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Student name:	YEUNG Wai Kin	Student ID number:	1812886
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Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

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PART I – LITERATURE REVIEW

1.0 ABSTRACT

There are two part in this study. Part I reviews the literatures on e-service quality dimensions, also named as online service quality, with an emphasis on the methodology in development measurement scales and the construction of e-service quality dimensions. The author chooses numerous studies on e-service quality from ProQuest and the database of HKU library and subjected them to a comprehensive analysis. This study demonstrates that e-service quality dimensions incline to be subject on the service industry. The author further focuses on financial service industry and discuss the characteristics of e-service quality dimensions of financial service and then further discuss about the rise of development of mobile technology and the concept of measurement scales of mobile service quality.

Keywords: Service quality, e-service quality, online service quality, mobile service quality, online financial services

2.0 INTRODUCTION

The objective of this study is to find out a comprehensive view on e-service quality dimension of online financial services (no matter through web or mobile application) by reviewing relevant researches over the past twenty years. The author works in a global financial institution which provides a series of financial service purely online and targets on PRC investors and would like to through this study to help online financial service providers to achieve sustainable competitive advantage.

The rise of internal and mobile technology further changes the customer expectations

over time. According to the 42nd bi-annual statistical report from the China Internet Network Information Center (CNNIC), 788 million Chinese used mobile phones to surf the internet in the first half of 2018, making up 98.3 % of the total internet users. And 21% of them were online financial service users and increasing every year. Measurement of perceived service quality is always important to strategies planning and precision marketing.

Service quality act as a critical determinant in the success of the service providers of online financial services. Yang and Fang (2004) determined that it influences corporate reputation, customer trust, loyalty, website and application adoption, perceived value, customer satisfaction, attitude toward and recommendation of the financial service provider.

Delivery of advantageous service quality assists financial service providers to differentiate themselves from their competitors and promotes relationships with customer. These will help sustainable competitive advantage development and enhance the profitability. (Santos, 2003)

Therefore, the research questions of this study are:

What is the definition of e-service quality?

How to measure online service quality? (In what scales or dimensions)

How to apply the appropriate measurement in online financial service?

3.0 TRANSFORMATION OF FINANCIAL SERVICES INDUSTRY

Traditional channels are being rapid substituted by online channels as a way of consumption and shopping (Blut et al., 2015) Rapidly transforms of social tendency, competitive dynamics, and technological landscape have being restructured the business model of financial services industry (Arasli et al., 2005).

Such transforms accompanying the growth of familiar level of customers for online services and resulted the providers of financial service to evaluate their business strategies again and introduce online service to customers in order to provide a better service. Consecutively, online services have become the preference of channels for both customers and service providers in in financial industry (Ding et al., 2011; Ladhari and Leclerc, 2013).

4.0 THE DEFINITION OF SERVICE QUALITY

During the past few decades, service quality is a hot topic for academic research during past few ten years. The concept of service quality is abstractive and elusive as there are three characteristics which are unique regard to services. Parasuraman et al (1988) determined them as intangibility, heterogeneity, and inseparability of production and consumption. The importance of service quality for businesses has gained considerable research attention (Ahmad and Chiasakul, 2005; Ellis et al., 2003).

Service quality was defined in various ways:

- Parasuraman et al. (1988) stated that “service quality is a comparison between

expectations and performance” Expectation refers to what customer expect that a company should provide. Performance refers to the perceived value of the service performance. Other researchers had a similar point of view (Gronroos, 1990).

- Bitner and Hubbert (1994) stated that service quality is “the consumer’s overall impression of the relative superiority/inferiority of the organization and its services”.
- Asubonteng et al. (1996) have a similar view that is the difference between expectations of the customer referred to service performance prior to the service received and their related perceptions.
- Gefen (2002) presented that service quality is the customers’ subjective comparison between the quality of service and they want to be given and what they get.
- Yasin et al. (2007) defined service quality as an asset of organization and a foremost element of corporate financial performance and marketing.

In general, service quality can be regarded as the customers’ perceptions of service performance.

5.0 THE DEFINITION OF E-SERVICE QUALITY

Rise of technology induced rapidly changing of internet-based services and changes the mode of interaction of service companies and consumers.

Zeithaml et al. (2000) and Parasuraman et al. (2005) defined e-service as “the extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery of products or services”. Parasuraman et al. also discussed e-services is provided through an electronic way such as internet and these transactions initiate with a great degree of controlled by the consumer. In e-service, the customers contact or interact with the service companies through information technology, such as their websites or web-based application i.e., customers need to completely depend on information technology to receive the service.

Rust (2001) had a similar view that e-service is provided by a service provider by electronic systems.

De Ruyter et al. (2001) defined e-service as an internet-based, content-centered, and interactive customer service that is integrated with the support of system and technologies offered by service providers. These are driven by customers and intend to strengthen the relationship between the customer and service provider.

And it was also defined as an interactive information service that is provided on the internet by Ghosh et al. (2004)

Rowley (2006) claimed e-service as performances efforts, or deeds whose delivery is

regarding information technology

There are two main features of e-service summarized by Barrera and Carrión (2014): electronic system delivery and self-services based on technology (SSTs) or technological self-services.

Nowadays, wide range of services have embraced online channels. Services such as education, retail banking and governmental service are being increasingly delivered online. In all these, the quality of service customers experienced through online channels (e-service quality) is critical.

E-service quality was defined as “the beginning to the end of the transaction including information search, website navigation, order, customer service interactions, delivery, and satisfaction with the ordered product.” (Wolfenbarger and Gilly, 2003)

Santos (2003) determined that e-service quality is the overall judgments and evaluations of customers referred to the quality and superiority of e-service provided in virtual market place.

Yang et al (2001) and Santos (2003) considered that e-service becomes more important day by day not only as a factor to determine which the e-business is success or failure, but also in provision for exceptional experience to the customers regarding the interaction of information flow.

Data collected from or provided by customers can be analyzed and dissected by the service provider and utilized as the foundation to customize the service offered by the

organization. (Rowley, 2006).

E-service quality not only can compose competitive advantages for the online service providers, but also interact with the customers with quick feedback and strengthen the relationship with the customer in the development process of services or products.

Compared to the traditional service, comparison of the technical features and prices become much easier as the quality of e-service will be a core factor for customers' satisfaction (Santos, 2003).

Cronin (2003) determined that e-service quality not only has the potential in provision of strategic advantages but also as critical elements for enhancement of profitability and operational efficiency.

Fassnacht and Koese (2006) gathered up two fundamental dimensions of e-service quality. These are technical quality and service quality.

6.0 CONCEPTIONAL FRAMEWORK FOR MEASUREMENT SCALE ON E-SERVICE QUALITY

The mainstream conception model for measurement scale on e-service quality are SERVQUAL, E SERVQUAL and WEBQUAL.

6.1 The Traditional Model - SERVQUAL

Although assessing users' expectations of service quality is difficult, many researchers have made positive efforts to develop service quality's measurements. Such as Parasuraman et al. (1988), they defined SERVQUAL model to measure service quality. To evaluate service quality, they propose the following dimension:

Tangibility - the appearance of equipment, personnel and physical facilities;

Responsiveness - the willingness to assist customers and provide prompt service;

Reliability – the ability to fulfil the committed service dependably and accurately;

Empathy – the level of concern and individualized awareness the service provider offers to its customers; and

Assurance – the knowledge and politeness of employees and their capacity to arouse confidence and trust

As a matter of fact, “the appropriateness of using SERVQUAL for measuring service quality for a wide range of services has been debated since the model was first presented” (Hughey et al., 2003) Some studies argued that the dimensional structure of SERVQUAL was not confirmed when applying SERVQUAL on the service quality, such as Badri et al. (2005), while others found that SERVQUAL remains a valid tool

for service-quality research (Ladhari, 2009). Prior studies have used the SERVQUAL to measure Web site quality (Cao et al., 2005) have adapted the measures from SERVQUAL, such as SERVQUAL plus (Gorla, 2011), or have modified SERVQUAL (Horn et al., 2005), etc.

SERVQUAL model was used by some researchers as the measurement scale for the e-service quality. But traditional approach for measurement of service quality may not be directly applied to e-service quality.

6.2 Model for E-commerce - E SERVQUAL

Electronic service quality refers to the quality of service that customers get when dealing with e-commerce websites from which they make online purchase transactions of both products and services. Zeithaml et al. (2000, 2002) defined electronic service quality as the measurement of the quality of a website that - during the interactions with the site and during the post interaction stages such as fulfillment of the order and dealing with product returns. Electronic service quality is broadly defined to wreathe all section of interactions of a customer with a Web site: 'The extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery.' Zeithaml et al. (2002) identified several website characteristics and categorized them into 11 dimensions. Upon further analysis and scale reduction (Parasuraman et al., 2005), the 11 dimensions of the E SERVQUAL scale was modified to 4 dimensions with a total of 22 items. Such four dimensions constituted the final scale were: efficiency (ease and speed with which a site can be accessed and used), fulfillment (extent to which promises made by the site regarding order delivery and order fulfillment are fulfilled), system availability (proper technical functioning of the site) and privacy (degree to which the site is safe and secure

and protects customer information)

6.3 Model for Web based service - WEBQUAL Model

Li et al. (2002) defined service quality of web-based service as the measurement to which services depend on web technologies advancing effectiveness and efficiency of online communications, delivery and consumption of product/services. There are several common characteristics of service between online store and physical store. Thus, the measurement of web-based service quality is similar to traditional model and it is supposed to be multi-dimensional. However, there are two principle differences between traditional and web-based services quality: Traditional service is much less efficient than web-based service comparatively; and web-based service is less time consuming and labor intensive. Websites or web-interface application can provide an inseparable linkage between customers and companies simultaneously.

And Wolfinbarger and Gilly (2001) determined that web-based customers are not passive recipients of marketing information. In opposite, they are core participants who experience strengthened control in the internet ambience. Web-based customers are active participants who utilize information on the internet and self-service during online purchases.

Loiacono et al. (2002) defined that WEBQUAL consists of twelve dimensions: business process, design, flow, information fit to task, innovativeness, integrated communication, interaction, intuitiveness, response time, visual appeal, trust and substitutability

6.4 A Hierarchical Model - Blut's Model

Blut et al. (2015) had conducted a meta-analytic review on conception framework of measurement scales for e-service quality. And based on the review, Blut (2016) introduced a hierarchical model for e-service quality. Widely used scales such as WebQual and E SERVQUAL were contrasted and a better and updated construct of scale (Blut's model) was developed and proofed by research results. There are three key outcomes from the impact of e-service quality has been summarized. These are word-of-mouth, repurchase intentions, and customer satisfaction. Besides, three contextual factors were identified which are moderated overall service quality. They are regulatory environment, industry context, and country culture. Finally, four fundamental dimensions of conceptual framework for e-service quality were determined as website design, customer service, fulfilment, and privacy/ security. they are demonstrated as follow:

6.41 Website design

The first dimension is website design, most of the research related to e-service quality was mentioned this dimension.

Wolfenbarger and Gilly (2003) commented researchers focused to assess attributes regarding website interface at the initial conceptualization and Holloway and Beatty (2008) recommend that measurement do not involve for the whole transaction processes.

Bauer et al. (2006) suggest that the e-commerce transaction processes comprise four stages which are an information stage, an agreement stage, a fulfillment stage, and an

after-sales stage. It was argued that attributes are different regard to the needs of customers in the distinct stage.

Attributes regarding website design are critical during information stages. At this stage, customers have a primary interest in the products' information, and easier the information being accessed, more advantageous the website being assessed (Holloway and Beatty 2008). Blut (2016) suggest that customers are interested in the quality of the information of product/service, the aesthetics of the website when compose an order decision, the smoothness of the transaction process, the convenience of the website being browsed, the product/service selection, the availability of product/ service, the price information, the personalization of information, and the website availability .

In accordance with the theory of means-ends-chain, these attributes are used to assess the customers' particular experiences. Besides, customers integrated their experiences and consider these to assess the capacity of service providers' overall performance.

Website design referred to the interface and layout, updating and user-friendliness of content (Loiacono et al., 2000, Yang et al., 2004). In e-commerce, one of the most critical respects is the availability of information (Wolfenbarger and Gilly, 2001). Zeithaml et al. (2002) stated that it is different from offline sales transactions, customers who purchasing online perceive an advantage that they can receive information from the content of the website directly without participate of salesman. Besides, users of internet perceive benefit with decrease in cost of search (Alba et al., 1997). If there is a glut of free information available which is easily accessed and well organized, this will be a critical reason that the consumers purchase online. (Wolfenbarger and Gilly, 2001) These allow customers to compare products and services.

6.42 Fulfillment

Orders' fulfillment is the second dimension of Blut's model. It refers to the abilities of online shops and service providers to ensure the orders of customers was properly executed and delivered.

At this stage it mainly regards to the post-sales issues (Bauer, et al. 2006). Orders have already been placed by customers in this stage. And the customers would like to received goods or services which is expect to be delivery. Hence, attributes of this dimension concerned to accurateness of fulfillment of order, timing of order, and the status of delivery of good and services are of critical importance.

Customers believed that the online shops or service provider will assure the demonstration and description are accurate on the website. Besides, customers expected right products will be delivered which is correct pricing, in a proper condition and without delay.

By application of the critical incident technique, Holloway and Beatty (2008) it is discovered that these attributes are used to evaluate performance of online shop or service provider by customers, and about 64% of the interviews being reported, customers argued about problems related to fulfillment which lead to dissatisfaction.

Therefore, it is able to assume that order accuracy, and delivery condition and delivery timeliness are important attributes that affect perceptions of the ability of an online shop or service provider to assure effective fulfillment of order. And fulfillment of order

represents a major dimension of comprehensive e-service quality evaluation.

6.43 Customer Service

Customer service is the third dimension which refers to online support toward customer before, among, or after the customers had place the online order (Bauer, et al. 2006).

Its attributes are about the online stores general level of service, complaint handling and return (refund) policies. Holloway and Beatty (2008) demonstrate that trustworthy service support, integrated with equitable, appropriate policies of goods return/exchange, would be an critical attribute to drive customer satisfaction.

Therefore, for online shops and service providers, level of service and policies of return are supposed to dedicate to important element of advanced customer service perceptions.

Furthermore, customer service is recommended to dedicate to integrated assessments of service quality when customers comprise their comprehensive judgement of the online shops and service providers.

At the beginning of rise of e-commerce, people believed that low prices and availability on the internet would be ensured the success of online business.

These days, customer service becomes a critical factor to succeed in online business

(Zeithaml et al., 2002). Customers expect that the online shops and service providers are able to execute transactions properly, obtain personalized attention, deliver the product and service with timely manner, instant message interaction (email or instant message) and receive information accessibility.

6.44 Security/Privacy

Lastly, the security and privacy are the fourth dimension. It is also defined as the assurance attribute which referred to the concern of customers regard to potential lapses of security and privacy. (Bauer et al., 2006) If customers perceive their online payment is not secured or their personal and transaction information is not treated as confidential, they may avoid to consume at the online shops and service providers.

Customers would have concern on their private personal information may be leaked out, such as their name or address. They have expectation that online shops and service providers will protect them against theft, fraud and harass such as junk emails. Therefore, it is able to assume that security and privacy of an online shop and service provider are important e-service dimension and influence consumers' evaluation of overall e-service quality.

7.0 THE RESEARCH GAP AND INCENTIVE OF FURTHER RESEARCH.

It is found that there is no consensus on the number and the nature of the dimensions in the e-service quality but generally six dimensions mentioned more consistently by the researchers. These are 'reliability/fulfilment', 'responsiveness', 'ease of use/usability', 'privacy/security', 'web design', and 'information quality/benefit'.

Some of the dimensions are identical or at least similar to those reported for traditional service quality; However, some of researcher applied DeLone and McLean's IS success model (2003) (a quality scale for information systems) which was fundamentally different from traditional service quality.

And there are two research gaps being identified as follows:

7.1 Lack of New Insight in Dimension Of Mobile Service Quality

Kannan and Li (2017) and Venkatesh et al. (2017) stated that it is necessary to understand the features of mobile devices in order to conceptualize mobile service (m-service quality). by a point of view of technology, there is several features differ from desktop computer by comparison with tablet and smart phone. Wang et al. (2015) considered that mobile device has limitation in size of display and input, battery power and processing capacity.

Therefore, presentation of products and usage of services through smartphone and table is supposed to be less comfortable at the view of customer. Although there are limitation of presentation, m-service can provide several benefits such as localization and mobility of services.

Mobility of services let users to consume and receive service anytime and anywhere they want. It is fundamentally different from traditional physical and online store. (Kleijnen et al. 2007)

By using the global positioning system (GPS), location-based services allow the service provider to trace the location of consumers

Zou et al. (2016) consider the interaction between service provider and customer has changed to a more dynamic information exchange which provides the feasibility of real-time marketing. Grewal et al. determine these advantages enable online store and service provider to provide more personalized and uninterrupted experiences of consumption. The features of mobile devices should induce to new perceptions and expectations of service quality dependent with devices. it will be a new research area which are related to for decision-making of customers.

Kaatz et al. (2017) argue that present conceptualizations of m-service quality normally do not think over the features of m-service differ from general online service. Several studies were carried out in mobile service but only few focused on the examination of measurement scale. Vlachos et al. (2011) and Huang et al. (2015) has examined the m-commerce context but unable to address the features of m-service such as ubiquitous availability.

Hoehle and Venkatesh (2015) also argue that although researches related to information system and interaction between human and system frequently studied m-service quality, they had missed mobile context as a critical factors. They normally focused on general usability of website without taking the unique features of mobile devices into account. With this background, Kaatz et al. (2017) firstly introduce dimension of ubiquity in measurement of m-service quality, on top of Blut's model. However, very few researches are found for support Kaatz et al. conception framework.

7.2 Lack of Comprehensive Study on E-Service Quality of Online Financial Service

Most of the studies of online financial service related to online banking but only few studies related to other financial services especially in investment sectors such as securities and futures brokerage, insurance, wealth management or other investment service; Feng et al. (2013) also argue that less attention has been paid to online trading securities, which may require further empirical evidence. Besides, online fraud and cybersecurity has become a serious concern of online financial service. Such areas are also influence the overall service quality especially in financial industry. Furthermore, Blut's model have briefly discussed the regulatory environment. Financial service providers suffered increasing regulatory scrutiny from their regulators. Areas of investigation not only included research analyst conflicts of interest, market timing and late trading involving mutual funds, high-speed trading, and specialist firms executing their own trades ahead of public bids but also cybersecurity issues and technology-related system failures. But only few researches have taken the compliance or regulatory element into account for service quality.

PART II – DISCUSSION METHODOLOGY OF A CHOSEN ARTICLE - MEASUREMENT AND VALIDATION OF ONLINE FINANCIAL SERVICE QUALITY (OFSQ) BY ROY AND BALAJI (2015)

8.0 DISCUSSION ON METHODOLOGY OF A CHOSEN RESEARCH PAPER

This part discussed the methodology of a chosen research paper with related topic with part I. the authors of the chosen are Sanjit Kumar Roy from Australia and M.S. Baliaji from Malaysia. The study discusses about the measurement and validation of online financial service quality (OFSQ). It purposed to demonstrate the fundamental dimensions of perceived service quality regarding the online financial services in order to develop a measurement scale for OFSQ.

8.1 Ethical Issue

This research paper does not have a section to demonstrate the issue of Ethics in details. It is supposed that a consent letter would be sent to each interviewee and respondent. According to policy on research integrity of human research ethics committee of University of Hong Kong, the consent letter should contain following content:

A briefly introduction of researcher(s)

Purpose of the study - To truly inform potential participants, the informed consent form should be written in simple, non-technical language, readily understood by laymen

Procedures - To describe what a participant will experience and be asked to do and

clearly state how much time the procedure will take.

Potential Risks / Discomforts and their minimization - To describe the risks and discomforts that are greater than what are commonly encountered in everyday life. And to explain how the researcher(s) will try to minimize such risks/discomforts.

Compensation for participation/ potential benefits - describe how participants will be compensated for their time and direct benefits to the participants, if any, and potential benefits to others in the future

Confidentiality – to promise strict confidentiality and that the information obtained in the study will be used for research purposes only; to explain also what steps will be taken to ensure confidentiality. If the procedure will be video-recorded / audio-recorded, remind the participants have the right to review and erase the video/audio records; and mention the storage strategies of the recorded data. For the video recording with groups, there is a need to offer being outside the camera view or having the image blurred if participants do not agree to be video-recorded

Data retention – to explain how long will the data containing personal identifiers be kept after publication of first paper, and whether personal identifiers will be removed for long term retention of the research data.

Participation and Withdrawal – to explain the participation is voluntary and the participant can choose to stop at any time without negative consequences.

Contact information – the contact information of the researcher(s) for participants

if they have any question and concern

The consent letter provides a general background of the research and let participants to understand what they need to do, risk suffered, right and protection they will have. Therefore, it is suggested that a section is necessary to briefly explain the ethical issue about the study.

8.2 Development of conceptional framework

The chosen research paper has conducted in two parts, qualitative research and quantitative research. The qualitative research section aimed to develops instruments that are contextually meaningful and appropriate for the target audience. i.e. users of online financial services. Section. In this section, a content analysis was conducted on existing literatures to identify and compare various conceptional framework and measurement scales for online service quality. This analysis was concluded 17 literatures across 10 years and a list of dimensions and attributes were sorted out. Then three focus groups interviews were conducted with convenience sampling and further deep interviews were conducted to each participant in order to explore their insights for assessment of online financial service quality. After review of the result of the content analysis and the opinion from the participants, the researchers decided to adopt Grönroos's (1984) service quality model and DeLone and McLean's (2003) information systems (IS) success model to develop a scale with multidimensions and multi-items for OFSQ measurement.

The process for development of conceptional framework is seemed completed and comprehensive. However, the researchers used convenience sampling in the focus

group and deep interview. The advantage of this sampling method is easy to carry out and cost saving. Since the fame of sampling is an uncertainty and the samples are not randomly selected, there are inherent bias that the sample is not possible to be representative of the targeted population. Besides, the option of participants may not be represented as experienced customers and practitioners of financial service by using purposive sampling or expect sampling which is more proper for the conceptual framework development.

The quantitative research section aimed to develop the scales for the OFSQ dimensions and ensure content validity and reliability of the constructs. A pilot study was conducted with 30 postgraduate students firstly and 208 respondents after improve the questionnaire in term of readability through CATI telephone data collection methodology. A five-point Likert scale was used to assess the extent to which participants agreed with the attribute statements. The pilot study was as an initial pilot measures for evaluation of reliability and unidimensionality. A structure with six factors extracted from an initial exploratory factor analysis (EFA). Attributes and dimensions which with factor loadings were less than 0.5 threshold level or/ and Cronbach α less than recommended value of 0.7 were excluded. (Hair et al., 2010) Finally, 25-item with 5 dimensions measurement instrument was resulted for the main study.

In main study, a 30-item final instrument which involved 25 items extracted from pilot study and 3 items for measurement of behavioral intentions of customers to used online financial service was used. Convenience sampling and snowball sampling were used in data collection. 1,100 questionnaires were sent and 630 valid data

The pilot study was used as a pre-test of a formal full-scale research and particular

instruments. it is a critical elements of successful research as its increase the likelihood of success of main study. It not only can reflect the presentation of the research instrument but also provide data for analysis to filter unreliable and remoted items. the researchers of the chosen study had used polit study to improve their research instruments and filtered 25 items from 44 items by using EFA. It was a good practice in research study. Be benefited by the pilot study, the main study conducted smoothly. About the sample size, 630 of usable data collected is considered as sufficient according to Malhotra's study (2008). 30% of the sample respondents had been used online financial service for less than one year and 17 percent less than three years. As at 2013, online financial service only became popular several years. It is considered that is acceptable but future research may replicate this study for more experienced customers to enhance the validity and generalizability of the scale (Brunner et al., 2008).

Similar to qualitative research section, there is a problem in sample method. As mentioned, convenience sampling has a drawback on responsiveness. Snowball sampling is enable study carry out without limitation of contact with participant and prevent study failure with lack of participants, but it is unable to determine the sampling error or make inferences about populations based on the obtained sample. Systematic sampling method is suggested and further increase the sample size would mitigate the drawback of convenience sampling and snowball sampling

8.3 Data analysis and results

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted and the scale successfully passed the standards for various validity tests and the five factors showed high levels of internal consistency.

The EFA was used in identification of fundamental dimensions of OFSQ and CFA was used to establish the reliability and validity of the OFSQ measurement instrument. Based on Gefen and Straub (2000) and Berthon et al. (2005) suggestion, the researchers divided the sample group into two sub group by random and each group contain equal sample size (n=315). One group was used for development purpose, another one used for validation purposes. The criteria used for factor extraction is three-fold: the eigenvalue should be greater than one, factor loadings should be greater than 0.5 and more importantly a meaningful, useful and conceptually sound factor structure (Hair et al., 2010). The factor loadings were ranged 0.65 to 0.93 in EFA and 0.71 to 0.94 in CFA (>0.50) and Bartlett's test of sphericity (2055.55) and the corresponding p-value (0.000). Generally, the data is acceptable when the factor loading is 0.50 or greater (Hair, 2006). although some researcher such as Awang et al. (2015) stated that the accepted factor loading is above 0.60, the result of the factor analysis of chosen research paper were all greater than 0.60. It represents that the data is valid. Furthermore, the value of average variance extracted (AVE) were ranged 0.65 to 0.76 for all of the constructs greater than the recommended minimum threshold of 0.50 by Wu et al. (2008) and Hair (2010).

Besides, Cronbach's coefficient alpha (Cronbach's α) and Composite Reliability (ρ) were used to test reliability. It was resulted that the Cronbach's α of each measurement items vary between 0.88 and 0.91 and that value of ρ vary between 0.84 and 0.91. Both values are greater than 0.70 which are recommended by Fornell and Larcker (1981) and these indicated a good internal consistency among the items measuring each of the factors obtained according to Hair et al. study (2010). Thus, the reliability and validity of the data collected were confirmed. And the result was presented in table with detailed elaboration. The author believed that the methodology of data analysis is

comprehensive and presentation is good enough for readers.

8.4 Limitation

The chosen research paper was conducted only in one background and one country.

The findings of the study should be replicated in other contexts and countries in order to increase representativeness.

And It adopted a cross-sectional design, which has its own limitations, and should be replicated using a longitudinal research design. A longitudinal research design will provide a deeper understanding of the dynamic nature of OFSQ.

9.0 PHILOSOPHICAL CONSIDERATIONS

The chosen research paper is rare as it did not only focus on online retail banking or securities brokerage but an integrated financial services sector regarding online service quality and provided strong theoretical arguments for developing the OFSQ scale. It summarized the research outcome about e-service quality of financial service from 2002 to 2013. Compared to other four literatures regarding similar research areas, the chosen research paper has a more comprehensive study and achieves higher reliability that it's resulted the highest overall coefficient alpha (see Appendix A)

Besides, it successfully adopted DeLone and McLean's information system success model into e-service quality of financial service which incorporated "service quality" to reflect the importance of service and support with successful information system in financial industry. It provides a new insight to the research in similar area in the futures.

The author believes this approach also be able to applied to measurement of mobile service quality of mobile financial service.

However, it is unfortunate that their no new dimension introduced by the researchers in the chosen research paper. They are too focused on the identified dimensions and attributes of existing literatures and did not consider the features and development trend of online financial service.

10. CONCLUSION

There are two part in this study. Part I had reviewed several literatures on e-service quality dimensions with an emphasis on the methodology in development measurement scales and the construction of e-service quality dimensions. The author has found that there was no consensus on the number and the nature of the dimensions in the e-service quality and some of e-service dimension are similar or identical to traditional service quality. And there are two research gaps for future research being identified. They are lack of new insight in dimension of mobile service quality and lack of comprehensive study on e-service quality of online financial service. Part II had discussed methodology of the chosen research paper from Roy and Balaji (2015) and concluded that it is a comprehensive study with provision of strong theoretical arguments in development of OFSQ scale and it contributed to future study in this research area as provide a new insight in conceptional framework of e-service quality dimension and further benefit to those of mobile service quality of mobile financial service.

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12 Appendix A – Comparison of chosen research paper to other recent research in e-financial service

Studies	Domain of measure	Type of Studies	Sample	Industry	Data analysis procedure for assessing factor-structure	Final number of dimensions	Dimensions of Service Qualities	Internal reliability coefficient alpha / Composite construct reliability
Feng et al. (2014)	Web-site Quality and Customer Acceptance of Online Trading	Empirical studies	207 and 236 investors from Mainland China and Taiwan respectively	Securities Brokerage	Exploratory factor analysis and confirmatory factor analysis	5	System quality, Information quality, Service quality, Perceived usefulness, Perceived ease of use	Ranges from 0.8 to 0.9.
Roy and Balaji (2015)	Online financial service quality (OFSQ)	Empirical studies	725 experience users and 630 usable data collected	Online Financial Service	Exploratory factor analysis and confirmatory factor analysis	5	Information quality, System quality 1 (Convenience), System quality 2 (Functionality), Interaction quality, Image quality	Ranges from 0.88 to 0.91.
Stamenkov and Dika (2016)	E-Service Quality, satisfaction and loyalty	Empirical studies	231 bank staffs and online bank users	Retailing Banking	Exploratory factor analysis	5	Efficiency, System availability, Privacy, Responsiveness, Contact	Ranges from 0.71 to 0.92.

Toufaily and Pons (2017)	E-Service Quality, e-trust and online customer loyalty	Empirical studies	326 Canadian investors	Securities Brokerage	Exploratory factor analysis	8	Website design, Website ease of use, Website security/privacy, Website interactivity/ Personalization/ Social presence, Support quality, Virtual community	Ranges from 0.776 to 0.981.
Baber (2019)	E-Service Quality and performance	Empirical studies	721 user of Islamic Banking	Islamic Banking	Exploratory factor analysis	7	Efficient and reliable, Security-trust, Site aesthetic, Responsiveness, Ease of use, Shariah compliance, Fulfillment	Ranges from 0.722 to 0.953.

A LITERATURE REVIEW: SERVICE QUALITY DIMENSION OF FINANCIAL ONLINE SERVICES

SBPD7001

Approaches to Research and Academic Communication

Ricky Yeung

1. ABSTRACT

- There are two part in this study. Part I reviews the literatures on e-service quality dimensions, also named as online service quality, with an emphasis on the methodology in development measurement scales and the construction of e-service quality dimensions. The author chooses numerous studies on e-service quality from ProQuest and the database of HKU library and subjected them to a comprehensive analysis. This study demonstrates that e-service quality dimensions incline to be subject on the service industry. The author further focuses on financial service industry and discuss the characteristics of e-service quality dimensions of financial service and then further discuss about the rise of development of mobile technology and the concept of measurement scales of mobile service quality.

2. INTRODUCTION

- The topic of this study is about **E-Service Quality Dimensions of Online Financial Services**
- The objective of this study is to find out a comprehensive view on e-service quality dimension of online financial services (no matter through web or mobile application) by reviewing relevant researches over the past twenty years. The author works in a global financial institution which provides a series of financial service purely online and targets on PRC investors and would like to through this study to help online financial service providers to achieve sustainable competitive advantage.

2. INTRODUCTION

- Research Questions are:
 - What is the definition of online service quality?
 - How to measure online service quality? (In what scales or dimensions)
 - How to apply the appropriate measurement method in Financial Industry?

2. INTRODUCTION

- Service quality act as a critical determinant in the success of the service providers of online financial services. Yang and Fang (2004) determined that it influences corporate reputation, customer trust, loyalty, website and application adoption, perceived value, customer satisfaction, attitude toward and recommendation of the financial service provider.
- Delivery of advantageous service quality assists financial service providers to differentiate themselves from their competitors and promotes relationships with customer. These will help sustainable competitive advantage development and enhance the profitability. (Santos, 2003)

2. INTRODUCTION

- Traditional channels are being rapid substituted by online channels as a way of consumption and shopping (Blut et al., 2015) Rapidly transforms of social tendency, competitive dynamics, and technological landscape have being restructured the business model of financial services industry (Arasli et al., 2005).
- Such transforms accompanying the growth of familiar level of customers for online services and resulted the providers of financial service to evaluate their business strategies again and introduce online service to customers in order to provide a better service. Consecutively, online services have become the preference of channels for both customers and service providers in in financial industry (Ding et al., 2011; Ladhari and Leclerc, 2013).

3 THE DEFINITION OF SERVICE QUALITY

- The concept of service quality is abstractive and elusive as there are three characteristics which are unique regard to services. Parasuraman et al (1985) determined them as intangibility, heterogeneity, and inseparability of production and consumption. The importance of service quality for businesses has gained considerable research attention (Ahmad and Chiasakul, 2005; Ellis et al., 2003).

4.0 THE DEFINITION OF E-SERVICE QUALITY

- Zeithaml et al. (2000) and Parasuraman et al. (2005) defined e-service as “the extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery of products or services”. Parasuraman et al. also discussed e-services is provided through an electronic way such as internet and these transactions initiate with a great degree of controlled by the consumer. In e-service, the customers contact or interact with the service companies through information technology, such as their websites or web-based application i.e., customers need to completely depend on information technology to receive the service.
- E-service quality was defined as “the beginning to the end of the transaction including information search, website navigation, order, customer service interactions, delivery, and satisfaction with the ordered product.” (Wolfinbarger and Gilly, 2003)

5.0 CONCEPTIONAL FRAMEWORK FOR MEASUREMENT SCALE ON E-SERVICE QUALITY

- Parasuraman et al. (1988), they defined SERVQUAL model to measure service quality. To evaluate service quality, they propose the following dimension:
- Tangibility - the appearance of equipment, personnel and physical facilities;
- Responsiveness - the willingness to assist customers and provide prompt service;
- Reliability – the ability to fulfil the committed service dependably and accurately;
- Empathy – the level of concern and individualized awareness the service provider offers to its customers; and
- Assurance – the knowledge and politeness of employees and their capacity to arouse confidence and trust

5.0 CONCEPTIONAL FRAMEWORK FOR MEASUREMENT SCALE ON E-SERVICE QUALITY

- E-SERVQUAL model identified several website characteristics and categorized them into 11 dimensions. Upon further analysis and scale reduction (Parasuraman et al., 2005), the 11 dimensions of the E-SERVQUAL scale was modified to 4 dimensions with a total of 22 items. Such four dimensions constituted the final scale were: **efficiency** (ease and speed with which a site can be accessed and used), **fulfillment** (extent to which promises made by the site regarding order delivery and order fulfillment are fulfilled), **system availability** (proper technical functioning of the site) and **privacy** (degree to which the site is safe and secure and protects customer information)

5.0 CONCEPTIONAL FRAMEWORK FOR MEASUREMENT SCALE ON E-SERVICE QUALITY

- Wolfinbarger and Gilly (2001) determined that web-based customers are not passive recipients of marketing information. In opposite, they are core participants who experience strengthened control in the internet ambience. Web-based customers are active participants who utilize information on the internet and self-service during online purchases.
- Loiacono et al. (2002) defined that WEBQUAL consists of twelve dimensions: **business process, design, flow, information fit to task, innovativeness, integrated communication, interaction, intuitiveness, response time, visual appeal, trust and substitutability**

5.0 CONCEPTIONAL FRAMEWORK FOR MEASUREMENT SCALE ON E-SERVICE QUALITY

- Blut et al. (2015) had conducted a meta-analytic review on conception framework of measurement scales for e-service quality. And based on the review, Blut (2016) introduced a hierarchical model for e-service quality. Widely used scales such as WebQual and E SERVQUAL were contrasted and a better and updated construct of scale (Blut's model) was developed and proofed by research results.
- four fundamental dimensions of conceptual framework for e-service quality were determined as website design, customer service, fulfilment, and privacy/ security.

Figure 5.1 - Significant conceptual development of e-SQ measurement dimensions (Shi et al., 2018)

Literature	Scale name	Measurement dimensions
Zeithaml <i>et al.</i> (2001)	E-SQ	Accessibility, navigation, flexibility, reliability, price, aesthetics, efficiency, personalization, privacy, responsiveness, assurance
Yoo and Donthu (2001)	SITEQUAL	Practicality, design, processing speed, safety
Francis and White (2002)	PIRQUAL	Product attributes, function, ownership, security, transportation, customer service
Loiacono <i>et al.</i> (2002)	WEBQUAL	Information matching, understanding, completion, reaction time, picture, operation, creativity, interaction, trust
Barnes and Vidgen (2002)	WEBQUAL	Usability, design, resonance, trust
Wolfinbarger and Gilly (2003)	e-TaiLQ	Design, privacy, reliability, customer service
Parasuraman <i>et al.</i> (2005)	E-S-Qual	Availability, privacy, execution
Parasuraman <i>et al.</i> (2005)	E-RecS-Qual	Responsiveness, compensatory, contact
Bauer <i>et al.</i> (2006)	eTransQual	Function/design, process, reliability, enjoyment, responsiveness
Cristobal <i>et al.</i> (2007)	P-e-SQ	Design, guarantee, order management, customer service
Sohn and Tadisina (2008)	e-SQ	Trust, usability, web content and functionality, reliability, communication, delivery
Ding <i>et al.</i> (2011)	e-SELFQUAL	Perceived control, service convenience, customer service, service fulfillment

FIGURE 5.2 - SERVICE QUALITY LITERATURE RELEVANT TO ONLINE FINANCIAL SERVICE QUALITY (ROY AND BALAJI., 2015)

Author(s)	Context	Service quality conceptualization	Methods	Key findings
Broderick and Vachirapornpuk (2002)	Internet banking	Multidimensional	Observation and narrative analysis of UK internet banking web site	The content analysis identified five key elements that determined online service quality, namely, expressed expectations, service setting attributes, image, service encounter, and customer participation level
Montoya-Weiss <i>et al.</i> (2003)	Financial services and education industry	Unidimensional	1137 responses and structural equation modeling was used	Online service quality was conceptualized based on SERVQUAL and consisted of four items representing convenience, reliability, responsiveness and service delivery. The results found that navigation style and information content determine the online service quality
Yang <i>et al.</i> (2004)	Online banking	Multidimensional	Content analysis of 848 reviews on online review web sites and 235 survey responses from online customers	The scale development process based on traditional service quality, information quality and product portfolio perspectives identified six dimensions of online service quality, namely, reliability, responsiveness, competency, ease of use, product portfolio and security
Chang <i>et al.</i> (2005)	Internet tax-filing system	Multidimensional	141 tax payers and structural equation modeling was used	The authors conceptualized service quality to include perceived system quality and information quality. These quality dimensions were found to significantly influence perceived ease of use and perceived usefulness
Al-Hawari and Ward (2006)	Automated service quality	Multidimensional	442 banking users and structural equation modeling was used	The automated service quality was determined by ATM services, telephone banking, internet banking, price and core product
Loonam and O'loughlin (2008)	Internet banking	Multidimensional	Structured observation technique of 20 customers	Based on the uses and gratifications categorization system three gratifications of online service quality, namely, information, transaction, and enjoyment gratification were identified
Sohail and Shaikh (2008)	Internet banking	Multidimensional	939 responses and factor analysis was used	Based on system quality perspective, five dimensions privacy, information content, web site design, ease of use and reliability were found to determine the customer perception of e-service quality
Herington and Weaven (2009)	Online banking services	Multidimensional	200 internet banking users. Factor analysis and regression analysis was used	Based on the SITEQUAL perspective, the authors develop the online web site service quality scale consisting of four dimensions: personal needs, site organization, user friendliness and efficiency of web site
Khan and Mahapatra (2009)	Internet banking	Multidimensional	1,143 internet banking customers. Factor analysis and regression analysis was used	Seven dimensions of internet banking service quality, namely, reliability, accessibility, user-friendliness, privacy/security, efficiency, responsiveness and fulfillment were found to determine overall service quality

(continued)

**FIGURE 5.2 (CONTINUED) - SERVICE QUALITY LITERATURE
RELEVANT TO ONLINE FINANCIAL SERVICE (ROY AND BALAJI,
2015)**

Author(s)	Context	Service quality conceptualization	Methods	Key findings
Santouridis <i>et al.</i> (2009)	Internet banking	Multidimensional	184 responses and structural equation modeling is used	The six dimensions of service quality, namely, assurance, quality of information, responsiveness, web assistance, empathy and reliability were found to significantly influence overall customer satisfaction
Ho and Lin (2010)	Internet banking	Multidimensional	130 internet banking users. Factor analysis was used	Based on perceived service quality perspective, five dimensions of internet banking were identified: customer service, web design, preferential treatment, assurance, and information provision
Rod <i>et al.</i> (2009)	Internet banking	Multidimensional	72 internet banking users. Structural equation modeling	Online customer service quality, online information system quality and banking service product quality were found to determine the overall internet banking quality
Torres-Moraga <i>et al.</i> (2010)	Internet banking	Multidimensional	Critical incident technique and 200 banking users	The study results reveal six valid and reliable dimensions of internet banking service quality: accessibility/availability, accuracy, products/ services quality, responsiveness, security/privacy, and usability
Al-Hawari (2011)	Banking context	Multidimensional	200 banking customers participated in the study and structural equation modeling was used	The online service quality dimensions of e-escape, security, e-responsiveness and ease of use were found to influence various dimensions of brand equity
Marimon <i>et al.</i> (2012)	Electronic banking	Multidimensional	428 customers and factor analysis was used	The four dimensions of e-service quality, namely, efficiency, fulfillment, system availability and privacy was related to e-recovery quality
Butt and Aftab (2013)	Online Islamic banking	Unidimensional	350 responses were obtained and structural equation modeling was used	Service quality was found to significantly influence loyalty and satisfaction in the context of online Islamic banking services
Hussien and El Aziz (2013)	e-Banking service quality	Multidimensional	133 responses from bank users. Regression analysis was used	The nine dimensions of e-banking service quality, namely, reliability, usability, responsiveness, privacy, incentives, fulfillment, efficiency, assurance and empathy determined overall service quality

FIGURE 5.3 SUMMARY OF REVIEWED SERVICE QUALITY LITERATURE RELEVANT TO ONLINE FINANCIAL SERVICE

Study	Domain of measure	Type of Study	Sample	Industry	Original items	Data analysis procedure for assessing factor-structure	Final items	Final number of dimensions	Dimensions of Service Qualities	Internal reliability coefficient alpha / Composite construct reliability
Ladhari (2010)	E-Service Quality (e-SQ)	Literature review	27 empirical studies	Multiple industries	N/A	N/A	N/A	N/A	N/A	N/A
Pearson et al. (2012)	E-Service Quality (e-SQ) and Information Quality (IQ)	Empirical studies	409 students and 158 usable data collected	E-commerce	55 items 5 point scale for e-SQ and 10 point scale for IQ Online administration	Exploratory factor analysis	55	4 + 6	e-SQ: Efficiency, System Availability, Fulfillment, Privacy IQ: Relevance, Understandability, Reliability, Adequacy, Scope Usefulness	Ranges from 0.75 to 0.96.
Feng et al. (2014)	Web-site Quality and Customer Accptance of Online Trading	Empirical studies	207 and 236 investors form Mainland China and Taiwan respectively	Securities Brokerage	44 items 5 point scale	Exploratory factor analysis and confirmatory factor analysis	44	5	System quality, Information quality, Service quality, Perceived usefulness, Perceived ease of use	Ranges from 0.8 to 0.9.
Roy and Balaji (2015)	Online financial service quality (OFSQ)	Empirical studies	725 experience users and 630 usable data collected	Online Financial Service	44 items 5 point scale Online and Offline administration	Exploratory factor analysis and confirmatory factor analysis	25	5	Information quality, System quality 1 (Convenience), System quality 2 (Functionality), Interaction quality, Image quality	Ranges from 0.88 to 0.91.
Blut (2016)	Online Service Quality and its outcome	Empirical studies	358 online retail customers	Retailing	55 items 5 point scale Online administration	Exploratory factor analysis and confirmatory factor analysis	55	4	Website design, Fulfillment, Customer service, Security/privacy	Ranges from 0.93 to 0.94.
Luo et al. (2017)	E-Service Quality (e-SQ)	Empirical studies	440 from customers of 4 major retail website	Retailing	18 items 5 point scale Online administration	Exploratory factor analysis and confirmatory factor analysis	18	5	Functionality, Aesthetics, Privacy, Reliability, Recovery	Ranges from 0.748 to 0.844
Kaatz et al. (2017)	Mobile Service Quality (MSQ)	Empirical studies	21 consumer for focus groups with 181 statements and 256 participants for critical incident technique (CIT)	Multiple industries	N/A Online and Offline administration	N/A	N/A	5	Ubiquity, Mobile store design, Customer service, Fulfillment, Security/privacy	N/A
Toufaily and Pons (2017)	E-Service Quality (e-SQ), e-trust and online customer loyalty	Empirical studies	326 Canadian investors	Securities Brokerage	35 items 5 point scale Online administration	Exploratory factor analysis	35	8	Website design, Website ease of use, Website security/privacy, Website interactivity/ Personalization/ Social presence, Support quality, Virtual community	Ranges from 0.776 to 0.981. 16
Baber (2019)	E-Service Quality (e-SQ) and performance	Empirical studies	721 user of Islamic Banking	Islamic Banking	32 items 5 point scale Online administration	Exploratory factor analysis	32	7	Efficient and reliable, Security-trust, Site aesthetic, Responsiveness, Ease of use, Shariah compliance, Fulfillment	Ranges from 0.722 to 0.953.

6. THE RESEARCH GAP AND INCENTIVE OF FURTHER RESEARCH

- It is found that there is no consensus on the number and the nature of the dimensions in the e-service quality but generally six dimensions mentioned more consistently by the researchers. These are 'reliability/fulfilment', 'responsiveness', 'ease of use/usability', 'privacy/security', 'web design', and 'information quality/benefit'.
- Some of the dimensions are identical or at least similar to those reported for traditional service quality; However, some of researcher applied DeLone and McLean's IS success model (2003) (a quality scale for information systems) which was fundamentally different from traditional service quality.

6. THE RESEARCH GAP AND INCENTIVE OF FURTHER RESEARCH

- Lack of New Insight in Dimension Of Mobile Service Quality
 - Kaatz et al. (2017) argue that present conceptualizations of m-service quality normally do not think over the features of m-service differ from general online service. Several studies were carried out in mobile service but only few focused on the examination of measurement scale. Vlachos et al. (2011) and Huang et al. (2015) has examined the m-commerce context but unable to address the features of m-service such as ubiquitous availability.
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 - Hoehle and Venkatesh (2015) also argue that although researches related to information system and interaction between human and system frequently studied m-service quality, they had missed mobile context as a critical factors. They normally focused on general usability of website without taking the unique features of mobile devices into account. With this background, Kaatz et al. (2017) firstly introduce dimension of ubiquity in measurement of m-service quality, on top of Blut's model. However, very few researches are found for support Kaatz et al. conception framework.

6. THE RESEARCH GAP AND INCENTIVE OF FURTHER RESEARCH

- Lack of Comprehensive Study on E-Service Quality of Online Financial Service
 - Most of the studies of online financial service related to online banking but only few studies related to other financial services especially in investment sectors such as securities and futures brokerage, insurance, wealth management or other investment service;
 - Feng et al. (2014) also argue that less attention has been paid to online trading securities, which may require further empirical evidence.
 - Online fraud and cybersecurity has become a serious concern of online financial service. Such areas are also influence the overall service quality especially in financial industry.
 - Blut's model have briefly discussed the regulatory environment. Financial service providers suffered increasing regulatory scrutiny from their regulators, especially for cybersecurity issues and technology-related system failures.

7. THE REASON WHY THE REVIEWER WOULD LIKE TO STUDY

- The reviewer works in a global financial institution which provides a series of financial service purely online and targets on PRC investors ;
- According to the 42nd bi-annual statistical report from the China Internet Network Information Center (CNNIC), 788 million Chinese used mobile phones to surf the internet in the first half of 2018, making up 98.3 % of the total internet users. And 21% of them were online financial service users;
- The rise of mobile technology further changes the customer expectations over time;
- Measurement of perceived service quality is always important to strategic planning and precision marketing.

8. DISCUSSION ON THE CHOSEN ARTICLE

- The title of the article is **measurement and validation of online financial service quality (OFSQ)** by Roy and Balaji (2015).
- Purpose – It purposed to demonstrate the fundamental dimensions of perceived service quality regarding the online financial services in order to develop a measurement scale for OFSQ.
- Design/methodology/approach – the researchers decided to adopt Grönroos's (1984) service quality model and DeLone and McLean's (2003) information systems (IS) success model to develop a scale with multidimensions and multi-items for OFSQ measurement.

8. DISCUSSION ON THE CHOSEN RESEARCH PAPER

- Ethical Issue
 - This study does not have a section to demonstrate the issue of Ethics in details. It is supposed that a consent letter would be sent to each interviewee and respondent. And It is suggested that a section is necessary to briefly explain the ethical issue about the study.

8. DISCUSSION ON THE CHOSEN RESEARCH PAPER

- Development of conceptional framework
 - A thorough review of existing literatures (17 literatures across 10 years) was carried out to identify the various dimensions of online service quality and how they are described or defined;
 - Focus group and depth interviews were conducted for scale development using convenience sampling; the sampling method of selection is not representative although the literatures review had built up the fundamental conception of measurement dimensions. Purposive sampling or expect sampling should be more proper for the scale development

8. DISCUSSION ON THE CHOSEN RESEARCH PAPER

- Development of conceptional framework
 - Pilot study was conducted. 30 students and 190 valid responses by CATI telephone data collection methodology and then initial exploratory factor analysis was conducted. The pilot study is a critical elements of successful research as its increase the likelihood of success of main study. It not only can reflect the presentation of the research instrument but also provide data for analysis to filter unreliable and remoted items.
 - Similar to qualitative research section, there is a problem in sample method. As mentioned, convenience sampling has a drawback on responsiveness. Snowball sampling is enable study carry out without limitation of contact with participant and prevent study failure with lack of participants, but it is unable to determine the sampling error or make inferences about populations based on the obtained sample. Systematic sampling method is suggested and further increase the sample size would mitigate the drawback of convenience sampling and snowball sampling

8. DISCUSSION ON THE CHOSEN RESEARCH PAPER

- Data analysis and results
 - Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted and the scale successfully passed the standards for various validity tests and the five factors showed high levels of internal consistency. The presentation of statistics data were in appropriate table format. The author believed that the methodology of data analysis is comprehensive and presentation is good enough for readers.

8. DISCUSSION ON THE CHOSEN RESEARCH PAPER

- Limitation
 - The study was conducted only in one background and one country. The findings of the study should be replicated in other contexts and countries;
 - The study adopted a cross-sectional design, which has its own limitations, and should be replicated using a longitudinal research design. A longitudinal research design will provide a deeper understanding of the dynamic nature of OFSQ.

9. PHILOSOPHICAL CONSIDERATIONS

- The chosen study is rare as it did not only focus on online retail banking or securities brokerage but an integrated financial services sector regarding online service quality and provided strong theoretical arguments for developing the OFSQ scale. It summarized the research outcome about e-service quality of financial service from 2002 to 2013. Compared to other four literatures regarding similar research areas, the chosen study has a more comprehensive study and achieves higher reliability that it's resulted the highest overall coefficient alpha (see Appendix A)
- Besides, it successfully adopted DeLone and McLean's information system success model into e-service quality of financial service which incorporated "service quality" to reflect the importance of service and support with successful information system in financial industry. It provides a new insight to the research in similar area in the futures. The author believes this approach also be able to applied to measurement of mobile service quality of mobile financial service.
- However, it is unfortunate that their no new dimension introduced by the researchers in the chosen study. They are too focused on the identified dimensions and attributes of existing literatures and did not consider the features and development trend of online financial service.

10. CONCLUSION

- There are two part in this study.
- Part I the author has found that there was no consensus on the number and the nature of the dimensions in the e-service quality and some of e-service dimension are similar or identical to traditional service quality. And there are two research gaps for future research being identified. They are lack of new insight in dimension of mobile service quality and lack of comprehensive study on e-service quality of online financial service.
- Part II had discussed methodology of the chosen study and concluded that it is a comprehensive study with provision of strong theoretical arguments in development of OFSQ scale and it contributed to future study in this research area as provide a new insight in conceptional framework of e-service quality dimension and further benefit to those of mobile service quality of mobile financial service