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Influential Factors on the Quality of E-banking Services and Loyalty Among University Students in Baoshan, China

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Abstract

Purpose: This research examines the factors impacting e-banking service quality and loyalty for university students in Baoshan, China. The conceptual framework contains reliability, privacy and security, website design, customer service and support, service quality, trust, satisfaction, and loyalty. **Research design, data, and methodology:** Sample data was collected using the quantitative method and a questionnaire as a tool. The target population is 500 students from Baoshan, China, with more than one year of e-banking experience. Item-objective congruence and pilot tests were adopted to test the content validity and reliability of the questionnaire before distribution. Data was analyzed by utilizing Confirmatory Factor Analysis and Structural Equation Modeling to validate the model's goodness of fit and confirm the causal relationship among variables for hypothesis testing. **Results:** The study has found that the conceptual model was able to predict which factors impact e-banking service quality and loyalty for university students in Baoshan, China. Reliability, privacy and security, website design, customer service and support are four key antecedents of e-banking satisfaction. **Conclusions:** The E-banking service quality and trust were the strongest predictors of the students' E-banking satisfaction, both directly and indirectly. Therefore, the findings of this study can guide Chinese local governments or financial departments as they design regulations for e-bank development and supervision.

Keywords : Customer Service and Support, Service Quality, Trust, Satisfaction, Loyalty

JEL Classification Code: E44, F31, F37, G15

1. Introduction

As described by Shaikh and Karjaluoto (2015), services are now delivered in many ways because of developments in information technology and rising Internet usage over the past few decades. Click and portal systems have taken the role of in-store services and in-person transactions, and banks are no exception to the trend of society as a whole in promoting tailored services for customers. Modern-day banks offer services via electronic banking channels. The terms "Internet Banking" and "e-banking" in the literature refer to customers who utilize personal computers and mobile terminal devices to access e-banking services. Therefore, they are interchangeable (Amin, 2016). From Jayawardhena (2004), we know that e-banking is the practice of customers interacting with banks digitally and remotely using computers. While traditional banks contact consumers through non-website Settings, Internet banks' customers communicate with one another via network technologies. Network banking, on the other hand, exhibits traits that traditional banking does not. Customers can do various financial activities electronically through online banking, for instance, at a cheaper cost and whenever (Angelakopoulos & Mihiotis, 2011). According to the "2020 China E-Banking Development Report" published by the China Financial Certification Center, more than 59% of Chinese citizens used the pertinent services offered by online banking in 2020. This indicates that as the economy grows, online banking

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customers are expanding rapidly. Although the growth rate slowed somewhat from the prior year, it still increased by three percentage points over the prior year. Contrarily, the percentage of users of personal mobile banking continues to expand quickly, with increases of 8% and 71% in 2020, with an average annual growth rate of 12%. This indicates that mobile banking has taken the lead in expanding retail e-banking. The percentage of personal WeChat Bank users also increased consistently, and the user penetration rate increased to 45% (China E-banking development report, 2020). In recent years, with the popularity of online banking, online banking has shown a trend of vertical development from online payment by individual consumers, transfer remittance, credit card payment, and other ways to enterprise user inquiry and transfer settlement, and the development trend is very positive.

Entering the electronic market is crucial for businesses; however, because of the tremendous growth of e-commerce, the haphazard and disorderly growth of the electronic services sector has left many customers feeling extremely unsatisfied with their online service experiences. E-banking is similar to other online services in some ways, so more study is required to understand better the factors that may affect how customers use these services. This will help businesses better serve their customers in the future, boost customer satisfaction, and foster greater customer loyalty (Luo et al., 2012). The social interaction is deeper and more prolonged than the physical surroundings. Businesses may guarantee client loyalty in several ways. For instance, they guarantee customer loyalty by improving the relationship between staff and customers or offering individualized service that suits the needs and characteristics of the customer. However, achieving customer satisfaction and trust in the network environment has become a new challenge since, unlike traditional services, the role of the human aspect in the process of service occurrence is drastically decreased or abolished in the network environment (Brun et al., 2014). For e-banking services, the two most important factors that can directly affect customer satisfaction and loyalty are the quality of the bank's service and the quality of the bank's maintenance of customer relationships. These two variables directly influence the experience and loyalty of the consumer. The quality of online services is the primary determinant of e-commerce in the competitive process. The quality of online services directly affects the customer's experience and determines how customers evaluate and judge the overall quality of the online service they receive (Amin, 2016). This study's primary goal is to learn more about how customer loyalty to e-banking is impacted by relationship quality and service quality, as well as how these two elements interact. At the same time, we also need to investigate whether this behavior will alter when consumers' fundamental characteristics, including social standing and wealth, change. Therefore, more experimental studies are needed to verify the relationship between them.

2. Literature Review

2.1 Reliability

According to the study of Sirdeshmukh et al. (2002), reliability refers to the ability of a bank to continuously and accurately complete customers' scheduled tasks. A concentrated manifestation of the dependability of electronic financial services is the consistency and stability of online services, which is a crucial metric for assessing the level of quality of those services (Cox & Dale, 2001; Madu & MAdu, 2002). From the research of Parasuraman et al. (2005), reliability is described as the website service of technology and function, especially the availability and accuracy of the website. The capacity of e-banking to correctly carry out its activities on the network service platform without interruption is referred to as reliability (Bahia & Nantel, 2000; Parasuraman et al., 2005). According to Yang and Jun's (2002) study, if the e-banking system conducts e-commerce accurately and reliably, it will help to improve consumers' goodwill toward the quality of e-banking services. An important component of e-banking that is crucial to its development is reliability. Banks can establish a better reputation and obtain more customers through the reliability of services (Jabnoun & Khalifa, 2005). Adil (2020) noted that because dealing with money is serious, clients' primary motivation for depositing their hard-earned money in banks is trust. Suppose banks keep their promises and deliver on their promises in the eyes of the customers. In that case, it fosters dependability and consistent performance over time, which can effectively improve a bank's credibility in customers' eyes. From these studies, the following hypothesis has been formulated:

H1: Reliability has a significant impact on e-banking service quality.

2.2 Privacy and Security

Galanxhi-Janaqi and Fui-Hoon Nah (2004) stated that *privacy* is usually defined as the individual's full autonomy in using and obtaining personal information acquisition terms. Customers believe the website will not be invaded, and the platform protects personally shared information (Hussien & Abd El Aziz, 2013). According to A Ahmad Al-Hawari (2014), users have certain concerns regarding their privacy and security when using electronic banking services because there is no need for face-to-face connection and communication between them and the service providers. Users of online banking can confidently

disclose personal information on the online banking platform thanks to privacy and security (Muturi et al., 2013). People are becoming increasingly dubious about websites when uploading and using their personal information when using electronic services, according to our research on websites. As Udo (2001) pointed out, online banking consumers are particularly concerned with maintaining their privacy and security. Security and the complexity of online banking are some of the factors that prevent customers from fully accepting electronic banking. The greater the sense of security and confidence that customers will respond appropriately to successful or difficult transactions, the greater their contentment with the system and the more positive their attitude about it (Chung & Paynter, 2002). From these studies, the following hypothesis has been formulated:

H2: Privacy and security have a significant impact on e-banking service quality.

2.3 Website design

From the study of Wolfinbarger and Gilly (2003), the business platform offered to customers by e-banking is referred to as having a website design. This includes various components that customers can use to connect with the website—for example, website index, details, and transaction processing. Website design is divided into practicality and pleasure. In order to be practical, something must be accessible, information must be searchable, and detailed product and service information must be available. Hedonistic elements include pictures, colors, music, appealing visual designs, and social networking features (Bilgihan & Bujisic, 2015). Shankar and Jebarajakirthy (2019) stated that the following criteria could be used to define the quality of a website's design: a systematic, easy-to-follow catalog that is well-organized website reliability Content, terms, and conditions that are easy to understand

In addition to a search engine that draws visitors and streamlines the purchasing process for clients, a service website should include additional components that make up a solid user experience. Website design typically pertains to the look and feel of basic search pages. Website layout and e-banking service platform design are also included in the definition of website design as e-commerce has grown (Abbott et al., 2000). According to Zhou (2011), it is easier to truly increase the quality of websites if we can comprehend the needs of Internet users. The operation of e-commerce websites is mostly influenced by website design and the caliber of the information, according to customers. A well-designed website should offer useful features that draw customers' attention and streamline the transaction process. The secret to the success of e-commerce websites has always been to increase website service quality to suit customer needs (Kuo & Chen, 2011). Thaichon et al. (2014) stated that customers' faith in the e-banking provider is increased by the website's presentation style, regular content updates, quick transaction and page processing, and simplicity of the website's content. From these studies, the following hypothesis has been formulated:

H3: Website design has a significant impact on e-banking service quality.

2.4 Customer Service and Support

Customer support and service entails satisfying clients, offering prompt service, attending to their needs, and resolving concerns as soon as possible (Blut et al., 2015). According to Venkatesh and Davis (2000), customer service and support are customers' opinions of an e-banking service system's ability to accomplish tasks, including accuracy and convenience. Customer service and support means that e-banking can provide users with fast and effective solutions in time to satisfy customers (Chaudhry et al., 2009). Smooth customer assistance and service are essential for meeting customers' growing demand for e-banking services (Shankar & Jebarajakirthy, 2019). According to Yu et al. (2015), in providing services and support, consumer information security, confidentiality, and privacy are important considerations for providers of e-banking services. Ensure the offering's quality. Customer trust in the e-banking provider is increased by the customer care team's empathic behavior, the accessibility of their services, and the provider's dedication to answering customers' questions. Customers will develop end, uring ties with them (Amit & Charles, 2018). From these studies, the following hypothesis has been formulated:

H4: Customer service and support have a significant impact on e-banking service quality.

2.5 E-banking Service Quality

Banks must offer top-notch services to compete in the fiercely competitive e-banking industry (Amin, 2016). According to Ma and Zhao (2012), service quality is based on the customer's impression of whether the service offered is superior or can remain superior for an extended period. E-banking services are off-counter financial services that banks offer customers over public networks or open communication channels. Online banking, telephone banking, mobile banking, self-service banking, and other off-counter services are the most common types of e-banking services (Lustsik, 2003). Unlike offline banks, e-banking has unique advantages, making the service more personalized, convenient, and localized (Bauer et al., 2005), according to the research of Ahmad Al-Hawari (2015), the popularity of e-banking means that consumers can get the banking

services they want anytime, anywhere. With localization, banks can pinpoint their customers' locations and offer customized services based on their requirements. Such as local automated terminal services (Amin, 2016). From these studies, the following hypothesis has been formulated:
H5: E-banking service quality has a significant impact on e-banking satisfaction.

2.6. Trust

Customer trust is crucial in electronic banking, which involves securing many financial services systems and preserving respondents' private information. Respondents are reluctant to divulge much personal information online because they are worried about security and unauthorized access to their data (Ridings et al., 2002). Ennew and Sekhon (2007) defined *trust* as "A positive expectation of an individual's intention or behavior without understanding the situation of others, which is premised on interdependence and risk." Since they are certain that, despite some risks, no one will use their personal information, they exhibit e-banking trust (Corritore et al., 2005). Toufaily and Pons (2017) confirmed that because users immediately experience financial services through websites, websites are crucial in establishing consumer trust in a virtual network environment (Kassim & Abdulla, 2006). Because there is a physical barrier between consumers and e-banking, trust is crucial to building and maintaining customer relationships in e-banking services. In the delivery of electronic services, trust is crucial for realizing commitment to customers and serving as the foundation for long-term relationships with customers (Sirdeshmukh et al., 2002). Lichtenstein and Williamson (2006) stated that one's level of trust heavily influences the decision to utilize and continue using e-banking services. From these studies, the following hypothesis has been formulated:
H6: Trust has a significant impact on e-banking satisfaction.

2.7 E-Banking Loyalty

In articles, e-loyalty is frequently defined as the "intention to revisit the website" (Corstjens & Lal, 2000). According to Amin (2016), customer loyalty to the bank is mainly reflected in the possibility of customers returning to the bank's website and using new services in the online environment. Customer loyalty refers to a person's goal or propensity to keep using a certain provider's products or services (Edvardsson et al., 2000). According to the study of Baumann et al. (2011), Customer loyalty is typically classified into two categories based on its form: behavior loyalty and attitude loyalty. Consumers who repurchase products or services, because they appreciate a brand or service, are said to be showing behavioral loyalty. Attitude loyalty reflects an individual's emotional and psychological desire, which refers to whether customers will re-purchase and recommend products to others. Strong and reliable relationships between customers and businesses are the foundation of true customer loyalty. The existence and growth of e-banking depend heavily on customer loyalty. Thus, businesses must discover ways to stay in touch with customers to increase their pleasure and loyalty to e-banking (Chen, 2012). According to Keating et al. (2003), An increase in customer loyalty may stabilize the number of customers and attract new ones to the business, increasing income. Loyalty is a fundamental component of a company's success and sustainability. The emotional components of customer loyalty include sticking with the same firm and making a positive brand your first choice. Other examples include recommending a brand to other customers (Ahmad Al-Hawari et al., 2009). From these studies, the following hypothesis has been formulated:
H7: E-banking satisfaction has a significant impact on e-banking loyalty.

2.8 E-Banking Satisfaction

E-banking satisfaction means that users think the custody or use of facilities can make them have a positive emotion (Rust & Kannan, 2003). From the study of Lee and Suami (2009), customers' subjective assessment of whether the services offered by online banking are up to par with their expectations when utilizing the service is known as online banking satisfaction. When a consumer uses e-banking to manage connected financial services, they should have a positive experience with it, which is known as customer satisfaction with e-banking (Szymanski & Hise, 2000). Severt (2002) described that when customers evaluate all of the services offered by e-banking service providers, they create an emotional state known as satisfaction. The relationship between customers and services is what satisfaction means, viewed as a judgment or viewpoint that evolves over time (Eshghi et al., 2007). Osman (2014) stated that providing high-quality services to customers will help e-banking establish a good reputation to increase users' use and attract new potential users to use the online banking website. As a result, satisfied customers are increased by exceptional service. Customers' satisfaction with e-banking services often depends on the following aspects: the level of service, the range of products or services offered, and the system's capacity for interactive communication (Luo & Lee, 2011). Fang et al. (2011) described that customers are more inclined to use and stick with a website and recommend it to their friends when satisfied with the online service.

3. Research Methods and Materials

3.1 Research Framework

Tis study aims to examine the factors that influence the loyalty and happiness of Baoshan University students when they use electronic banking services. The two key theories used in the conceptual framework design are the Cognitive Motivational Relationship (CMR) theory and the Technology Acceptance Model (TAM). The researchers established the conceptual framework after examining the many relationships between the pertinent factors. Three important frameworks from earlier research supported its conceptual framework.

Regarding the conceptual framework, the researcher wanted to look into seven connections between these factors. Reliability and e-banking service quality were the first two factors to be correlated; reliability was an exogenous variable, and e-banking service quality was an endogenous variable. The second relationship was between privacy and security and e-banking service quality; privacy and security were exogenous variables, and e-banking service quality was endogenous. The third relationship was between website design and e-banking service quality; website design was an exogenous variable, and e-banking service quality was an endogenous variable. Customer service and support and the quality of the e-banking service were related in a fourth way; customer service and support were exogenous variables, while the quality of the e-banking service was an endogenous variable. The fifth relationship was the interaction between the exogenous variable of e-banking service quality and the endogenous variable of e-banking satisfaction. The sixth relationship was the interaction of the endogenous variable, e-banking satisfaction, and the exogenous variable, trust. The final link involved the interaction between the endogenous variable of e-banking loyalty and the exogenous variable of e-banking satisfaction. The research conceptual framework is proposed as follows: Figure 1.

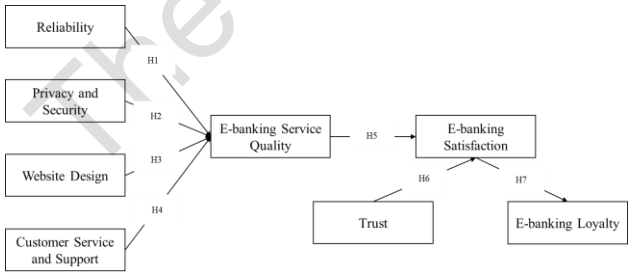

Figure 1: Conceptual Framework

H1: Reliability has a significant impact on e-banking service quality.
H2: Privacy and security have a significant impact on e-banking service quality.
H3: Website design has a significant impact on e-banking service quality.
H4: Customer service and support have a significant impact on e-banking service quality.
H5: E-banking service quality has a significant impact on e-banking satisfaction.
H6: Trust has a significant impact on e-banking satisfaction.
H7: E-banking satisfaction has a significant impact on e-banking loyalty.

3.2 Research Methodology

In this study, empirical analysis and quantitative methods were adopted. Sample data were collected from the target population by using a questionnaire as a tool. The questionnaire was distributed among university students in Baoshan, China, who had e-banking experience. The survey comprised a screening question, demographic information, and five-point Likert scale items for the variables. For the content validity of the research instrument, four specialists with a Ph.D. in education and almost ten years of experience in giving blended instruction were invited to perform item-objective congruence to examine the objectives advanced by the scale items developer for this research. Based on the recommendations of Anderson and Gerbing (1988), before gathering data, a group of three experts evaluated the Index of Item-Objective Congruence (IOC) to ensure that each item accurately gauges its intended construct, thereby contributing to the validity of the assessment of a score over 0.6. 30 participants were required for the pilot test to achieve a suitable scale. Therefore, the researcher selected 30 target students for the pilot test and examined the internal consistency reliability using Cronbach's Alpha coefficient. Cronbach's Alpha produced a score of 0.7 and above, signifying the reliable measurement of the intended construct and bolstering the overall reliability of the test results (George & Mallery, 2003).

After the pilot test, the in-person questionnaires were circulated to 500 participants from the target university. The data were analyzed using statistical software. In addition, confirmatory factor analysis (CFA) was applied to examine the factor loading, t-value, composite reliability (CR), average variance extracted (AVE), and discriminant validity. Structural equation modeling (SEM) was used to verify the hypothesis results and examine the direct, indirect, and total effects of the relationships between latent variables (Hair et al., 2010).

3.3 Population and Sample Size

In the research, the target population is students from Baoshan, China, with more than one year of e-banking experience. This is to ensure that participants were familiar with the e-banking experience. Based on the A-priori Sample Size Calculator for SEM by Soper (2006), the recommended minimum sample size was 444 from the parameters of 8 latent variables and 33 observed variables at the probability level 0.05. Therefore, the questionnaires are distributed and screened for valid responses at 500.

3.4 Sampling Technique

The sample was scoped and selected using the multistage sampling techniques of judgment, stratified random, and convenient sampling. Judgment sampling was adopted to select the students from Baoshan, China, and then random sampling was stratified to determine the sample size from each sampling stratum, as shown in Table 1.

Table 1: Sample Units and Sample Size

Type of Bank	Population Size	Proportional Sample Size
ICBC	3429	142
CBC	7216	300
ABC	1401	58
Total	**12046**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The demographic profile of 500 respondents is presented in Table 2. The respondents are 175 females and 325 males, representing 35.00 percent and 65.00 percent, respectively.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	325	65.0%
	Female	175	35.0%

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is a key starting point in the SEM (Hair et al., 2010). Both variables' reliability and validity can be measured with CFA (Byrne, 2010). Convergent validity can be statistically measured by Cronbach's Alpha reliability, factor loading, average variance extracted (AVE), and composite reliability (CR) (Fornell & Larcker, 1981). Factor loading above 0.50 is significant (Hair et al., 1998). In this study, factor loadings of all individual items were greater than 0.50 and mostly were above 0.70, ranging from 0.522 to 0.852, as presented in Table 3. Composite reliability (CR) was recommended at the value of 0.70 or above, and average variance extracted (AVE) was recommended at greater than or at 0.4 (Fornell & Larcker, 1981; Hair et al., 1998). In Table 3, all estimates were significant as CR values exceeded 0.7 and AVE values exceeded 0.5. Cronbach's alpha was a technique applied to evaluate the items' internal consistency in construct (Killingsworth et al., 2016). The value of Cronbach's alpha should be at 0.7 or higher to indicate acceptable reliability (George & Mallery, 2003; Hair et al., 2010). All Cronbach's Alpha values exceeded 0.7, as per Table 3.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Reliability (R)	Amit and Charles (2018)	4	0.841	0.709-0.835	0.842	0.573
Privacy and Security (PS)	Amit and Charles (2018)	4	0.712	0.522-0.817	0.754	0.468
Website Design (WD)	Amit and Charles (2018)	4	0.846	0.702-0.852	0.851	0.590
Customer Service and Support (CSS)	Amit and Charles (2018)	5	0.867	0.682-0.836	0.868	0.570
Trust (T)	Amit and Charles (2018)	4	0.857	0.739-0.845	0.859	0.604
E-banking Service Quality (EBSQ)	Garepasha and Aali (2020)	4	0.861	0.757-0.797	0.862	0.609
E-banking Satisfaction (EBS)	Haq and Awan (2020)	4	0.878	0.775-0.823	0.879	0.645
E-banking Loyalty (EBL)	Inzamam and Adil Tahir (2020)	4	0.844	0.629-0.847	0.845	0.580

Discriminant validity appeared satisfactory in Table 4. All variables were significant from the greater value of AVE square roots compared to the factor correlations.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.919
GFI	≥ 0.85 (Sica & Ghisi , 2007)	0.908
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.89
NFI	≥ 0.80 (Wu & Wang, 2006)	0.892
CFI	≥ 0.80 (Bentler, 1990)	0.945
TLI	≥ 0.80 (Sharma et al., 2005)	0.937
RMSEA	< 0.08 (Pedroso et al., 2016)	0.043
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation

Indicators of goodness of fit were measured in Table 5. Indices used for measurement were CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA; all statistical values from CFA were greater than acceptable and proved fit for the measurement model.

Table 5: Discriminant Validity

	R	PS	WD	CSS	T	EBSQ	EBS	EBL
R	**0.760**							
PS	0.231	**0.684**						
WD	0.166	0.236	**0.768**					
CSS	0.172	0.259	0.138	**0.755**				
T	0.232	0.255	0.218	0.220	**0.777**			
EBSQ	0.254	0.385	0.362	0.198	0.208	**0.780**		
EBS	0.303	0.494	0.237	0.322	0.330	0.393	**0.803**	
EBL	-0.042	-0.022	-0.024	-0.080	-0.024	-0.020	0.132	**0.762**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

4.3 Structural Equation Model (SEM)

This study adopted a Structural Equation Model (SEM) to analyze the collected data. The strengths of SEM include various aspects. First, SEM could explore dependent relationships (Hair et al., 2010). Secondly, SEM examined the causal relationships among latent and observed variables. Third, random error in the observed variables was used to provide more accurate measurement results. Fourth, it used multiple indicators to measure latent variables. Lastly, it could test hypotheses at the construct level, not only at the item level (Hoyle, 2011). The goodness of fit for the structural model was measured and demonstrated in Table 6. The statistical values were CMIN/DF = 2.285, GFI = 0.881, AGFI = 0.863, NFI=0.865, CFI = 0.919, TLI = 0.912, and RMSEA = 0.051. All values from fit indices were greater than the acceptable values, so they affirmed the model fitness.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	2.285
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.881
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.863
NFI	≥ 0.80 (Wu & Wang, 2006)	0.865
CFI	≥ 0.80 (Bentler, 1990)	0.919
TLI	≥ 0.80 (Sharma et al., 2005)	0.912
RMSEA	< 0.08 (Pedroso et al., 2016)	0.051
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation

4.4 Research Hypothesis Testing Result

The correlation magnitude among the independent and dependent variables proposed in the hypothesis is measured by regression coefficients or standardized path coefficients.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: R→EBSQ	0.190	3.910*	Support
H2: PS→EBSQ	0.333	6.465*	Support
H3: WD→EBSQ	0.313	6.163*	Support
H4: CSS→EBSQ	0.109	2.306*	Support
H5: EBSQ→EBS	0.409	7.942*	Support
H6: T→EBS	0.285	5.809*	Support
H7: EBS→EBL	0.139	2.711*	Support

Note: * $p<0.05$
Source: Created by the author

As presented in Table 7, all the proposed hypotheses were supported. Students' E-banking satisfaction strongly impacted E-banking loyalty. The students' E-banking satisfaction was significantly driven by E-banking service quality and Trust, respectively. The E-banking service quality was significantly driven by Reliability, Privacy and security, Website design, and Customer service and support, respectively. The path relationship between reliability and e-banking service quality has a standardized path coefficient of 0.190 and a t value of 3.910 in H1. The relationship between privacy and security and E-banking service quality has a standardized path coefficient of 0.333 and a t value of 6.465 in H2. The relationship between website design and e-banking service quality has a standardized path coefficient of 0.313 and a t value of 6.163 in H3. The relationship between customer service and support and e-banking service quality has a standardized path coefficient of 0.109 and a t value 2.306 in H4. The relationship between E-banking service

quality and students' E-banking satisfaction has a standardized path coefficient of 0.409 and a t value of 7.942 in H5. The relationship between Trust and students' E-banking satisfaction has a standardized path coefficient of 0.285 and a t value of 5.809 in H6. The relationship between students' E-banking satisfaction and loyalty has a standardized path coefficient of 0.139 and a t value of 2.711 in H7.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study aimed to comprehensively analyze which factors impact the quality and loyalty of e-banking services for university students in Baoshan, China. Both structural equation modeling and confirmatory factor analysis were used to verify the findings. The study's dimensions include customer happiness, client trust in the bank, and more elements influencing client loyalty. Additionally, it considers the software configuration, website layout, dependability, security, ease of use of the bank, and service quality. On the one hand, the findings of this paper will benefit front-line e-banking service practitioners. Regarding business growth, the staff can create more logical service content and service methods by the pertinent customer loyalty influencing factors to meet the service needs of various customers and subsequently effectively improve the customer scale and customer loyalty of e-banking to a certain extent. Spend. On the other hand, the findings of this study have some bearing on how e-banking should be managed. According to the study's findings, businesses can create a management system that better meets customer needs, modify and get rid of software and hardware that does not keep up with the advancements of the Internet era, and introduce some new service content, all of which will increase the loyalty of current clients and draw in new users.

With the collected data, CFA was adopted to measure and test the validity and reliability of the research conceptual model. SEM was also employed to analyze and discuss the factors impacting the quality and loyalty of E-banking services for university students in Baoshan, China. All the hypotheses proposed were supported and proven to fulfill research objectives. The findings of this research can be summarized as follows: The results reveal that this conceptual model was able to predict which factors impact the quality and loyalty of E-banking services for university students in Baoshan, China. The results reveal that reliability, privacy and security, website design, and customer service and support are the most significant factors in the quality of E-banking service, the students' E-banking satisfaction, and E-banking loyalty. The E-banking service quality and trust were the strongest predictors of the students' E-banking satisfaction, both directly and indirectly. Therefore, the findings of this study can guide Chinese local governments or financial departments as they design regulations for e-bank development and supervision. It not only effectively promotes the development of the electronic banking business but also effectively protects users' interests, and it has certain reference significance for various types of network services.

5.2 Recommendation

On the one hand, in this study, the quality of e-banking services was the strongest predictor of the students' e-banking satisfaction, both directly and indirectly. The e-banking service quality was driven significantly by Reliability, Privacy and security, Website design, and Customer service and support, respectively. It can be seen that many students choose E-banking because Reliability, Privacy and security, Website design, and Customer service and support influence them, respectively.

On the other hand, there are some restrictions on how the study is implemented to guarantee its relevance and concentration. The study's findings demonstrate that consumer loyalty to e-banking services may directly be influenced by customer satisfaction and that dependability, responsiveness, tailored demand, efficiency, and other characteristics are the key determinants of customer satisfaction with e-banking services. According to the survey's findings, customer development is based on service quality, which is why it is crucial in every community. Understanding online banking and getting customers to interact with the service will be crucial to providing banking services. As a result, improved e-service quality may increase customers' contentment and encourage them to use e-banking. In addition, it is determined that the most crucial factors in determining the quality of an e-service are the capability of the support staff, system accessibility, service combination, responsiveness, and reliability. This study supports the empirical findings that the quality of e-services positively affects consumer happiness (Chu et al., 2012).

5.3 Limitation and Further Study

Certain limitations to this study need to be noted, and the following are recommendations for further research. First, this study is limited to Baoshan University, and the sample size is small because it is highly targeted. So, the scope and sample size are limited. In addition, the research theory in the framework includes only two models, the TAM model and the CMR model, which fails to conduct research from multiple perspectives. However, as the study's variables are also merged with the original literature, some things could be improved in how the variables were set. Future research

can still be improved in various ways, such as expanding the study area or the number of groups, the distribution of different ages, and so on.

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