
An Investigation of Factors Influencing Service Quality of Commercial Bank:

A Case Study in China

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Abstract:

Purpose- This paper aim to look at the relationship between service quality and customer satisfaction, and the impact of CSR on customer satisfaction, the impact of customer satisfaction on word-of-mouth, the impact of customer satisfaction on loyalty intention. This paper also compares the effect of service quality across different types of commercial banks, including state-owned commercial banks and city commercial banks, using SERVQUAL model.

Design/methodology/approach- The sample is made up 368 bank customers, 196 from stated-owned commercial banks and 172 from city commercial banks from different cities of Guangxi, China. The data have been collected using the structured questionnaire. T-test, F-test, Crosstab analysis and multiple regression be used for analyzing data.

Findings- The result shows that perceived service quality is positively related to customer satisfaction, the results reveal that the responsiveness, assurance and empathy have highest impact on customer satisfaction. There is a significantly different perception of service quality between state-owned commercial banks and city commercial banks. Customers of city commercial banks has higher perceived service quality. On the other hand, this paper finds that older people of respondents are more satisfaction and more loyalty then younger respondents. This study also finds that CSR is positively related to customer satisfaction, customer satisfaction is positively related to word-of-mouth, customer satisfaction is positively is positively related to loyalty intention.

Originality/value- First, this paper conducts a survey of commercial banks in China banking industry, and analyses the difference in perceived service quality between state-owned commercial banking and city commercial banking. It could be very useful from the managing marketing perspective in increase bank competitiveness. Second, this paper examines Chinese commercial banking service quality and the effects of every factors on customer satisfaction by quantitative analysis method. The result is helpful for improving customer satisfaction and preventing customer defections. Final, this paper the investigates level of CSR activity, customer satisfaction, word-of-mouth and loyalty intention, by studying customers' behavior. The results could provide a suitable direction in order to meet customers' demand trend.

Keywords: SERVQUAL, commercial banks, satisfaction, CSR, WOM, loyalty

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1. Introduction

Along with the comprehensive opening of Chinese financial markets, the relaxation of the financial regulation and aggravation of the market competition after China joined WTO, hunting for customer resources has become an important means to strengthen bank market competitiveness.

Within the 30 years, Chinese financial system constantly develops and reforms in order to meet the demands of Chinese characteristic socialist market economy. In the meanwhile, apart from foreign banks, other mid-small banks are also founded one after another. Thus, all of them have turned into competitors of state-owned banks. As regard to personal customer numbers of Industrial and commercial bank of China Ltd in Guilin district, Guilin branch was 1,434,905 in 2013, and numbers of personal customers reached 1,487,416 in 2014. With steady and rapid development of Guilin bank, the numbers of personal customers changed from 968,851 to 1,498,967 between 2013 and 2014. To some extents, the data illustrate that customers of city commercial bank have higher perceived service quality.

In the face of fierce financial market competition situation, how to use the marketing means to respond to any challenges of financial globalization is one of the difficult problems for state-owned commercial banks. However, as shown in past studies results, some workers of state-owned commercial banks merely see one side of bank advantage, and find no crisis in bank industry. Meanwhile, they lack service consciousness (Lu Jin He, 2013). In addition, owing to the long-term wholly state-owned characteristics and high monopolization of state-owned banks, the limitations of the system make them have weak marketing connection. State-owned commercial banks still occupy a leading position on the market. However, it begs the question-how to keep this temporary dominating position into a long-term competitiveness? Thus, for the purpose of improving the service quality, state-owned bank needs to understand the state about service quality of itself as well as the gap with city commercial bank. As for commercial bank, it has realistic significance to enhance satisfaction of customer, and win the WOM as well as loyalty intention.

All of these theoretical background provides a valuable reference for this paper. In summary, this study re-examine the SERVQUAL model by Parasuraman, Zeithaml and Berry(1988) for measuring differences in perceived service quality of the state-owned commercial banks and city commercial banks. The study also test the relationship between service quality, corporate social responsibility, customer satisfaction, word-of-mouth, loyalty intention.

GuangXi Zhuang Autonomous Region

GuangXi Zhuang Autonomous Region situated is located in south China, the only minority autonomy and coastal areas in China, is situated in south China, and has a population of 46,820,000 people (National Bureau of Statistics of the People's Republic of China, 2013). The total area of 23.67 hundred thousand square kilometers occupy 2.5% of Chinese land area. There are 14 cities in Guangxi.

At present, the high-speed railways in Guangxi are developing rapidly. In China, Guangxi is a state that has high-speed rails in 11 cities. In 2014, miles of high-speed surpassed over 1600 kilometers, accounting for almost 14% of China (National Railway Administration of the People's Republic of China, 2015). Meanwhile, there is only three-hour transportation from Nanning to any city in Guangxi.

Nanning is the capital of Guangxi. Since 2004, China has held "CHINA-ASEAN Exposition (CAEXPO)" in Nanning annually so as to enhance economy and trade development of ASEAN countries. Admittedly, it has brought a lot of economic profits to Nanning. Nanning, as the permanent host city, becomes a regional international city. Guilin is not only an ideal place for residence but also a world-renowned attraction for leisure traveling. Moreover, the high-speed line of "Guilin-Beijing" has already opened. At present, it only takes 10 hours (2125 kilometers) from Guilin to Beijing, while it merely takes 3 hours (668.8 kilometers) from Guilin to Guangzhou. In 2014, Guilin has hosted 38.7 million tourists, and the tourism revenue amounted to 42.1 billion Yuan (Guilin Travel and Tourism Administration, 2014). As the geographical center of Guangxi, Liuzhou is also a significant industry city, and the gross value of industrial output of Liuzhou was 401.42 billion Yuan for 2013. Notably, the auto production in the auto industry reached 19.43 million cars, and the output value amounted to 159.39 billion Yuan (LiuZhou's Ministry of Industry and Information Technology)

2. Literature review

Service quality

In the original study about service quality, Parasuraman, Zeithaml and Berry (1985) find 10 dimensions in assessing service quality. There are tangibles, responsiveness, communication, credibility, understanding of customer, reliability, competence, security, access, and courtesy. After more researches were conducted, Parasuraman *et al.* (1991) summarized that service includes five dimensions which have a great influence on customer's perception. They are reliability(ability to firms performance as promised service, timely and accurate to complete the service work), responsiveness(wishes of helping customers and provides fast and quick services), empathy(think what customers thinks, and give special attention to customers), assurance(employees treat people with sincerity, and knowledge and skills to solve problems), and tangibles(physical facilities, equipment and professional appearance of employees are the tangibles of firm) as the basic structure of the service quality consisting of 22 item sections. Service quality is a determinant of satisfaction (Lang, 2011), and is positively relative to satisfaction (Kuo, Wu and Deng, 2009).

Customer satisfaction

Service quality is the establishment of strong network with customers by knowing satisfaction. In other words, it is the determinants of customer satisfaction (Banerjee, 2012). Parasuraman, Zeithaml and Berry (1988) pioneered a measuring tool of service quality, which is the SERVQUAL model to help company gain better understanding of the customer satisfaction level and to improve service. In the past literature about bank's

marketing, many studies measured service quality by re-examining the SERVQUAL model (Parasuraman et al., 1988). Katircioglu and Smadi (2005) found that the empathy and assurance of the SERVQUAL model are important antecedents of satisfaction. Mei, Ronnie et al. (2013) measured the service quality in Hong Kong banking industry, finding that five dimensions of the SERVQUAL model are the most important factors in evaluating customer satisfaction. Besides, Olgun, Ceylan and Ibrahim (2014) tried to research how service quality dimensions influenced satisfaction by the SERVQUAL model. Through face-to-face interviews and questionnaires, they suggested that empathy and assurance of the SERVQUAL model are crucial to satisfaction.

CSR

The degree of customer satisfaction can also be improved through the CSR activities (Luo and Bhattacharya, 2009). A company with more CSR activities tends to have more trust in the product or service from this company (Pivato, Misani and Tencati, 2007). The full name of CSR is Corporate Social Responsibility. Carroll (1979, 1991) considered that Corporate Social Responsibility includes economic, legal, ethical and philanthropic factors. More and more companies practice the CSR activities in order to increase customer satisfaction, for example, standing out for women, alleviating poverty, and finding hope for schools (Guilin bank social responsibility report, 2013; ICBC social responsibility report, 2014; et al.,).

Sen and Bhattacharya (2006) noted that a positive Corporate Social Responsibility of the company can obtain a high degree of recognition and praise from customers. Additionally, they explained that the evaluation of company tend to be more sensitive to negative information on CSR than positive information on CSR.

Luo and Bhattacharya (2009) studied the impact of corporate social responsible on company risk, finding that higher CSR has lower risk. It means that CSR is positively related to customer satisfaction. Monika and Aurelijus (2014) investigated the importance of CSR activities in Lithuania's service sector, discovering that CSR could positively influence customer satisfaction. However, in Lithuania's finance, CSR is less important than service quality.

Word-of-mouth

WOM has significant influence on customer choice, so that companies can gain more market share through developing positive WOM among customers (Casalo et al., 2008). WOM as the main source of information can influence the repurchasing decision of customers, and is also a manifestation of customer satisfaction or dissatisfaction of the past experience (Lindberg-Repo, 1999). Customer satisfaction is an important factor of WOM (Liang and Wang, 2007). here is a positive relation between customer satisfaction and positive WOM (Lymperopoulos and Chaniotakis, 2008). imilarly, Shirsaver, Gilaninia and Almani (2012) studied on bank customers in Iran banking industry, finding that WOM is the primary determinant of positive WOM to customer satisfaction. Besides, Yanzheng, Changhong and Zengxiang (2014) considered that unsatisfactory service may cause Customer's bad feelings so that they are likely to make complaints. Even though a large number of researches believe that customer satisfaction has positive word-of-mouth effects, Jochen and Chew (2002) have conducted a

study to show how incentives would possibly interact with other factors which have been shown to driver word-of-mouth effects. They found that satisfaction is not always causing the increase of WOM.

Loyalty intention

Profits from loyalty intention far exceed the customer's lifetime value (Dick and Basu, 1994; Chiou and Droge, 2006). Zhang et al.(2013) emphasized that the increase of customer loyalty is an important strategic management tool for organizations. Customer loyalty is the objective for the existence and development of a company. Thus, building up customer loyalty has become a major marketing goal (Rujirutana and Poolthong, 2009).

Sivadass and Baker (2000) pointed out that customer loyalty is the ultimate goal of customer satisfaction measurement. Arun et al. (2010) found that service quality can promote customer loyalty through customer satisfaction. In fact, customer satisfaction is a necessary and important premise to loyalty (Sivadass and Baker, 2000). Similar results were found in the banking sector through analysis of questionnaire and the results of banks in USA, Fraering and Minor (2013) found that customer satisfaction and action loyalty have positively relation. Musilm and Isa (2013) observed how customer satisfaction has an impact on customer loyalty for Islamic banks in Malaysia. Through studying the effect of customer satisfaction on image, image effect on trust, and trust effect on customer loyalty, the results showed that customer satisfaction has a considerable correlation with customer loyalty.

But some researchers noted that customer satisfaction is not enough to cause customer's loyalty intention. Satisfaction has offered the prerequisite for loyalty intention, and the positive effect that satisfaction has on the loyalty is insignificant. However, customer satisfaction is not equal to the intention of customer loyalty (Bowen and Shiang, 2001).

Theoretical framework

Parasuraman, Zeithaml and Berry (1988) summarized that service quality includes five dimensions which have great influences on customer's perception of service quality. The five dimensions are reliability, responsiveness, empathy, assurance and tangibles.

This paper proceeds from quantitative, and based on the modified PZB model. According to the regulations of modern market, additional Corporate Social Responsibility dimension can be used to evaluate customer satisfaction. Considering the effect of perceived service quality and Corporate Social Responsibility on customer satisfaction, and the effect of customer satisfaction on word-of-mouth and loyalty intention can be examined (Figure 1).

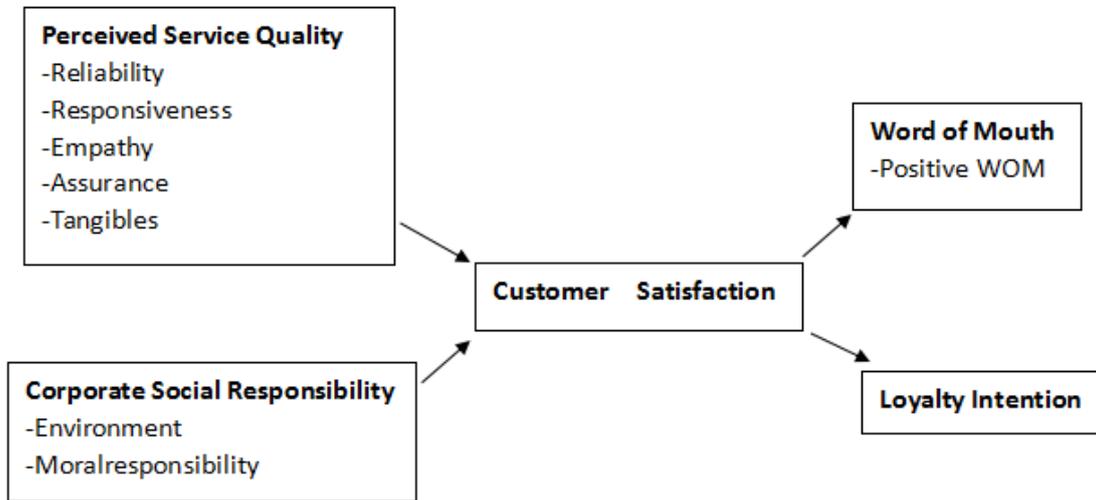


Figure I. The framework of this study

- H1: Perceived service quality is positively related to customer satisfaction.
- H2: CSR is positively related to customer satisfaction.
- H3: Customer satisfaction is positively related to word-of-mouth.
- H4: Customer satisfaction is positively related to loyalty intention.

3. Methodology and Date Characteristics

The survey questionnaires consisted of seven parts. The first Part of questionnaires are the demographic data of investigated objectives, including gender, age, gender, educational level, income and occupation. The second part of questionnaires about the respondents' usage of bank channels and their behavior. The thirdly part of questionnaire according to the five dimensions of SERVQUAL model(Parasuraman, et al., 1988). These dimensions are tangibles, reliability, responsiveness, assurance, and empathy includes 20 questions related to service quality dimensions by past literature. The fourth part of questionnaire about CSR, their are 4 questions related to the bank social responsibility. The fifth part of questionnaire are about customer satisfaction, the respondents are answer to rate each item on a "1=Strong Disagree" to "5=Strong Agree" Likert scale. The sixth part of questionnaire is about Word-of-Mouth, and the seventh part of questionnaire are about loyalty intention. A five-point Likert scale ranging from "1=Strong Disagree" to "5=Strong Agree" was used to measure the two variables.

This study focus on customers who are the customers from state-owned commercial banks or city commercial banks, with different demographic characteristics. According to the formula of Cochran (1953), the sample size was equal to about 384. Actually, the questionnaire would be distributed to 3 state-commercial bank

branches and 3 city commercial bank branches. To average the distribution of the questionnaires, the final target sample size was set at 402 (n=402), in which 201 were for state-owned commercial banks and the other half were for city commercial banks. Researcher mainly targeted at state-owned commercial banks in Guilin (67), Liuzhou (67) and Nanning (67), as well as 3 cities commercial banks such as Guilin bank (67), Liuzhou (67) bank and Beibu Golf bank (67) in Guilin, Liuzhou and Nanning respectively. The respondents are from customers who waiting in the bank hall. The survey date was from 20 May to 20 June, 2015, and each city had 10 days for survey.

4. Analysis of Model and Findings.

The sample characteristic and customer banking behavior

From a total of 402 respondents, out of 34 questionnaires were excessive missing data, that the total sample size was restricted to 368 participants, 46.74 per cent of the respondents are city commercial banking customers, while other 53.26 per cent of the respondents are state-owned commercial banking customers.

From the total respondents of this study (Table I), 57.34 per cent respondents are female, and 42.66 per cent respondents are male. Most of them are 18-28 years old, Consisting of 57.88 per cent. 68.21 per cent of respondents are bachelor's holder, 30.44 per cent of respondents are private company employee, and monthly income between 2001 to 3000 yuan (29.34 per cent).

In State-owned commercial banking, the main reason for choosing the sample bank is "close to home" (25.36 per cent). 10.77 per cent of respondents choosing the sample bank because other reason, for example, "payroll card", "pay for the electricity and water", "pay off loans", "Family factors".

In City commercial banking, the main reason for choosing the sample bank is "several type of account to choose from" (18.93 per cent). 9.47 per cent of respondents choosing the sample bank because other reason, for example, "No ATM service fee in all the world", "Family factors" (Table II).

Table I Summary of sample demographic characteristic

Demographic	Categories	SB	CB	Total
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		N	%	N	%	N	%
Gender	Female	111	56.63	100	58.14	211	57.34
	Male	85	43.37	72	41.86	157	42.66
Age	<Age 18	2	1.02	0	0	2	0.54
	Age 18-28	110	56.12	103	59.88	213	57.88
	Age 29-38	23	11.74	22	12.79	45	12.23
	Age 39-48	23	11.74	18	10.47	42	11.42
	Age 49-58	34	17.34	24	13.95	58	15.76
	\geq Age 59	4	2.04	5	2.91	9	2.45
Education	Below secondary school	0	0	3	1.74	3	0.82
	Secondary school	4	2.04	3	1.74	7	1.90
	High school	40	20.41	35	20.35	75	20.38
	Bachelor degree	138	70.41	113	65.70	251	68.21
	Masters or doctoral degree	14	7.14	18	10.47	32	8.70
Occupation	Housewife	4	2.04	9	5.23	13	3.53
	Business Owner	26	13.27	21	12.21	47	12.77
	Government Officer Employee	28	14.29	24	13.95	52	14.13
	Private Company Employee	61	31.12	51	29.65	112	30.44
	State Enterprises office	57	29.08	48	27.91	105	28.53
	Others	20	10.20	19	11.05	39	10.59
Monthly income	<RMB1000	3	1.53	12	6.98	15	4.08
	RMB1000-2000	18	9.18	10	5.81	28	7.61
	RMB2001-3000	51	26.02	57	33.14	108	29.34
	RMB3001-4000	48	24.49	41	23.84	89	24.19
	RMB4001-5000	32	16.33	21	12.21	53	14.40
>RMB5000	44	22.45	31	18.02	75	20.38	

Note: SB=State-owned commercial bank CB=City commercial bank

Table II The reason for choose the sample bank

Items	SB		CB	
	N	%	N	%

Reason(s) for choice this bank n(SB)=196 n(CB)=172	High interest		24	6.76	39	11.54
	Close to home		90	25.35	58	17.16
	Several types of account to choose from		45	12.6	64	18.93
	Gift with opening account		13	3.66	26	7.69
	Modern looking facility		39	10.99	37	10.95
	Quick in branch service		49	13.80	42	12.43
	On line service		57	16.06	40	11.83
	Others	Payroll card	19	5.35	2	0.59
		Charge card	6	1.69	0	0
		Family factors	3	0.85	1	0.30
		No ATM service	0	0	12	3.55
	fee	Other factors	10	2.82	17	5.03
	Total		355	100	338	100

Note: SB=State-owned commercial bank CB=City commercial bank

The most heavily used banking behavior channel is auto teller machine (ATM) as 36.60 per cent of the respondents use this channel. The next most preferred channel is internet banking with 30.62 per cent user. The mobile banking with 18.47 per cent users. However, branch banking is not hot among the respondents and only 14.31 per cent of respondents use this channel. ATMs are preferred because they are fast channel to get current, and the ATMs have conveniently located for certain banks. But branch banking is another channel can not replace, for example opening an account (Kumar et al., 2009), and small change or large amount cash transaction.

The main factor affecting the choice of a bank is **convenience**, average score is 3.92. In matter of **branding** affecting respondents choice of a bank, average score is 3.24. In matter of **rate charges** affecting respondents choice of a bank, average score is 3.23. In matter of **recommended by peers** affecting respondents choice of a bank, average score is 2.72. In addition, average score of **other factor** is 2.96, for example, has to patronize someone business (Table III).

Table III What extent the factors affecting customer choice of bank

Items	Very important		Important		Neutral		Some important		Not important		Average score
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	

Convenience	133	36.14	144	39.13	47	12.23	17	4.62	27	7.54	3.92
Branding	52	14.13	118	32.07	100	26.90	62	16.58	36	10.06	3.24
Rate charges	61	16.58	78	21.20	141	37.77	62	16.85	26	7.26	3.23
Other factor	27	7.34	53	14.40	197	52.99	59	16.03	32	8.94	2.96
Recommended by peers	12	3.26	62	16.85	153	41.03	92	25.00	49	13.69	2.72

Respondents' perception about the level of CSR activity, average score of **“the bank are environmentally friendly”** is 3.80. Average score of **“the sample bank are socially responsible”** is 3.73. Average score of **“the sample bank provide education scholarships”** is 3.68. Average score of **“the sample bank help the disadvantage”** is 3.59.

Respondents' perception about the level of customer satisfaction, average score of **“customer are happy with the service their experienced at the bank”** is 3.86. Average score of **“customer did the right thing choosing the bank for its service”** is 3.85. Average score of **“customer choice of doing transactions with the bank was the wise one”** is 3.81. Average score of **“service of the sample bank are exactly the same as what customer need”** is 3.72.

Respondents' perception about the level of word-of-mouth, average score of **“customer will encourage their friends and family to use the service offered by the bank”** is 3.75. Average score of **“customer will recommend the bank to someone who ask they”** is 3.70. Average score of **“customer will encourage their friends and family to use the service offered by the bank”** is 3.67. Average score of **“customer will recommend the bank to others”** is 3.65.

Respondents' perception about the level of loyalty intention, average score of **“customer will do more business with the bank in the next few years”** is 3.76. Average score of **“customer will not leave the bank, even if others recommend they to other banks”** is 3.71. Average score of **“As long as the bank to maintain the existing service level customer will not leave.”** is 3.70. Average score of **“customer will consider the bank as their first choice when they need new product/service”** is 3.68.

Hypothesis test

This paper used multiple regression as the analysis method to do the hypothesis testing. By analyzing, the result shows that, all the hypothesis of this paper were supported.

The first hypothesized relationship were supported by the data analysis. Perceived service quality was found to positively influence the customer satisfaction. The overall satisfaction (Y) has been taken as the dependent variable, and reliability (X_1), tangibility (X_2), responsiveness (X_3), assurance (X_4), empathy (X_5) have been taken as the independent variables. From regression analysed, the equations were as follows:

$$Y_s = 0.129 X_1 + 0.062 X_2 + 0.274 X_3 + 0.171 X_4 + 0.288 X_5$$

The results revealed that all five dimensions of perceived service quality are positively related to customer

satisfaction. Among them, empathy ($\beta=0.288, p=0<0.05$), responsiveness ($\beta=0.274, p=0<0.05$), and assurance ($\beta=0.171, p=0.02<0.05$) have most significant influence on customer satisfaction, all dimensions except tangibility ($\beta=0.062, p=0.201>0.05$) are significant. Hence H1 is accepted.

The second hypothesized relationship were supported by the data analysis. Corporate social responsibility activities was found to positively influence the customer satisfaction, and the relationship is significant ($\beta=0.602, p=0<0.05$). The overall satisfaction (Y) has been taken as the dependent variable, and CSR (X_1) has been taken as the independent variables. From regression analysed, the equations were as follows:

$$Y_s = 0.602 X_1$$

The results revealed that CSR is positively related to customer satisfaction, and the relationship is significant ($\beta=0.602, p=0<0.05$). Hence H2 is accepted.

The third hypothesized relationship were supported by the data analysis. satisfaction was found to positively influence the Word-of-Mouth, and the relationship is significant ($\beta=0.707, p=0<0.05$). Word-of-mouth (Y) has been taken as the dependent variable and the overall satisfaction (X_1) has been taken as the independent variables. From regression analysed, the equations were as follows:

$$Y_{\text{wom}} = 0.707 X_1$$

The results revealed that customer satisfaction is positively related to Word-of-Mouth, and the relationship is significant ($\beta=0.707, p=0<0.05$). Hence H3 is accepted.

The fourth hypothesized relationship were supported by the data analysis. satisfaction was found to positively influence the loyalty intention, and the relationship is significant ($\beta=0.711, p=0<0.05$). Loyalty intention (Y) has been taken as the dependent variable and the overall satisfaction (X_1) has been taken as the independent variables. From regression analysed, the equations were as follows:

$$Y_L = 0.711 X_1$$

The results revealed that customer satisfaction is positively related to loyalty intention, have been supported, and the relationship is significant ($\beta=0.711, p=0<0.05$). Hence H4 is accepted.

The findings of independent sample *t-test* to statistically verify the different in perception service quality between state-owned commercial banks and city commercial banks (Table IV). The results revealed that customer of city commercial bank has higher perceived service quality, have been supported (Table 4.3). and the relationship is significant ($\beta=0.711, p=0<0.05$). The dimension “reliability” ($t=-2.135, p=0.033<0.05$), “responsiveness” ($t=-4.538, p=0<0.05$), “assurance” ($t=-3.044, p=0.003<0.05$) and “empathy” ($t=-2.548, p=0.011<0.05$), there is significant difference between state-owned commercial banking and city commercial banking. But the dimension “tangibility” ($t=-1.521, p=0.129>0.05$), there is no significant difference between state-owned commercial banking and city commercial banking.

Table IV Differences in service quality between SB and CB: independent sample T-test

	Item	Mean (SB)	Mean (CB)	Mean difference	T-value	Sig. (2-tailed)
Reliability	Q1	3.64	3.76	-0.12	-1.428	0.154
	Q2	3.49	3.73	-0.24	-2.732	0.007
	Q3	3.64	3.77	-0.13	-1.628	0.104
	Q4	3.84	3.94	-0.10	-1.285	0.2
Tangibility	Q5	3.90	3.84	0.06	0.862	0.389
	Q6	3.56	3.69	-0.13	-1.582	0.114
	Q7	3.80	3.97	-0.17	-2.154	0.032
	Q8	3.62	3.81	-0.19	-2.419	0.016
Responsiveness	Q9	3.54	3.85	-0.31	-3.537	0
	Q10	3.53	3.87	-0.34	-3.913	0
	Q11	3.62	3.89	-0.27	-3.17	0.002
	Q12	3.48	3.73	-0.25	-2.79	0.006
Assurance	Q13	3.72	3.91	-0.19	-2.416	0.016
	Q14	3.76	3.94	-0.18	-2.405	0.017
	Q15	3.67	3.97	-0.3	-3.53	0
	Q16	3.66	3.83	-0.17	-2.167	0.031
Empathy	Q17	3.50	3.64	-0.14	-1.492	0.137
	Q18	3.40	3.60	-0.2	-2.246	0.025
	Q19	3.36	3.62	-0.26	-2.649	0.008
	Q20	3.55	3.72	-0.17	-2.016	0.044
Q1-Q4	Reliability	3.79	3.96	-0.17	-2.135	0.033
Q5-Q8	Tangibility	3.86	3.98	-0.12	-1.521	0.129
Q9-Q12	Responsiveness	3.60	4.01	-0.41	-4.538	0
Q13-Q16	Assurance	3.82	4.06	-0.24	-3.044	0.003
Q17-Q20	Empathy	3.48	3.73	-0.25	-2.548	0.011
Perceived Service Quality		3.70	3.91	-0.21	-2.712	0.007

Note: SB=State-owned commercial bank CB=City commercial bank

Table V show that T-test result between age and each factors of this paper. p value of reliability ($t=-1.085$, $p=0.279>0.05$), tangibility ($t=-1.781$, $p=0.076>0.05$), responsiveness ($t=-0.766$, $p=0.445>0.05$), empathy ($t=-1.971$,

$p=0.05=0.05$) are no significant differences between youth people and old people. Except assurance ($t=-2.084$, $p=0.038<0.05$), there is significant differences between younger people and older people.

Then, p value of CSR ($t=-1.608$, $p=0.109$) and WOM ($t=-1.775$, $p=0.077$), are higher than 0.005, there is no significant differences between youth people and old people. Satisfaction ($t=-2.561$, $p=0.011$), and loyalty ($t=-2.493$, $p=0.013$) are lower than 0.05, there is significant differences between youth people and old people, older people have greater satisfaction and more loyalty than younger people.

Table V T-test between age and each factors of this paper

Item	Mean	Mean	Mean	T-value	Sig. (2-tailed)
	Youth	Maturity& old	difference		
Reliability	3.84	3.94	-0.1	-1.085	0.279
Tangibility	3.87	4.02	-0.15	-1.781	0.076
Responsiveness	3.77	3.84	-0.07	-0.766	0.445
Assurance	3.88	4.06	-0.18	-2.084	0.038
Empathy	3.54	3.75	-0.21	-1.971	0.05
CSR	3.80	3.94	-0.14	-1.608	0.109
Satisfaction	3.86	4.09	-0.23	-2.561	0.011
WOM	3.73	3.91	-0.18	-1.775	0.077
Loyalty	3.75	4.00	-0.25	-2.493	0.013

5. Conclusion and discussion

This study investigates factors influencing service quality in Chinese bank industry. The purpose of this study is to research the elements of service quality that makes customer satisfaction, the relationship between CSR and customer satisfaction, as well as the relationship between customer satisfaction and word-of-mouth, and the relationship between customer satisfaction and loyalty intention by quantitative analysis method.

To look at the ways to improve the commercial bank service quality, this paper used the *t-test* to test differences in perception service quality between state-own commercial bank and city commercial bank, and used *multiple regression analysis* to test the relationship between perception service quality, CSR, customer satisfaction, word-of-mouth and loyalty intention. The result shows that, all the hypothesis of this paper were supported, including hypothesis 1 (perceived service quality is positively related to customer satisfaction), hypothesis 2 (CSR is positively related to customer satisfaction), hypothesis 3 (customer satisfaction is positively related to WOM), hypothesis 4 (customer satisfaction is positively is positively related to loyalty intention).

In term of service quality, three dimensions have very high influences the level of customer satisfaction. They are responsiveness, assurance and empathy, employees should enhance this three dimensions of service quality. By *responsiveness*, employees should be tell customer exactly when services will be performed, give customer prompt service, always willing to help customer and do no too busy to respond to customer's request. By *assurance*, employees should learn to be more polite, have more knowledge to answer customer's questions, reassure customer feel safe in transactions with the banking, and the behaviors of staffs in the bank should instills confidence in consume. By *empathy*, one of the way which can help bank improve the service quality is showing soft skills like smile service, communication skills, staff's initiative in service. Employees should give customer individual attention, has staffs who give customer personal attention and has customer's best interest at heart, the staffs of the bank understand customer's specific needs.

On the other hand, considering the front line staff have limited ability to meet differential customers' demand, the more effective way might be to struggle to improve the service quality from the aspect of institutional construction. Find a way to increase competency through maintaining a good management information system by gathering as much information as possible from customer, for example to establish a new department to response to customer feedback, include deal with customer complaints, take the initiative and ask about customer reviews and uncovering customer needs.

In term of CSR activities, short-term costs have been an issue, but banking should ensure that maximize the CSR budgets, and to work hard to achieve them. This paper suggests banking attempt to expand the scope of CSR activity. For example, supports culture and art activities of local community. Another way to increase CSR campaigns' exposure is invite customers to participate in relate activities.

In term of WOM, this paper suggests that, banking may give material rewards for the customer who recommend the bank to others, and bring new customer. In addition, banking can try to build a review site, customers can exchange information and share experiences online, and also give rewards for the customer who return a good review on the Internet.

In term of loyalty intention, this study finds a relationship between frequency of respondents go to bank branch and loyalty intention, and a relationship between frequency of respondents do online banking. Respondents who go to bank branch or do online banking at higher frequency have more loyalty. This paper suggests that banking to enhance develop e-financial product or service, the more high involvement to customer, the more likely online banking will be used. For example, pay the electricity costs online, buy movie tickets online.

This study was re-examine the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1985) for measuring perceived service quality in China banking sector. Measured all the five service quality dimensions, through independent *t-test*, results of the study found that the customer of city commercial bank has higher perceived service quality. The results shows that a significantly higher perception of *reliability*, *responsiveness*, *assurance* and *empathy* in city commercial banks compared with state-owned commercial banks, except

tangibility. Especially in “the bank has modern looking-equipment”, state-owned commercial banking are better than city commercial banking. In the future, state-owned commercial banks should to keep this continuable competitive advantage, focus on other competitive ability. The biggest gap of service quality between state-owned commercial banks and city commercial banks in responsiveness dimension, some workers of state-owned commercial banks merely see one side of bank advantage, and find no crisis in bank industry. Meanwhile, they lack service consciousness (Lu Jin He, 2013). State-owned commercial banks should set up performance evaluation system and incentive mechanism to mobilize the employees’ enthusiasm, in order to make the response of employee has a more direct interest and real material interests. On the other hand, state-owned commercial bank to strengthen staff training needs of professional skills and service skills two ways. This paper suggested increased training about customer psychology, it will help the service of employee to meet personalized and emotional demands of customers.

On the other hand, this paper continue to probe into demographics, found that older people of respondents have greater satisfaction and more loyalty than younger people by *T-test* analysis. The paper suggests that treat older people with passion and patience services. employees should give more care and help, and excellent after-sales service. Through the telephone or SMS activation to keep relationships with old customers. Another result is the younger people are less loyal. Convenient service, personalized service would appeal to young customers, and continuously strives to upgrade and improve the product and service to meet customers’ expectations. For example, improve network operations, particularly strengthening cooperation with online shopping site. and provide individualized products or services, like design DIY payment card.

6. Limitations and future of the study

The limitation of this study is the sample selection and research design.

First, the respondent of this study are the people who wait in the bank hall, but according to the survey, it found that only 14.24% respondents of this paper often go to branch for make trades. There are a large part of the banking customers which are normally used other trade channel, like ATM, online banking or mobile banking. Thus, the findings do not reflect the perception of all banking customers.

Second, the demographic variable distribution of respondents is uneven. This paper used a random sampling to distribute questionnaires, then got 57.88% of respondents ages 18 to 28, and 68.21% of respondents were bachelor degree’s holder. On the other hand, the researcher targeted of this paper at Guilin, Liuzhou, Nanning, and the surveyed time from 20 May to 20 June 2015, each city only 10 days. Because of a large number of Chinese commercial banks, and economic and cultural difference vary greatly amongst the different regions of China, if enlarge the samples and extending the time of intervention will improve the accuracy of the search results.

And last, there are a lot of factors that effects customer satisfaction, but constituent factors of this paper only based on literature and there was only used quantitative method. Due to the limited number of variables, the value

of this study has some limitations. Future research use the qualitative method will be more comprehensive and in-depth.

As more and more foreign banks are entering the Chinese market, and more ways to manage money that will threaten the development of commercial banks. The customers raises higher requirements to service quality of commercial banks, The service quality will have more of a greater impact on competitive power of commercial banks. For adapting to the new competitive environment, Chinese commercial banking should manage marketing perspective in the increase bank competitiveness.

This paper uses of the recent actual survey data of the major commercial bank in China banking industry, analysis the result about the service quality differs between the state-owned commercial banking and the city commercial banking from current level of performance, and provides the improving direction about service quality from the gap of different types of commercial banking, it could be quite conducive to increasing bank competitiveness.

In this paper, Chinese commercial banking service quality and the effect factors on customer satisfaction by quantitative analysis method are studied. Moreover, the result shows how factors influence the satisfaction, which is helpful to improve customer satisfaction.

This paper investigates the level of CSR activity, customer satisfaction, word-of-mouth and loyalty intention, by studying customers' behavior. The result could provide a suitable direction to meet customers' demand trend.

To get more reliable and extensively applicable framework, a future research should try to extend survey regional and time, can also try to use factor analysis method to analyze the data in order to determine key points of service quality, and through qualitative research to find out more variables of researches in this field. For example, interviews, observation activity. Future research would allow for greater generalization of the relationship test in commercial bank industry or possibly extend it to other industries.

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