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# The Impact of Service Quality and Loyalty on Adoption and Use of Mobile Banking Services: Empirical Evidence from Central Asian Context*

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## Abstract

The service industry has been acknowledged as a critical part of mobile banking services in recent years. This study examines the impact of e-service quality and loyalty on the intention to use and use behavior of mobile banking services in Mongolia, a Central Asian country. As a result, based on past research, a conceptual model was suggested. This study comprises 209 completed questionnaires from young Mongolians who own a bank account and a smartphone. The data was collected based on convenience sampling, and it was analyzed with SmartPLS software using a partial least squares-structural equation modeling (PLS-SEM) technique. The findings indicate that system quality, interface design, and security assurance have a significant positive impact on service quality; service quality has a positive impact on loyalty. Moreover, the results reveal that service quality and loyalty have a significant influence on the intention to use mobile banking services. The findings of this study suggest that local or international banks and financial institutions in Mongolia should consider system quality, interface design, and security concerns as key successors to building perceived security quality to retain current mobile banking users and attract new customers.

**Keywords:** Mobile Banking, Service Quality, Loyalty, Adoption and Use Behavior

**JEL Classification Code:** C83, N15, G21, L86

## 1. Introduction

There has been a rapid increase in the adoption of mobile technologies in the past years. This innovation changed the way businesses and customers engage in service delivery. The banking sector is no exception. In fact, the financial industry was one of the pioneers in the adoption of mobile technologies (Laukkanen, 2007). Mobile banking services are gradually taking over traditional banking services due to their convenient accessibility to financial services from anywhere, 24/7 (Cruz et al., 2010). Mobile banking refers to financial and non-financial transactions by banks and microfinance institutions through the use of mobile devices (Shaikh & Karjaluoto, 2015). Li et al. (2021) pinpointed that mobile banking has made it possible for bank clients to be more connected to their bank accounts through their smartphones. It enables financial institutions to offer their services and share information with consumers about new products or services efficiently at a lower cost when compared to traditional banking (Zhu et al., 2021). Moreover, it allows consumers to overcome location and time limitations when they access and manage their bank accounts (Luarn & Lin, 2005).

Mobile banking service options available to consumers have expanded drastically in a short period of time. Laukkanen (2006) proposes that to engage and retain mobile banking app users, banks need to advance effective mobile strategies and promote their value. Scholars emphasize that service quality is considered a crucial factor of competitiveness (Gupta et al., 2018). In other words, it can assist companies to differentiate their services, gain competitive advantages

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in the market, and have long-term success (Virtanen et al., 2018; Jun & Palacios, 2016). According to Chakrabarty et al. (2008), service quality refers to the adaptation of customers' demands in delivering service.

Arcand et al. (2017) recognized service quality as one of the concepts to achieve customer satisfaction. Santos (2003) stated that service quality is an important determinant of internet commerce since online comparison of technical characteristics of products is essentially costless and feasible. In the context of mobile banking, mobile service quality is defined as the clients' overall evaluation and judgment of the excellence and quality of the mobile banking service offerings (Jun & Palacios, 2016). In the report by Deloitte (Johnstone et al., 2010), it was emphasized that mobile banking had improved the bottom lines of many banks. For instance, banks were able to expand their market areas and have a clearer understanding of customer needs by analyzing data collected from mobile banking application users.

Previous studies indicate that service quality and loyalty have a significant positive impact on the adoption and use behavior of internet technologies (Sharma, 2015; Lee et al., 2011; Liljander et al., 2006). Thus, this study seeks to analyze the influence of mobile banking service quality (mobile banking system quality, interface design, and security assurance) and loyalty on adoption and use behavior among young banking clients in Mongolia. The aim is to provide an in-depth understanding of the factors influencing mobile banking service adoption and use behavior from the standpoint of online service quality. The model is proposed to contribute to knowledge and enhance understanding of the aspects of mobile banking service quality.

For the purpose of differentiating this research from previous studies, the factors that impact service quality were identified based on the investigations by Parasuraman et al. (1988), along with the three service quality factors in the context of mobile banking in the study by Zhou et al. (2021). Later, this research was extended by an additional variable such as loyalty as an indicator of adoption and use behavior. This paper is structured as follows: the first section discusses the study background and the context of the study. It then proceeds to hypothesis development and delineates the research model. The following section consists of the methodology with explanations of the survey questionnaire and the demographic profile of respondents. Subsequently, the results of data analysis are discussed, elaborating the theoretical and practical implications for banks.

## 2. Literature Review and Hypothesis Development

### 2.1. Background

Service quality is a strategic tool that helps businesses gain profits, customer satisfaction, increased market share, return on investments, and continuous purchase intention. The impact of service quality has been widely studied in relation to purchase intention and use behavior in the existing literature. Service quality refers to an evaluation of how well service meets the customers' expectations (Kuo et al., 2009). Scholars identify that service differs fundamentally from tangible goods (Wakefield & Blodgett, 1999); thus, evaluating service quality is more difficult than evaluating product quality.

Moreover, previous studies have recognized service quality in different service settings. SERVQUAL was one of the first service quality models, which was proposed by Parasuraman et al. (1985). Initially, the proposed model had 10 dimensions, but then it was reduced to five dimensions, which are reliability, tangibles, responsiveness, empathy, and assurance. The five dimensions of SERVQUAL were identified as core components and were used in different contexts (Yuen & Van Thai, 2015). For example, Butt and de Run (2010) applied the model to evaluate private health service quality; Abari et al. (2011) evaluated the quality of educational services; Saleh and Ryan (1) analyzed service quality in the hospitality industry.

However, some scholars argue the application of the SERVQUAL model and its dimensions in all contexts (Gilmore, 2003). For instance, in the context of the banking industry, Ali and Raza (2017) proposed six dimensions of SERVQUAL, such as compliance, assurance, reliability, tangibles, empathy, and responsiveness, to evaluate customer satisfaction among the customers of banks in Pakistan, and the results demonstrated that all six dimensions significantly impact customer satisfaction. Amiri Aghdaie and Faghani (2012) examined the impact of mobile banking services on customer satisfaction, and the results showed that four variables, such as tangibles, reliability, responsiveness, and empathy, have a significant correlation with customer satisfaction. Likewise, Kumar et al. (2010) identified four dimensions, such as tangibility, reliability, competence, and convenience, to scrutinize service quality in banks. The results of the study indicated that there were differences between respondents' expectations and perceptions.

In the context of the banking industry, the proposed model by Zhou et al. (2021) illustrated that system quality, interface design, and security assurance are the customized and combined factors based on the SERVQUAL model, which significantly impact mobile banking service quality and loyalty. According to the research, these constructs have a significant variance; thus, system quality, interface design, security assurance, service quality, and loyalty were selected to explain the adoption and use behavior of mobile banking apps. Based on the discussions above, this study investigated the customized SERVQUAL model as the starting point and expanded the proposed model with an additional variable considered in the prior studies

in the mobile banking context – loyalty, to evaluate the adoption and use behavior of mobile banking applications in Mongolia.

## 2.2. Mobile Banking System Quality

System quality can be defined as the degree of connectivity and/or availability of a website or mobile portal (Choi et al., 2008). System quality is related to the performance of the mobile application; this can include device compatibility with an app, reliable and smooth operations, app response time, and availability of online customer services, such as chatbots. Scholars indicate that the system quality of mobile apps is a key quality component that measures the failures of an application (Wimalasooriya et al., 2021). Failures of mobile apps can lead users to feel frustrated and move to alternative products and services (El Zarif et al., 2020). Previous studies on mobile service quality pinpoint the significant importance of system quality (Huang et al., 2015; Jun & Palacios, 2016). Hence, based on the strong evidence from prior studies, the following hypothesis is constructed:

***H1:*** *Mobile banking system quality has a positive effect on service quality.*

## 2.3. Mobile Banking Interface Design

Interface design allows consumers to directly engage with the device and service or product (Miraz et al., 2021). Therefore, complicated app interfaces or constant changes in app interface designs can negatively affect this engagement. In the context of mobile banking, interface design refers to the app interface layout and ease of use, as well as its structure and navigation functions (Zhou et al., 2021). Interface design is important for both banks and consumers. Prior literature recognizes the importance of interface design on customer intentions (Patel et al., 2020). In this respect, interface design has a direct influence on perceived enjoyment, which has a positive impact on adoption when using mobile apps. Based on this discussion, it leads to the following hypothesis:

***H2:*** *Mobile banking interface design has a positive effect on service quality.*

## 2.4. Mobile Banking Security Assurance

Consumers have a security vulnerability concern with mobile banking apps regarding the security that a person may possess their information and control over their bank account (Harris et al., 2016). Previous literature mentions that security assurance is one of the strongest constructs of adoption and use behavior among mobile app users (Balapour et al., 2020; Amin & Ramayah, 2010). In the context of mobile banking, security assurance refers to the belief that bank consumers' privacy will be protected if they avail of mobile banking services (Hanif & Lallie, 2021). Furthermore, in the study by Gu et al. (2009), there is strong evidence that security assurance is the antecedent of trust among customers, which can lead to increased adoption of mobile banking. Accordingly, this research proposes the following hypothesis:

***H3:*** *Mobile banking security assurance has a positive effect on service quality.*

## 2.5. Service Quality

Service quality is a critical asset that banks must manage to stay afloat and obtain a competitive advantage. Nowadays, many banks have shifted their attention to providing exceptional service to attract and retain loyal customers. Existing literature emphasizes the importance of service quality on customer loyalty. For instance, the study by Bloemer et al. (1998) suggested the direct influence of service quality on loyalty. Likewise, Yen and Lu (2008) pinpointed that if customers are satisfied with the service, they are more likely to become loyal customers. In addition, previous studies emphasize that customers who experience positive service quality are likely to adopt online services (Lee et al., 2011). In other words, when bank clients perceive high-quality service, the positive experience strengthens their confidence in the bank's capability. Therefore, it leads to the following hypotheses:

***H4:*** *Service quality has a positive effect on loyalty intention.*

***H5:*** *Service quality has a positive effect on the behavioral intention to use mobile banking technologies.*

## 2.6. Loyalty

According to Gremler and Brown (1996), loyalty refers to the "degree to which a customer exhibits repeat purchasing behavior from a service provider." Loyalty reflects a consumer's satisfaction with the service he or she receives from a company. Scholars state that loyalty has a positive impact on purchase intention (Malik et al., 2013; Hennig-Thurau et al., 2002). Moreover, previous studies (Souiden et al., 2016; Nguyen et al., 2020) emphasize that once there is confidence established in the memory of consumers, it may create overall positive evaluations of products and services. Thus, if bank users have confidence in the operation of a bank, they are more likely to adopt mobile banking services. Based on this evidence, a hypothesis is proposed as:

***H6:*** *Loyalty has a positive impact on the behavioral intention to use mobile banking apps.*

### 2.7. Intention to Use

Extensive studies have emphasized that intention is one of the strongest predictors of usage (Venkatesh et al., 2012). This is consistent with previous studies (Baptista & Oliveira, 2015; Thusi & Maduku, 2020; Sang, 2021), where results have shown that intention to use is a reliable determinant of actual technology use behavior. Therefore, this leads to the development of the following hypothesis:

***H7:*** *Intention to use positively influences the use behavior of mobile banking services.*

The conceptual framework of this study is depicted in Figure 1.

## 3. Methodology

A quantitative approach was employed in this study to provide an empirical result explaining statistical insights. An online survey was used as an instrumental tool. Likewise, in previous studies, surveys were used to scrutinize the adoption and use behavior of new technologies in different contexts, such as online shopping (Erjavec & Manfreda, 2022), mobile payments (Al-Saedi et al., 2020), electronic document management systems (Ayaz & Yanartaş, 2020). The survey questionnaire consisted of demographic questions and questions to evaluate measurement items of the selected constructs based on prior investigations. A five-point Likert scale was used to measure a 22-item questionnaire, where 1 = strongly disagree and 5 = strongly agree.

Measurement item statements for system quality were adopted from McKnight et al. (2002a & 2002b). Interface design items were adopted from Bharati and Chaudhury (2004), Schierz et al. (2010), security assurance items were adopted from Luarn and Lin (2005). Five indicators of service quality in the context of mobile banking were adopted from Cronin et al. (2000), McDougall and Levesque (2000), Petrick and Backman (2002), and Shankar et al. (2020). Measurement items for loyalty were adopted from Arcand et al. (2017), Lee and Chung (2009), and Baabdullah et al. (2019). Intention to use and use behavior measurement items were adopted from Ajzen and Fishbein (1975) and Bhattacherjee (2001), respectively. The research measurement items are presented in Table 1. Before the survey distribution, a pilot study was conducted on a sample of 36 Mongolian students who owned a bank account and smartphones; the results showed that the pilot study participants clearly understood the questions and measurement items.

Data was collected in December 2021, and it took approximately two weeks. A total of 253 survey responses were collected; after screening out incomplete responses, only 209 responses were valid. A sample consisting of 209 responses was used for data analysis. Table 2 represents the demographic profile of respondents. The results indicate that 150 respondents were female (71.8%), and 59 respondents were male (28.2%) students. Respondents ranged in age from 20 to 22 years old (51.7%), 17 to 19 years old (34.9%), 23–25 years old (7.2%), and over 25 years old (6.2%). Furthermore, the results show that most of the respondents (71.3%) had more than six months of experience using mobile banking services. Finally, more than half (55%) of the respondents subscribed to Khan Bank, 29.7% of respondents subscribed to Golomt Bank, 9.1% of respondents subscribed to the Trade & Development Bank of Mongolia, 4.8% of respondents subscribed to XacBank, 0.5% of respondents subscribed to Arig Bank, and 1% answered "Other."

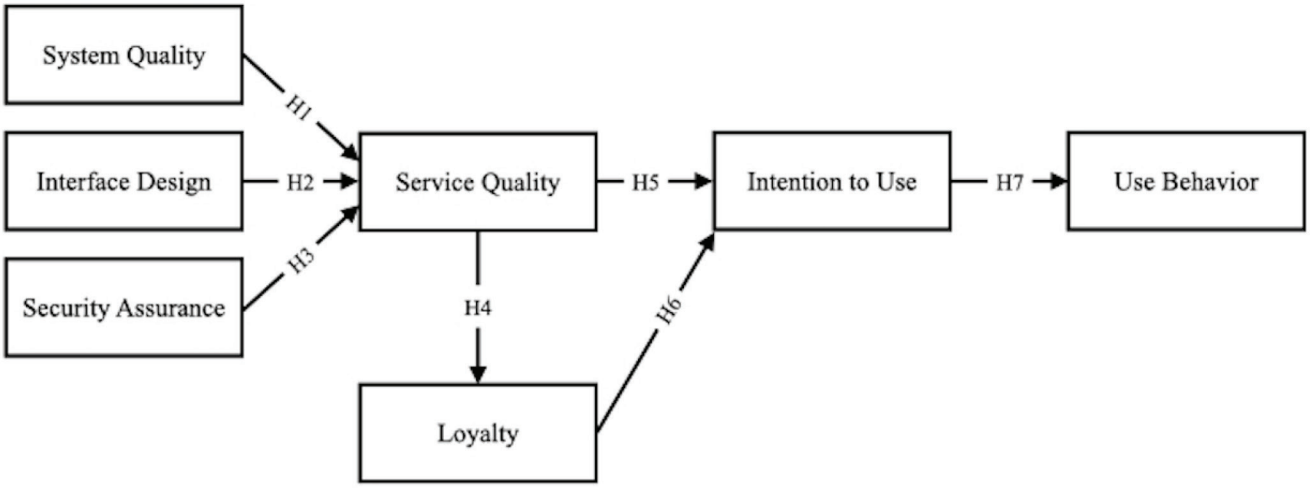


**Figure 1:** Proposed Research Model

**Table 1:** Service Quality and Loyalty Measurement Items Impacting Adoption and Use of Mobile Banking Services

| Construct | ID | Measurement | Source |
|---|---|---|---|
| Mobile Banking System Quality (SysQual) | SysQual1 | Mobile banking is of good compatibility, stable and smooth operation. | McKnight et al. (2002a & 2002b) |
| | SysQual2 | The mobile banking response speed is fast. | |
| | SysQual3 | Online customer service is professional, timely, and effective in solving problems. | |
| Mobile Banking Interface Design (InterDes) | InterDes1 | It is easy to use mobile banking app. | Bharati and Chaudhury (2004); Schierz et al. (2010) |
| | InterDes2 | The interface design of the mobile banking app is of good appearance. | |
| | InterDes3 | The navigation design of the mobile banking app allows us to easily find out various functions. | |
| Mobile Banking Security Assurance (SecAssur) | SecAssur1 | Mobile banking is of high security, which can ensure the security of accounts and funds. | Luarn and Lin (2005) |
| | SecAssur2 | The transaction process and data are transparent and traceable. | |
| Mobile Banking Service Quality (SerQual) | SerQual1 | Mobile banking functions can fully meet the needs of daily life. | Cronin et al. (2000), McDougall and Levesque (2000), Petrick and Backman (2002), and Shankar et al. (2020) |
| | SerQual2 | I am satisfied with the inquiry service of mobile banking. | |
| | SerQual3 | I am satisfied with the diversity of services of mobile banking. | |
| | SerQual4 | The service price of mobile banking applications is rational. | |
| | SerQual5 | I am satisfied with the overall mobile banking service. | |
| Loyalty (Loy) | Loy1 | The bank improves the service experience of mobile banking through service innovation. | Arcand et al. (2017), Lee and Chung (2009), and Baabdullah et al. (2019) |
| | Loy2 | The innovative service makes customers willing to use and recommend to others. | |
| | Loy3 | There are good coordination and cooperation between the mobile banking and offline branches. | |
| Intention to Use (IU) | IU1 | I intend to use m-banking in the future. | Ajzen and Fishbein (1975) |
| | IU2 | I expect that I will use m-banking in the future. | |
| | IU3 | I plan to use m-banking applications in the future. | |
| Use Behavior (UB) | UB1 | I will continue to avail services over them-banking platform. | Bhattacherjee (2001) |
| | UB2 | I prefer to use m-banking for availing of banking services. | |
| | UB3 | I will use m-banking more often, availing banking services. | |

## 4. Results and Discussion

### 4.1. Reliability Test

The latest SmartPLS software is used to conduct the analysis. Before hypothesis testing, confirmatory factor analysis was examined. The model fit was confirmed by the standardized root mean square residual (SRMR = 0.057); the literature suggests that the acceptable range of SRMR should be less than 0.08 (Henseler et al., 2014). Later, measurement constructs were analyzed by considering reliability, convergent validity, and discriminant validity. Table 3 demonstrates that all standardized factor loadings are larger than 0.7, with 0.706 (SerQual4) being the lowest (Hair et al., 2010).

Cronbach's alpha determines internal consistency and is considered an accurate estimate of reliability. According to the results, Cronbach's alpha of each construct is above the recommended threshold of 0.7, with 0.777 (mobile banking

**Table 2:** Demographic Information

| Variables | Level | *N* (*N* = 209) | Percentage (%) |
|---|---|---|---|
| Gender | Female | 150 | 71.8 |
| | Male | 59 | 28.2 |
| Age | 17–19 | 73 | 34.9 |
| | 20–22 | 108 | 51.7 |
| | 23–25 | 15 | 7.2 |
| | Above 25 | 13 | 6.2 |
| School Year | 1-year (Undergraduate) | 51 | 24.4 |
| | 2-year (Undergraduate) | 43 | 20.6 |
| | 3-year (Undergraduate) | 45 | 21.5 |
| | 4-year (Undergraduate) | 70 | 33.5 |
| Experience duration of using a mobile banking app | 1–3 months | 33 | 15.8 |
| | 4–6 months | 27 | 12.9 |
| | More than 6 months | 149 | 71.3 |
| Bank Subscription | Arig Bank | 1 | 0.5 |
| | Golomt Bank | 62 | 29.7 |
| | Khan Bank | 115 | 55.0 |
| | TDB | 19 | 9.1 |
| | XacBank | 10 | 4.8 |
| | Other | 2 | 1.0 |

system quality) being the lowest (Kline, 1999). Likewise, the composite reliability (CR) of each construct exceeds the suggested value of 0.70 (Hair et al., 2010). The average variance extracted (AVE) values are greater than 0.5 for each construct, having 0.692 as the lowest (Hair et al., 2010). Lastly, the reliability test indicates that all constructs will be used for analysis in the conceptual model of the study.

## 4.2. Hypothesis Testing

The bootstrapping technique was used for hypothesis testing. Mobile banking system quality ($\beta$ = 0.435, $p < 0.001$), interface design ($\beta = 0.161$, $p < 0.05$), and security assurance ($\beta = 0.376$, $p < 0.001$) all have a significant positive effect on mobile banking app adoption. Hence, H1, H2, and H3 are accepted. Following that, service quality ($\beta$ = 0.800, $p < 0.001$) has a positive and significant effect on loyalty, supporting H4. Furthermore, service quality ($\beta$ = 0.354, $p < 0.001$) has a significant and positive effect on intent to use mobile banking apps. Thus, H5 is supported. Similarly, loyalty ($\beta$ = 0.323, $p < 0.001$) has a positive and significant influence on intention to use, lending support to H6. Finally, mobile banking app adoption ($\beta$ = 0.852, $p < 0.001$) has a strong and positive impact on user behavior, resulting in H7 acceptance. Based on these results, all hypotheses were accepted. Table 4 presents the results of hypothesis testing.

## 4.3. Discussion

This research scrutinized service quality and loyalty as the key factors contributing to the adoption intention and use behavior of mobile banking services. Today, in a fast-changing economic environment, service quality is a crucial asset that banks use to gain a competitive advantage to outperform their competitors. Therefore, in the first place, one attempted to gain a deeper understanding of service quality in the context of mobile banking. The results of this research suggest that there are three factors that explain the quality of mobile banking service: system quality, interface design, and security assurance. Moreover, service quality predicts customer loyalty. As shown in Figure 1, adoption intention is determined by service quality and loyalty, which have a strong effect on the user behavior. The detailed results of the hypothesis analysis are explicated as.

The results of this study illustrate that mobile system quality (H1) is one of the strongest components of service quality, thus highlighting the importance of system quality for overall service quality measurement. The result is consistent with previous literature (Gorla et al., 2010). Likewise, interface design (H2) is a strong determinant of service quality. This finding is in line with the study by Everard and Galleta (2005), where scholars emphasize that good interface design forms trust among customers and

**Table 3:** Measurement Model Convergent and Internal Consistency Test

| Variables | Indicator | Mean | SD | Loading (>0.7) | Cronbach Alpha (>0.6) | CR (>0.7) | AVE (>0.5) |
|---|---|---|---|---|---|---|---|
| Mobile Banking System Quality | SysQual1 | 3.806 | 0.911 | 0.850 | 0.777 | 0.871 | 0.692 |
| | SysQual2 | 3.763 | 1.007 | 0.830 | | | |
| | SysQual3 | 3.555 | 1.044 | 0.814 | | | |
| Mobile Banking Interface Design | InterDes1 | 4.066 | 0.962 | 0.840 | 0.843 | 0.905 | 0.761 |
| | InterDes2 | 3.829 | 0.913 | 0.879 | | | |
| | InterDes3 | 3.777 | 0.909 | 0.896 | | | |
| Mobile Banking Security Assurance | SecAssur1 | 3.611 | 0.988 | 0.916 | 0.821 | 0.918 | 0.848 |
| | SecAssur2 | 3.773 | 0.885 | 0.926 | | | |
| Mobile Banking Service Quality | SerQual1 | 3.773 | 0.931 | 0.810 | 0.879 | 0.912 | 0.677 |
| | SerQual2 | 3.749 | 0.987 | 0.870 | | | |
| | SerQual3 | 3.773 | 0.931 | 0.850 | | | |
| | SerQual4 | 3.540 | 1.027 | 0.706 | | | |
| | SerQual5 | 3.701 | 1.003 | 0.867 | | | |
| Loyalty | Loy1 | 3.725 | 0.887 | 0.855 | 0.850 | 0.909 | 0.769 |
| | Loy2 | 3.711 | 0.972 | 0.886 | | | |
| | Loy3 | 3.678 | 0.919 | 0.889 | | | |
| Intention to Use (IU) | IU1 | 4.057 | 0.962 | 0.889 | 0.894 | 0.934 | 0.825 |
| | IU2 | 4.052 | 0.920 | 0.914 | | | |
| | IU3 | 4.038 | 0.933 | 0.921 | | | |
| Use Behavior (UB) | UB1 | 4.005 | 0.931 | 0.888 | 0.874 | 0.922 | 0.799 |
| | UB2 | 3.957 | 0.990 | 0.901 | | | |
| | UB3 | 3.957 | 0.945 | 0.892 | | | |

Note: The model fit is indicated by SRMR = 0.057 (Henseler et al., 2014).

**Table 4:** Hypothesis Testing

| Hypothesis | Relationship | Path Coefficient ($\beta$) | Std Error | *t*-value | *P* | Result |
|---|---|---|---|---|---|---|
| H1 | System Quality → Service Quality | 0.435 | 0.079 | 5.527*** | 0.000 | Accepted |
| H2 | Interface Design → Service Quality | 0.161 | 0.072 | 2.238* | 0.026 | Accepted |
| H3 | Security Assurance → Service Quality | 0.376 | 0.058 | 6.482*** | 0.000 | Accepted |
| H4 | Service Quality → Loyalty | 0.800 | 0.033 | 24.320*** | 0.000 | Accepted |
| H5 | Service Quality → Intention to Use | 0.354 | 0.089 | 3.953*** | 0.000 | Accepted |
| H6 | Loyalty → Intention to Use | 0.323 | 0.090 | 3.580*** | 0.000 | Accepted |
| H7 | Intention to Use → Use Behavior | 0.852 | 0.026 | 33.298*** | 0.000 | Accepted |

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Significant at the level 0.05 level.

creates a likelihood of purchase intention. Interface design strongly influences the perception of quality which can be stressed that it is crucial for banks to maintain high standards for their mobile banking apps. Security assurance (H3) is another significant determinant of mobile banking service quality. By definition, electronic banking refers to providing clients access to banking services through secure mediators without a physical presence (Li et al., 2021). Reasonably, this study is consistent with prior studies and indicates that security assurance remains a critical concern for internet banking users due to the possibility of the threat of hackers or data leakage (Merhi et al., 2019).

The findings display that service quality is a predictor of loyalty (H4). The research results are in accordance with other studies (Bloemer et al., 1998; Kheng et al., 2010), whereby scholars revealed the positive impact of service quality on customer loyalty. Clearly, if consumers experience good customer service, they are more likely to become loyal customers. Next, the study indicates that mobile banking service quality (H5) has a positive and significant impact on the adoption of mobile banking services. By definition, better service quality can lead to increased benefits for companies, such as a greater number of customers, possible attraction of new customers through positive word of mouth, and increased use rate among existing customers (Danaher & Rust, 1996). However, this study implicates that improved service quality can lead to greater adoption of mobile banking services, which is consistent with previous studies (Rahi & Ghani, 2019).

This research provides an indication of the significant influence of loyalty on the intention to use mobile banking services. Existing literature is consistent with this finding (Malik et al., 2013; Anderson et al., 2014). This implies that when customers are loyal to banks, they are more likely to adapt to their services, including mobile banking. Finally, intention to use has a significant and positive impact on user behavior; in fact, prior studies have found that technology adoption intention is the strongest predictor of use behavior (Venkatesh et al., 2022).

## 5. Conclusion and Implications

The research offers both theoretical and managerial implications. All of the hypotheses are accordant with prior literature and contribute to existing knowledge. Theoretically, it contributes to the literature by proposing adapted factors (system quality, interface design, and security assurance) that impact service quality in the context of mobile banking. These three factors interpret 78.5% of the variance in mobile banking service quality, which is considered to be of robust predictive power. Additionally, it is one of the pioneer studies on the impact of service quality on the loyalty of bank clients in Mongolia. Moreover, this study is one of the first to pore over the impact of loyalty on technology adoption intentions. Previous studies mainly measured the impact of adoption intention or purchase intention on loyalty (Kumar et al., 2018; Xu et al., 2015) or proposed loyalty and adoption intention as two separate dependent variables (Rahi et al., 2017). Finally, the findings confirm the strong predictive power of the intention to use in relation to user behavior by 72.6%.

This research also has practical implications for local or international banks and financial institutions in Mongolia that seek to retain current mobile banking users as well as attract new customers. For instance, decision-makers or marketers of Mongolian banks need to consider system quality, interface design, and security concerns as key successors to building perceived security quality. Firstly, well-developed mobile systems are prerequisites for service quality. Arguably, a system that is not well constructed is more likely to cause occasional system errors and crashes, which will be adverse to the bank's reputation. Thus, decision-makers of banks need to ensure that mobile banking apps maintain good compatibility, have stable operations, fast speed, and timely problem-solving. Following this, findings reveal that young mobile banking service users are significantly influenced by interface design. Hence, app developers need to ensure that mobile banking apps are based on customer needs by considering the perceived ease of use of banking services, good aesthetics, and easy navigation. Lastly, the results indicate that service quality is impacted by security assurance. In other words, bank clients will not be satisfied if they feel insecure about the competence of the service provider. Therefore, decision-makers need to continuously ensure that apps are of high security.

Moreover, study results show that service quality positively impacts customer loyalty and that service quality is a predictor of mobile banking adoption intention. This means that if customers are satisfied with the service quality offering, then they are more likely to become loyal customers and adopt mobile banking services. Decision-makers at banks, therefore, can encourage ways to increase customer satisfaction by seeking out customer feedback about the features and functions of mobile banking apps, supporting the information of services available, and implementing the best communication strategies. This can aid in strategizing and building customer loyalty among new or existing clients and encouraging them to avail themselves of mobile banking services. Subsequently, loyalty has an influencing capacity to encourage mobile banking intention to use. As such, marketers should develop different strategies for loyal customers, such as special reward programs, point systems, discount offers, and the like. Finally, adoption intention is the strongest predictor of user behavior. In other words, if clients intend on adopting mobile banking technologies, then

they are more likely to use them in the future. Henceforth, banks need to develop perseverance strategies among bank customers and promote special benefits that may be of customer interest.

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