.04	0.35	3.66	3.5	3.63	0.06	0.94
27. Availability of restroom	4.19	4.23	4.21	0.03	0.97	3.89	3.86	3.95	0.06	0.94
28. Cleanliness of restroom	4.33	4.32	4.16	0.39	0.67	3.73	3.32	4	0.83	0.44
29. Comfort of waiting/gate areas	4.2	4.18	3.95	1.04	0.35	3.77	3.5	3.79	1.14	0.32
30. Cleanliness of airport terminal	4.2	4.14	4	0.73	0.48	3.9	3.64	3.89	1.17	0.31

Table 3.9 Variation in International Perception of Service quality by Purpose of visit

Service Attributes	Expectation					Perception				
	Mean			ANOVAs		Mean			ANOVAs	
	Relaxing	Business	Others	F-value	p-value	Relaxing	Business	Others	F-value	p-value
31.Ambience of the airport	3.92	4.09	3.74	1.05	0.35	3.7	3.55	3.42	1.44	0.24
32.Speed of baggage delivery service	4.13	4	3.79	1.63	0.2	3.89	3.55	3.84	0.18	0.83
33. Customs inspection	3.98	3.82	3.74	1.11	0.33	3.78	3.59	3.63	0.86	0.43
34. Waiting time for immigration procedure	4.13	4.14	3.79	1.34	0.26	3.72	3.59	3.63	0.27	0.76
Total Grand Mean	3.86	3.91	3.96	4.07	1.19	0.45	3.72	3.66	0.76	0.58

*Indicates statistically significant differences between groups at $p \leq 0.05$

3.2.4 Importance-Performance Analysis of Service Quality (IPA)

Importance-Performance Analysis (IPA) is a tool used to develop marketing strategies and understand customer satisfaction and prioritize service quality improvements. First demonstrated by Martilla and James over 25 years ago, importance and performance analysis has gained popularity among hospitality and tourism researchers for its measure simplicity and ease of use (Oh, 2001). Using IPA, customer ratings of importance and performance across several attributes are plotted against each other. The resulting importance and performance called (IP) space is divided into four quadrants.

By examining the points in each quadrant, management may infer which attributes, customers feel should be the highest priorities for improvement (i.e. the 'concentrate here' quadrant) and the lowest priorities for improvement (i.e. the 'possible overkill' quadrant). Then manager can consider the costs of various improvements and develop an action plan. Thus IPA provides managers with a simple graphical representation of how customers feel about the business, some direction for improvement of the business, and an indication of why customers want particular improvements.

The grand mean scores for both importance ($Y = 3.92$) and performance ($X = 3.72$) as indicated in table 3.3 and 3.4 respectively, determines the placement on the grid (see Figure 3.1). Passengers appear to have thought that 34 service quality attributes at Phuket International Airport were also related to their expectations of good service. It is quite normal as the importance grand mean scores were high and also higher than the grand mean performance score. What Phuket International Airport has to do in order to serve their international passengers is important. The airport must add value for the passengers and each attribute on the grid can then be analyzed by locating the appropriate quadrant in which it falls.

As figure 3.1 exhibited, there are seventeen service attributes; "Overall satisfaction with the airport", "Ground transportation to/from airport", "Efficiency of check-in staff", "Courtesy and helpfulness of security staff", "Passport and Visa inspection", "Courtesy and helpfulness of security staff", "Waiting time at security inspection", "Feeling of being safe", "Ease of finding your way", "Flight information screens", "Ease of making connections", "Courtesy, helpfulness of airport staff", "Availability of restroom", "Comfort of waiting/gate area", "Cleanliness of airport terminal", "Speed of baggage delivery service", and "Customs

inspection” that are of high importance and that have a high performance in the upper-right quadrant (keep up the good work). These are the major strengths of the service quality attributes at Phuket International Airport which generally wants to keep up the good performance.

In the upper-left quadrant (concentrate here) are the major weaknesses of Phuket International Airport or the low performing areas that are of high importance. These attributes; “Thoroughness of security inspection”, “Ambience of the airport”, and “Waiting time for immigration procedures”, are of high importance to international passengers using Phuket International Airport, but they are performing poorly. Thus, it is here where major improvements are required to improve customers’ satisfaction.

The third quadrant (lower left); low priority; consists of low performance that are of little importance to passengers. While it is important to know and to be aware of, Phuket International Airport should not invest too much in them owing to their low importance. The attributes positioned here are “Availability of parking facilities”, “Value for money of parking facilities”, “Restaurant/eating facilities”, “Value for money of restaurant and eating”, “Availability of bank”, “Shopping facilities”, “Value for money for shopping”, “Opening hours shopping/restaurant”, “Phone/Internet/facilities”, and “Business/executive lounges”.

Attributes in the fourth quadrant (lower-right); possible overkill, are the minor strengths. This means that they are the high performances that are of low importance. Since these attributes; “Availability of baggage cart/trolley”, and “Walking distance inside the terminal”, are of lower importance to international passengers, Phuket International airport should not invest too much effort in improving them.

Since the essential role of service quality influences the passengers’ overall satisfaction at the airport, some more statistical test as well as analysis has been done on the airport services at Phuket International Airport.

Table 3.10 shows the result of paired-samples T-test of the difference of the means of Importance and Performance of service attributes at Phuket International Airport. Based on statistics in Table 3.10, the attributes which had negative performance-importance gap need to improve to get the Performance of the attributes equal or higher than their Importance. The airport services attribute needed to improve most were “Cleanliness of restroom” (-0.60), “Waiting time in check-in queue” (-0.50), “Comfort of waiting/gate areas” (-0.43), “Feeling of being safe” (-

0.41), “Waiting time for immigration procedure” (-0.40), “Value for money of restaurant/ eating” (-0.39), “Flight information screens” (-0.38), “Efficiency of check-in staff” (-0.37), “Thoroughness of security inspection” (-0.36), “Ground transportation to/from airport” (-0.35), “Courtesy, helpfulness of check-in staff” (-0.33), “Courtesy and helpfulness of security staff” (-0.33), “Cleanliness of airport terminal” (-0.31), “Passport and Visa inspection” (-0.30), “Availability of restroom” (-0.29), “Ease of finding your way” (-0.28), “Phone/Internet/IT facilities” (-0.26), “Waiting time at security inspection” (-0.25), “Ambience of the airport” (-0.25), “Speed of baggage delivery service” (-0.24), “Value for money of shopping” (-0.20), “Ease of making connections” (-0.19), “Courtesy, helpfulness of airport staff” (-0.19), “Restaurants/eating facilities” (-0.19), “Customs inspection” (-0.19), “Overall satisfaction with the airport” (-0.18), and “Availability of bank” (-0.15).

Of the services attributes above, all of them showed statistically significant (Significant level = ≤ 0.05) difference between importance and performance. Therefore these attributes indicate where urgent improvements are needed to satisfy international passengers, except “Speed of baggage delivery service” and “Availability of Banks”.

Table 3.10 Importance-Performance Gaps of Service Quality at Phuket International Airport

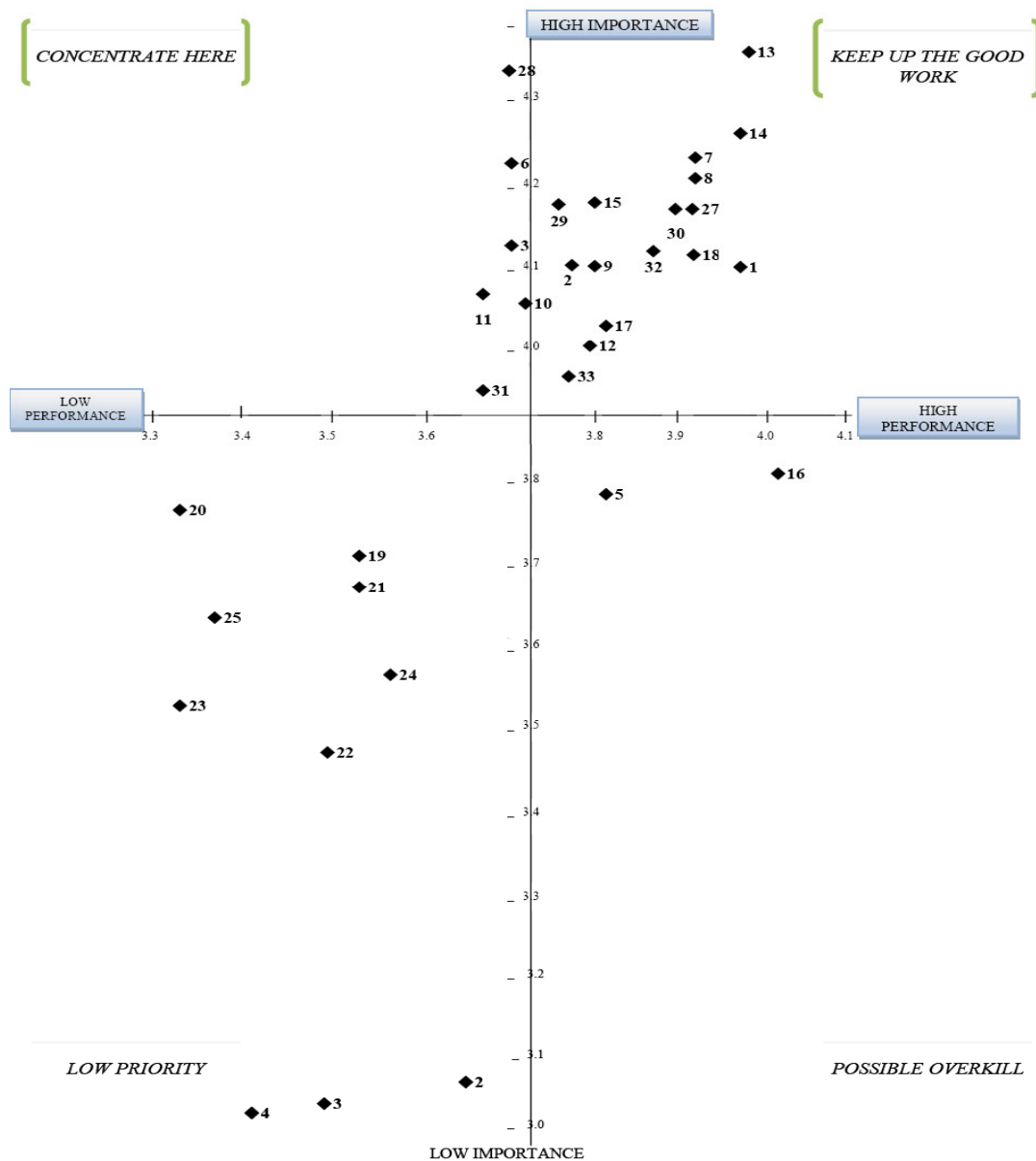
Attributes of Airport Services	P	I	(P-I)	T-test	
				t-statistic	p-value
Cleanliness of restroom	3.72	4.32	-0.60	6.37	0.00*
Waiting time in check-in queue	3.72	4.22	-0.50	8.45	0.00*
Comfort of waiting/gate areas	3.76	4.19	-0.43	9.00	0.00*
Feeling of being safe	3.97	4.38	-0.41	8.96	0.00*
Waiting time for immigration procedure	3.71	4.11	-0.40	7.12	0.00*
Value for money of restaurant/ eating	3.37	3.76	-0.39	6.90	0.00*
Flight information screens	3.80	4.18	-0.38	7.38	0.00*
Efficiency of check-in staff	3.92	4.29	-0.37	7.80	0.00*
Thoroughness of security inspection	3.70	4.06	-0.36	7.02	0.00*
Ground transportation to/from airport	3.76	4.11	-0.35	7.65	0.00*
Courtesy, helpfulness of check-in staff	3.92	4.25	-0.33	7.43	0.00*
Courtesy and helpfulness of security staff	3.73	4.06	-0.33	6.54	0.00*
Cleanliness of airport terminal	3.88	4.19	-0.31	7.02	0.00*
Passport and Visa inspection	3.80	4.10	-0.30	5.92	0.00*
Availability of restroom	3.90	4.19	-0.29	6.13	0.00*
Ease of finding your way	3.96	4.24	-0.28	5.66	0.00*
Phone/Internet/IT facilities	3.37	3.63	-0.26	4.01	0.00*
Waiting time at security inspection	3.79	4.04	-0.25	4.54	0.00*
Ambiance of the airport	3.68	3.93	-0.25	5.03	0.00*
Speed of baggage delivery service	3.87	4.11	-0.24	1.73	0.08
Value for money of shopping	3.32	3.52	-0.20	3.57	0.00*
Ease of making connections	3.83	4.02	-0.19	4.09	0.00*
Courtesy, helpfulness of airport staff	3.92	4.11	-0.19	4.25	0.00*
Restaurants/eating facilities	3.52	3.71	-0.19	3.50	0.01*
Customs inspection	3.77	3.96	-0.19	4.16	0.00*
Overall satisfaction with the airport	3.92	4.10	-0.18	4.61	0.00*
Availability of bank	3.52	3.67	-0.15	2.67	0.08
Availability of baggage carts/trolleys	3.82	3.79	0.03	-0.66	0.51
Shopping facilities	3.50	3.47	0.03	-0.57	0.57
Opening hours shopping/restaurant	3.58	3.53	0.05	-0.97	0.33

Table 3.10 (Continue)

Attributes of Airport Services	P	I	(P-I)	T-test	
				t-statistic	p-value
Walking distance inside the terminal	4.03	3.82	0.21	-4.49	0.00*
Value for money of parking facilities	3.43	3.02	0.41	-6.97	0.00*
Availability of parking facilities	3.50	3.04	0.46	-7.17	0.00*
Business/Executive lounges	3.65	3.08	0.57	-4.66	0.00*

Note:*statistically significant gap ($p \leq 0.05$) between Performance and Importance (Paired-sample T-test)

Figure 3.1 IPA Grid for Service Quality at Phuket International Airport



- | | | |
|---|--|---|
| <ul style="list-style-type: none"> 1) Overall satisfaction with the airport 2) Ground transportation to/from the airport 3) Availability of parking facilities 4) Value for money for parking facilities 5) Availability of baggage carts/trolleys 6) Waiting time in check-in queue 7) Efficiency of check-in staff 8) Courtesy, helpfulness of check-in staff 9) Passport and Visa inspection 10) Courtesy and helpfulness of security staff 11) Thoroughness of security inspection | <ul style="list-style-type: none"> 12) Waiting time at security inspection 13) Feeling of being safe 14) Ease of finding your way 15) Flight information screens 16) Walking distance inside the terminal 17) Ease of making connections 18) Courtesy, helpfulness of airport staff 19) Restaurants/eateries 20) Value for money of restaurant/ eating 21) Availability of banks 22) Shopping facilities 23) Value for money of shopping | <ul style="list-style-type: none"> 24) Opening hours shopping/restaurant 25) Phone/Internet/ IT facilities 26) Business/Executive lounges 27) Availability of restrooms 28) Cleanliness of restrooms 29) Comfort of waiting/gate areas 30) Cleanliness of airport terminal 31) Airport ambience 32) Speed of baggage delivery service 33) Customs Inspection 34) Waiting time for immigration procedures |
|---|--|---|

CHAPTER 4

SUMMARY

This chapter presents the summary of the main findings from the investigation of the passenger's viewpoint towards the service quality at Phuket International Airport. Accordingly, the purpose of this chapter is to draw some conclusions and discussion in order to propose possible solutions for improving service quality and passengers' satisfaction based on the research findings of the study, including to analyze the factors which are crucial to service quality perception; to examine customer expectation and perception of service quality at Phuket International Airport, and to identify and prioritize service areas requiring managerial attention and action to ensure an improving service quality. Furthermore, the last section of this chapter points out the limitations of this research as well as suggestions for future research.

This study explores the current situation of service quality within Phuket International Airport. A survey was used to collect opinions from 400 passengers using the airport, especially at the international departure terminal at Phuket International Airport during February to April 2010. The data collected from questionnaires was analyzed by using the Statistical computer program. Then frequency counts, percentage distributions, and means were calculated and analyzed. Eventually, by using Importance-Performance Analysis (IPA), passengers' perceptions of service quality at Phuket International Airport were assessed.

There are four sections within this chapter, presenting discussion and suggestions related to findings and objectives of this study as follows:

4.1 Conclusion

4.1.1 Crucial factors affecting service quality perception for passengers using Phuket International Airport;

4.1.2 Passengers' perception on importance and performance of service quality at Phuket International Airport;

4.1.3 Prioritized service areas requiring managerial attention and action to ensure an improving service quality and customer satisfaction;

4.2 Discussion

4.3 Recommendations

4.4 Limitation and Suggestions for further research

4.1 Conclusion

4.1.1 Crucial factors affected service quality perception

Referring to research findings, all of the 34 airports service attributes and the IPA measure has been used by ACI to assess passengers' perception of airport service quality enormously throughout of the world. Similarly this research applies the Airport Service Quality models (ASQ) with the 34 items of service quality to a survey which took place at Phuket International Airport in the given time as mentioned earlier. A 5-point Likert rating scale to rate each ASQ models of the 34 items of airport service quality was used in order to understand the current demand of passengers using Phuket International Airport. In addition, IPA analysis was then chosen to assess the importance and performance of all attributes in the passengers' opinions. There are primarily five factors, 'Thoroughness of security inspection', 'Ambiance of the airport', 'Waiting time for immigration procedure', 'Waiting time in check-in queue', and 'Cleanliness of restroom' which were the most crucial to international passengers' perception of service quality. The above may imply that these factors are of high importance to International passengers using services at Phuket International Airport, but the airport performs poorly. Thus, it is here where major improvements are required such as to improve the Phuket International Airport's capability of satisfying more International passengers.

4.1.2 Passengers' perception on expectation and perception of service quality

Of the 400 respondents, there were 65.0% male and 35.0% female. The majority age-group of the respondents (62.8%) was 26-45 years old, 17.5% of them were 46-60 years old and 15.5% were 18-25 years old. Travelers from Asia accounted for 35.0% of the total respondents, followed by Europe (30.0%) while Oceania and Australia emerged as the third significant market to Phuket, representing 22.5%. Business owners, salespeople and others such as teachers, divers, and consultants were three major occupations categories (65.6%). The survey revealed that majority came to Phuket for leisure and vacation (89.75%). In addition, a

significant percentage came to Phuket for business purposes. The analysis, however, showed that the number of airport users varied insignificantly between first time usage of Phuket International Airport (53.25%) and repeated usage (46.75%). As anticipated, 94.0% of the respondents used Phuket International Airport for the purposes of departure and arrival.

The findings of this study are about gaining an insight into international passengers' perspective of the service quality of Phuket International Airport. The overall tourists' perception analysis was conducted, using a questionnaire to investigate airport services.

According to the questions, tourists were asked to evaluate 34 attributes. These questions were designed to assess the degree of importance of airport service attributes as well as to evaluate the performance of Phuket International Airport. Therefore, the average importance of attributes and the average level of performance with various aspects attribute experiences were calculated for the overall respondents.

The respondents placed most importance on "Feeling of being safe", "Cleanliness of restrooms" ranked second and the third was "Efficiency of check-in staff". However the respondents had the lowest importance level for attribute "Value for money of parking facilities" followed by "Availability of parking facilities" and "Business/Executive lounges". Relating to the above stage of ranking what is important for airport service quality, it raised the question of how Phuket International Airport is performing its service quality. The spread between the high (Walking distance inside the terminal) and the low (Value for money of shopping) ranked factor is insubstantial. The mean scores ranged from a high of 4.03 to moderate of 3.32. According to the results, Phuket International Airport was seen to have high substantial performances in most airport service attributes, except the operation of "Phone/ Internet/ IT facilities", "Value for money of restaurant/ eating" and "Value for money of shopping" that ranged moderate performance.

4.1.3 Service areas prioritized requiring managerial attention and action to ensure and improve service quality and customer satisfaction;

In order to gain an insight into the international passengers' perspective of service quality at Phuket International Airport, the overall passengers' perspective analysis was examined in detail. Afterwards, the summary of passengers' point of view toward service quality at Phuket International Airport was revealed in an importance-performance grid (figure 3.1). IPA was employed in order to identify which service areas the management should pay particular attention to in order to act and improve service quality and the satisfaction of passengers using Phuket International Airport. All thirty-four were prioritized to each quadrant as follows;

First priority, of the four quadrants, the upper-left one can be implied as the most important quadrant (concentrate here) which the manager should prioritize to concentrate on. These are factors which are crucial to service quality perception of the passengers using Phuket International Airport. This quadrant defines the major weaknesses of Phuket International Airport or the low performing attributes that are of high importance. These attributes; 'Thoroughness of security inspection', 'Ambiance of the airport', 'Waiting time for immigration procedure', 'Waiting time in check-in queue', and 'Cleanliness of restroom', are high importance to International passengers using service quality at Phuket International Airport, but they are rated as low performance. Thus, it is here where major improvements are required so as to improve the Phuket International Airport's capability of satisfaction more the international passengers.

For the second priority, there are seventeen service attributes which are of high importance and that have a high performance in the upper-right quadrant (keep up the good work); "Overall satisfaction with the airport", Ground transportation to/from airport", "Efficiency of check-in staff", " Courtesy and helpfulness of security staff", "Passport and Visa inspection", "Courtesy and helpfulness of security staff", "Waiting time at security inspection", "Feeling of being safe", "Ease of finding your way", "Flight information screens", " Ease of making connections", "Courtesy, helpfulness of airport staff", Availability of restroom", "Comfort of waiting/gate area", "Cleanliness of airport terminal", "Speed of baggage delivery service", and "Customs inspection". These are the major strengths of the service quality attributes at Phuket International Airport where the good performance should be continued.

Third priority (lower left); low priority; consist of low performance that are of low importance or minor weaknesses. While important to know and to be aware of, Phuket International Airport should not invest too much in them owing to their low importance. The attributes positioned here are “Availability of parking facilities”, “Value for money of parking facilities”, “Restaurant/eating facilities”, “Value for money of restaurant and eating”, “Availability of bank”, “Shopping facilities”, “Value for money for shopping”, “Opening hours shopping/restaurant”, “Phone/Internet/facilities”, and “Business/executive lounges”.

Forth priority, Attributes in this forth quadrant (lower-right); possible overkill, are the minor strengths. This means that they are the high performances that are of low importance. Since these attributes; “Availability of baggage cart/trolley), and “Walking distance inside the terminal”, are of lower importance to International passengers, Phuket International airport should not invest too much effort in improving them.

4.2 Discussions and Recommendations

In this study, the researcher discussed the research results in order to propose possible solutions to improve service quality and customer’s satisfaction at Phuket International Airport. Questionnaires were collected from 400 respondents of the international passengers using Phuket International Airport.

The international passengers were asked to evaluate 34 attributes, which were developed from Airport Service Quality models (ASQ) by ACI, in two parts: importance and performance of service quality at Phuket International Airport, which identifies 3 core components of service quality: servicescape, interaction, and services (Fodness, 2009); with a 5-likert scale rating. The application of primary service quality to categorize the three factors which are crucial for airport service quality perception of passengers could be concluded as followed;

First, *servicescape* as the major factor which is essential to the passengers’ perception of service quality at the airport. There are 30 service areas in the servicescape category including Overall satisfaction with the airport, Ground transportation to/from airport, Availability of parking facilities, Value for money of parking facilities, Availability of baggage carts/trolleys, Waiting time in check-in queue, Passport and visa inspection, Thoroughness of security inspection, Waiting time at security inspection, Feeling of being safe, Ease of finding

your way, Flight information screens, Walking distance inside the terminal, Ease of making connections, Restaurants/eating facilities, Value for money of restaurant/ eating, Availability of banks, Shopping facilities, Value for money of shopping, Opening hours shopping/restaurant, Phone/Internet/IT facilities, Business/Executive lounges, Availability of restrooms, Cleanliness of restrooms, Comfort of waiting/gate areas, Cleanliness of airport terminal, Ambience of the airport, Speed of baggage delivery service, Customs inspection, and Waiting time for immigration. All *servicescape* attributes above are the objective or tangible factors controllable by the service provider that facilitate customer action during the service encounter and improve passengers' satisfaction of service quality (Fodness, 2009).

The second factor is *service personnel* which influences service quality perceptions where customers' physical presence is required for service delivery, i.e. interactions with service personnel through the specified three subdimensions: attitudes, behavior, and expertise. Of thirty-four airport service areas, just five service attributes consist "Overall satisfaction with the airport", "Efficiency of check-in staff", "Courtesy and helpfulness of check-in staff", "Courtesy and helpfulness of security", and "Courtesy and helpfulness of airport" are included in service personnel factors.

Services is the last crucial factor to service quality perception. As the airport experience demands a significant time commitment, the importance of time spent waiting at the airport is an important factor to make passengers have more favourable perceptions of the airport service quality provided. Productive (work and study related), maintenance (e.g., eating, resting, grooming), and leisure (e.g., housework, shopping) activities should be provided to the customers in an efficient way to minimize time and to enjoy their shopping and leisure time in the commercial area. This study provides "Overall satisfaction with the airport", "Restaurants/eating facilities", "Value for money of restaurant/ eating", "Availability of bank", "Shopping facilities", "Value for money of shopping", "Opening hours shopping/restaurant", "Phone/Internet/IT facilities", "Business/Executive lounges", "Comfort of waiting/gate areas", "Cleanliness of airport terminal", and "Ambience of the airport" as service attributes for international passengers to assess service quality at Phuket International Airport. Some services can be categorized to servicescape as following; "Restaurants/eating facilities", "Value for money of restaurant/ eating", "Availability of bank", "Shopping facilities", "Value for money of shopping", "Opening

hours shopping/restaurant”, “Phone/Internet/IT facilities”, “Business/Executive lounges”, “Comfort of waiting/gate areas”, “Cleanliness of airport terminal”, and “Ambience of the airport”

Most of respondents were travelling for leisure purpose from Asia and Europe. Of 34 airport service quality attributes, there are only five primary factors including ‘Thoroughness of security inspection’, ‘Ambiance of the airport’, ‘Waiting time for immigration procedure’, ‘Waiting time in check-in queue’, and ‘Cleanliness of restroom’ which were rated as the most crucial to international passengers’ perception of service quality at Phuket International Airport. These are the factors ranked as high importance to International passengers using service quality at Phuket International Airport, but where performance is low. Thus, it is here where major improvements are required such as to improve the Phuket International Airport’s capability of satisfying International passengers. Why are these five factors crucial to passengers’ perception of service quality at Phuket International airport? The above question comes up in order to find out how to improve this service quality to satisfy passengers.

“Thoroughness of security inspection”, “Waiting time for immigration procedure”, “Waiting time in check-in queue”,

This section focuses on some key processes which now have a major impact to airport operation, as well as reflecting on the passengers’ perception of airport service quality. There are a number of different airport activities involved with the protection and well-being of passengers.

In order of importance of Maslow’s hierarchy needs; of the five needs included Physiological need, Safety need, Social need, Esteem need, and Self-actualization need, the ‘Safety need’ is the second most important need which people have at any particular time (Kotler, 2000). Tourism, Safety and Security; the topic of safety and security in the tourism industry is of vital importance globally. In recent years, and mainly after the 9/11 event, both academics and practitioners have started to look into crisis management issues seeking workable solutions in order to mitigate the negative impacts of safety and security incidences in the tourism industry and affected destinations (Mansfeld et al, 2005). Given the major role that safety and security plays in making travel choices, it is demonstrated quite clearly that peace is the best friend of travel and tourism while war and insecurity are among its worst enemies (JohnRose,2009).

Airport security is concerned with the prevention of illegal activities, such as terrorism. Since airport security was introduced; it may raise the question of how is it different from 'Airport safety'. The latter term is different from airport '*security*' as it is specifically related to safety on the aircraft (Graham, 2008). Airport security awareness since the 11th September 2001 incident reflects how the increased emphasis on security has concerned the service quality regarding the queuing and the waiting process.

Increased security procedures have led to increased waiting times at the airport. This shows the relationship between service related to security and waiting time factors. Therefore high awareness of 'thoroughness of security inspection' leads to the increase of the related security activities which may affect to the scarce of time passengers spend on other processes before departure and the scarcity of time to enjoy airport service quality which might lead to passengers' dissatisfaction. The same as if the passengers' scarce time was spent through the "*Waiting time for immigration procedure*", "*Waiting time in check-in queue*", the short time the passengers spend when they are away from home may limited. Therefore, possible solutions are as followed;

As "*Thoroughness of security inspection*", "*Waiting time for immigration procedure*", "*Waiting time in check-in queue*" process are related to servicescape theory by Fodness (2009) which includes all the objective factors controllable by the service provider that facilitate customer action during the service encounter and enhance their overall service quality perception. Therefore the efficiency and effectiveness of the arrangement and relationship of machinery and equipment should serve properly to the passengers in order to minimize the time of waiting during whatever process of airport services.

"Airport Ambience"

BMC Health Services Research (2007) states that Kotler first introduced the concept of *atmospherics*, a term that refers to how the physical and controllable components of an environment affect a buyer's satisfaction, and other marketing professionals have also pointed out that the ambience can lead to customer satisfaction, patronage, and advertising via word-of-mouth.

Fodness (2009) combines *ambience*, which is related to the 'feeling', as a part of *the first* (servicescape) and *the third factors* (services) of the airport service quality dimension.

These first and third factors contain items of ambiance scale which are more tangible, including temperature, lighting, noise, music and scent and so on, that affect the perception of the environment. Apart from the above, the ambience was described as the '*decor*' of the airport. Therefore the decoration of the airport is crucial to the passengers' perception of service quality. The recommendations on improving this service attribute are such; an airport should be clean, should have soothing music playing throughout its facilities and terminal with as much natural light through windows, skylights, etc. as possible, an airport's decor should match the local culture of the city at which it is located, an airport should display art and or have current decor. In other settings, ambient conditions have been found to have either stressful or relaxing effects on customers mentioned by Miliman (1982, 1986), and Yalch and Spartenberg (1988) was cited in (Fodness, 2009). The above can be a guideline for airport managers to play a role in expectation and underlying service quality perception of airport.

“Cleanliness of restrooms”

Cleanliness of restroom means bathroom hygiene. This study analyzed the relationship between passengers' demographics and their thoughts on the environment of the waiting areas. It determined that women were less satisfied with the cleanliness of the physical environments, measured in terms of the restrooms' surroundings. Traditionally, women take more responsibility for cleanliness at home, which might account for and translate into them having higher expectations for cleanliness than men. Additionally, in female's restrooms trash is filled much faster than in men's restrooms (BMC Health Services Research, 2007). As the above concern prevention and improvement of restrooms by the medical industry, an application should be possible to suggest to the airport cleaning section for checking and cleaning the restrooms more frequently to ensure comfort.

Similarly Might (2004, cited in Zinzi, 2008) suggests the single most critical factor upon which customers base their judgement is the cleanliness of the restroom, be it an airport, a restaurant, a bus terminal and so forth. Too frequently, particularly during busy times, the restrooms are neglected simply because none of the staff has been assigned to maintain on them. Aspects of a cleanliness of restroom help determine people judge the overall cleanliness (cintas.com, 2008). Surprisingly, many of the top considerations have nothing to do with hygiene, but rather with stock. The same study found more than 84 percent of respondents equate empty

toilet paper dispensers with restroom dissatisfaction and more than 76 percent of respondents are dissatisfied if the soap dispensers are empty.

The study has clear implications for service quality measurement and management at the airport. The most obvious is that in order for airport service quality strategies and tactics to yield the desired results, the service quality of the airport must be defined by and measured from passengers themselves (Fodness, 2007). More specifically, researchers in this industry have sometimes relied on airport and travel professionals for specifying and even for measuring airport service quality “from a passenger’s perspective” (Fodness, 2009). Thus, a key managerial implication of this study is a passenger-driven framework for the airport manager on how to enhance the quality of the service quality management processes thereby improving service quality in ways that really do matter to the passengers. In addition service quality can increase the likelihood of being perceived by a passenger as the best choice, relative to the alternatives available as ACI (2004) was cited in Fodness (2009) that “Passengers...demand higher standards of service, and, where they have a choice, they will end to choose the...airports...which give the best quality of service”.

4.3 Suggestions and recommendations

What specific areas should Phuket International Airport try to improve, in order to significantly increase customer satisfaction is using a questionnaire, we discovered that the following are the areas which customers felt most needed to be improved:

1. *“Thoroughness of security inspection”*
2. *“Waiting time for immigration procedure”*
3. *“Waiting time in check-in queue”*
4. *“Airport ambience”*
5. *“Cleanliness of toilet facilities”*

The first three key points, “Thoroughness of security inspection”, “Waiting time for immigration procedure”, and “Waiting time in check-in queue” process are related to Servicescape theory by Fodness (2009), including all the objective factors controllable by the service provider that facilitate customer action during the service encounter and enhance their overall service quality perception. Therefore the efficiency and effectiveness of the arrangement

and relationship of machinery and equipment should serve properly to the passengers in order to minimize their time of waiting during the process of airport services.

Passengers felt the security checks were superficial and inadequate, making them feel unsafe. Therefore for the *thoroughness of security inspection*, high technology of security machinery and the efficiency of service personnel may influence the customer's perception of security at Phuket International Airport. In addition, due to Thailand's political crisis the government has been impacted since 2008 concerning the stability of Thailand affecting businesses including tourism; the government should be involved to promote Thailand as a safety and security country.

Waiting time in check-in queue is often slow. Additional desks should be installed. Airports tend to serve passengers with very different expectations, and of course it is very difficult to please everyone. The same applies for *Waiting time for immigration procedure*, reflecting too long immigration queues. Additional immigration desks and officials should be installed.

The level of segmentation can then be increased with the introduction of 'fast track' systems which guides the passengers swiftly through various processes such as immigration and custom. For instance, the security fast lane at Liverpool airport is available for all passengers who pay a fee of 2 pounds (currently around 100 baht at 2010 rates) (Graham, 2008). The previous examples may be good examples of passenger segmentation by the airport to solve the problems of different needs and wants of difference customers. In addition, the above provision can be counted as a new source of revenue for the airport.

In order to improve an effective check-in, there are now a number of ways that passengers can check-in for their flight apart from using the traditional check-in desk. These include self-service check-in kiosks at airports, and remote methods such as mobile phones and the internet (Sigala, 2008; Field, 2008; cited in Graham, 2008). This was an inevitable development as the air transport industry saw how self-service technologies could lower costs, increase productivity, and reduce customer waiting time. At the same time, better use of the scarce space at the airport could be made.

Apart from all mentioned tactics, airports look at the ways to keep the customer. For example, there are entertainment managers, and some employ actors to entertain the passengers during the process of security checks (Graham, 2003).

Last-minute shopping in the commercial area of the airport is essential for some customers. This is why they require time to satisfy their needs. This, perhaps, influences their perception in a positive way. To run the airport procedures effectively, ensuring the time for customers to enjoy their last minute shopping is a vital key to satisfy the passengers. At the same time, developing leisure and commercial areas at the airports creates opportunities to generate the commercial revenues.

“Airport ambience” - from the customer's perspective, atmospherics involves much more than the design and construction of the physical surroundings. Fodness (2009) combines the **ambience** which is related to the ‘feeling’ as a part of *the first* (servicescape) and *the third factors* (services) of airport service quality dimensions. These first and third factors contain items of an ambience scale which are more tangible, including temperature, lighting, noise, music and scent and so on, that affect perception of environment. Apart from the above, the ambience is described as the **‘decor’** of the airport. Therefore the decoration of airport is crucial to the passengers’ perception of service quality at Phuket International airport. The recommendations for improving this service attribute are: an airport should be clean, should have soothing music playing throughout its facilities and terminal with as much natural light through windows, skylights, etc. as possible. An airport’s decor should match the local culture of the city at which it located. An airport should display art appropriate to the current decor. In other settings, ambient conditions have been found to have either stressful or relaxing effects on customers (Miliman, 1982; 1986, and Yalch and spartenberg, 1988 cited in Fodness, 2009). The above can be a guideline for airport management to play a role in helping to meet expectations underlying passengers’ service quality perceptions of the airport.

Cleanliness of toilet facilities is an area that the airport should recognize more. The toilet paper dispensers and soap dispensers were considered by the customers to be often empty. They also considered that the toilets were often unacceptably dirty. It would be better if the toilets were regularly cleaned and re-stocked by staff.

By improving in these areas, Phuket International Airport would help to boost not only its own performance and profits, but also the wealth of Phuket as a whole, due to the increased number of tourist visits that would result.

The single most critical public perception of the place which customers used the shared facilities, such as restaurants, bus terminals, airports, etc. are that if the restroom is thoroughly clean, so is the specified place. Needless to say, the reverse is also regarded as true. An analysis published in *Restaurant Hospitality* magazine focused on guests' perceptions of the restrooms in 100 different restaurants (Might, 2004 was cited in Zinzi, 2008). These studies of restaurant hospitality can be applied equally to the service quality of restrooms at the airport. All too frequently, particularly during busy times, the restrooms are neglected, simply because no-one on staff has been given specific responsibility for checking on them.

How do people actually define the restroom's cleanliness? Cintas.com (2008) mentioned that aspects of a restroom's cleanliness help determine what people consider when judging a on the overall cleanliness of that place. Surprisingly, many of the top considerations have nothing to do with cleaning, but rather stocking. The same study found more than 84 percent of respondents equate empty toilet paper dispensers with restroom dissatisfaction and more than 76 percent of respondents are dissatisfied if the soap dispensers are empty. Therefore to solve the problem of stock in the restroom, the housekeeping staff should check both tissues and dispenser stock in the restrooms more frequently. This will sustain higher comfort levels for customers and is therefore recommended in this case.

It has been pointed out that Phuket International Airport is the second biggest in the country and handles flights from both far-flung places such as Australia and Europe, as well as many regional flights from south-east Asia. Due to the increasing number of tourists using the airport, Airports of Thailand announced that the hub at Phuket will undergo renovation works. These include constructing a new international passenger terminal, car-park and walkways, as well as improving facilities in the existing terminal (Jones, 2010).

Phuket international airport development project passed government approval by 2 December 2009 and the government approved 6 million baht in funding (Pornchanan, 2009). AOT plans for future service for up to 12.5 million people by the year 2018. But now it can serve only up to 6.5 million. The airport expects to see 6.8 million passengers in 2010. Therefore the

expansion is needed. Additionally, improvements in service quality at Phuket International Airport would give the airport a more competitive edge.

This research has discussed many ways to improve service quality in order to increase the customers' satisfaction. One criticism that should not be ignored is 'handling complaints' about services provided by airport. The recommendations for the airport must include paying more attention to address complaints from customers, and then solving problems immediately, or as quickly as possible. This can be applied in order to reduce customers' dissatisfaction. In addition, efficient action by staff to handle the problem properly is another essential key for the airport to consider. Recruitment and training for staff could focus on how to promptly serve the customers.

4.4 Limitations and Suggestions for Further Study

This study holds implications for further research in the airport service quality and passenger satisfaction domains. First of all, due to time limitations, the survey was conducted among international passengers using Phuket International Airport only. The questionnaires could have been distributed to both international and domestic users, who are also potential passengers. According to the methodology, a comparison between Phuket International Airport and similar airports would be suggested. In addition, to be more beneficial to the airport industry, especially for Phuket International airport, all categories of airport customers, including airlines, concessionaires (stores, businesses), employees, tenants and others should be consulted in order to know what they expect, and to measure the actual airport service quality performance. This would provide a guideline for airport organizations to improve their services to meet their customers' expectations. Airlines are particularly recommended, as they are the second most important customers of the airport. They pay substantial amounts of money for services provided, such as runways, terminal facility, office space, and technical facilities. Finally, service quality needs to be measured periodically in order to update measurements of the current satisfaction of customers.

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APPENDIX

Passengers' questionnaire



No....

QUESTIONNAIRE

**An Investigation of Service Quality at Phuket International Airport:
An Assessment form the Passengers' Viewpoint**

The purpose of this questionnaire is to collect the data for Graduate a minor thesis for the Master of Business Administration Program in Hospitality and Tourism Management (International Program), the Faculty of Service Industries at Prince of Songkhla University, Phuket Campus. The data collected will be analyzed for academic purposes only: for investigating and analyzing the factors which are crucial to service quality perception of tourists using Phuket International Airports.

The researcher would like to express you special thanks and appreciation for the kind cooperation and attention in spending your valued time for completing this questionnaire and make my thesis successful.

This questionnaire consists of 4 parts;

1. Your experience of services in Phuket International Airport.
2. Your opinion on Phuket International Airport's performances.
3. Your recommendations.
4. Personal Information

Ms. Malin Wannasatit

Note: Please write down your answer or put '√' into the which corresponds to your answer.

Part 1: Experience of services in Phuket International Airport.

1. My **main** purpose of using Phuket International Airport this time is for

- Relaxing (spending most of time on recreation; traveling, sunbathing, playing sport, reading. etc.)
- Business (such as government officers, attending seminars or conferences. Etc.)
- Others (Please specify).....

2. What has been your '**typical**' usage of Phuket International airport in the east 12 months?

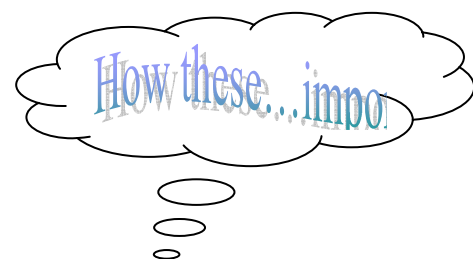
- Departures & Arrival
- Departures only
- Arrivals only
- Transit

3. Is this your **first time of using** Phuket International Airport?

- Yes.
- No, I have been used Phuket International Airport...times (include this time).

Part2: Your opinion on Phuket International Airport's performances.2.1 How are these Phuket International Airport's characteristics/attributes **important** to you?

5 = Extremely important	4 = Important
3 = Moderately important	2 = Unimportant
1 = Extremely unimportant	



Airport Services Attributes	5	4	3	2	1
1. Overall satisfaction with the airport					
2. Ground transportation to/from airport					
3. Availability of parking facilities					
4. Value for money of parking facilities					
5. Availability of baggage carts/trolleys					
6. Waiting time in check-in queue					
7. Efficiency of check-in staff					
8. Courtesy, helpfulness of check-in staff					
9. Passport and Visa inspection					
10. Courtesy and helpfulness of security staff					
11. Thoroughness of security inspection					
12. Waiting time at security inspection					
13. Feeling of being safe					
14. Ease of finding your way					
15. Flight information screens					
16. Walking distance inside the terminal					
17. Ease of making connections					
18. Courtesy, helpfulness of airport staff					
19. Restaurants/eating facilities					
20. Value for money of restaurant/ eating					
21. Availability of bank					
22. Shopping facilities					
23. Value for money of shopping					
24. Opening hours shopping/restaurant					
25. Phone/Internet/IT facilities					
26. Business/Executive lounges					
27. Availability of restroom					
28. Cleanliness of restroom					
29. Comfort of waiting/gate areas					
30. Cleanliness of airport terminal					
31. Ambience of the airport					
32. Speed of baggage delivery service					
33. Custom inspection					
34. Waiting time for immigration procedure					

2.2 How well did the Phuket International Airport **perform** to you services?

5 = Very good	4 = Good
3 = Neutral	2 = Poor
1 = Very poor	



Airport Services Performances	5	4	3	2	1
1. Overall satisfaction with the airport					
2. Ground transportation to/from airport					
3. Availability of parking facilities					
4. Value for money of parking facilities					
5. Availability of baggage carts/trolleys					
6. Waiting time in check-in queue					
7. Efficiency of check-in staff					
8. Courtesy, helpfulness of check-in staff					
9. Passport and Visa inspection					
10. Courtesy and helpfulness of security staff					
11. Thoroughness of security inspection					
12. Waiting time at security inspection					
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29. Comfort of waiting/gate areas					
30. Cleanliness of airport terminal					
31. Ambience of the airport					
32. Speed of baggage delivery service					
33. Custom inspection					
34. Waiting time for immigration procedure					

Part 3: Recommendations

4. The performance (services) of Phuket Intl' Airport that **impresses me the most!!** is.....

- | | |
|---|--|
| <input type="checkbox"/> 1. Ambience of the airport | <input type="checkbox"/> 6. Airport staff services |
| <input type="checkbox"/> 2. Airport facilities | <input type="checkbox"/> 7. Cleanliness of airport |
| <input type="checkbox"/> 3. Airport securities | <input type="checkbox"/> 8. Speed of baggage delivery service |
| <input type="checkbox"/> 4. Custom inspection | <input type="checkbox"/> 9. Restaurant & Shopping facilities |
| <input type="checkbox"/> 5. Immigration process | <input type="checkbox"/> 10. Value for money of restaurant, shopping & Parking |

5. The performance (services) of Phuket Intl' Airport that **needs improvement urgently!!** is...

- | | |
|---|--|
| <input type="checkbox"/> 1. Ambience of the airport | <input type="checkbox"/> 6. Airport staff services |
| <input type="checkbox"/> 2. Airport facilities | <input type="checkbox"/> 7. Cleanliness of airport |
| <input type="checkbox"/> 3. Airport securities | <input type="checkbox"/> 8. Speed of baggage delivery service |
| <input type="checkbox"/> 4. Custom inspection | <input type="checkbox"/> 9. Restaurant & Shopping facilities |
| <input type="checkbox"/> 5. Immigration process | <input type="checkbox"/> 10. Value for money of restaurant, shopping & Parking |

6. Suppose that Phuket Intl' Airport have plan of **expansion** in next few years, ***what changes or improvements*** would you like to see at Phuket Intl' Airport?

.....

Part 4: Personal Information

7. **Gender:** 1. Male 2. Female

8. What is your **age** group?

- 18 – 25 years 26 – 45 years 46 – 60 years above 60 years

9. My **Profession/ occupation:**

1. Government/State Enterprise
 2. Student
 3. Business owner
 4. Salesperson
 5. Housewife
 6. Hospitality industry staffs (hotels, airline, restaurant etc.)
 7. Agricultural
 8. Others..... (Please identify)

10. My **region** of residence

- | | |
|--|---|
| <input type="checkbox"/> 1. Asia | <input type="checkbox"/> 4. America |
| <input type="checkbox"/> 2. Europe | <input type="checkbox"/> 5. Oceania & Australia |
| <input type="checkbox"/> 3. Middle East & Africa | <input type="checkbox"/> 6. Others..... (Please identify) |

Thank you for your cooperation in answering this questionnaire.

VITAE

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