

Available online at www.buu.ac.th/BUUConference

Burapha University International Conference 2015



"Moving Forward to a Prosperous and Sustainable Community"

Service quality and customer satisfaction in Thailand's audit firms

Nuchsara Pringviriya, Dr. Faudziah Hanim Hj. Fadzil and Dr. Syed Soffian Syed Ismail

Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, Malaysia

Abstract

Customer satisfaction is an important factor for firms. In the high levels of competition, many firms are trying to increase customer satisfaction. Increasing customer satisfaction decreases customer complaints, increase repurchase intentions, get higher future profitability and lead to better financial performance. Service quality is a key factor for customer satisfaction. It is an important tool for audit firms for increasing their income and market share. The aim of this research is to determine whether service quality will affect customer satisfaction in Thailand's audit firms. Perceived service quality of audit firms were measure by adapted and modified 22 items of SERVQUAL scale. The seven-point Likert scale was used for measuring all of the observed variables (service quality and customer satisfaction) which ranged from "1 = strongly disagree" to "7 =strongly agree". The design of this study used the survey method with data collection through questionnaire by mailing to president/director, accounting manager, or department head of finance and accounting department who act as an agent for their companies and play and important roles in engaging auditor for the audit works. The data were collected from a sample of 296 companies listed on the Stock Exchange of Thailand that spans all of the eight industries during the 2^{nd} quarter of 2014. There are: 1) Agro and Food Industry 2) Consumer Products 3) Financials 4) Industrials 5) Property and Construction 6) Resources 7) Services and 8) Technology. All of these are using auditors under Thailand law and regulations and approved by the office of the Stock Exchange of Thailand in order to audit the Securities and Exchange Commission registrants. In order to test the research hypotheses, correlation and regression analysis was used. Empirical findings of the research show that perceived service quality of audit firms affects customer satisfaction. The results of the findings suggest that audit firm needs to emphasise on service quality. This is to their service quality is usually assessed by measures of the service provider's relationship with customers. Thus, audit firm service management should pay attention to staff skill improvement and offering fast and efficient services.

© 2015 Published by Burapha University.

Key word: Service qulaity; customer satisfaction; SERVQUAL scale; Thailand's audit firms

Nuchsara Pringviriya Doctor of Business Administration (Candidate)	E-mail: n_pringviriya@hotmail.com
Asso. Prof. Dr. Faudziah Hanim Hj. Fadzil, CMA	E-mail: fhanim@uum.edu.my
Asso. Prof. Dr. Syed Soffian Syed Ismail, CA (Malaysia), CMA, ICA	E-mail: soffian@uum.edu.my

1. Introduction

The market for audit service is generally viewed as a monopolistic competition (Shailer, Cummings, Vatuloka, and Welch, 2004). In Thailand, audit firms are going forward to compete and faced with higher costs and high risk activities in order to generate higher returns (Sonsa-ardjit and Vejaratpimol, 2010). Competition in the audit firm has been intense, with more variety of service offering (that is: auditing, bookkeeping/accounting, payroll, tax, legal, consulting, investment/financial advising, and corporate recovery) to satisfy customer needs. Some audit firms differentiate themselves from their competitors by specialising in auditing clients in particular industries.

The increasing competition and innovation in the audit firms are beneficial to customers. Increasing competition audit business has led many companies to consider quality as a strategic tool capable of influencing customer satisfaction. Several audit firms have adopted a customer relation management (CRM) platform to serve the specific needs of different customer segments. Audit firms could differentiate their services by providing higher quality of services. In order to have a competitive advantage, a firm may choose to improve service quality in order to differentiate their service from their competitor. The customers know how perceiving service quality can benefit audit firms in quantitative and qualitative ways.

For example, the Big-Four audit firms are the top accounting firms in the year of 2013 (www.accountancyage.com; 2014). They are PricewaterhouseCoopers (PwC), Deloitte & Touche Tohmatsu (Deloitte), Klynveld Peat Marwick Goerdeler (KPMG), and Ernst & Young (E&Y). These are the international companies providing service around the world (Eilifsen, Messier, Glover, and Prawitt, 2006). Moizer (1997) found that the Big-Four audit firms are able to command a higher fee premium between 16 to 37 % of the audit cost. Within each quality segment, the market is considered as being generally competitive (Gul, Sami and Zhou, 2009; Deng, Lu, Simunic and Ye, 2014). However, a change in auditor is not always initiated by the client, but maybe initiated by the audit firm. Francis and Yu (2009) argue that audit firms with more clients have a greater incentive to supply higher quality audits.

In Thailand, the Big-Four audit firms are giant organisations with substantial human resources, technical capabilities; huge earnings; and market power (Sonsa-ardjit and Vejaratpimol, 2010). The Big-Four audit firms' clients and Non Big-Four audit firms' clients differ in size, standard, perceptions, and expectations. The Non Big-Four audit firms' clients are not important to society and the economy but the clients of the Big-Four audit firms are mostly bigger enterprises which have a greater potential to seriously damage the market or economy (Thai Institute of Directors Association, 2009).

The Big-Four audit firms in Thailand are E Y Office Co., Ltd., KPMG Phoomchai Audit Col, Ltd., PricewaterhouseCoopers ABAS Co. Ltd., and Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. In 2009, Thailand Institute of Directors Association survey audit fee in Thailand's audit firms and found that the Big-Four audit firms: E Y Office Co., Ltd. is the largest audit firm with audit fee revenues of USD6.31 million (33%). KPMG Phoomchai Audit Co., Ltd. is the second of the Big-Four firms with audit fee revenues of USD4.49 million (23%). Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. took the third place of the Big-Four firms with audit fee revenues of USD2.07 million (11%), and PricewaterhouseCoopers ABAS Co., Ltd. the smallest of the Big-Four firms with audit fee revenues of USD1.88 million (10%). The Big-Four audit firm's revenues of USD14.75 million (77%) and Non Big-Four audit firms' revenue of USD4.49 million (23%).

As fiscal year 2013 ended, 286 (53%) of companies listed on The Stock Exchange of Thailand using audit serviced from the Big-Four audit firms and 259 (47%) of companies listed on The Stock Exchange of Thailand using audit serviced from Non Big-Four audit firms. The Big-Four audit firms in Thailand; E Y Office Co., Ltd. is the biggest Big-Four audits firm with 157 (29%) companies. KPMG Phoomchai Audit Co., Ltd. is the second Big-Four audit firms with 71 (13%) companies. PricewaterhouseCoopers ABAS Co., Ltd. is the third Big-Four audit firms with 33 (6%) companies, and Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. the smallest Big-Four audit firms with 25 (5%) companies.

However, these industries are not very familiar with concepts and tools for service quality improvement and have not had much experience in making systematic improvement in service quality. Therefore, efforts are needed to better equip these industries to improve their services with respect to satisfied customers.

Perceived higher service provider, complain less, give more customer satisfaction and the customer will pay a higher price to the service provider. Customer satisfaction is a competitive tool for many companies. The growth and survival of companies depend on how satisfy their customers are, and the audit firm is no exception. Customer satisfaction has played an important role for achieving the competitive advantages (Lin and Wang, 2006). Reichheld, Sasser and Earl (1990) found that customer satisfaction could lead to a 25 to 85% increase in profit. Luo and Bhattacharya (2006), Aydin and Ozer (2005), Oliver (1997), Bolton, Lemon and Verhoel (1998), Moorman, Deshpande, and Zaltman, (1993), Fornell (1992), Schurr and Ozanne, (1985) found that service quality is a major driver of customer satisfaction and leads to future revenue. Base on our studies that the audit industry had not been analyzed in the context of its customer satisfaction with respect to service quality in the context of Thailand.

2. Research objective

The purpose of this study is to examine the relationships between service quality and customer satisfaction in Thailand's audit firms. The study applies the SERVQUAL instrument with five dimensions which provides a measurement of service quality related to customer satisfaction. SERVQUAL started to apply for accounting and auditing firms from 1996 (Ismail, Haron, Ibrahim, and Isa, 2006; Kang and Bradley, 2002). Increasing in perceived service quality has a direct effect on customer satisfaction. Thus, the audit firms were investigated with the following objectives set for the study:

• To determine whether service quality will affect customer satisfaction.

3. Literature review and hypotheses development

3.1 *Literature review*

3.1.1 Service quality

The firm's ability to provide a high level of service quality is the important key to competitive advantages than competitors. Many of the definition of service quality revolve around the identification and satisfaction of customer needs and requirements. Zeithaml, Parasuraman and Berry (1990) defined service quality as the extent of discrepancy between the customer expectations and their perceptions. The American Customer Satisfaction Index (ACSI) defined service quality as the degree to which a service provides customer requirements and how these requirements are met (Fornell, Johnson, Anderson, Cha and Bryant, 1996). Parasuraman, Zeithaml and Berry (1985) argue that service quality can be defined as the difference between predicted, or expected, service (customer expectations) and perceived service (customer perceptions).

In order for the customers to be satisfied, the customers' perceived performance of a service should be greater than the customers' expectation. On the contrary, customers will be dissatisfied when service quality of an organization, a systematic and valid instrument is essential (Lewis and Mitchell, 1990; Parasuraman et al., 1985; Oliver, 1980). The customers assessment of overall service quality is based on the gap between their expectations and their perceptions of performance levels. Service quality is helpful for service firms to know the customer's perceptions of service quality in order to overcome their competitors and attract and retain customers.

3.1.2 The SERVQUAL instrument

In the consumer behaviour theory, service quality is defined as the difference between customer expectations of service and perceived service offered by firms (SERVQUAL), and indicated five service quality dimensions (Parasuraman et al., 1988). SERVQUAL model developed by Parasuraman et al. (1994, 1991, 1990, 1988, 1986, 1985) is the most often used approach for measuring service quality and has compared customers' expectations before a service encounter and their perceptions of the actual service delivered (Parasuraman et al., 1985; Lewis and Booms, 1983; Gronroos, 1982). The SERVQUAL instrument with five dimensions; tangibles, reliability, responsiveness, assurance, and empathy (Zeithaml et al., 1990) measure customer service quality.

Many researchers studied by using SERVQUAL found that its validity and reliability (Kettinger and Lee, 1997; Cronin and Taylor, 1992). This instrument is administered twice in different forms; first to measure expectations of service and second to measure perception of service provider (Parasuraman et al., 1985).

Based on the "expectancy-disconfirmation" model, Parasuraman et al., (1988) developed the SERVQUAL scale to assess customers' perception of service quality and how organization can improve their delivery of service quality. Five dimensions of service quality were identified in SERVQUAL: tangibles, reliability, responsiveness, assurance, and empathy. Table 1 shows the definition of SERVQUAL's five dimensions.

Dimensions	Definition	Items in Scale	
Tangibles	The appearance of physical facilities, equipment, personnel and communication materials.	4	
Reliability	The ability to perform the promised service dependably and accurately	5	
Responsiveness	The willingness to help customers and to provide prompt service.	4	
Assurance	The knowledge and courtesy of employees and their ability to convey trust and confidence	4	
Empathy	The provision of caring individualised attention to customers.	5	

Table 1. The definition of SERVQUAL's five dimensions

Source: SERVQUAL model, Parasuraman, Zeithaml and Berry, 1985

Previous studies in service marketing used SERVQUAL model to measure customer satisfactions such as Hutchinson, Li and Bai (2005) applied the SERVQUAL instrument in the new contexts of China's mobile communications industry. The dimensionality, reliability, and validity of the SERVQUAL instrument were assessed. The adapted SERVQUAL instrument is a valid and valuable tool to measure service quality. Service convenience is an important additional dimension of service quality in China's mobile communications setting. The dimension of empathy may need revision. Naeem, Akram and Saif (2009) studied service quality and its impact on customer satisfaction in Pakistan banking sector by using SERVQUAL model found that service quality is a good predictor of customer satisfaction. Mengi (2009) studied customer satisfaction with service quality of public and private sector bank by using SERVQUAL model. The results found that customers of public sector bank are more satisfied with the service quality than private sector banks. Improve customer satisfaction through service quality is positive word-of-mouth and consequently better customer acquisition and retention. Heung, Wong and Qu, (2000) studied airport-restaurant service quality in Hong Kong. They used the SERVQUAL methodology and adapting it to the

airport-restaurant environment and examined travelers' expectations and perceptions of the quality of the restaurants' service. This study analyse the gap between perceptions and what travellers expected and desired to determine a measure of service adequacy (MSA) related to expectations and a measure of service superiority (MMS) related to whether travellers' desired service levels were exceeded. The results showed that the Chinese restaurants achieved the highest MSA value by exceeding basic expectations for service, but all the restaurants had negative MMS values.

Many accounting researcher studied the relationship between service quality by using SERVOUAL model and customer satisfaction. Weekes, Scott and Tidwell (1996) studied service quality and client satisfaction in Australia's accounting firms by using SERVQUAL model. This study found that SERVQUAL model is a good instrument to measure service quality in the professional business services. Saxby, Ehlen, Koki (2004) studied service quality in Southern Indiana accounting firms by using SERVQUAL model confirm that service quality is positively related to clients' satisfaction. Hong and Goo (2004) studied service quality and customer satisfaction in Taiwan accounting firms. This studied found that SERVQUAL instrument is a good measurement of service quality and service quality is positively associated with customer satisfaction. Ismail et al. (2006) studied the relationship between audit service quality and client satisfaction to the audit firms in Malaysia by using SERVQUAL model to measure the perception and expectations of public listed companies on the services received from audit firms. They found that SERVQUAL model can measured customer satisfaction. Turk and Avoilar (2009) studied the effects of perceived service quality of audit firms on satisfaction in the Istanbul Stock Exchange (ISE) listed companies by using modified 22 items SERVQUAL scale indicated that the SERVQUAL scales is reasonably satisfactory to measure perceived service quality of audit firms. Aga and Safakli (2007) studied service quality and customer satisfaction in professional accounting firms operating in North Cyprus by using SERVQUAL model. They found that the SERVQUAL instrument with five dimensions provides good measurement of service quality in the context of professional accounting business. Service quality has as positive effect on customer satisfaction. Caruana, Money and Berthon (2000) studied service quality and satisfaction. This studied develop a model and hypotheses of the interrelationships, identifies measures and seeks to test the model with a sample of customer of an audit firm. For research instrument, they make use of the perception items in SERVQUAL to measure service quality. The result shown that, service quality and customer satisfaction was correlated. This finding suggests that service quality effect customer satisfaction.

In this study, perceived service quality defined as the extent to which a firm successfully serves the purpose of customers (Parasuraman et al., 1988; Zeithaml et al., 1990). Hence, to measure perceived service quality, this study used SERVQUAL instrument since SERVQUAL instrument is widely used to measure service quality (Parasuraman et al., 1994, 1991).

3.1.3 Customer satisfaction

Customer satisfaction is one of an important factor to organization. To be successful, organization must look into the needs and wants of their customers. Customer satisfaction is the individual's perception of the performance of the service in relation to the customer expectation (Rust, Zahorik, and Keiningham, 1996). Figure 1 below shows the linkage of the gap between perceived quality and expected quality.

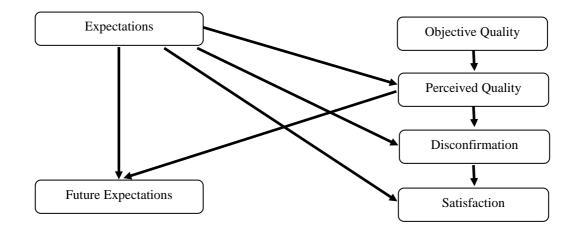


Figure 1. Satisfaction process Source: Rust, Zahorik, Keiningham, 1996

Satisfaction is a feeling reaction or emotional (Westbrook, Newman and Taylor, 1978). The range of emotion includes surprise, pleasure, contentment, or relief. Customer satisfaction can be built through the quality of service (Kotler and Keller, 2006). Therefore, the quality of service is a variable that affects customer satisfaction.

Many researchers have defined customer satisfaction in various ways. Oliver (1997) defined customer satisfaction as the customer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided a pleasurable level of consumption related fulfillment, including levels of under or over fulfillment. Kotler and Armstrong (2004) and Kotler (2000) defined customer satisfaction as a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his or her expectation. Hoyer and MacInnis (2001) defined customer satisfaction as a customer feeling of acceptance, happiness, relief, excitement, and delight.

Increasing customer satisfaction can get higher future profitability and lower costs related to service (Anderson, Hakan and Jan 1994). Customer satisfaction decreases customer complaints and increase repurchase intentions, and lead to better financial performance (Babakus, Bienstock, and Scotter, 2004; Ittner and Larcker, 1998; Fornell, 1992). The quest for profitability is essential to any organization. One factor that affects organizational profits is customer satisfaction with service providers. Service quality has been recognized as one of the major factors that influence the long-term profitability of an organization (Parasuraman et al., 1988). Perceived high levels of service quality can increase customer satisfaction and generate high revenue for the organization (Zeithaml et al., 1996).

In this study, customer satisfaction is defined as the customer judgment that service feature, or service itself, provided a pleasurable level of consumption related fulfillment, including levels of under or over fulfillment as defined by Oliver (1997).

3.1.4 Research framework

The study seeks to determine the relationship between service quality and customer satisfaction. The independent variable of this study is the service quality. The customer satisfaction is the dependent variable. In accordance with the literature, the developed research model is shown in Figure 2.

Proceedings of the Burapha University International Conference 2015, 10-12 July 2015, Bangsaen, Chonburi, Thailand

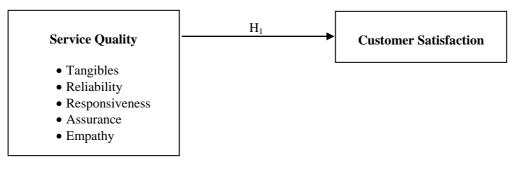


Figure 2. Research framework

3.1.5 Hypotheses development

Services are intangible process, but have a close relationship with customers (Soteriou and Chase, 1998). Superior service quality is related to increase customer satisfaction (Brady and Robertson, 2001). SERVQUAL instrument is use to measure service quality in this study (Parasuraman et al., 1988). The perceived service quality of audit firms are measured by using 22 questions of SERVQUAL instrument adapted and modified from Parasuraman et al. (1988). The perceived service quality is hypothesised to have direct effect on customer satisfaction.

In the high levels of competition, many firms are trying to increase the customer satisfaction. Ittner and Larcker (1998) found that service quality is positively related to customer satisfaction. Customer satisfaction is one result of service marketing activity, post-purchase behavior involves several interrelationships within the consumption process. Churchill and Surprenant (1982) considered that the concept of customer satisfaction can be included directly in service marketing concepts, and this concept includes satisfying consumer demands while producing company profits. Based on the above discussion the hypothesis can be developed as follows:

H₁: The level of service quality is positively related to customer satisfaction.

4. Methodology

4.1 Data collection

This study is conducted by gathering data from customers of audit firm in Thailand by using mailing instrument (questionnaire). The customers of audit firm were selected from the companies registered under the Stock Exchange of Thailand for public listed companies as of December 31, 2013. The companies are selected from all industry sectors of 507 public listed companies on the Stock Exchange of Thailand. The questionnaires were distributed by mailing. The respondents were asked to indicate their perception of the level of service quality and customer satisfaction which were delivered by the audit firms with respect to each item on a seven point Likert scale (from 1: strongly disagree to 7: strongly agree).

A total of 507 questionnaires were distributed to the owner/general manager, president/director, accounting manager, and department head of the public companies listed on the Stock Exchange of Thailand. There are customers' of the audit firm under the Thailand law and regulations and are approved by the office of the Stock Exchange of Thailand. Only 296 questionnaires were received resulting in a response rate of 58.38%. There are 69 (23.31%) of services industry, 61 (20.61%) of property and construction, 53 (17.91%) of industrial industry, 39 (13.18%) of financials industry, 27 (9.12%) of agro and food industry, 22 (7.43%) of consumer products industry, 16 (5.40%) of technology industry, and 9 (3.04%) from resource industry. Most

of public companies mainly used audit service from Big-Four audit firms (63.85%) and had audit service between 5 to 10 years (38.51%).

4.1 Measurement

The dependent variable in this study is customer satisfaction. Customer satisfaction dimensions were measured by using 7 statement items. The independent variable is service quality. Service quality dimensions were measured by using 22 items of SERVQUAL model. In order to determine the scale items for this study, a principal component factor analysis were performed.

5. Results

5.1 Service quality

In order to test the hypothesis, two factors were analyzes. The first was undertaken on the 22 items of five dimensions of SERVQUAL scale were subjected to principal components analysis (PCA). PCA analysis revealed the presence of two components with engenvalue exceeding 1, explaining 65.30% and 71.40% of the variance respectively. The first factor comprised of 16 items and was a combination of four original dimensions (reliability 4 items, responsiveness 4 items, assurance 3 items, and empathy 5 items). So, this factor was labeled as "service quality". The second factor comprised of 6 items and was a combination of 3 original dimensions (tangible 4 items, reliability 1 item, and assurance 1 item). So, this factor was deleted in this study. Finally, this study used 16 items of SERVQUAL scale to measure service quality.

In order to test the reliability of the SERVQUAL scale and internal consistency of 16 questions of service quality (independent variable), Cronbach's coefficient α score were computed for each question on the perception score. The Cronbach's Alpha value higher than 0.70 indicate internal consistency (Hair, Black, Babin and Anderson, 2010; Devellis, 2003). The reliability coefficients of 16 questions are shown in Table 2.

Service Quality	Factor Loading
SQ1	0.849
SQ2	0.809
SQ3	0.811
SQ4	0.832
SQ5	0.856
SQ6	0.852
SQ7	0.851
SQ8	0.884
SQ9	0.893
SQ10	0.848
SQ11	0.836
SQ12	0.750
SQ13	0.798

Table 2. Factor analysis and reliability test result on service quality

Service Quality	Factor Loading
SQ14	0.813
SQ15	0.814
SQ16	0.883
Cronbach's Alpha	0.971
Eigenvalues	11.207
Variances Explained (%)	70.042
Cumulative (%)	70.042
The Kaiser-Meyer-Olkin Measure of Sampling Adquacy	0.941
The Barlett's test of Sphericity Approx. Chi-Square	5287.734
Df	120.000
Sig.	0.000

The results which in Table 2 show that 16 items of SERVQUAL scale have internal consistency measures higher than 0.70 which indicate that satisfactory levels of internal consistency. Thus, the SERVQUAL scale is reasonably satisfactory to measure perceived service quality of audit firms in Thailand. The statistical test results (KMO = 0.941, Bartlett Test of Sphericity = 5287.734, Significance = 0.000, Factor Loading = > 0.50) indicate that the data was appropriate for the factor analysis. All items with Eigenvalues greater than 1.0 were extracted, which accounted for 70.04% of the variance in the set of the items. The exploratory factor analysis results in Table 4 indicate that 16 questions of SERVQUAL scale matched as described by Parasuraman et al. (1988).

5.2 *Customer satisfaction*

The second analysis was undertaken on the 7 items of customer satisfaction. The results of the analysis were shown in Table 3.

Table 3.	Factor ana	lysis and	l reliability	test result	on	customer	satisfaction

Customer Satisfaction		Factor Loading
CS1		0.865
CS2		0.845
CS3		0.860
CS4		0.853
CS5		0.823
CS6		0.858
CS7		0.836

Table 3. (continued)

Customer Satisfaction	Factor Loading
Cronbach's Alpha	0.935
Eigenvalues	5.043
Variances Explained (%)	72.049
Cumulative (%)	72.049
The Kaiser-Meyer-Olkin Measure of Sampling Adquacy	0.915
The Barlett's test of Sphericity Approx. Chi-Square	1584.203
Df	21.000
Sig.	0.000

Table 3 shows the Cronbach's Alpha values for all items of customer satisfaction (dependent variable) are above 0.70 as suggested by Hair et al. (2010) and Devellis, (2003). The statistical test results KMO score was 0.915, which indicated that the factor analysis technique was appropriate. The Bartlett's test of sphericity was significant at a level of 0.000. All items had factor loading above 0.50 which achieved the rule of thumb that the communalities value of the items to be retained in the factor analysis should be greater than 0.50. All items with Eigenvalues greater than 1.0 were extracted, which accounted for 72.05% of the variance in the set of the items. The Cronbach's alpha for each factor reached the satisfactory level, ranging from 0.823 to 0. 865, and therefore indicated that the scale was reliable.

5.3 *Reliability test for the variables*

The results in Table 4 showed the Conbach's Alpha values for two variables are service quality (α =0.971) and customer satisfaction (α =0.935). Overall, the Cronbach's Alpha values for all the variables in this study are above the cutting point of 0.70 indicating that all items are within the respective variables being tested in this study met the statistical requirement for further analysis (Hair et al, 2010). This confirms that the measurement set used was reliable.

Table 4. Reliability test for the variables

Variable/a	Service Quality	Customer Satisfaction
Cronbach's Alpha Value (a)	0.971	0.935

5.4 Descriptive statistics of the variables

The acceptable range value of the skewness is -3:3, and the range value of kurtosis is -10:10 (Kline, 2005). These range values are required for the data to be considered as normally distributed (Kline, 2005).

Table 5. Descriptive statistics of the variables

				N=296
Variable	Mean	Standard Deviation	Skewness	Kurtosis
Independent Variables				
Service Quality	5.7044	0.71193	-0.443	0.086
Dependent Variable				
Customer Satisfaction	5.5077	0.71264	-0.760	0.720

As presented in Table 5, the skewness statistics for the variables are ranging from -0.760 to -0.443. Likewise, the kurtosis statistics for the variables are in the range of 0.720 to 0.086. Collectively, all the items that make up the measured variables had absolute values of kurtosis smaller than -10:10 indicating the values of skewness and kurtosis of the measurement items did not violate the conservative rule of thumb within the conventional limits of normality criteria (Hair et al. 2010; Kline 2005). In this study, the skewness and kurtosis statistics for the variables indicated that the data in this study are fitted in normal distribution.

5.5 Correlation and regression analysis

Person correlation was employed to explore the relationship between independent variable (service quality) and dependent variable (customer satisfaction).

Table 6. Correlations between service quality and customer satisfaction

Variables			Se	ervice Quality	Customer Satisfaction
Service Quality				1	0.817
Customer Satisfaction				-	1
N. D. 1	• • • • • •	1 0.01.1	1 (2 : 1 1)	201	

Note: Pearson correlation is significant at the 0.01 level (2-tailed); n=296.

Table 6 presents the results of the assessment of the relationship between service quality and customer satisfaction by using Pearson correlation analysis and significant at the 0.01 level. The results show that service quality was strongly correlated to customer satisfaction (0.817). This means that there was a strong and significant relationship between service quality and customer satisfaction among customer in Thailand's audit firms.

5.6 Hypothesis analysis

Test of the hypotheses was then performed using the standardized solution estimated and t-value. Table 7 present the hypothesis analysis for H₁: The level of service quality is positively related to customer satisfaction. The results showed that independent variable namely service quality had a significant positive influence on dependent variable namely customer satisfaction. The result revelled that H₁ is supported (β =0.817, p<0.000). Given these finding, it can be concluded that service quality is a good indicator to predict customer satisfaction.

Table 7. Hypotheses analysis

Hypotheses	Relationship Coefficient	Standardized β	t	Accepted
H_1	Service Quality →Customer Satisfaction	0.817	24.307	Yes

6. Conclusion

The purpose of this study is to measure service quality perceptions of audit firms' customer and to examine the relationship between service quality and customer satisfaction in Thailand's audit firms. The correlation and regression analysis was used to test the constructs framework that customer satisfaction was influenced by the perception of audit firms' service quality. The results confirmed that the SERVQUAL model is a good measurement of service quality and service quality is positively associated with customer satisfaction in the context of audit firms. These indicated that service quality is positively associated with customer satisfaction in Thailand's audit firms. In addition, the findings of this study are consistent with previous studies by Turk and Avoilar (2009); Aga and Safakli (2007); Ismail et al. (2006); Saxby et al. (2004); Hong and Goo (2004) who stated that there was a strong link between service quality and customer satisfaction in audit firms.

Although, audit firm's customers are satisfied with the overall service quality provided by their audit firms, their customers still switch to other audit firms. Therefore, audit firms need to improve the relationship between audit firm and customer.

References

- Aga, M., & Safakli, O. (2007). An empirical investigation of service quality and customer satisfaction in profession accounting firms: Evidence from North Cyprus. *Journal of Problems and Perspectives in Management*, 5, 84-98.
- Anderson, J.C., Hakan, H. & Jan, J. (1994). Dyadic business relationships within a business network context. *Journal of Marketing*, 58(October), 1-15.
- Aydin, S. & Ozer, G. (2005). The analysis of antecedents of customer loyalty in the turkish mobile telecommunication market. *European Journal of Marketing*, 39 (7/8), 910-925.
- Babakus, E., Bienstock, C., & Scotter, J. (2004). Linking perceived quality and customer satisfaction to store traffic and revenue growth. *Decision Sciences*, 35(4), 713-737.
- Bolton, R.N., Lemon, K.N., & Verhoef, P.C. (1998). The theoretical underpinnings of customer asset management: a framework and propositions for future research. *Journal of the Academy of Marketing Science*, 32(3), 271-292.
- Brady, M.K., & Robertson, C.J. (2001). Searching for a consensus on the antecedent role of service quality and satisfaction: An exploratory cross-national study. *Journal of Business Research*, 51(1), 53-60.
- Caruana, A., Money, A.H., & Berthon, P.R. (2000). Service quality and satisfaction: The moderating role of value. *European Journal of Marketing*, 34, 1338-1352.
- Churchill, G.A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19, 491-504
- Cronin, J.J., & Taylor, S.A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56, 55-68.
- Deng, M., Lu, T., Simunic, D.A. & Ye., M. (2014). Do joint audits improve or impair audit quality? *Journal* of Accounting Research, 52(5), 1029-1062.

- Devell, R.F. (2003). *Scale Development: Theory and Application (2nd ed.)*. United State of America: Sage Publications, Inc.
- Eilifsen, A., Messier, Jr. W.F., Glover, S.M., & Prawitt, D.F. (2006). Auditing and Assurance Services (International Edition). Maidenhead: McGraw-Hill Education.
- Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *Journal of Marketing*, 55(1), 1-21.
- Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J., & Bryant, B.E. (1996). The American Customer Satisfaction Index: Nature, Purpose, and Findings. *Journal of Marketing*, 60(October), 7-18.
- Francis, J.R. & Yu, M.D. (2009). Big 4 office size and audit quality. *The Accounting Review*, 84(5), 1521-1552.
- Gronroos, C., (1982). An applied service marketing theory. European Journal of Marketing, 16(7), 30-41.
- Gul, F., Sami. H., & Zhou. H (2009). Auditor disaffiliation program in China and auditor indepence. A Journal of Practice & Theory, 28(1), 29-51.
- Hair, J.F., W.C., Black, B.J. Babin & R.E. Anderson (2010). *Multivariate data analysis. A global perspective*. Printice Hall, New Jersey.
- Heung, V.C.S., Wong, M.Y., & Qu, H. (2000). Airport-restaurant service quality in Hong Kong: An application of SERVQUAL. *Cornell Hotel and Restaurant Administration*, 3, 86-96.
- Hong, S.C., & Goo, J. (2004). A causal model of customer loyalty in professional service firms: An empirical study. *International Journal of Management*, 21(4), 531-540.
- Hoyer, W.D., & MacInnis, D.J. (2001). Consumer Behaviour (2nd ed.). Boston, Houghton Mifflin Company.
- Hutchinson, F.L.J., Li, D., & Bai, C. (2005). An empirical assessment and application of SERVQUAL in mainland China's mobile communications industry. *International Journal of Quality & Reliability Management*, 24, 244-262.
- Ismail, I., Haron, H., Ibrahim, D.N., & Isa, S.M. (2006). Service quality, client satisfaction and loyalty towards audit firms: Perceptions of Malaysian Public Listed Companies. *Managerial Auditing Journal*, 21, 738-756.
- Ittner, C., & Larcker, D. (1998). Are non-financial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research*, 36(3), 1-36
- Kang, H., & Bradley, G. (2002). Measuring the performance of IT services: An assessment of SERVQUAL. *International Journal of Accounting Information Systems*, 3, 151-164.
- Kettinger, W., & Lee, C. (1997). Pragmatic perspectives on the measurement of information systems service quality. *MIS Quarterly*, 21(2), 223-240.
- Kline R.B. (2005). Principles and Practice of Structural Equation Modelling (2nd ed.). New York: Guilford Press.
- Kotler, P. (2000). Marketing Management (10th ed.). New Jersey, USA:Prentice-Hall.
- Kotler, P., & Armstrong, G. (2004). Principle of Marketing (10th ed.). New Jersey, USA: Prentice Hall.
- Kotler, P., & Keller, K.L. (2006). *Marketing Management*, 8rd ed. Perarson Prenntice Hall.
- Lewis, B.R., & Booms, B. (1983) in Berry, L.L., Shostack, G., & Upah, G.D. (Eds). *The marketing aspects of service quality in emerging perspective on service marketing*. American Marketing Association, Chicago.
- Lewis, B.R., & Mitchell, V.W. (1990). Defining and measuring the quality of customer service. *Marketing Intelligence & Planning*, 8(6), 11-17.
- Lin, H.H., & Wang, Y.S. (2006). An examination of the determinants of customer loyalty in mobile commerce contexts. *Information & Management*, 43,271-282.
- Luo, X., & Bhattacharya, C.B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing*, 70, October, 1-18.
- Mengi, P. (2009). Customer satisfaction with service quality: An empirical study of public and private sector banks. *The IUP Journal of Management Research*, 7(9), 7-17.

- Moizer, P. (1997). Auditor reputation: The international empirical evidence. *International Journal of Auditing*, 1(1), 61-74.
- Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing*, 57(January), 81-101.
- Naeem, H., Akram, A., & Saif, M.L. (2009). Service quality and its impacts on customer satisfaction: empirical evidence from The Pakistani banking sector. *The International Business & Economics Research Journal*, 8(12), 99-104.
- Oliver, R.L. (1980). A cognitive model of the antecedents and consequences of satisfaction decision. *Journal* of Marketing Research, 17(11), 460-469.
- Oliver, R.L. (1997). Satisfaction: A behavioral perspective on the consumer. McGraw-Hill, New York, NY.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). A conceptual model of service quality and its implication. *Journal of Marketing*, 49, 41-50.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1986). SERVQUAL: A multiple-item scale for measuring customer perceptions of service quality. *Marketing Science Institute, Cambridge*, MA, 86-108.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). SERVQUAL: A multiple-item scale for measuring customer perceptions of the service quality. *Journal of Retailing*, 64, 12-40.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1990). *Delivering quality service*. The Free Press, New York, NY.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1991). Refirement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67(4), 420-450.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1994). Alternative scales for measuring service quality: A comparative assessment base on psychometric and diagnostic criteria. *Journal of Marketing*, 70(3), 21-30.
- Reichheld, E.E. & Sasser, W.E. (1990). Zero defections: Quality comes to services. Havard Business Review, 68(5), 105-111.
- Rust R.T., Zahorik A.J., & Keiningham T.L. (1996). Service marketing. New York, HarperCollinsCollege Publishers.
- Saxby, C.L., Ehlen, C.R., & Koki, T.R. (2004). Service quality in accounting firms: The relationship of service quality to client satisfaction and firm/client conflict. *Journal of Business & Economics Research*, 2(11), 75-87.
- Schurr, P.H., & Ozanne, J.L. (1985). Influence on exchange processes: buyers' preconceptions of a seller's trustworthiness and bargaining roughness. *Journal of Consumer Research*, 11(4), 939-953.
- Shailer, G., Cummings, L., Vatuloka, E., & Welch, S. (2004). Discretionary pricing in a monopolistic audit market. *International Journal of Auditing*, 8, 263-277.
- Shailer, G., Cummings, L., Vatuloka, E., & Welch, S. (2004). Discretionary pricing in a monopolistic audit market. *International Journal of Auditing*, 8, 263-277.1
- Sonsa-ardjit, P., & Vejaratpimol, R. (2010). Clients' perspectives toward audit service quality of the Big Four in Thailand. *University essay form Karlstads Universitet*.
- Soteriou, A.C., & Chase, R.B. (1998). Linking the customer contact model to service quality. *Journal of Operation Management*, 16, 495-508.
- Turk, Z., & Avcilar, M.V. (2009). The effects of perceived service quality of audit firms on satisfaction and behavioural intentions: A research on the Istanbul Stock Exchange Listed Companies. *Research Journal* of Business Management, 3, 36-46.
- Weekes, D.J., Scott, M.E., & Tidwell, P.M. (1996). Measuring quality and client satisfaction in professional business services. *Journal of Professional Service Marketing*, 14(2), 25-37.
- Westbrook R.A., Newman J.W., & Taylor J.R. (1978). Satisfaction/dissatisfaction in the purchase decision process. *Journal of Marketing*, October, 54-60.

- Zeithaml, V., Berry, L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal* of *Marketing*, 6(2), 31-47.
- Zeithaml, V., Parasuraman, A., & Berry, L.L. (1990). Delivering quality service: Balancing customer perceptions and expectations. Free Press, New York, N.Y.