SERVICE QUALITY, CUSTOMER SATISFACTION AND
REPURCHASE INTENTION IN ONLINE FOOD ORDERING
SERVICE: A CASE STUDY OF XYZ COMPANY IN THAILAND

By

ACHIRAYA JITKOMUT

Submitted in Partial Fulfillment of the Requirements for the Degree of
MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT

Martin de Tours School of Management
Assumption University
Bangkok, Thailand

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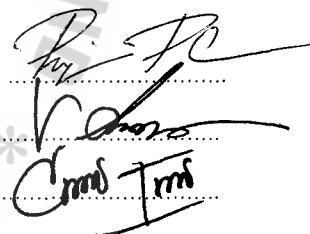
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Declaration of Authorship Form

I, Achiraya Jitkomut declare that this project and the work presented in it are my own and have been generated by me as the result of my own original research.

Project Title SERVICE QUALITY, CUSTOMER SATISFACTION AND REPURCHASE INTENTION IN ONLINE FOOD ORDERING SERVICE: A CASE STUDY OF XYZ COMPANY IN THAILAND

I confirm that:

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ABSTRACT

This research focused on the e-service quality that affects customer satisfaction and repurchase intention. The researcher tried to identify the factors affecting customer satisfaction for the online food ordering service in the Thai context, XYZ, using E-S-QUAL model. The study examined the linkage of e-service quality, customer satisfaction and the linkage of customer satisfaction and repurchase intention in Thai context by quantitative approach. According to the literature review in this study, E-service quality has been found to have positive correlation to customer satisfaction, and customer satisfaction also leads to repeat sales. Therefore, the conceptual framework, research hypothesis and data collection method utilized in this study were developed. The reliability of the measurement items (Efficiency, Fulfillment, System Availability, Privacy, Customer Satisfaction, Repurchase Intention) were validated. The questionnaire was developed by adopting from previous researches. Non-probability sampling technique was applied to collect the data. Four hypotheses were tested by statistical program, SAS. The summary of the findings shows that e-service quality (Privacy and Efficiency) has significant impact to customer satisfaction, and customer satisfaction has positive impact to repurchase intention. Managerial implications, limitation and recommendations for future research are also discussed.

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CHAPTER I

GENERALITIES OF THE STUDY

Introduction

People nowadays have changed the way they live. The pace of their life is moving faster and faster in today's globalization. The limited resource in life like "Time" needs to be considerably well-spent. According to the study by INRIX Inc, Bangkok is rated as the 12th most congested city in the world (Global Traffic Scorecard, 2016). People need to spend more time on traffic while there are only 24 hours a day. The urbanization is squeezing people to move faster, but what can they do since they are still stuck on the road? Hence, Internet is the answer.

The customer's behavior keeps changing in the era of industry 4.0, many activities have extended to another platform – Internet. The Internet helps people to save more time on many activities, e.g. booking ticket, hotel reservation, money transfer, online shopping, etc. It is one of the reasons why the smartphone users in Thailand have increased significantly; average around 230 minutes per day (Nielson information Mobile insight Q3'2016). In the combination of smartphone and Internet, it has obviously changed people's lifestyle.

The business extended to online platform, the environment and context have changed. Many companies have lost their business while many companies get the chance to get into business. Business startup in Thailand tries to use Internet channel to reach customers. Every company knows that Internet channel is available for everyone, all people can use the Internet and be reached by the Internet, if one company can do, other competitors can also do. So, how can they compete with each other? What should be the company's strategies or core competency to win against the competitors? One of the strategies is service quality.

1.1 Background of the Research

The Internet has become indispensable for everybody. Most companies have started applying Internet and mobile application to their business, both internally and externally for efficiency and cost saving. In Thailand, people continue to see more and more activities that can be done online which helps not only to save time but also more convenient, such as online banking, shopping, hotel reservation and air ticketing, etc. Apart from those activities, we see the growth of online food ordering service which is a growth enabler of food chain in Thailand.

Recently, the online food ordering service has been expanding and trying its best to change consumer behavior. Online food ordering is an alternative tool for food retailing. It is a good opportunity to learn more on overall online food ordering process and customer satisfaction using the online channel to order food.

1.2 Statement of the Problems

Online food ordering service in Thailand is in growing stage. It is interesting that there are few online food ordering services that are very successful and well-known, while many still struggle to grow their pie in the market.

Only few of online food ordering service providers are being heard of. One of the very successful companies in Thailand is XYZ. As of December 2017, the number of application downloads is 10 million. XYZ was founded in 2012 in Singapore, operating in 23 countries globally. In 2016, the company was acquired by its competitor, Delivery Hero, and now has headquarters in Berlin, Germany. XYZ allows customers to select local restaurants and place orders via website or mobile application. XYZ Thailand currently provides services around main cities, such as Bangkok, Nonthaburi, Samut Prakarn, Pathum Thani, Chiang Mai, Pattaya, Phuket, and Hua Hin. XYZ messengers are around the central business district areas queuing to buy food and deliver to

customers. In 2016, the new companies like Line Man and Uber EATS competed with XYZ by offering promotion to attract people.

However, the business is still limited and not fully adopted by most customers. Some of them try only once when it has promotion, but after that, no more order. Therefore, this study has investigated the factors that affect customer satisfaction and repurchase intention. The research question of this study is *"What are the factors that affect customer satisfaction and repurchase intention of online food ordering service in Thailand?"*

Figure 1.1: Online Food Ordering Process
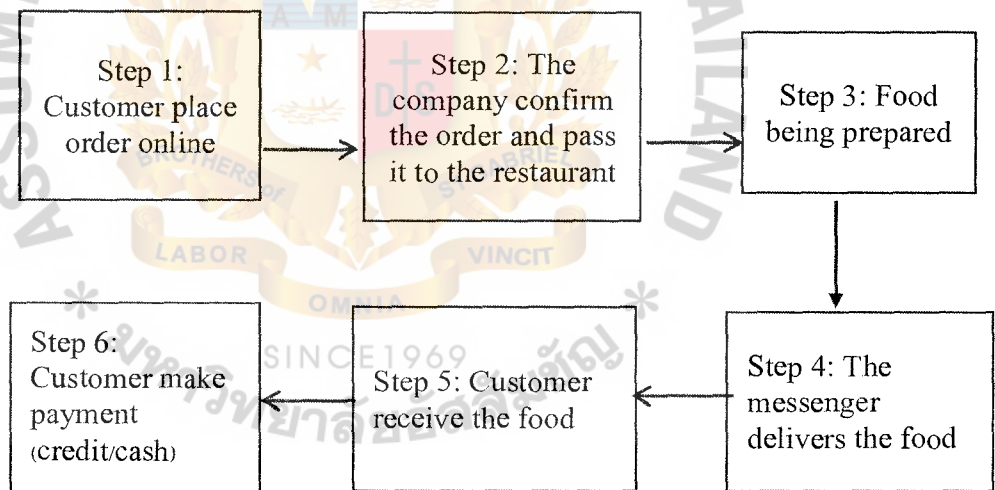
Source: Author

According to the above process flow, the standard process of online food ordering starts from the order placement via online website or online application. The company will pass the order to the selected restaurant and the food is then being prepared and delivered to the customers. After that, the customers can pay for the food by cash or direct debit to their credit card at their convenience.

1.3 Research Objectives

To understand customer satisfaction and repurchase intention of customers who use the services of online food ordering, four objectives have been proposed in this research.

1) To study customer satisfaction and repurchase intention of online food ordering service in Thai context;
2) To identify the factors that affect customer satisfaction on online food ordering service;
3) To identify the relationship between customer satisfaction and repurchase intention on online food ordering service;
4) To compare the level of efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention among customers who live in different types of residence; and
5) To compare the level of efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention among customers who are in different age range.

1.4 Scope of the Research

There might be many factors both internal and external that affect the customer satisfaction and repurchase intention. Due to limited timeframe and area of interest, the study was focused only on internal factors that affect customer satisfaction. The researcher has also studied further to prove whether or not customer satisfaction has direct impact on repurchase intention.

This study aimed to identify the factors that can predict customer satisfaction and to test the impact of customer satisfaction toward repurchase intention. The E-S-QUAL model developed by Parasuraman, Zeithaml, and Malhotra (2005) was the measurement model used in this study to assess the e-service quality of the XYZ website who currently provides online food ordering service in Thailand. The model has been used in many other researches to measure service quality of the online service,

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e.g. online shopping (Kandulapati & Bellamkonda, 2014; Wu, 2006), online book stores (Boshoff, 2007), online banking (Akinci, Atilgan-Inan, & Aksoy, 2010), online supermarket (Marimon, Vidgen, Barnes, & Cristóbal, 2010), online grocery (Rafiq, Lu, & Fulford, 2012), and social commerce activity (Lee, Cha, & Cho, 2012).

Although the E-S-QUAL has been used in many areas of online service industry, it was not used to measure online food ordering in Thailand before. Therefore, this research was a great opportunity to test whether or not this measurement tool can be applied in the Thai context. A set of questionnaires has been developed based on E-S-QUAL model to measure e-service quality, customer satisfaction and repurchase intention of a Thai online food ordering service provider, XYZ. The key respondents of this researchwere the people who live in urban area or in the major cities of Thailand.

1.5 Significance of the Research

Customer satisfaction becomes more and more important nowadays. Many companies try to focus on customer satisfaction and consider it to be a critical measurement of company's performance (Jayasankaraprasad & Kumar, 2012). Customer satisfaction is generic and becomes one of the most common perceptual measurements for every business and product. According to Wang and Liao (2007), satisfied customers have higher level of repurchase intentions and positive word-of-mouth, which can help business to strive in the market. Therefore, many researches have been conducted to find out what is the driven factor of customer satisfaction. In this research, some of the drivers of customer satisfaction were identified.

Customer satisfaction basically has a positive impact on customers' loyalty to a business (San-Martin and Lopez-Catalan, 2013). The researcher has observed that online food ordering in Thailand is now in growing stage.

In conclusion, customer satisfaction is assumed to be the key success of every business. This study has identified the factors affecting customer satisfaction for the online food ordering service, XYZ, using E-S-QUAL model. The study has examined the linkage of e-service quality, customer satisfaction and the linkage of customer satisfaction and repurchase intention in Thai context. For other researchers who are interested in service quality, they can also study further and apply the tool in different contexts to expand the knowledge and its usefulness.

1.6 Limitations of the Research

There were several limitations when this research was conducted. Firstly, the participants were limited only in Bangkok area and agreed to participate voluntarily. Secondly, not every people using online food ordering service and the number of people who have experienced XYZ service were more exclusive. Lastly, most of the population came from the young people who easily adopt the new technology; therefore, there might have been some bias in the sampling method.

1.7 Definition of Terms

Customer satisfaction	The degree of overall pleasure or contentment felt by the customer, resulting from the ability of the service to fulfil the customer desires, expectations and needs in relation to the service (Hellier, Geursen, Carr, & Rickard, 2003)
Efficiency	The ease and speed of accessing and using the site (Parasuraman, Zeithaml, & Malhotra, 2005)

E-Service Quality	The consumers' overall evaluation and judgment of the excellence and quality of e-service offerings in the virtual marketplace (Santos, 2003)
Fulfillment	The extent to which the website's promise about order delivery and item availability are fulfilled (Parasuraman et al., 2005)
Privacy	The degree to which the site is safe and protects customer information (Parasuraman et al., 2005)
Repurchase intention	The customer's decision to be engaged in future activities with the retailer or supplier (Hume, Mort, & Winzar 2007)
System availability	The correct technical functioning of the site (Parasuraman et al., 2005)

1.8 Chapter Summary

This research has tried to identify the factors affecting customer satisfaction for the online food ordering service in the Thai context, XYZ, using E-S-QUAL model. The study has examined the linkage of e-service quality, customer satisfaction and the linkage of customer satisfaction and repurchase intention in Thai context by using quantitative approach.

CHAPTER II

REVIEW OF RELATED LITERATURES AND CONCEPTUAL FRAMEWORK

In this study, linkage between e-service quality, customer satisfaction and repurchase intention were examined. Therefore, literatures that associated with the topic were reviewed.

2.1 E-Service Quality

Service quality is conceived as an overall evaluation that customer use to measure service. It is a key measurement criterion to assess the service (Lewis & Booms, 1983). However, there is no clear indication of the assessment dimensions, because it depends on the interpretation of individuals. And it is also different among various business contexts. In addition, some measurement dimensions which relate to experiences and feeling are dependent on individual experience or feeling at the point in time and cannot be directly observed or measured (Dahlgaard, Schütte, Ayas, & Dahlgaard-Park, 2008).

In one of the primary studies of service quality, Grönroos and Shostack (1983) advised that service quality can be measured during a service and on completion of a service. The authors also suggested that customers' experience of both during and on completion of service should be contrasted with customers' expectations. Asubonteng, McCleary, and Swan (1996) also had mostly similar explanation that service quality is an outcome when customers compare between expectation before experiencing the service and perception after experiencing the service.

E-service quality is defined as "the extent to which a Web site facilitates efficient and effective shopping, purchasing, and delivery" (Zeithaml, Parasuraman, & Malhotra, 2000). Santos (2003) defined it as "the consumers' overall evaluation and judgment of

the excellence and quality of e-service offerings in the virtual marketplace." Zeithaml et al. (2002) defined e-service quality as "the extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery." Many e-service quality literatures have been reviewed and found that e-service quality has been defined in various definitions; therefore, many measurement models been developed by different researchers based on the definition of e-service quality in their study (Kurt & Atrek, 2012).

E-service quality has been discussed in many researches. Several dimensions, for example, security/privacy, website design, reliability, responsiveness and information have been continuously cited by many researchers (Kalia, 2017). However, in general, service quality has been acknowledged that related research is still in an early stage (Santouridis, Trivellas, & Tsimonis, 2012). The research conducted by Kundu and Datta (2015) found that e-service quality is correlated to customer satisfaction significantly.

In 1988, Parasuraman, Zeithaml, and Berry developed SERVQUAL model to measure service quality. The model measures service quality by the difference between customer expectation during experience and customer perception after experience. The model is comprised of five dimensions: reliability, assurance, tangibles, empathy, and responsiveness (RATER). The SERVQUAL measurement model is a tool that has an important role in measuring conventional service quality in various types of business (Ladhari, 2009).

Referring to SERVQUAL measurement model, the tangibles are physical facilities and the appearance of personnel. Reliability means the ability to execute the promised service dependably. Responsiveness refers to the promptness of service to customers, assurance means employee's knowledge to build customer trust as well as confidence. The last element, empathy refers to caring and the personalization of employee's attitudes (Parasuraman et al., 1988; Ueltschy, Laroche, Eggert, & Bindl, 2007).

Parasuraman et al. (1988) developed SERVQUAL model and described it as a general measurement model of quality and could be applied for all types of services. However,

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some critics have different opinions. They argued that the model is not applicable for all kinds of services as the developers of the model suggested (Francis, 2007). The reason for this argument is because the dimensions of the model may lack stability when applied in different contexts. It raises concern that SERVQUAL model needs to be modified to suit different services (Buttle, 1996; Yang, Jun, & Peterson, 2004). Tate and Evermann (2010) also argued that SERVQUAL is not applicable for online or virtual environment because it was developed for face-to-face market that is different from online environment. Later in 2005, the modified measurement model was developed to measure online service quality, called E-S-QUAL model (Parasuraman et al., 2005).

Various measurement models for e-service quality were developed based on customer perceptions or assessment of purchasing experiences (Liu, 2012). In the year 2000, Zeithaml, Parasuraman, and Malhotra developed 11 dimensions to measure e-service quality. The model measures e-service quality using empirical data collection and exploratory focus groups.

The SITEQUAL model was developed by Yoo and Donthu (2001). The model measures four dimensions which are ease-of-use, aesthetic design, processing speed, and security of the website. The WEBQUAL model of Barnes and Vidgen (2003) was developed to measure three dimensions of e-service quality which are usability, information, and interaction. Wolfinbarger and Gilly (2003) developed the E-TailQ model. This model measures four dimensions of e-service quality which are website design, fulfillment - reliability, security - privacy, and customer service. Bressolles (2006) developed the NetQUAL model. This model measures five dimensions of e-service quality which are information, ease-of-use, reliability - fulfillment, site design, and security – privacy.

Parasuraman et al. (2005) refined the e-service quality scale and developed a new measurement model called E-S-QUAL. The model uses 22 items to measure four dimensions (Parasuraman et al., 2005). Although previously, there were many measurement models developed by many researchers, but since E-S-QUAL was

established, this measurement model has received significant attention in terms of research literature and model testing in various types of online business (Boshoff, 2007; Marimon et al., 2010; Meng, 2010; Yaya, Marimon, & Casadesus, 2011).

The E-S-QUAL model has been in attention for 10 years since its development, but is still considered as quite recent; therefore, its applicability and usefulness are still being discussed among the researchers (Yaya et al., 2011). Although the tool is still under discussion, several researchers (Parasuraman et al., 2005; Boshoff, 2007; Akinci et al., 2010; Marimon et al., 2010) have proven that the E-S-QUAL model is applicable for various types of business, and it is a useful measurement for e-service quality.

2.2 E-S-QUAL Model

The E-S-QUAL measurement model was developed by Parasuraman et al. in 2005. The model has formed the fundamental of the recent e-service quality study. It is a comprehensive method to measure e-service quality because it includes both prior and after of e-service quality aspects (Santouridis et al., 2012). Besides, each dimension of E-S-QUAL model was developed based on qualified data because the respondents had experience on internet shopping. Thus, comparing to other studies that use convenience sampling method with random students, the E-S-QUAL model is granted for more reliable data and more eligible in terms of measurement scales (Kim, Kim, & Lennon, 2006). The model consists of four dimensions which are efficiency, fulfillment, system availability and privacy.

The dimensions of the E-S-QUAL model represent majority of the perspective of e-service quality (Kim et al., 2006). The model has been utilized as a measurement tool for e-service quality in many studies (Kurt & Atrek, 2012), such as online shopping (Kandulapati & Bellamkonda, 2014; Wu, 2006), online book stores (Boshoff, 2007), online banking (Akinci et al., 2010), online supermarket (Marimon et al., 2010), online grocery store (Rafiq, Lu, & Fulford, 2012), social commerce activity (Lee, Cha, & Cho, 2012), microblogging sites (Hu, Wang, & Hung, 2012), a university website (Zada,

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Abbasi, Barazesh, & Abdi, 2012), e-government services (Alanezi, Mahmood, & Basri, 2012; Connolly, Bannister, & Kearney, 2010; Jun, Liangliang, & Fubin, 2009).

Boshoff (2007) utilized the E-S-QUAL model with an online marketing company selling CDs, DVDs, books, etc. and the study advised that E-S-QUAL model is reliable and a valid tool to measure e-service quality in online platform. Akinci et al. (2010) examined E-S-QUAL model in a service-oriented situation across different-cultural customers. The result reaffirmed evidence of the reliability and validity of the measurement model. Kim and Kim (2010) reassessed E-S-QUAL model and found that the four dimensions, which are efficiency, fulfillment, system availability and privacy significantly influence customer satisfaction, whereas fulfillment and privacy are significantly related to customer loyalty (Kim & Kim, 2010; Sheng & Liu, 2010). The model has been applied to various industries and the scale's reliability and validity have been confirmed (Kim, 2015).

There are various measurement models to measure e-service quality in recent studies; however, the E-S-QUAL model developed by Parasuraman et al. (2005) is broadly applied in many researches which can validate the effectiveness and reliability of its scale (Kurt & Atrek, 2012). The study of Kandulapati and Shekhar Bellamkonda (2014) examined the E-S-QUAL model and revealed that it is valid for evaluating e-service quality in the context of online shopping in India. Their study is another validation evidence to confirm that perceived e-service quality has a significant impact on perceived service value. In the conclusion, the perceived service value mediates the relationship between e-service quality and customer satisfaction.

Figure 2.1: Original model of E-S-QUAL
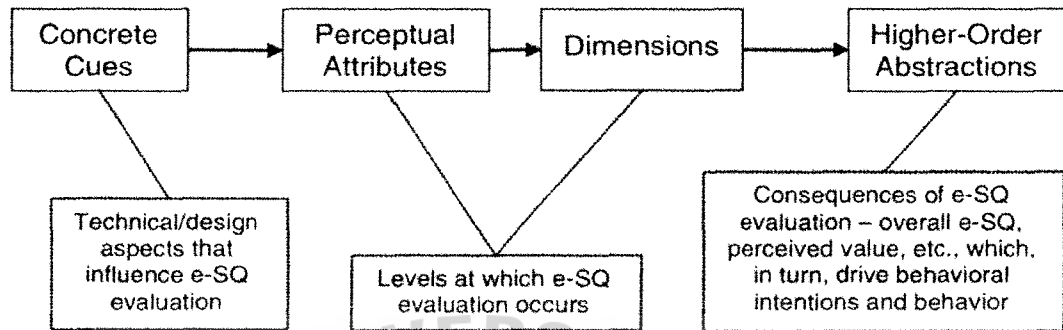
Source: *Parasuraman et al. (2005)*

Parasuraman et al. (2005) conducted extensive focus group research in 2000. The research considered variety of website features ranging from specific and concrete cues (e.g. tab structuring) to general perceptual attributes (e.g. perceived transaction speed), to broad dimensions (e.g. ease of navigation), then to higher-order abstractions (e.g. perceived quality and value in overall) and came up with the proposed framework as shown below.

2.2.1 Efficiency

Efficiency in E-S-QUAL model is defined as "the ease and speed of accessing and using the site" (Parasuraman et al., 2005). Many researchers have considered ease of use and speed separately (Kundu and Datta, 2015). It normally refers to "customers' ease of web site access, simplicity of using the site, ease of finding information, and fast check-out with minimal effort" (Kim et al., 2006). It also includes features of ability to navigate (Cebi, 2013; Kurt & Atrek, 2012; Goi, 2012; Zhao & Dholakia, 2009; Souitaris & Balabanis, 2007; Schaupp & Bélanger, 2005).

Efficiency is an important factor in many e-service quality studies (Kim, 2015; Einasto, 2014; Kiran & Diljit, 2012; Hernon & Calvert, 2005). Efficiency can be represented in the research by using phrases such as "easy to use" and "convenient to access" as representation. It is also considered as a significant element in e-commerce, because convenience and saving time are normally perceived as main reasons for online shopping acceptance (Kim et al., 2006; Ranganathan & Ganapathy, 2002). Davis (1989) concluded that customers assess service quality of a website by perceiving how users are able to complete tasks efficiently. Overall, most researches are consistent with industry reports. Researches and reports focus on ease of navigation as it is a critical factor in e-shopping (Trocchia & Janda, 2003). Santos (2003) believed that efficiency is also a crucial factor derived from a well-structured and easy-to-navigate site. The content of website must be concise and easy-to-understand. Terms and conditions plus URL address must be easy to remember.

According to the definition of efficiency from the literature review, it can be referred as easy to use, convenient to access, navigable site, and fast checkout with minimal effort. In the extension review of other literatures, easy to use, convenient to access, and navigable information are mostly similar to the term "Website quality" in the study of Chiou, Lin and Perng (2010) and similar to the term "System quality" in the study of Egeln (2015). The term website quality (Chiou et al., 2010) includes usability, accessibility, navigability or information quality while system quality (Egeln, 2015) refers to web appearance and interactivity. Cyr (2013) identified four design categories as important components when developing effective website. The four components are information design, information content, navigation design, and visual design.

Website appearance is like people appearance, it determines the first impression and attractiveness. The website appearance is represented by the web design, such as theme, font, language, etc. (Egeln 2015; Aladwani & Palvia, 2002). Many researchers advised that in the online platform, the features shown on websites have significantly impacted on customer shopping experience (Baker, Parasuraman, Grewal, & Voss, 2002). Interactivity definition is "a continuous construct capturing the quality of two-way communication between two parties" (Egeln, 2012; Alba, Lynch, Weitz, Janiszewski,

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Lutz, Sawyer, & Wood, 1997). Interaction between customer and website can happen in different ways depending on shopping objectives and the expectations of customer toward the website.

2.2.2 Fulfillment

According to E-S-QUAL model, fulfillment is defined as "the extent to which the site's promise about order delivery and item availability are fulfilled" (Parasuraman et al., 2005). Study of Cristobal, Flavian, and Guinaliu (2007) defined fulfillment as "the order management including the correct product in a timely manner". In other studies, the term "reliability" may be used interchangeably with "fulfillment" (Ladhari, 2010; Bauer, Falk, & Hammerschmidt, 2006).

Fulfillment is a core factor in most studies' criteria to assess service quality (Kim, 2015; Hernon & Calvert, 2005; O'Neill, Wright, & Fitz, 2001). It is a crucial factor for the judgment of online shopping quality because to keep service promised and to keep order fulfilled are fundamental for e-service quality that predict customer satisfaction or dissatisfaction (Yang & Fang, 2004). Wolfinbarger and Gilly (2003) reported in their study that the most predominant dimensions of e-service quality are fulfillment and reliability, whereas responsiveness has the least predominant on overall website service quality (Wolfinbarger & Gilly, 2003). The study of Wolfinbarger and Gilly (2003) found that two important dimensions which are fulfillment and reliability can predict customer satisfaction, customer loyalty, and repurchase intention. Bauer et al. (2006) further concluded that online and offline environment are similar in terms of customer expectations since fulfillment, in customer perspective, is an important factor in assessing service quality.

Fulfillment is a key performance indicator in online retailing that requires smooth coordination among all parties related to operations. E-fulfillment can be considered as meeting customer expectation or beyond customer expectation, and keeping customer satisfied. Fulfillment process starts with order placement and ends with the receiving

exactly what customer wants at the right place and time (Tarn et al., 2003). Order fulfillment in online retailing involves the order picking, packing and shipping process, which was conceptualized as Physical distribution service quality (PDSQ) (Rabinovich & Bailey, 2004; Bienstock, Mentzer, & Bird, 1996), Logistics service quality (Mentzer, Flint, & Hult, 2001) and Operational order fulfillment service quality (Davis-Sramek, Mentzer, & Stank, 2008). Mentzer, Flint, and Kent (1999) discussed PDSQ in the scope of three dimensions which are availability, timeliness and condition. Jain, Gajjar, Shah, and Sadh (2017) also studied the order fulfillment service quality and considered the three dimensions as well. According to their study, availability is capability of inventory (Xing and Grant, 2006); timeliness refers to product and service delivered in the timely manner (Jain et al., 2017; Koufteros et al., 2014); condition refers to the condition of the products that customer receives whether in good or bad condition (Koufteros et al., 2014). Condition of the product is fundamental for the order fulfillment because customers expect the product to be shipped and arrived in good condition and un-damaged (Jain et al., 2017). Apart from the three dimensions, Koufteros, Droge, Heim, Massad, and Vickery (2014) added billing accuracy as a part of order fulfillment construct. Otim and Grover (2006) identified that after sales services, such as visibility of order tracking and on-time delivery significantly impact customer loyalty.

To be a successful online service provider, it is important that the firm is able to keep promises in a timely manner (Ladhari, 2010). The customer expects the right product to be shipped in good condition, on time, and to the appointed address. Since product availability is not physically visible to customers, online retailers must ensure that the actual availability of the product is consistent with the display on the website (Jain et al., 2017). Product shortage may lead to delayed shipment and customer dissatisfaction. On the other hand, if the product is available, and the company is able to deliver the right product that the customer has ordered, it means that order is fulfilled immediately, the customer will have positive feeling receiving the message that order is packed and shipped. As a result, it will lead to customer satisfaction.

Although a good designed website can have a positive impact on customer purchase intentions, but the customer considers the quality only when the product is received and meets customer expectations (Dholakia & Zhao, 2010). Therefore, online business needs to ensure that orders are fulfilled and customer service is provided in order to keep the customer happy.

2.2.3 System availability

System availability per E-S-QUAL model is defined as "the correct technical functioning of the site" (Parasuraman et al., 2005). Availability is an ability of a service or a system that could be functional upon operation requested. The availability of the system is a reliability function and a management of logistics (Jazouli, 2011). System availability can also be referred as "site is always available", "links are all working" (Einasto, 2014; Kiran & Diljit, 2012) and "correct technical functioning, no broken links" (Kim, 2015).

According to Jazouli (2011), availability is a significant issue for many operating systems in real business world. A failure, for example, an increase of down time of an ATM machine causes customers inconvenience; unavailability of a point-of-sale system in retail stores can cause a great financial loss; unavailability of a medical device can lead to fatality; unavailability of servers or system causes loss of data; and unavailability of airplane causes flights to be delayed or cancelled and impact all passengers' schedule.

Fram and Grady (1995) indicated that technical software problem is related to online shopping. When customers buy an item from an online store or they are just searching the item they are looking for on the internet, system functional issues such as un-clickable buttons or error links cause negative feelings toward the website. Customer may exit the online site and feel disappointed. As a result, the online retailers may lose the opportunity to extend customer loyalty (Wachter, 2002). Avoiding and eliminating non-workable links are a part of the total e-service quality (Santos, 2003).

2.2.4 Privacy

This study adopts E-S-QUAL model of Parasuraman et al. (2005) and the definition is similar to many papers which privacy is "the degree to which the site is safe and protects customer information" (Parasuraman et al., 2005).

As per study of Culnan (1999), security and privacy are the key factors in measuring online service. Security definition is "customers are safe from fraud and risks of financial damage when using credit cards" (Friedman, Kahn, & Howe, 2000). Gavison (1980) defined privacy as "a limitation of others' access to an individual". Schoeman (1992) defined privacy as "protecting individuals from the overreaching control of others". Moor (1997) suggested that the term *privacy* should be used as "designate a situation in which people are protected from intrusion or observation by natural or physical circumstances" and on the contrary, to "give individuals as much personal choices as possible". Spinello (2003) defined informational privacy as "concerns the collection, use, and dissemination of information about individuals". In the study of Haruna, Kiran, and Tahira (2017), privacy is "degree to which the customer believes the site is safe from intrusion and personal information is protected". When customers would like to make an online purchasing, they expect the website to be trustable (Egeln, 2015; van Iwaarden, van der Wiele, Ball, & Millen, 2004). In order to increase the adoption rate for online purchasing, it is crucial that the website is able to make customer trust that any personal data and sensitive information such as credit card will not be disclosed; thus, the customer feels safe and secured to use and purchase on the website (Ladhari, 2010).

Privacy has been acknowledged that it has a significant impact on purchase intention (Liu, 2012; Loiacono, Watson, & Goodhue, 2002), customer satisfaction (Szymanski & Hise, 2000) and total website quality (Yoo & Donthu, 2001). However, many people are still feeling unsafe to buy products online because of the mindset regarding security risk which is related to maltreatment of personal information (Santouridis et al., 2012). Therefore, nowadays, online shops are increasing their privacy awareness for the customers (Ranganathan & Ganapathy, 2002).

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Information privacy has been indicated as a contributing factor in customer satisfaction (Lee & Lin, 2005). Customer satisfaction is driven by meeting the privacy expectations of the customer and may include cultural expectations and individual predisposition factors as well (Laufer & Wolfe, 1977). Kim, Ferrin, and Rao (2008) suggested that *"when perceived risk of privacy and security was low, trust in the website would high which in turn positively influenced purchase intentions"*. Forsy and Shi (2003) found that perceived performance risk has the greatest impact on purchase intentions. When customers perceive that a website is credible, the website will be trustworthy and believable in customer's perspective (Jun, Yang, & Kim, 2004).

2.3 Customer satisfaction

In theoretical definition according to Oliver (1997), customer satisfaction is defined as "a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over fulfillment". Cronin and Taylor (1992) defined satisfaction as the sum of all transactions involving a company or product line, suggesting that customer satisfaction is the result of ongoing satisfaction with the transactions. Stauss and Neuhaus (1997) defined satisfaction as "a person's feeling of the pleasure or disappointment effecting by comparing products' perceived performance in relation to expectation". Oliver (1999) defined customer satisfaction as "meeting or exceeding the customer's expectations". Hellier, Geursen, Carr, and Rickard (2003) defined customer satisfaction as "the degree of overall pleasure or contentment felt by the customer, resulting from the ability of the service to fulfil the customer desires, expectations and needs in relation to the service". Various researchers reflect the acknowledgement that satisfaction is "a feeling which results from a process of evaluating what has been received against what was expected, including the purchase decision itself and the needs and wants related to the purchase" (Armstrong & Kotler, 1996). According to Zeithaml, Berry, and Parasuraman (1993), customer satisfaction, whether driven by a transaction or overall experience is a result of a balance between customer expectations and

customer experiences with a product or service. Thus, customer satisfaction can be achieved if a company or service providers know what the customers need and try to put efforts to meet their needs (Harris & Harrington, 2000). Customer satisfaction is somehow related to service quality, the service quality is a perception or feeling gap between before and after the service, while customer satisfaction is a consequence of a perceived difference between expectations before and after the experience (Oliver, 1980).

Chellappa and Sin (2005) suggested that the customer satisfaction with the interaction is positively impacted by the ability to proactively manage customer interaction, including various components of privacy. Fang, Chiu, and Wang (2011) identified a positive correlation between privacy and satisfaction as a component of customer satisfaction during the purchase of hotel lodgings. In the online environment, research of Sarris (2015) also found that customer is sensitive to the types of information requested during a transaction, thereby further supporting the premise that information privacy represents a key construct when studying customer satisfaction (Chellappa & Sin, 2005; Fang et al., 2011).

Oliver (1999) suggested that when pleasure is derived during the acquisition of goods or services, the result is customer satisfaction which leads to customer retention. Higher levels of customer satisfaction can lower the chance of supplier altering and increase repurchase intentions with current supplier (Yaya et al., 2011). Customer satisfaction encourages repeat sales, stimulates recommendation to others, and sustains brand loyalty (Goode, Moutinho, and Chien, 1996). Cristobal et al. (2007) had similar opinion that satisfaction with online environments can increase more traffic to websites and encourage customer to repeat usage of the websites.

2.4 Repurchase Intention

According to Yan (2006), "cost of getting a new customer is five times greater than keeping an existing customer". Thus, keeping a current customer can generate positive

effects of revenue and profit while less effort is needed. Hence, it is a priority for management to focus on customer satisfaction which can lead to repurchase intention.

Repurchase is defined as "a customer's actual behavior resulting in the purchase of the same product or service on more than one occasion". *Retention* is another common term for repurchase and may be used interchangeably (Zineldin, 2006; Hennig-Thurau, 2004; Narauandas, 1998). It is considered as a very important topic in marketing field (Fullerton, 2005; Morgan and Hunt, 1994). While repurchase is a pass behavior, repurchase intention is defined as "the customer's decision to be engaged in future activities with the retailer or supplier (Hume, Mort, & Winzar 2007)". Jones and Sasser (1995) suggested that repurchase behavior will happen if customer is satisfied after purchasing. Kotler (1999) also stated that if customer is satisfied with the product or service after delivery which meet customer expectation, or even beyond expectation, customer will decide to repurchase or recommend to other friends.

Repurchase intention is a measuring method of customer loyalty. Repurchase intention also refers to repeat purchasing and word-of-mouth recommendations (Baldinger & Rubinson, 1996; Dick & Basu, 1994). It is an outcome of customer satisfaction (Daniel, Miriam, Miguel, & Giancarlo, 2012; María, Ana, Leticia, & Ana, 2013; Lin & Ding, 2005). Satisfied customers show potential high levels of repurchase intentions (Wang & Liao, 2007). However, Yi and La (2004) suggested that repurchase is quite complex and not entirely driven by customer satisfaction and that other relationships may explain the variability in repurchase, even with highly satisfied customers.

Various studies found the significant relationship between e-business quality and customer behavioral intentions related to repurchase from online grocery retailers (Boyer & Hult, 2005b; Gehrt, Rajan, Shainesh, Czerwinski, & O'Brien, 2012; Hult, Boyer, & Ketchen, 2007; Lim, Widdows, & Hooker, 2009). Collier and Bienstock (2006) studied about the impact of ease of use toward repurchase intention and customer satisfaction, and relationship was observed. Other studies also found a significant relationship between ease of use and shopping satisfaction (Collier & Bienstock, 2006; Kim, Jin, & Swinney, 2009; Lin & Sun, 2009; Pentina, Amialchuk,

& Taylor, 2011; Thaichon, Lobo, & Mitsis, 2014), and repurchase intention (Lee, Eze, & Ndubisi, 2011).

Figure 2.2: Conceptual Framework
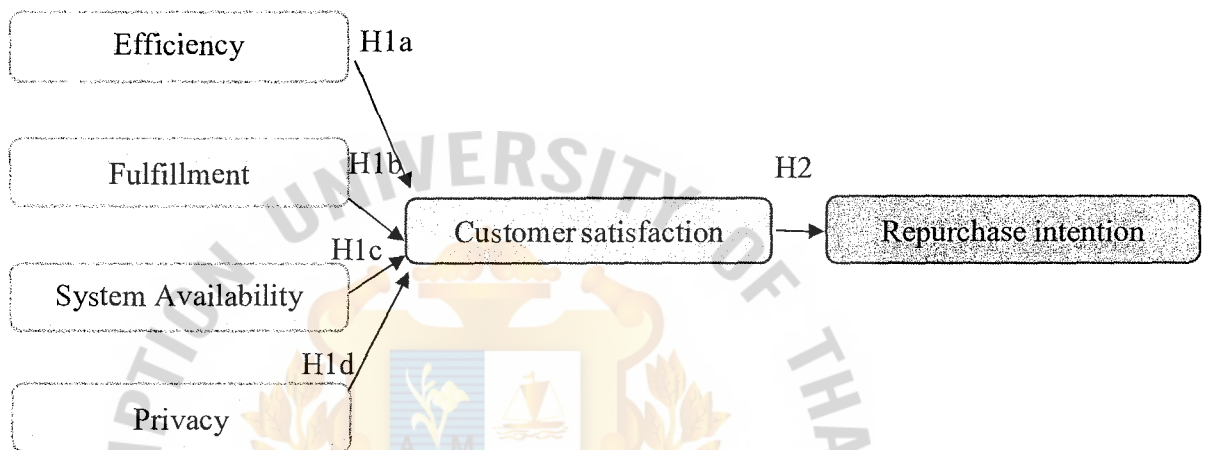
Source: Author

2.5 Chapter Summary

Many researches and tools have been developed to measure e-service quality based on the research objective. E-service quality has been found to have positive correlation to customer satisfaction, and customer satisfaction also leads to repeat sales.

CHAPTER III

RESEARCH METHODLOGY

The E-S-QUAL model of Parasuraman et al. (2005) has been confirmed by many researchers that it is a useful instrument for evaluating e-service quality. As a result, this tool was used to examine the XYZ website service quality in Thai context. The model consists of four dimensions per review in chapter two and are mentioned again in this chapter. Good service quality is assumed to have an impact on customer satisfaction. Customer satisfaction is assumed to be a factor of repurchase intention.

3.1 Data Collection

This study used quantitative approach (web-based questionnaire survey) to examine the hypotheses.

The 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), was developed to examine the hypotheses in this research. The scale was applied for measurement of e-service quality dimensions, customer satisfaction and repurchase intention

The questionnaire in this research was adapted from the previous researches. Refer to table 3.1, the e-service quality questionnaire was adapted from the study of Parasuraman et al. (2005). Refer to table 3.2, the questionnaire to measure customer satisfaction and repurchase intention was adapted from Liu (2012). The questionnaire created by Google Form, total 400 sets of questionnaires were distributed to the respondent via online social media, such as Facebook and Line. Therefore, the respondents of the questionnaire were persons who use online social media and have ever used XYZ service for food delivery.

3.2 Hypotheses

E-commerce has changed the way how we do business in the past twenty years. According to the study of Wu (2006), "e-service quality and customer expectations had no direct effect on customer satisfaction, but had indirect positive effects on customer satisfaction". The E-S-QUAL model was developed in 2005 and still needs further examination and validation by applying it in different types of online business.

3.2.1 Relationship between E-Service Quality and Customer Satisfaction

Kim and Kim (2010) examined E-S-QUAL and found that the four dimensions of E-S-QUAL model significantly influence customer satisfaction. Wolfinbarger and Gilly (2003) reported in their study that fulfillment and reliability are the most predominant dimensions of service quality. The study proved that fulfillment and reliability have significant impact on customer satisfaction, customer loyalty, and repurchase intention. According to the study of Yang and Peterson (2004), overall satisfaction comprises of holistic evaluation including service delivery experience and considered as a result of individual attributes satisfaction (i.e. service quality).

Thus, the relationship can be proposed as Hypothesis 1 as follows:

Hypothesis 1: E-Service Quality i.e (a) efficiency, (b) fulfillment, (c) system availability, and (d) privacy are related to customer satisfaction of online food ordering service.

3.2.2 Relationship between Customer Satisfaction and Repurchase Intention

Previous studies proved that if customer retention results increase, the profit will be greater for the firm as well (Lee, Choi, & Kang, 2009). For this reason, it is important to identify which factors have significant impact on customer repurchase intention.

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According to prior study, customer that has been satisfied seems to return more (Lee et al., 2009), customer satisfaction is a key factor that impacts customers' online purchase behavior and also a significant factor that affects customer loyalty. Pappas, Pateli, Giannakos and Chrissikopoulos (2014) proved that the impact of positive online purchasing experience can generate customer satisfaction and repurchase intention. Khalifa and Liu (2007) reported that experiences moderate the impact of customer satisfaction on repurchase intention. Even though satisfied customer may not always return to the same provider, but previous researchers have identified that customer experience has positive influences on purchase intention (Sa'nchez-Garcı'a, Pieters, Zeelenberg, & Bigne', 2012).

Thus, the relationship can be proposed as Hypothesis 2 as follows:

Hypothesis 2: Customer satisfaction is related to repurchase intention of online food ordering service.

3.2.3 Demographic characteristics

Demographic characteristics asked in the questionnaire include gender, type of accommodation, marital status, age, education, career and average income. The geographic region has been excluded from this questionnaire because majority of the participants were in the major cities, such as Bangkok, Chiang Mai, Pattaya, Samut Prakan, and Pathum Thani which are under XYZ service area.

Based on the different demographic characteristics and preference type of their residences; therefore, the additional hypotheses are proposed as:

Hypothesis 3: Customers who live in different type of accommodation have different perception in efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention.

Hypothesis 4: Customers who are in different age range have different perception in efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention.

3.3 Sample Size

Sample size used for this study was based on sampling theory of Yamane (1973) who is a famous statistician. The sampling formula is $n = N/(1+Ne^2)$ where n is the sample size, N is the population and e is the acceptable sampling error or alpha level.

If e = 0.05, the confidence interval is 95%, assumed population 100,000, the sample size will be: 100,000 / (1 + 100,000 (0.05) = 100,000 / 251 = 398.41

Thus, this collected around 400 surveys to represent the population.

3.4 Sample and Sampling Technique

There are two types of sampling techniques that have been used in academic research which are Probability sampling technique and Non-probability sampling technique. The probability sampling technique can be used when the total population or sampling frame is known, and then simple random or systematic random sampling method can be applied. However, in this research, the total population of the XYZ users was unknown and the number of active customers was dynamic; therefore, the non-probability sampling technique was used in this research.

The researcher used convenience and snowball sampling to collect the data for this study. The questionnaire was distributed via social media and the participants were the people who ever experienced the online food ordering service by XYZ in Thailand and agreed to participate voluntarily.

3.5 Questionnaire Development

The questionnaire that was used in this research comprised the following four constructs:

1) E-service quality measurement. This construct consists of 22 items of E-S-QUAL model, measuring below four dimensions (Parasuraman et al., 2005):

- Efficiency: 8 items
- System availability: 4 items
- Fulfillment: 7 items
- Privacy: 3 items

2) Customer satisfaction: 6 items (Liu, 2012)
3) Repurchase intention: 4 items (Liu, 2012)
4) Customer demographics: 7 items (Kurt & Atrek, 2012)

This research was conducted by utilizing the E-S-QUAL, e-service quality measurement model of Parasuraman et al. (2005). The conceptual framework of this study is shown in Figure 2.2. E-S-QUAL model has been applied in many studies (Egeln, 2015; Kandulapati et al., 2014; Santouridis et al., 2012; Sheng & Liu, 2010; Kim & Kim, 2010; Wolfinbarger & Gilly, 2003)

Customer satisfaction and repurchase intention questions in the questionnaire were adapted from the study of Liu (2012), "Effect of E-service Quality on Customer Online Repurchase Intentions".

The demographical data aimed to capture the gender, age, marital status, educational level, career, type of accommodation and monthly income of respondents. It was adapted from the journal of Kurt and Atrek (2012) "The classification and importance of E-S-QUAL quality attributes: an evaluation of online shoppers".

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Table 3.1: E-S-QUAL Measurement Items

Dimensions	Items	Source
Efficiency	EFF1 This site makes it easy to find food I need.	
	EFF2 It makes it easy to get anywhere on the site.	
	EFF3 It enables me to complete a transaction quickly.	
	EFF4 Information at this site is well organized.	
	EFF5 It loads its pages fast.	
	EFF6 This site is simple to use.	
	EFF7 This site enables me to get on to it quickly.	
	EFF8 This site is well organized.	
Fulfillment	FUL1 It delivers orders when promised.	
	FUL2 This site makes foods available for delivery within a suitable time frame.	
	FUL3 It quickly delivers what I order.	
	FUL4 It sends out the foods ordered.	Adapted from Parasuraman et al. (2005)
	FUL5 It has the food that the company claims to have.	
	FUL6 It is truthful about its offerings.	
	FUL7 It makes accurate promises about delivery of foods.	
System availability	SYS1 This site is always available.	
	SYS2 This site launches and runs right away.	
	SYS3 This site does not crash.	
	SYS4 Pages at this site do not freeze after I enter my order information.	
Privacy	PRI1 It protects information about my purchasing behavior.	
	PRI2 It does not share my personal information with other sites.	
	PRI3 This site protects information about my credit card.	

Table 3.2: Measurement Items for Customer Satisfaction, Repurchase Intention and Demographical Data

Dimensions	Items	Source
Customer Satisfaction	CS1 I am satisfied with my decision to purchase from this website.	Adapted from Liu (2012)
	CS2 If I had to purchase again, I would feel differently about buying from this website.	
	CS3 My choice to purchase from this website was a wise one.	
	CS4 I feel badly regarding my decision to buy from this website.	
	CS5 I think I did the right thing by buying from this website.	
	CS6 I am unhappy that I purchased from this website.	
Repurchase intention	RI1 I would be willing to purchase from this website again.	Adapted from Liu (2012)
	RI2 I The next time I purchase food online, I am likely to purchase from this website only.	Adapted from Cherukuri Jayasankaraprasad1, Prodhuturi Venkata Vijaya Kumar (2012)
	RI3 I will purchase from this website within next month.	
	RI4 I would be very likely to increase my purchasing activity with this website.	Adapted from Liu (2012)

Table 3.2: Measurement Items for Customer Satisfaction, Repurchase Intention and Demographical Data (Continuation)

Dimensions	Items	Source
General Information	Gender (Male/Female)	Adapted from Kurt and Atrek (2012)
	Type of your accommodation (Condominium or apartment/ House/ Townhome/ Others)	
	Marital status (Single/Married/Others)	
	Age (Under 18, 18-25, 26-35, 36-45, 46-60, above 60)	
	Education level (Under High School/ High School or equivalent/ Undergraduate or equivalent/ Graduate/ Post graduate)	
	Career (Student/ House wife/ Government officer or State Enterprises officer/ Company Employee/ Business Owner/ Freelance/ Others	
	Average monthly income (Below 15,000 BHT/ 15,001-30,000 BHT/ 30,001-45,000 BHT/ 45,001-60,000 BHT/ Above 60,001 BHT)	

3.6 Reliability of the Measurement Items

The reliability is tested when the number of target respondents reached 30 persons which is conducted by Cronbach's alpha Coefficient. The values will be ranged from 0 to 1. A value of greater than 0.6 indicates acceptable reliability. In order to achieve the reliability of research, the result of Cronbach' Alpha has to be greater than 0.6 (Cronbach, 1951).

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Table 3.3: Reliability of the Pre-test Data

Construct	Cronbach's Alpha	No. of Items
E-Service Quality	0.922	22
Efficiency	0.912	8
Fulfillment	0.832	7
System availability	0.773	4
Privacy	0.747	3
Customer Satisfaction	0.935	6
Repurchase Intention	0.878	4

Table 3.3 shows the result of reliability test of all constructs. The scores are greater than 0.6, which validated this research to have achieved the reliability test standard.

3.7 Factor Analysis Result

Factor analysis is a statistical method generally used to test the validity of constructs of questionnaires. Besides, researchers may use it to group common factors from items measured in constructs (Leech, Barrett, & Morgan, 2005). Factor analysis can also be used to extract a set of interrelated factors. Thus, in this study, factor analysis approach was adopted to assess the validity of three constructs in the questionnaire which include e-service quality (22 items), customer satisfaction (6 items) and repurchase intention (4 items).

Table 3.4: Factor Analysis Result of E-Service Quality

Measurement Items	Components			
	1	2	3	4
EFF1			.542	
EFF2			.577	
EFF3			.628	
EFF4			.448	
EFF5			.553	
EFF6			.487	
EFF7			.633	
EFF8			.715	
FUL1	.583			
FUL2	.645			
FUL3	.734			
FUL4	.553			
FUL5	.567			
FUL6	.765			
FUL7	.652			
SYS1				.663
SYS2				.567
SYS3				.621
SYS4				.728
PRI1		.564		
PRI2		.687		
PRI3		.677		

Note: KMO = 0.90; Bartlett's Test of Sphericity $p<0.001$;

Cumulative Variance Explained = 65.782%

Table 3.4 shows the factor analysis result of e-service quality which includes four dimensions, total 22 items (Efficiency 8 items; System availability 4 items; Fulfillment 7 items; Privacy 3 items).

Table 3.5: Factor Analysis Results of Customer Satisfaction and Repurchase Intention

Measurement Items	Components	
	1	2
Customer Satisfaction		
CS1		.552
CS2		.674
CS3		.777
CS4		.689
CS5		.634
CS6		.677
Repurchase Intention		
RI1	.654	
RI2	.762	
RI3	.564	
RI4	.612	

Note: KMO = 0.88; Bartlett's Test of Sphericity p<0.001;

Cumulative Variance Explained = 60.325%

Table 3.5 shows the factor analysis result of customer satisfaction and repurchase intention, which include six items for customer satisfaction and four items for repurchase intention.

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3.8 Chapter Summary

This chapter has provided the conceptual framework, research hypothesis and data collection method utilized in this study. Reliability of the measurement items were validated. Factor analysis was conducted for the constructs questionnaire. Questionnaire development, sample and sampling technique, data collection were explained.

CHAPTER IV

PRESENTATION AND CRITICAL DISCUSSION OF RESULTS

This chapter presents data analysis of the data collected from the respondents. The analysis was conducted to investigate relationship among e-service quality, customer satisfaction, and repurchase intention. Statistical program, SAS, was used to interpret the data in this research.

4.1 Data Analysis

This research model was evaluated using statistic application, SAS Enterprise Guide 7.1 to analyze the relationship between variables and mean difference of the different groups of respondents. Multiple regression technique was to measure the relationship between independent variables (efficiency, fulfillment, system availability, and privacy), and dependent variables (customer satisfaction, repurchase intention). Simple linear regression was used to measure the relationship between mediating variable (customer satisfaction) and dependent variable (repurchase intention). One-way ANOVA was used to test whether customers who live in different types of accommodation and who are in different age range have different perception toward efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention.

4.2 Descriptive analysis of respondent profile

The data used in this research were gathered from the respondents who used online food ordering service, XYZ in Thailand. The total respondents were 400, and the demographic data of respondents is shown in the table.

Table 4.1: Demographic Information of respondents

Type of your accommodation	Frequency	%
Condominium/Apartment	138	34.50%
House	139	34.75%
Townhouse/Townhome	123	30.75%
Total	400	100%

Most of the respondents live in condominium/apartment and house. The number of respondents who live in condominium/apartment and house are very similar (138 versus 139). The rest of the respondents live in townhouse/townhome.

Gender	Frequency	%
Female	285	71.25%
Male	100	25.00%
Other	15	3.75%
Total	400	100%

The total respondents are 400, which represent as 100 percent. The majority of the respondents are female which is 71.25 percent (285 out of 400). The rest are male 25 percent (100 out of 400), and other is 3.75 percent (15 out of 400).

4.3 Results of Hypotheses

4.3.1 Hypothesis 1: E-Service Quality i.e. efficiency (a) fulfillment, (b) system availability, and (c) privacy are related to customer satisfaction of online food ordering service.

Table 4.2: Result of Hypothesis 1 testing

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	4	7.99315	1.99829	11	<.0001
Error	395	71.76213	0.18168		
Corrected Total	399	79.75528			
Root MSE		0.42623	**R-Square**		0.1002
Dependent Mean		3.1175	**Adj R-Sq**		0.0911
Coeff Var		13.67233			
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	2.20282	0.15461	14.25	<.0001
EFFICIENCY	1	0.12239	0.05296	2.31	0.0213
FULFILLMENT	1	0.05948	0.04884	1.22	0.2239
SYSTEM AVAILABILITY	1	-0.08031	0.05242	-1.53	0.1263
PRIVACY	1	0.14323	0.04147	3.45	0.0006

Table 4.2 shows the result of Hypothesis 1 testing. Multiple linear regression method was used for this hypothesis. P-value represents the probability or significant level of the relationship between independent variables (Efficiency, Fulfillment, System availability, and Privacy) and dependent variable (Customer satisfaction). From the result, P-Value is <.0001 which is smaller than 0.05, it shows that there is significant relationship between independent variables (Efficiency, Fulfillment, System availability, and Privacy) and dependent variable (Customer Satisfaction).

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Adjusted R-square shows 0.911, which means that the independent variables (Efficiency, Fulfillment, System availability, and Privacy) can explain customer satisfaction at 9.1%.

Table 4.2 shows that efficiency and privacy affect customer satisfaction. P-value of efficiency and privacy are less than 0.05. P-value of privacy is 0.0006, which means this factor affects customer satisfaction the most.

4.3.2 Hypothesis 2: Customer satisfaction is related to repurchase intention of online food ordering service.

Simple linear regression method was used to examine the relationship between Customer Satisfaction and Repurchase Intention, and the result is shown in Table 4.3.

Table 4.3: Result of Hypothesis 2 testing

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	47.62744	47.62744	112.06	<.0001
Error	398	169.14991	0.425		
Corrected Total	399	216.77734			
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	0.88152	0.2299	3.83	0.0001
CUSTOMER SATISFACTION	1	0.77277	0.073	10.59	<.0001
Root MSE		0.65192	**R-Square**		0.2197
Dependent Mean		3.29063	**Adj R-Sq**		0.2177
Coeff Var		19.81144			

The result of Hypothesis 2 testing is shown in Table 4.3. P-value is less than 0.05, which means that customer satisfaction has significant relationship with repurchase intention.

According to table 4.3, R-square shows 0.2197, which means that customer satisfaction can explain repurchase intention at 21.97%. This result proves that customer satisfaction has positive impact on repurchase intention.

4.3.3 Hypothesis 3: Customers who live in different types of accommodation have different perception in efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention.

Table 4.4: Result of Hypothesis 3 testing (Efficiency)

EFFICIENCY					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.495659	0.2478295	0.67	0.5098
Error	397	145.7904347	0.3672303		
Corrected Total	399	146.2860938			

The statistical result shows P-value 0.5098, which is greater than 0.05 and F-value is 0.67. Therefore, the research failed to reject null hypothesis and it means customers who live in different types of accommodation have the same perception on efficiency.

Table 4.5: Result of Hypothesis 3 testing (Fulfillment)

FULFILLMENT					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.2183324	1.6091662	4.39	0.013
Error	397	145.375086	0.3661841		
Corrected Total	399	148.5934184			
Means with the same letter are not significantly different.					
Duncan Grouping		Mean	N	Type of your accommodation	
	A	3.98026	123	Townhouse/Townhome	
	A				
B	A	3.90683	138	Condominium/Apartment	
B					
B		3.76362	139	House	

According to table 4.5, the statistical result shows P-value 0.013, which is smaller than 0.05 and F-value is 4.39. The result shows that at least one group of respondents perceive fulfillment differently. There are three groups of respondents which are A who live in townhouse/townhome, B who live in condominium/apartment, and C who live in house.

According to the Duncan's Multiple Range testing result, there are three groups of respondents which are A who live in townhouse/townhome, BA who live in condominium/apartment, and B who live in house. Regarding the result, those who live in townhouse/ townhome perceived fulfilment different from people who live in house. Moreover, the result shows that the mean score of customers who live in townhouse/townhome is 3.98026; the mean score of customers who live in condominium/apartment is 3.90683; and the mean score of customers who live in house is 3.76362. People who live in townhouse/ townhome perceived fulfilment higher than people who live in condominium/apartment and house.

Table 4.6: Result of Hypothesis 3 testing (System Availability)

SYSTEM AVAILABILITY					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.0187707	0.5093854	1.17	0.3115
Error	397	172.8962293	0.4355069		
Corrected Total	399	173.915			

The statistical result shows P-value 0.3115, which is greater than 0.05 and F-value is 1.17. Therefore, the research failed to reject null hypothesis and it means customers who live in different types of accommodation have the same perception on system availability.

Table 4.7: Result of Hypothesis 3 testing (Privacy)

PRIVACY					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.9906534	0.9953267	2.03	0.133
Error	397	194.8624022	0.4908373		
Corrected Total	399	196.8530556			

The statistical result shows P-value 0.133, which is greater than 0.05 and F-value is 2.03. Therefore, the research failed to reject null hypothesis and it means customers who live in different types of accommodation have the same perception on privacy.

Table 4.8: Result of Hypothesis 3 testing (Customer Satisfaction)

CUSTOMER SATISFACTION					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.08652275	0.54326137	2.74	0.0657
Error	397	78.66875503	0.19815807		
Corrected Total	399	79.75527778			

The statistical result shows P-value 0.0657, which is greater than 0.05 and F-value is 2.74. Therefore, the research failed to reject null hypothesis and it means customers who live in different types of accommodation have the same perception on customer satisfaction.

Table 4.9: Result of Hypothesis 3 testing (Repurchase Intention)

REPURCHASE INTENTION					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.7436502	0.3718251	0.68	0.5055
Error	397	216.0336935	0.5441655		
Corrected Total	399	216.7773438			

According to table 4.9, the statistical result shows P-value 0.5055, which is greater than 0.05 and F-value is 0.68. Therefore, the research failed to reject null hypothesis and it means customers who live in different types of accommodation have the same perception on repurchase intention.

4.3.4 Hypothesis 4: Customers who are in different age range have different perception in efficiency, fulfillment, system availability, privacy, customer satisfaction, and repurchase intention.

Table 4.10: Result of Hypothesis 4 testing (Efficiency)

EFFICIENCY					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	3	1.172891	0.3909637	1.07	0.363
Error	396	145.113203	0.3664475		
Corrected Total	399	146.286094			

The statistical result shows P-value 0.363, which is greater than 0.05 and F-value is 1.07. Therefore, the research failed to reject null hypothesis and it means customers who are in different age range have the same perception on efficiency.

Table 4.11: Result of Hypothesis 4 testing (Fulfillment)

FULFILLMENT					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	3	0.5993348	0.1997783	0.53	0.6588
Error	396	147.994084	0.3737224		
Corrected Total	399	148.593418			

From table 4.11, the statistical result shows P-value 0.6588, which is greater than 0.05 and F-value is 0.53. Therefore, the research failed to reject null hypothesis and it means customers who are in different age range have the same perception on fulfillment.

Table 4.12: Result of Hypothesis 4 testing (System Availability)

SYSTEM AVAILABILITY					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.6787675	0.8929225	2.06	0.1043
Error	396	171.236233	0.4324147		
Corrected Total	399	173.915			

The statistical result shows P-value 0.1043, which is greater than 0.05 and F-value is 2.06. Therefore, the research failed to reject null hypothesis and it means customers who are in different age range have the same perception on system availability.

Table 4.13: Result of Hypothesis 4 testing (Privacy)

PRIVACY					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	6.2656508	2.0885503	4.34	0.005
Error	396	190.5874047	0.4812813		
Corrected Total	399	196.8530556			
Means with the same letter are not significantly different.					
Duncan Grouping		Mean	N	Age	
	A	4.0111	60	18-25	
	A				
B	A	3.716	27	36-45	
B	A				
B	A	3.6809	305	26-35	
B					
B		3.4167	8	Above 46	

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The statistical result shows P-value 0.005, which is smaller than 0.05 and F-value is 4.34. The result shows that at least one group of respondents perceive privacy differently. There are three groups of respondents which are A who are in age range 18-25 years, B who are in age range 36-45 and 26-35 years, and C who are in age range above 46 years.

According to the Duncan's Multiple Range testing result, mean score of customers who are in age range 18-25 years is 4.0111, mean score of customers who are in age range 36-45 years is 3.716, mean score of customers who are in age range 26-35 is 3.6809, and mean score of customers who are in age range above 46 years is 3.4167. People who are in age range 18-25 years perceive privacy higher than people who are in age range 36-45 years, 26-35 years, and above 46 years.

Table 4.14: Result of Hypothesis 4 testing (Customer Satisfaction)

CUSTOMER SATISFACTION					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.73006906	0.2433564	1.22	0.3023
Error	396	79.0252087	0.1995586		
Corrected Total	399	79.7552778			

The statistical result shows P-value 0.3023, which is greater than 0.05 and F-value is 1.22. Therefore, the research failed to reject null hypothesis and it means customers who are in different age range have the same perception on customer satisfaction.

Table 4.15: Result of Hypothesis 4 testing (Repurchase Intention)

REPURCHASE INTENTION					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.9689829	0.989661	1.83	0.1406
Error	396	213.808361	0.5399201		
Corrected Total	399	216.777344			

The statistical result shows P-value 0.1406, which is greater than 0.05 and F-value is 1.83. Therefore, the research failed to reject null hypothesis and it means customers who are in different age range have the same perception on repurchase intention.

4.4 Chapter Summary

The four hypotheses were tested by using statistical program, SAS. The result of Hypothesis 1 showed that the two dimensions of the e-service quality measurement model which are Efficiency and Privacy have significant impact to customer satisfaction. The result of Hypothesis 2 showed the significant relationship between customer satisfaction and repurchase intention. The result of Hypothesis 3 showed the different perception of customers who live in different types of accommodation toward Fulfillment. The result of Hypothesis 4 showed the different perceptions of customers who are in different age range toward Privacy.

CHAPTER V

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study focused on examining the impact of e-service quality toward customer satisfaction and repurchase intention for XYZ in Thailand by using multiple linear regression, simple linear regression and one-way ANOVA.

5.1 Summary of the Findings

The results of the four hypotheses were presented in Chapter 4. The summary of the result of each hypothesis is presented below.

The result of hypothesis 1 proved that e-service quality is a significant predictor of customer satisfaction. Privacy has the most impact on customer satisfaction and efficiency is another significant factor affecting customer satisfaction. According to the result of hypothesis 2, customer satisfaction has significant relationship with repurchase intention.

Referring to the result of hypothesis 3, the result showed that customers who live in different types of accommodation have different perception on fulfillment. For hypothesis 4, the result showed that only Privacy is perceived differently among customers who are in different age range.

5.2 Conclusions

This study focuses on the e-service quality that affects customer satisfaction and repurchase intention. According to Hypothesis 1 result, the summary of the findings has proven that e-service quality (Privacy and Efficiency) has significant impact on customer satisfaction, and customer satisfaction has positive impact on repurchase intention. According to the result, factors that have positive impact toward customer satisfaction have been identified. Privacy and Efficiency are two of the most important factors that business should focus on.

Refer to the research model, Hypothesis 2 "Customer satisfaction is related to repurchase intention of online food ordering service". It has been proposed based on the assumption that satisfied customer seems to return more (Lee et al., 2009). Simple linear regression method has been used to examine the relationship between Customer Satisfaction and Repurchase Intention, and the result shows that Customer Satisfaction has significant relationship with Repurchase Intention.

Types of accommodation and age range are two demographical factors that the researcher used for testing the difference of perception toward e-service quality (the 4 dimensions), customer satisfaction and repurchase intention. Firstly, the result of the hypothesis 3 shows that only one dimension of e-service quality, Fulfillment, is perceived differently among customers who live in different types of accommodation. The other five variables (Efficiency, System availability, Privacy, Customer Satisfaction, Repurchase Intention) are perceived the same by customers who live in different types of accommodation. Secondly, the result of hypothesis 4 shows that only one dimension of e-service quality, Privacy, is perceived differently among customers who are in different age range. The other five variables (Efficiency, System availability, Fulfillment, Customer Satisfaction, Repurchase Intention) are perceived the same by customers who are in different age range. Therefore, the business can base on this result to research more and improve the Fulfillment and Privacy of the online services to give customers better experience and perception.

5.3 Theoretical Implications

The E-S-QUAL model has been used in many other researches to measure service quality of the online service, e.g. online shopping (Kandulapati & Bellamkonda, 2014; Wu, 2006), online book stores (Boshoff, 2007), online banking (Akinci, Atilgan-Inan, & Aksoy, 2010), online supermarket (Marimon, Vidgen, Barnes, & Cristóbal, 2010), online grocery (Rafiq, Lu, & Fulford, 2012), and social commerce activity (Lee, Cha, & Cho, 2012). This results of this study have proven that the dimensions of e-service quality from E-S-QUAL model of Parasuraman et al. (2005) are applicable for online food ordering service in Thailand.

The research model reaffirms the positive impact of e-service quality toward customer satisfaction and repurchase intention. The result of hypothesis 1, Privacy has the highest level of significant relationship toward customer satisfaction which aligns with the other researches. Chellappa and Sin (2005) suggested that customer satisfaction with interaction is positively impacted by the ability to proactively manage customer interaction, including various components of privacy. Fang, Chiu, and Wang (2011) identified a positive correlation between privacy and satisfaction as components of customer satisfaction during the purchase of hotel lodgings. In the online environment, research of Sarris (2015) found that customer is sensitive to the types of information requested during a transaction, thereby further supporting the premise that information privacy represents a key construct when studying customer satisfaction (Chellappa & Sin, 2005; Fang et al., 2011).

According to the literature review, customer satisfaction encourages repeat sales, stimulates recommendation to others, and sustains brand loyalty (Goode, Moutinho, and Chien, 1996). Cristobal et al. (2007) had similar opinion that satisfaction with online environments can increase more traffic to websites and encourage customer to do repeat usage of the websites. The result of hypothesis 2 represents that customer satisfaction has positively impacted repurchase intention in the context of online food ordering service in Thailand. The significant relationship between customer

relationship and repurchase intention has been confirmed in this study, and it is aligned with the result of previous studies.

5.4 Managerial Implications

Nowadays, customer satisfaction is one of the most important indicators that every business is focusing on. This study supports the e-service quality as a factor that has a direct impact to customer satisfaction. Furthermore, according to the literature review and also supported by the result of this research model, customer satisfaction has positive impact to repurchase intention. Therefore, the business owner can ensure that customer satisfaction is still be a key performance indicator that should be focused on. Online food ordering service providers may consider to apply E-S-QUAL model to measure their service performance and use the data as a baseline to improve their performance in order to grow and sustain their business.

The E-S-QUAL model includes four dimensions, which are Efficiency, Fulfillment, System Availability and Privacy. According to the summary of the findings, Privacy has the most significant impact on customer satisfaction, and Efficiency impacts customer satisfaction as well. Customers of XYZ company will repurchase if they are satisfied with the service quality. Therefore, the XYZ company or other companies who provide online ordering service can get benefit from these findings by improving their service quality, especially for Efficiency and Privacy. In order to improve service quality, design and control of supply chain process should be applied. The E-S-QUAL model can help the company to measure its e-service quality level, and it can use the result as a baseline to drive better performance.

5.5 Limitations and Recommendations for Future Research

The research was studied only within the major cities of Thailand, and only for those who have ever used XYZ service. Future research can apply the model in awider range of service providers, such as Line man and Uber eats. Most of the respondents were from private company sector because most of the samples were sent to the colleagues and friends of the researcher which may have caused sampling bias.

Therefore, here are a few recommendations for future research. First of all, expanding larger sample size, selecting other groups of respondents, and using other sampling method should be considered in order to strengthen the research model, and also better assessment result. Secondly, business owner who would like to develop an online food ordering service could research more in details regarding the target market of the product or service that will be provided. Lastly, this research study can be developed further by applying this model with other kinds of online business, for example, online grocery store, online book store, or any other online business. The business may use this model as reference and revise as appropriate.

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APPENDICES

APPENDIX A

INRIX Global Traffic Scorecard

CITY	2017 ALL CITIES RANK (2016)	2017 INRIX TRAFFIC SCORECARD RANK (2016)	HOURS SPENT IN CONGESTION	ICI	PEAK	DAYTIME	OVERALL
Los Angeles, CA	1 (1)	1 (1)	102	18.3	21%	11%	12%
Moscow	2 (2)	2 (2)	91	20.1	32%	30%	26%
New York City, NY	3 (3)	3 (3)	91	17.4	19%	11%	13%
Sao Paulo	4 (6)	4 (6)	86	16.9	30%	23%	22%
San Francisco, CA	5 (4)	5 (4)	79	13.7	21%	10%	12%
Bogota	6 (5)	6 (5)	75	16.2	36%	30%	30%
London	7 (7)	7 (7)	74	14.1	20%	12%	13%
Magnitogorsk	8 (8)	—	73	18	42%	38%	44%
Yurga	9 (—)	—	71	16.7	42%	41%	39%
Atlanta, GA	10 (9)	8 (8)	70	12.3	17%	9%	10%
Aerodromnyy	11 (—)	—	69	16.1	41%	40%	37%
Paris	12 (10)	9 (9)	69	13.1	21%	12%	13%
Caracas	13 (13)	—	67	12.8	37%	29%	23%
Miami, FL	14 (11)	10 (10)	64	11.8	13%	7%	9%
Kansk	15 (20)	—	64	15	38%	34%	34%
Bangkok	16 (12)	11 (11)	64	12.5	33%	23%	23%
Jakarta	17 (22)	12 (19)	63	13.4	24%	21%	20%
Washington, DC	18 (15)	13 (13)	63	10.8	20%	9%	11%
Boston, MA	19 (18)	14 (16)	60	10.6	23%	12%	14%
Istanbul	20 (17)	15 (15)	59	12.2	25%	19%	19%
Mexico City	21 (14)	16 (12)	58	12.4	16%	13%	13%
Chicago, IL	22 (19)	17 (17)	57	10.3	17%	9%	10%
Medellin	23 (30)	18 (26)	57	11.4	29%	21%	21%
Krasnodar	24 (21)	19 (18)	57	12.4	31%	28%	25%
Belem	25 (24)	—	55	11.7	31%	29%	25%

Source: Global Traffic Scorecard by INRIX Inc.