

## Determinants of Customer Loyalty: A Case Study of Commercial Bank Customers in Phnom Penh

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### ABSTRACT

*This study aimed to investigate factors influencing customer loyalty in commercial banks in Phnom Penh by extending the conceptual model from previous studies. A quantitative approach was applied to fulfill the research objective, and a conceptual framework was proposed. A questionnaire was designed using Google Forms and Microsoft Forms, focusing on demographic and measurement variables and the study used a 5-point Likert scale to weigh the intensity of the answer in each questionnaire item. The study used both probability and non-probability sampling techniques as data collection methods. A total of 310 customers of commercial banks completed the questionnaire shared via Messenger and Telegram. The results showed that all proposed variables, namely customer satisfaction (SAT), service quality (SQ), bank image (BIM), brand awareness (BAW), and e-word of mouth (eWOM) significantly positive influence on customer loyalty (CL). It was also found that trust (TRU) negatively influences on customer loyalty (CL). This study offered several implications for the management of commercial banks such as improving service quality, paying attention to customers' trust by adopting a long-term customer relationship strategy rather than focusing only on short-term satisfaction, enhancing customer satisfaction, and increasing the positive of bank image, brand awareness, and e-word of mouth.*

**Keywords:** Customer Loyalty, Commercial Bank, PLS-SEM, E-word of Mouth, Brand Awareness, Service Quality, Trust, Brand Image

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## 1. Introduction

Banks are essential in carrying out economic activities (Indarto et al., 2018). From a financial standpoint, banks have facilitated money transfers between individuals, provided funding for various business ventures, and helped create new jobs (Alnaser et al., 2017). Over the past few decades, the banking sector has undergone a drastic change marked by increasingly intense competition and decreased demand for services in the banking industry (Indarto et al., 2018). Customers nowadays do not stick with just one bank because they have accounts with several banks for various needs. In Sri Lanka, post-war developments paved the way for new market entries and the expansion of new branches of existing banks, especially in the country's Northern part, which has been directly affected by war over the past three decades. Due to the recent entry of multiple banks into this market, there is fierce competition worldwide between the established banks and the new ones, with the former concentrating on keeping their current clientele while the latter aims to draw in new ones. As a result, banks have begun to recognize the importance of customer loyalty and how it affects their growth and financial performance. This situation compelled banks to focus more on building a loyal customer base for long-term relationships (Leninkumar, 2017). Additionally, companies spend millions of dollars to attract and retain loyal customers. Building client loyalty has become a crucial strategy for most financial institutions due to the fierce competition and growing globalization of the financial market (Dilham et al., 2018).

Achieving customer loyalty is a key marketing objective, yet cultivating loyalty and benefiting from it continues to be a persistent challenge. Theories suggest that loyalty comprises attitudes and purchase behaviors that benefit one seller over competitors (Watson et al., 2015). The primary goal of marketing initiatives is retaining customers (Dick & Basu, 1994). For example, U.S. firms spend dramatically to build and manage customer loyalty (Watson et al., 2015). Generally, every bank strives to earn profits, grow its business by gradually offering a wider range of products or services, and progressively capture a larger market share. In 2023, the National Bank of Cambodia reported that the total assets of banks and financial institutions grew by 8.6% to KHR 346.7 trillion, or USD 84.3 billion. Of these, 91.8% came from the banking sector, 7.6% from microfinance, and 0.6% from financial leasing. Customer loyalty to bank services and products may contribute to the banking industry's success.

Previous studies have explored various factors affecting customer loyalty, such as ATM service quality, customer satisfaction, and the overall service quality provided by banks. For instance, a study by Doung et al. (2024) proposed research linking service quality,

customer satisfaction, bank image, and trust to customer loyalty in Cambodian commercial banks, using ACLEDA Bank as a case study. This limitation of previous research led to the conduct of this study. Thus, the present study aims to analyze factors influencing customer loyalty through customer satisfaction at commercial banks in Cambodia. The study extends the previous model used by Doung et al. (2024) by integrating two extra variables, e-word of mouth and brand awareness.

Based on the research objective, we aim to analyze factors influencing customer loyalty at commercial banks in Cambodia, but we cannot collect data from the whole country. Therefore, the focus of this study was limited to data collection among commercial bank customers in Phnom Penh only. Furthermore, this study provides valuable insight and knowledge related to customer loyalty toward Cambodian commercial banks, as it could benefit stakeholders, such as decision-makers of commercial banks, students, and researchers interested in this topic.

## 2. Literature Review

### *Overview of customer loyalty*

Customer loyalty was defined by Oliver (1999) as the commitment of consumers to buy specific goods, services, and brands from a company for an extended length of time, regardless of new goods and innovations offered by competitors, and the lack of pressure to switch (Leninkumar, 2017). Comparably, Lam et al. (2004) described customer loyalty as exemplified by a service provider's repeated use and referrals to other clients. Furthermore, Leninkumar (2017) defined customer loyalty as the purchasers' desire to keep doing business with the company by making repeat purchases (Dick & Basu, 1994; Fornell, 1992).

As reported by Budianto (2019), Griffin (2000) stated that there are three categories of customer loyalty levels. Suspect encompasses all potential customers who might purchase corporate goods even if they are unaware of the business or the goods it sells but have faith in the brand. Prospects are those who need a product and can get it. They already know about the company and the products it offers. A disqualified prospect "is a prospect who knows the existence of a company's product but does not 'have a need' for the product or does not have the purchasing power to get it" (p. 35). According to Griffin (2000, as cited in Budianto, 2019) went on to list the following requirements for devoted clients: (1) recurring purchases (buybacks); (2) retention, in which the client purchases goods only from the business; (3) related sales of services, in which the client wishes to use the same goods in the future; and (4) referrals or refers

to others, in which the client suggests that others use the goods. One definition of customer loyalty is the desire of a customer to have a long-term relationship with a service or product supplier (Juwaini et al., 2022). A company's capacity to generate long-term value for customers and sustain it influences revenue stability (Siagian et al., 2022).

### *Theoretical background of customer loyalty*

Many studies have been conducted to investigate the factors influencing customer loyalty. For instance, Doung et al. (2024) defined service quality, customer satisfaction, bank image, and trust as the independent variables. The theoretical framework of their research had four indicators, three of which, namely service quality, customer satisfaction, and bank image, were adapted from Osman et al. (2015), and another variable, trust, was adapted from Yee and Faziharudean (2010). Using a quantitative method, Doung et al. (2024) collected data from 203 customers who use only the products and services of ACLEDA Bank Plc. The results of their research showed that all four hypothesis statements were supported, which indicated that all independent variables, such as service quality, customer satisfaction, bank image, and trust, had a positive and significant effect on customer loyalty. To build on this line of research, the current study adopts the four variables examined by Doung et al. (2024) and adds two more variables, namely e-word of mouth and brand awareness, which were also found to be influencing factors on customer loyalty (Haque et al., 2018; Jahroh & Saptono, 2023). Moreover, this study also aims to determine the influence of service quality and trust on customer loyalty through customer satisfaction (Ashiq & Hussain, 2024).

### *Hypothesis development*

#### **Service quality**

Consumers consistently seek excellent quality, affordable costs, prompt delivery, and first-rate assistance (Budianto, 2019). In addition to offering high-quality products, banks should be eager to give exceptional customer service to meet the expectations of their clients and grow the number of people they routinely serve (Alnaser et al., 2017). Good service will attract potential customers and retain existing ones (Darmawan et al., 2017). According to Caruana (2000), the research by Parasuraman et al. (1985) has sparked great interest in service quality among practitioners and researchers over the years. Five dimensions—tangible, reliable, responsive, assured, and empathic—help to describe service quality.

- Tangibles are things that can be seen, felt, and have a tangible presence. In the context of service quality, tangibles refer to information and communications technology (ICT) equipment, physical facilities and their appearance (ambiance, lighting, air conditioning, seating arrangement), and last but not least, the services providing personnel of the organization. Organizations use these tangibles in different combinations to provide services to clients, who assess the usefulness and quality of these tangibles (Alnaser et al., 2017).
- Reliability is the capacity of a service provider to precisely and reliably provide the promised services. Consumers seek reliable services that they can depend on (Alnaser et al., 2017).
- Responsiveness is a sense of responsiveness that develops when the bank offers services to the customer's needs. Customers receiving proper and timely solutions to their problems over time led to the image of being responsive (Zia, 2022).
- Assurance is derived from the workforce's expertise, politeness, and capacity to inspire customers' faith and confidence (Alnaser et al., 2017).
- Empathy is the ability to care for clients by giving them individualized attention. It entails listening to their issues and skillfully responding to their requests and worries (Alnaser et al., 2017).

Service quality is one of the key service factors contributing to customers' satisfaction judgments (Cronin & Taylor, 1992; Ruyter et al., 1997; Spreng & Mackoy, 1996). As reported by Caruana (2000), Bloemer and Poiesz (1989) argued that "satisfaction can be thought of as an important determinant of brand loyalty," (p. 817), while Selnes (1993) argued that it is satisfaction with a brand that leads to customer loyalty. Thus, customer satisfaction is regarded as a mediator in the relationship between service quality and service loyalty, and research has found that service quality acts on service loyalty via customer satisfaction (Caruana, 2000). Two hypotheses are proposed as follows:

- H1a: Service quality significantly influences on customer satisfaction.
- H1b: Service quality significantly influences on customer loyalty.

## Trust

According to Rotter (1967, as cited in Leninkumar, 2017), trust is defined as a person's broad expectation that another person's word may be trusted. According to Morgan and Hunt (1994),

trust is the confidence one party has in another due to the other partner's integrity and dependability. Patrick (2002) noted that customer trust can be defined as the ideas, sentiments, emotions, or actions that arise when clients believe that a supplier will behave in their best interests even when they lose power. The trust between a client and a service provider increases customer loyalty to that business (Kishada & Wahab, 2013). Furthermore, trust is a stronger emotion than satisfaction and a more significant predictor of loyalty (Leninkumar, 2017; Ranaweera & Prabhu, 2003). Ahamad et al. (2014) highlighted that a customer cannot enter into a loyalty set without the trust of a brand. Customer satisfaction can act as a mediator in the link between trust and service loyalty, and it has been found that trust was to act on service loyalty via customer satisfaction (Sitorus & Yustisia, 2018). Two more hypotheses are, therefore, proposed as follows:

- H2a: Trust significantly influences on customer satisfaction.
- H2b: Trust significantly influences on customer loyalty.

### **Customer satisfaction**

Minarti and Segoro (2014) defined satisfaction as a customer's attitude, evaluation, and emotional reaction following a transaction, which constitutes contentment. According to Oliver (1980, as cited in Darmawan et al., 2017), satisfaction has been defined as the level of emotional reactions to service experience. The first is the transaction-specific evaluation, which centers on a client's emotions toward a particular good or service they have either purchased or intended to purchase. Customer satisfaction is how customers respond to discrepancies between their preconceived notions and the product's performance following use (Indarto et al., 2018). They are satisfied if the organization fulfills their products and service expectations. It is an indication of being pleased with a product or a service (Leninkumar, 2017). According to Alnaser et al. (2017), customer satisfaction indicates how well a company's goods and services correspond to or exceed a customer's expectations. Businesses and market owners mostly use it as a metric to manage and enhance a business through the goods and services provided to the clients (Flavian et al., 2004). It is also regarded as a leading sign for determining a customer's loyalty and repurchase intentions. Many researchers connected between customer satisfaction and customer loyalty (Gupta, 2012; Shahroudi & Naimi, 2014; Upamannu & Sankpal, 2014; and Zhang, 2015), and they found that satisfaction can increase customer loyalty (Indarto et al., 2018). In other words, customer loyalty is considered a straight outcome of customer satisfaction (Leninkumar, 2017). As Arokiasamy (2013) noted, customer loyalty can only be achieved after

consistently meeting customer satisfaction. Customer satisfaction has been found to influence customer loyalty (Alnaser et al., 2017; Arokiasamy, 2013; Doung et al., 2024). Another hypothesis is proposed as follows:

- H3: Customer satisfaction significantly influences on customer loyalty.

### **Bank image**

According to Kotler et al. (2009, as cited in Indarto et al., 2018), image is an important factor in the marketing success of an organization, and it is a combination of beliefs, ideas, and impressions someone holds about an objective formed by continually processing information from various trusted sources. Company image is comprised of multiple dimensions that showcase notable aspects such as location, nature, diverse quality, price, advertising and promotion, sales staff, services rendered, physical qualities of the business, and post-transaction service and satisfaction (Indarto et al., 2018). Companies with a good image or reputation will encourage consumers to buy the products offered, enhance competitiveness, encourage employee morale, and increase customer loyalty (Indarto et al., 2018). According to Keller (2013, as cited in Indarto et al., 2018), brand image is a collection of associations people have with it. Similar findings indicating that brand image affects customer satisfaction and loyalty were also found by Shahroudi and Naimi (2014), Upamannu and Sankpal (2014), and Zhang (2015). According to Kurniawati et al. (2014, as cited in Indarto et al., 2018), brand image positively impacts customer loyalty. As reported in Darmawan et al. (2017), Walters and Paul (1970) stated that corporate image includes a consumer picture of organizational, functional, and merchandise image. Nguyen and Leblanc (2001) also found that corporate image relates positively to customer loyalty. Similar to businesses and products, consumers' perceptions of banks are shaped by their experiences, perceptions, emotions, and understanding of these establishments (Alnaser et al., 2017). Bontis et al. (2007, as cited in Alnaser et al., 2017) showed that banks in Palestine have built a positive image through their products and customer-friendly financial transactions, ensuring that they adhere to religious teachings. Likewise, bank image has been found to positively influence customer loyalty (Alnaser et al., 2017; Darmawan et al., 2017; Doung et al., 2024). Thus, another hypothesis is proposed as follows:

- H4: Bank image significantly influences on customer loyalty.

## **E-word of mouth**

E-word of mouth (eWOM) is a term used to describe online communication created by a person or group of individuals to share both positive and negative viewpoints (Siagian et al., 2022). The information technology and social media make information sharing between individuals and others increasingly massive and even uncontrollable (Singh, 2019). Siagian et al. (2022) noted that social media can be used as social interaction between users to create and choose relationships between individuals and groups. The dissemination of eWOM on social media involves providing electronic reviews of a service or product (Lee et al., 2017). eWOM can spread rapidly in digital formats, has unlimited capacity, and can be accessed repeatedly over time (Ma et al., 2019). It consists of statements made by current and former customers about products or services communicated to other customers or potential customers via the Internet (Mayzlin et al., 2014). As noted by Siagian et al. (2022), a positive experience from consumers in using products or services can arouse interest in other users to provide benefits for the company or online site. Singh (2019) stated that large companies like Facebook, Redbull, and Netflix have succeeded in using electronic word of mouth to get many subscribers. Siagian et al. (2022) also noted that users give reviews by providing adequate ratings according to what is perceived by customers. Online customer loyalty is a combination of users' positive responses to a product and repeatedly using the product via the Internet (Juwaini et al., 2022). Users can make repeated purchases using the products or services provided, and it is recommended that others pay more attention when using them. Overall, eWOM has positively influenced customer loyalty (Al-Adwan et al., 2020; Jahroh & Saptono, 2023). Another hypothesis is, therefore, proposed as follows:

- H5: E-WOM significantly influences on customer loyalty.

## **Brand awareness**

Building brand equity requires raising brand awareness (Bernarto et al., 2020). It speaks to the degree to which a customer can recognize a brand. Additionally, Kotler and Keller (2016) argued that the power of brand knowledge, which enables marketers to gauge consumers' capacity to recognize brands under varied circumstances, is correlated with brand awareness. Further, according to Aaker (2015, as cited in Bernarto et al., 2020), brand awareness affects perceptions, likes, and even consumer behavior. It can impact purchase decisions about brands, ultimately enhancing loyalty (Mathew et al., 2014). Ahmad et al. (2014, as cited in Dilham et al., 2018) stated that brand credibility and brand awareness are

key elements in building brand loyalty, which is equally important for marketers and consumers. Brand awareness creates or reinforces a brand's personality and enhances brand value or equity, which can be leveraged through brand extension (Dilham et al., 2018). According to Karam and Saydam (2015, as cited in Dilham et al., 2018), brand awareness is now a significant factor influencing how consumers view a company. Khan et al. (2016) stated that advertising has a very forceful role in creating awareness among customers which further results in commitment if the customer is satisfied by the quality that the brand gives. According to Lin (2006, as cited in Haque et al., 2018), brand awareness helps build brand equity to influence the development of customer loyalty. Based on this, another hypothesis is proposed as follows:

- H6: Brand awareness significantly influences on customer loyalty.

All of these hypotheses are summarized in the following conceptual model, as shown in Figure 1.

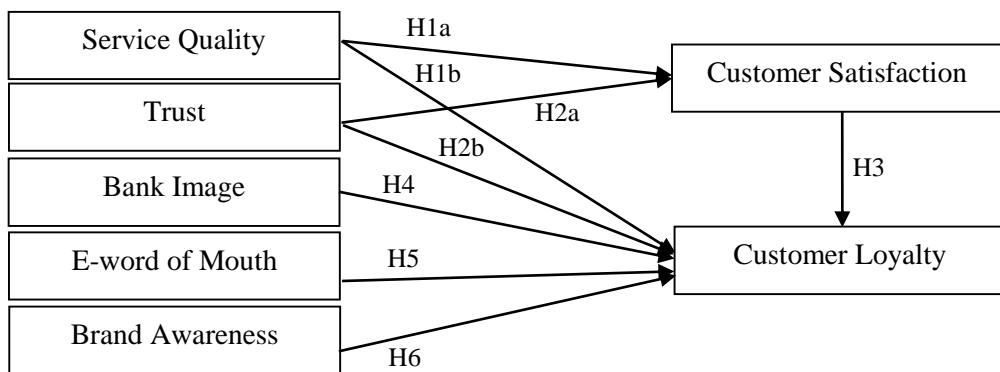


Figure 1: Conceptual model

### 3. Methods

#### *Research design*

This study employed a correlational design, which provided an opportunity to predict scores and explain the relationship among variables (Creswell, 2012). The study used a quantitative method, which involves hypothesis testing, focusing on a group of individuals who had experience using the products or services of Cambodian commercial banks. Firstly, we reviewed the literature to get an in-depth understanding, identified the issues regarding the

relevant topic, and contextualized it to fit the Cambodian context. Later, a logistics plan was developed with the alignment of the research, followed by data collection design, sampling design, and measurement questions. The measurement questions were carefully designed to obtain reliable and valid answers to the research questions. Lastly, the collected data was imported to SPSS and Amos for data analysis, and then we ethically reported the results based on what was found.

#### *Research area and target population*

Regarding the research area, we chose Phnom Penh city to conduct the study because there were different groups of people with various backgrounds. Plus, there were many commercial banks in Phnom Penh, Cambodia. Therefore, this allowed the survey to easily reach potential respondents who are currently customers of commercial banks.

#### *Sample size*

Due to an unknown number of bank customers living in Phnom Penh, the sample size of the study was determined by Cochran's formula (1977). Based on the Cochran's formula, the target respondents chosen for the study was 385. This study specifically targeted samples as customers of commercial banks including students, employees, business owners, and households who had experience of using commercial banks products or services of the commercial banks. However, the data collection reached only 310 target respondents and was used for a practical case of regression analysis in the Partial Least Squares Structural Equation Modeling (PLS-SEM). As reported in Normg et al. (2022), Knofczynski and Mundfrom (2008) recommended a 200 sample size of an excellent prediction level of four predictors variables with a level of squared population multiple correlation of 0.2; additionally, Wolf et al. (2013) stated that the simple two-factor model (with three indicators per factor) requires a minimum sample of 460, 200, and 120 for factor loadings of 0.50, 0.65, and 0.80, respectively in running the PLS-SEM.

#### *Research tool*

This study used a survey questionnaire as a tool for collecting data. The questionnaire was made in Google Forms and Microsoft Forms. It was designed into three sections. The first section aimed to collect personal data such as gender, age, occupation, and experience of using commercial bank products and services. The second section attempted to explore the opinions or experiences of using bank products or services so that the key objectives would be answered. The study used a 5-point Likert scale to weigh the intensity of the answer in each question item, with a scale of 1,

2, 3, 4, and 5, in that order, standing for strongly disagree, disagree, neutral, agree, and strongly agree. Finally, the last section contained an open question, giving respondents opportunities to express their opinions and comments. Measurement constructs in Table 1 were used in the survey questionnaire in this study.

Table 1: Construct measurement of the six variables

Constructs	Items	References
Service Quality	SQ1. All products/services of commercial banks are modern and up-to-date.	Tazreen (2012);
	SQ2. Commercial banks have convenient places where I can sit and wait comfortably.	Yee and Faziharudean (2010)
	SQ3. There is a lot of supporting information and guidelines on how to use the products/services of commercial banks.	
	SQ4. Commercial bank employees are good at handling my problems.	
	SQ5. Commercial bank employees provide me with reliable information.	
	SQ6. I feel secure using the products/services of a commercial bank.	
	SQ7. Commercial bank employees have a quick response to my needs.	
	SQ8. Commercial bank employees are always available to assist with my request.	
	SQ9. Commercial bank employees are willing to answer my questions or concerns.	
	SQ10. Commercial bank employees are polite and gentle to me.	
	SQ11. Commercial bank employees have a strong knowledge of answering my doubts and concerns about their products and services.	
	SQ12 All products/services of commercial banks are error-free.	
	SQ13. Commercial bank employees understand and fulfill my needs.	
	SQ14. Commercial bank employees accept all customers' complaints.	
	SQ15. Commercial bank employees always take care of each customer.	
Trust	TRU1. I trust that commercial banks will not misuse my personal information.	Ashiq and Hussain (2024);
	TRU2. The commercial bank treats me in an honest way in every transaction.	Bail et al. (2004)
	TRU3. I believe that commercial bank provides the service as promised.	
	TRU4. Overall, I have complete trust in commercial banks.	
Customer Satisfaction	SAT1. Based on my experience with commercial banks, I am very satisfied with the quality of the products and services they provide.	Gremler and Gwinner (2000)
	SAT2. My choice to use the commercial bank was a wise one.	
	SAT3. I think I did the right thing when I decided to use commercial bank products and services for my banking needs.	
	SAT4. My overall evaluation of the services provided by commercial banks is very good.	

(to be continued)

Table 1: Construct measurement of the six variables (continued)

Constructs	Items	References
Bank Image	BIM1. I always have a good impression of commercial banks. BIM2. Commercial bank has a better image than its competitors. BIM3. The commercial bank is a prestigious bank in Cambodia. BIM4. The commercial bank is a trust bank in Cambodia.	Yee and Faziharudean (2010)
E-word of Mouth	eWOM1. I will mention commercial banks to others through social networks. eWOM2. I will say positive online about commercial banks. eWOM3. I will provide more positive online information about commercial banks effectively.	Do and Pereira (2023)
Brand Awareness	BAW1. I have no difficulties in imaging commercial banks in my mind. BAW2. I can quickly recall the symbol or logo of a commercial bank.	Francioni et al. (2022)
Customer Loyalty	CL1. I will continue to transact business with commercial banks irrespective of service charges. CL2. I will transact with a commercial bank anytime. CL3. I plan to continue using commercial bank products/services in the future.	Gli et al. (2023)

### *Data collection*

The study used both probability and non-probability sampling techniques as data collection methods. For probability techniques, the study used a random sampling technique of 40 respondents for the pilot test. An accidental sampling technique was used for non-probability techniques. Additionally, this study used the accidental sampling (convenience sampling) technique to select samples from populations that were considerably close to our hands and were customers of commercial banks. The results of these sampling techniques were highly accurate, with a slight margin of error. After survey questionnaires were created in Google Forms and Microsoft Forms, we sent those links to target respondents through social media such as Telegram and Messenger. Thus, the survey questionnaires were completed by 310 respondents.

### *Data analysis method*

After we collected the data, we used SPSS and Amos to perform the analysis. Firstly, we generated a table of frequency and percentages regarding the demographic characteristics of the respondents in the first section of the questionnaire. Then, we statistically described

the confirmatory factor analysis (CFA) to confirm that the used model was fit for the study. After that, we analyzed the convergent validity and composite reliability, discriminant validity of constructs, and level of agreement before and after CFA. Cronbach's coefficient was analyzed to ensure the reliability of measurement items. Last but not least, we ran the correlation analysis and path analysis for hypotheses testing. Thus, the correlation between measuring factors as independent variables and customer loyalty as a dependent variable indicates whether the hypotheses were accepted or rejected.

#### *Reliability test*

To test the questionnaire reliability, a pilot test was conducted with 40 target respondents through Google Forms and Microsoft Forms. All seven constructs were put through a pre-test, and it was illustrated in Table 2 that Cronbach's alpha of seven constructs was more than 0.7, indicating that the constructed variables and factors were reliable enough to be used in this research (Nunnally, 1994).

Table 2: Reliability of the Questionnaire Items

Nº	Item	Number of items	Cronbach Alpha (n = 40)	Cronbach Alpha (n = 310)
1	Service Quality	15	0.932	0.876
2	Trust	4	0.940	0.796
3	Customer Satisfaction	4	0.917	0.902
4	Bank Image	4	0.886	0.874
5	E-word of Mouth	3	0.869	0.899
6	Brand Awareness	2	0.804	0.779
7	Customer Loyalty	3	0.815	0.859

#### *Ethical considerations*

Before taking action in the study, it was necessary to think of aspects concerning ethics, and we had to conform to ethical behavior, such as keeping confidential, providing credit, and ensuring freedom and integrity. Firstly, we had to keep the respondents' responses confidential by using the principle of anonymity for each question. Secondly, we had to provide credit to all works stated in this study by using in-text citations and the reference list. Thirdly, we had to open our minds to the fact that participation is voluntary and that participants have complete freedom to withdraw from the study at any time without any consequences. Lastly, we had to maintain integrity in interpreting and reporting all the data in this study without fabricating the information to serve our and someone else's satisfaction.

## 4. Results

### *Demographics factors*

Among the 310 respondents, 193 were female, accounting for 62.3%, and 117 were male, representing about 37.7%. The responses indicated that the participants from age 16-25 years old were the highest (67.1%). The responses also showed that 51% of the sample were company employees; and 40.3% were students. Regarding products/services adoption, most participants used mobile banking apps (26.2%) and they had experience with the products/services of ACLEDA Bank Plc. (46.3%).

Table 3: Demographic information of the respondents

Item	Categories (N = 310)	Frequency	Percentage
Gender	Female	193	62.3
	Male	117	37.7
Age	16-25 years old	208	67.1
	26-35 years old	52	16.8
	36-45 years old	39	12.6
	Over 45 years old	11	3.5
Occupational Status	Students	125	40.3
	Company Employee	158	51.0
	Government Officer	14	4.5
	Business Owner	4	1.3
	Self-employed/Freelance	7	2.3
	Currently Unemployed	2	0.6
Products/Service	Mobile Banking App	235	26.2
Adoption (multiple answers)	ATM	220	24.5
	Loan	67	7.5
	Deposit	100	11.1
	Money Transfer	123	13.7
	Debit Card/Credit Card	112	12.5
	Virtual Teller	30	3.3
	Others	11	1.2
Experience with Commercial Banks (multiple answers)	ACLEDA Bank Plc.	301	46.3
	Advanced Bank of Asia Limited (ABA)	162	24.9
	ARDB Bank	3	0.5
	Vattanac Bank	19	2.9
	Wing Bank (Cambodia) Plc.	54	8.3

(to be continued)

Table 3: Demographic information of the respondents (continued)

Item	Categories (N = 310)	Frequency	Percentage
Experience with Commercial Banks (multiple answers)	Woori Bank (Cambodia) Plc.	12	1.8
	RHB (Cambodia) Plc.	7	1.1
	SBI Ly Hour Bank Plc.	5	0.8
	Sathapana Bank Plc.	15	2.3
	Phillip Bank Plc.	13	2.0
	KB Prasac Bank Plc.	17	2.6
	Maybank (Cambodia) Plc.	13	2.0
	J Trust Royal Bank Plc.	21	3.2
	Union Commercial Bank Plc. (UCB)	8	1.2

### Assumption check

#### Normality

Figure 2 shows the Normal P-P (Probability-Probability) Plot of the standardized residuals from a regression analysis. One of the primary presumptions in linear regression is that the residuals (errors) from the regression model are normally distributed. According to Figure 2, the cumulative probability of the observed standardized residuals compared to the expected normal distribution is represented by dots (data points). At the same time, the straight diagonal line shows what would be expected if the residuals were perfectly normally distributed. The diagonal line in this plot shows a close alignment of the dots. The normality assumption of linear regression meets the requirements since this shows that the residuals are roughly regularly distributed. Although slight variations are common and acceptable, particularly at the tails, the fit of this plot is rather good. The normality assumption remains valid since the P-P plot indicates that the residuals closely approximate a normal distribution.

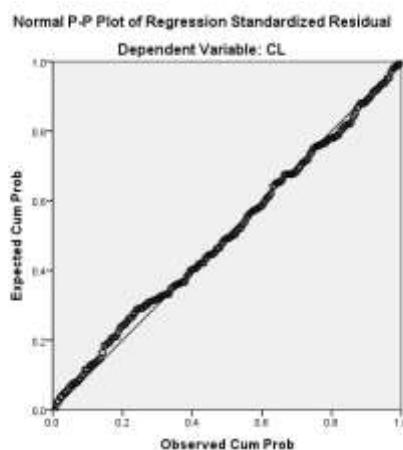


Figure 2: Normal P-P (Probability-Probability) Plot

## Linearity and Homoscedasticity

Figure 3 presents a residual scatterplot showing standardized residuals vs. standardized predicted values, used to check key regression assumptions — mainly linearity and homoscedasticity (constant variance). There seems to be a non-random pattern (potential clustering or faint trend lines) based on a random distribution of points around the horizontal axis (residual = 0), indicating that the linearity assumption may be broken and the relationship may not be linear. Although somewhat heavier in the middle, the spread appears to be relatively stable based on uniform spread (no funnel forms). Although a more random pattern would be preferable, homoscedasticity is generally acceptable because there is no obvious funnel form.

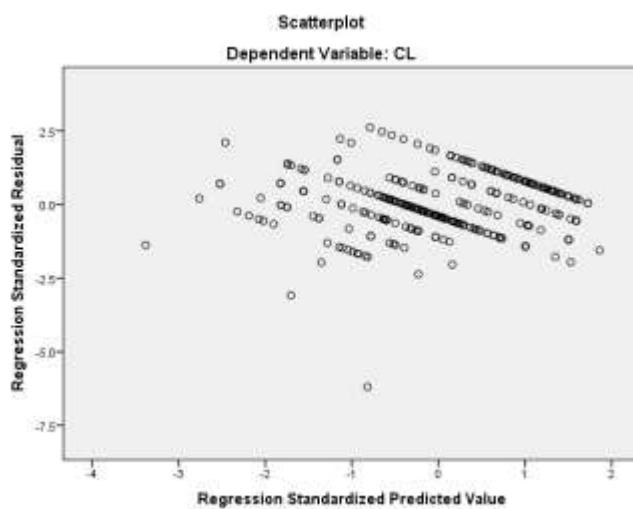


Figure 3: Scatterplot

## Confirmatory Factor Analysis

After running a Confirmatory Factor Analysis (CFA), the study dropped nine indicators from service quality (SQ), two from trust (TRU), one from customer satisfaction (SAT), and one indicator from bank image (BIM) (listed items in Table 4).

Table 4: Summary of dropped items

Variable	Number of Items		Remaining Item
	Before Fit	After Fit	
Service Quality (SQ)	SQ1, SQ2, SQ3, SQ4, SQ5, SQ6, SQ7, SQ8, SQ9, SQ10, SQ11, SQ12, SQ13, SQ14, SQ15	SQ4, SQ5, SQ6, SQ7, SQ9, SQ10	6 items

(to be continued)

Table 4: Summary of dropped items (continued)

Variable	Number of Items		Remaining Item
	Before Fit	After Fit	
Trust (TRU)	TRU1, TRU2, TRU3, TRU4	TRU3, TRU4	2 items
Bank Image (BIM)	BIM1, BIM2, BIM3, BIM4	BIM2, BIM3, BIM4	3 items
E-word of Mouth (eWOM)	eWOM1, eWOM2, eWOM3	eWOM1, eWOM2, eWOM3	3 items
Brand Awareness (BAW)	BAW1, BAW2	BAW1, BAW2	2 items
Customer Satisfaction (SAT)	SAT1, SAT2, SAT3, SAT4	SAT1, SAT2, SAT3	3 items
Customer Loyalty (CL)	CL1, CL2, CL3	CL1, CL2, CL3	3 items

Table 5 illustrated the standard range of fit indices and their acceptable value such as CMIN/DF, RMSEA, NFI, CFI, GFI, AGFI, and TLI.

Table 5: Fit indices and their acceptable thresholds

Fit Measures	Good Fit	Acceptable Fit
CMIN/DF( $\chi^2$ /df)	$0 \leq \chi^2/\text{df} \leq 2$	$2 < \chi^2 \leq 3$
RMSEA	$0 \leq \text{RMSEA} \leq 0.05$	$0.05 < \text{RMSEA} \leq 0.08$
NFI	$0.95 \leq \text{NFI} \leq 1.00$	$0.90 \leq \text{NFI} < 0.95$
CFI	$0.97 \leq \text{CFI} \leq 1.00$	$0.95 \leq \text{CFI} < 0.97$
GFI	$0.95 \leq \text{GFI} \leq 1.00$	$0.90 \leq \text{GFI} < 0.95$
AGFI	$0.90 \leq \text{AGFI} \leq 1.00$	$0.85 \leq \text{AGFI} < 0.90$
TLI	$0.95 \leq \text{TLI} \leq 1.00$	$0.90 \leq \text{TLI} < 0.95$

Adopted from Schermelleh-Engel et al. (2003, as cited in Norg et al., 2022)

Note: CMIN/DF= Chi-square divided by degrees of freedom, RMSEA=Root Mean Square Error of Approximation, NFI=Normed Fit Index, CFI=Comparative Fit Index, GFI=Goodness -of-Fit Index, AGFI=Adjusted Good-of-Fit Index, TLI=Tucker-Lewis Index

CFA confirmed that this conceptual model is a fit in the study of customer loyalty as the fit indices are acceptable, namely CMIN/DF =  $1.834 < 2$  (good fit), RMSEA =  $0.052 < 0.08$  (acceptable fit), NFI =  $0.932 > 0.90$  (acceptable fit), CFI =  $0.968 > 0.95$  (acceptable fit), GFI =  $0.913 > 0.90$  (acceptable fit), AGFI =  $0.879 > 0.85$  (acceptable fit), and TLI =  $0.959 > 0.95$  (good fit) (see Table 6). Additionally, the R square of customer satisfaction (SAT) is 0.582, and the R square of customer loyalty (CL) is 0.704. Thus, the whole model explains the variability of the SAT, around 58.2%, and CL, around 70.4%.

Table 6: Model Fit

Fit Measures	Before Modification	After Modification	Results
CMIN/DF( $\chi^2 / df$ )	2.931	$1.834 < 2$	good fit
RMSEA	0.079	$0.052 < 0.08$	acceptable fit
NFI	0.806	$0.932 > 0.90$	acceptable fit
CFI	0.862	$0.968 > 0.95$	acceptable fit
GFI	0.768	$0.913 > 0.90$	acceptable fit
AGFI	0.729	$0.879 > 0.85$	acceptable fit
TLI	0.848	$0.959 > 0.95$	good fit

### Factor loadings

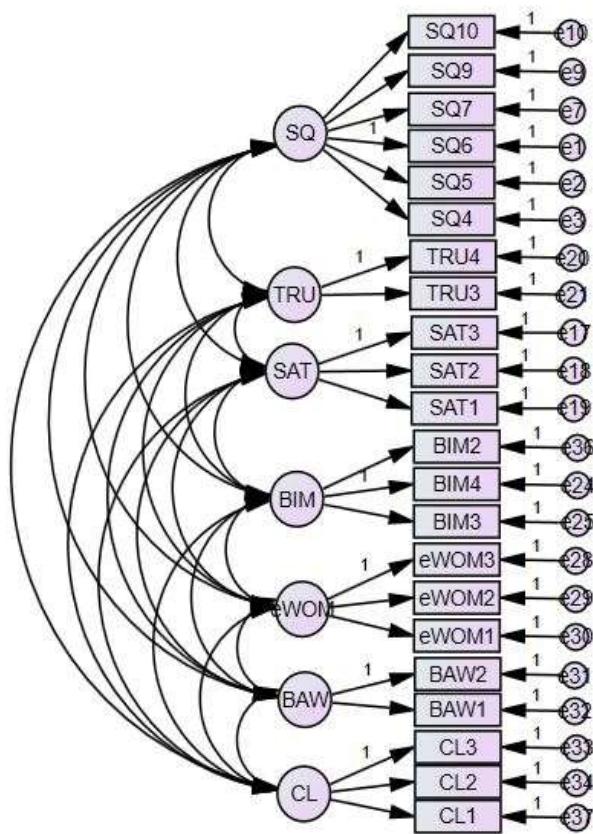


Figure 4: Confirmatory Factor Analysis

Figure 4 shows that the factor loadings of all items were highly adequate, as the standardized regression weights ranged from 0.622 to 0.912, above 0.50 (Hair et al., 2010). Thus, most of the constructs confirmed the convergent validity test, and those factor loadings can be used to estimate construct reliabilities (CR) and average variance extracted (AVE).

### *Convergent validity and composite reliability*

Table 7 illustrates the Convergent Validity and Composite Reliability with all significant loadings (greater than 0.05). Moreover, the Cronbach Alpha of all variables was greater than 0.60, and the average variance extracted (AVE) exceeded 0.50. This result was supported by Lam et al. (2004) who stated that "it was providing support for the convergent validity of the measure for each construct" (p. 303); furthermore, Malhotra (2010, as cited in Phou et al., 2024) emphasized that "As AVE is a pretty conservative measure, experts recommend that the use of CR alone is adequate to conclude convergent validity" (p. 702).

Table 7: Final CFA of all Variables

Variables	Items	Factor loadings	Average Variance Extracted (AVE)	Composite Reliability (CR)
Service Quality	SQ4	0.793	0.546	0.877
	SQ5	0.858		
	SQ6	0.780		
	SQ7	0.637		
	SQ9	0.622		
	SQ10	0.712		
Trust	TRU3	0.813	0.655	0.792
	TRU4	0.806		
Customer Satisfaction	SAT1	0.828	0.760	0.904
	SAT2	0.892		
	SAT3	0.893		
Bank Image	BIM2	0.791	0.700	0.875
	BIM3	0.821		
	BIM4	0.895		
E-word of Mouth	eWOM1	0.793	0.753	0.901
	eWOM2	0.894		
	eWOM3	0.912		
Brand Awareness	BAW1	0.867	0.647	0.784
	BAW2	0.736		
Customer Loyalty	CL1	0.779	0.677	0.862
	CL2	0.814		
	CL3	0.872		

### *Discriminant validity of constructs*

Discriminant validity is a measure of how well a construct can be distinguished from other constructs, and it is done in addition to convergent validity. As discussed by Phou et al. (2024), the Heterotrait-monotrait (HTMT) ratio is currently recommended approach to execute discriminant validity well since it gives the best balance between high detection and low arbitrary violation rates (Voorhees et al., 2016). Table 8 illustrates the HTMT Ratio of all constructs. Rasoolimanesh (2022, as cited in Phou et al., 2024) stated that the HTMT Ratio lower than 0.90 was good and 0.85 was best. Thus, discriminant validity theory is accepted, or multi-collinearity is absent because they were lower than 0.85. In other words, each construct could be considered distinctively from one to another.

Table 8: HTMT Ratio

	CL	eWOM	BIM	SAT	BAW	TRU	SQ
CL							
eWOM	0.469						
BIM	0.569	0.482					
SAT	0.556	0.463	0.625				
BAW	0.498	0.508	0.511	0.481			
TRU	0.443	0.555	0.639	0.505	0.521		
SQ	0.603	0.407	0.621	0.574	0.457	0.544	

### *Level of agreement*

Table 9 shows the seven variables' mean score and standard deviation after performing CFA. As can be seen, the respondents viewed all seven variables as Strongly Agree and Agree, ranging from 3.971 to 4.236. Customer satisfaction (SAT) has the highest mean score of 4.236 with an SD of 0.604, while e-word of mouth (eWOM) has the lowest mean score of 3.971 with an SD of 0.707. Besides, the mean score of BIM is 4.198 with an SD of 0.615, of CL is 4.181 with an SD of 0.643, of SQ is 4.175 with an SD of 0.547, of TRU is 4.129 with an SD of 0.608, and of BAW is 4.092 with SD of 0.667, respectively. This result showed the respondents' reasonable opinion about all variables.

Table 9: Level of Agreement After CFA

No	Variables	Min	Max	Mean	SD	Level of Agreement
1	SQ	2.33	5	4.175	0.547	Agree
2	TRU	2.00	5	4.129	0.608	Agree
3	SAT	2.67	5	4.236	0.604	Strongly Agree
4	BIM	2.33	5	4.198	0.615	Agree
5	eWOM	1.00	5	3.971	0.707	Agree
6	BAW	2.00	5	4.092	0.667	Agree
7	CL	1.00	5	4.181	0.643	Agree

\*Note: Strongly Agree: 4.20-5.00, Agree: 3.40-4.19, Neutral: 2.60-3.39, Disagree: 1.80-2.59, Strongly Disagree: 1.00-1.79 (Armstrong, 1987)

### Cronbach alpha and construct reliabilities

Table 10 shows Kaiser-Meyer-Olkin (KMO), Cronbach's alpha, and composite reliabilities. According to Glen (2016), the KMO Test is a way to check whether the data are good enough for factor analysis, and it measures how much of the variation in the data can be explained by common factors. KMO scores shall range from 0.5 to 1 since a higher KMO score indicates that the data are better suited for factor analysis (Glen, 2016). As can be seen, KMO ranges from 0.500 (TRU & BAW), the lowest, to 0.862 (SQ), the highest. After running CFA, the Cronbach's alpha of all variables ranges from 0.779 for brand awareness to 0.902 for customer satisfaction, which is higher than the 0.70, indicating good internal consistency or reliability (Nunnally, 1994). In addition, the composite reliability or all variables reaches a high-reliability value ranging from 0.784 for brand awareness to 0.904 for customer satisfaction. Thus, each construct has composite reliability, reaching an acceptable value of 0.60.

Table 10: Cronbach's Alpha and Construct Reliabilities

Variable Types	Variable Names	Name of Items	Number of Items	KMO	Cronbach's alpha	CR
Exo1	Service Quality (SQ)	SQ4	6	0.862	0.876	0.877
		SQ5				
		SQ6				
		SQ7				
		SQ9				
		SQ10				
Exo2	Trust (TRU)	TRU3	2	0.500	0.796	0.792
		TRU4				
Exo3	Bank Image (BIM)	BIM2	3	0.732	0.874	0.875
		BIM3				
		BIM4				
Exo4	E-word of Mouth (eWOM)	eWOM1	3	0.730	0.899	0.901
		eWOM2				
		eWOM1				
Exo5	Brand Awareness (BAW)	BAW1	2	0.500	0.779	0.784
		BAW2				
Mediating Variable	Customer Satisfaction (SAT)	SAT1	3	0.748	0.902	0.904
		SAT2				
		SAT3				
Endo	Customer Loyalty (CL)	CL1	3	0.734	0.859	0.862
		CL2				
		CL3				

### Correlation analysis

Correlation analysis was used to test the correlation level and validity between all constructs, which brought seven constructs into testing in this research. The correlation's values range between  $-1$  and  $+1$ , meaning that the closer the number in each variable reaches nearly  $+1$ , the stronger the correlation (Pearson, 1926). Table 11 shows that all variables are significantly correlated at the significant level of 0.01 (2-tailed). The results also showed favorable correlations between variables, with the lowest of 0.492 in service quality towards e-word of mouth and the highest of 0.819 in trust toward bank image.

Table 11: Pearson Correlation Matrix

	CL	eWOM	BIM	SAT	BAW	TRU	SQ
CL	1						
eWOM	0.581**	1					
BIM	0.699**	0.583**	1				
SAT	0.666**	0.538**	0.741**	1			
BAW	0.649**	0.641**	0.659**	0.607**	1		
TRU	0.574**	0.684**	0.819**	0.632**	0.709**	1	
SQ	0.743**	0.492**	0.767**	0.693**	0.599**	0.709**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

### Path analysis

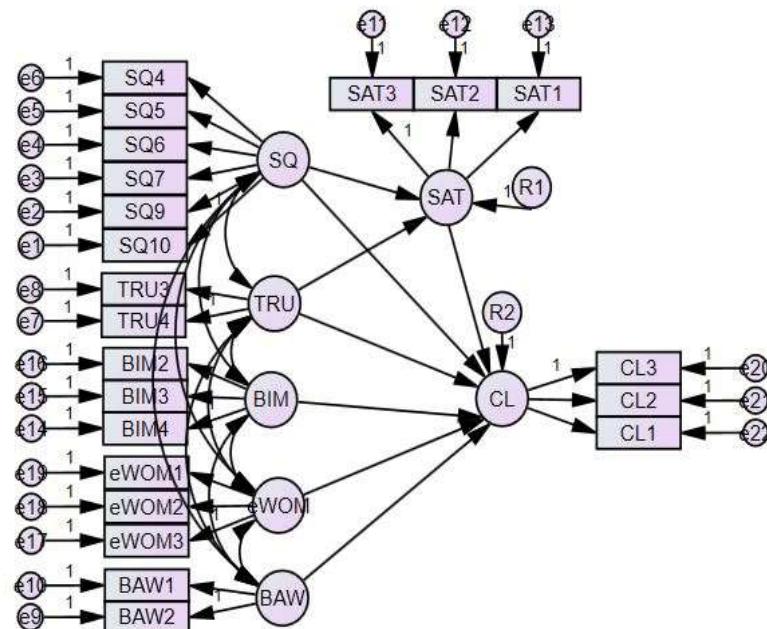


Figure 5: Results Path Analysis

Figure 5 shows the standardized regression weight of path analysis. For Path 1, factors such as service quality (SQ) and trust (TRU) are the predictors of customer satisfaction (SAT). For Path 2, factors such as service quality (SQ), trust (TRU), bank image (BIM), e-word of mouth (eWOM), and brand awareness (BAW) are predictors of customer loyalty (CUS).

The following table (Table 12) shows the result of the regression analysis Path 1. According to Table 12, the result of a regression analysis showed that service quality (SQ) and trust (TRU) significantly positive influence on customer satisfaction (SAT) with a standardized regression weight of SQ ( $\beta = 0.434$ ) at the level significance of 0.000 and standardized regression weight of TRU ( $\beta = 0.387$ ) at the level significance of 0.000.

Table 12: Regression Analysis Path 1

IV	Path	DV	Unstandardized Estimates	Standardized Estimates	S.E.	C.R.	P-value
SQ	→	SAT	0.528	0.434	0.113	4.673	0.000
TRU	→	SAT	0.423	0.387	0.106	3.984	0.000

The following table (Table 13) shows the result of regression analysis Path 2. According to Table 13, the result of regression analysis showed that service quality (SQ), customer satisfaction (SAT), bank image (BIM), e-word of mouth (eWOM), and brand awareness (BAW) significantly positive influence on customer loyalty with standardized regression weight of SQ ( $\beta = 0.465$ ) at the level significance of 0.000, standardized regression weight of SAT ( $\beta = 0.178$ ) at the level significance of 0.021, standardized regression weight of BIM ( $\beta = 0.308$ ) at the level significance of 0.039, standardized regression weight of eWOM ( $\beta = 0.245$ ) at the level significance of 0.003, and standardized regression weight of BAW ( $\beta = 0.242$ ) at the level significance of 0.008; however, trust (TRU) significantly negative influences on customer loyalty with standardized regression weight of TRU ( $\beta = -0.468$ ) at the level significance of 0.020.

Table 13: Regression Analysis Path 2

IV	Path	DV	Unstandardized Estimates	Standardized Estimates	S.E.	C.R.	P-value
SQ	→	CL	0.603	0.465	0.128	4.700	0.000
TRU	→	CL	-0.545	-0.468	0.235	-2.322	0.020
SAT	→	CL	0.191	0.178	0.083	2.300	0.021
BIM	→	CL	0.297	0.308	0.143	2.068	0.039
eWOM	→	CL	0.207	0.245	0.07	2.957	0.003
BAW	→	CL	0.270	0.242	0.102	2.654	0.008

### *Result of hypothesis testing*

Table 14 showcased the result from the tested hypotheses in the path analysis which indicated that eight hypotheses were all supported.

Table 14: Results of Hypothesis Testing

Hypotheses		P Value	Statistical Significance
H1a:	Service quality significantly influences on customer satisfaction.	0.000	Supported
H1b:	Service quality significantly influences on customer loyalty.	0.000	Supported
H2a:	Trust significantly influences on customer satisfaction.	0.000	Supported
H2b:	Trust significantly influences on customer loyalty.	0.020	Supported
H3:	Customer satisfaction significantly influences on customer loyalty.	0.021	Supported
H4:	Brand image significantly influences on customer loyalty.	0.039	Supported
H5:	E-word of mouth significantly influences on customer loyalty.	0.003	Supported
H6:	Brand awareness significantly influences on customer loyalty.	0.008	Supported

### *Discussion*

The results of this study supported H1a, which was consistent with the previous studies of Darmawan et al. (2017), Salehnia et al. (2014), Sitorus and Yustisia (2018), and Zia (2022). It was found that commercial banks should prioritize providing excellent customer service by making sure that customers have a good and safe experience. Providing a consumer experience that is easy to use and responsive is crucial. Additionally, the results of this study also supported H1b, which was aligned with many studies (Alnaser et al., 2017; Ashiq & Hussain, 2024; Budianto, 2019; Darmawan et al., 2017; and Doung et al., 2024). A better quality of service will result in more loyal consumers. However, customer satisfaction is how service quality influences service loyalty.

This study supported H2a, which was aligned with studies by Gul R. (2014) and Sitorus and Yustisia (2018). There is a substantial correlation between satisfaction and trust; some theories

even define satisfaction as a component of trust. Trust is normally recognized as one of the most essential constructs for improving customer loyalty positively. Interestingly, the statistical result of H2b showed that trust significantly negative influences on customer loyalty, which is contrasted with previous studies (Ashiq & Hussain, 2024; Doung et al., 2024; and Sitorus & Yustisia, 2018). However, a study by Afifi and Amini (2021) also found a negative influence between customer trust and customer loyalty with statistical value ( $\beta = -0.468$ ;  $t$ -value = -1.42). It can be explained that when customers trust commercial banks at a higher level, they might also have high expectations as well. When commercial banks can fulfill their demand, the customers are satisfied. However, maintaining this satisfaction requires continuous effort. If the banks fail to sustain their performance, trust can quickly decline.

H3 was supported and the result was aligned with the study of Alnaser et al. (2017), Ashiq and Hussain (2024), Doung et al. (2024), and Indarto et al. (2018). According to the result, many respondents indicated that they were satisfied with the commercial banks' convenience and the quality of their goods and services. Additionally, they were confident in their choice to employ the services and products offered by commercial banks. It implies that they will view the commercial banks favorably, which will encourage the development of a sense of loyalty among its customers.

H4 was also supported and the result was aligned with the study of Alnaser et al. (2017), Darmawan et al. (2017), and Doung et al. (2024). Customer loyalty is positively correlated with a bank's image. This can be explained by the fact that consumers weigh the bank's image when determining whether or not to stick with it. This study also revealed that consumers in Cambodia tended to think highly of commercial banks, considering them to be respectable and reliable financial institutions.

H5 was supported and this result is in line with the study of and Al-Adwan et al. (2020) and Jahroh and Saptono (2023). Social media and online networks are more likely to be regarded as trustworthy by the respondents when they provide more information about commercial banks. Furthermore, the data related to the consumer loyalty variable indicate that the dimension with the highest value is the reuse of products or services. As a result, eWOM is widely acknowledged as a non-commercial information source that influences the formulation of consumer suggestions and reuse decisions.

H6 was also supported and this result is aligned with the study of Ahmad et al. (2014) and Dilham et al. (2018). The current study found that brand awareness is key to building customer

loyalty, which is equally important for marketers and consumers. The positive coefficient values reveal that a higher level of knowledge and awareness about commercial bank images, symbols, or logos increases the relationship between customers and banks and leads to customer loyalty toward commercial banks.

## 5. Conclusion

The main objective of this study was to identify the influence of service quality (SQ), trust (TRU), bank image (BIM), e-word of mouth (eWOM), brand awareness (BAW), and customer satisfaction (SAT) on customer loyalty (CL) in Cambodian commercial banks. A quantitative method was employed to gather data from 310 respondents who are commercial bank customers. The study used the probability method of random sampling and non-probability to acquire the information from the targeted respondents through social media such as Telegram and Messenger. After we reached the target number of respondents, the data was analyzed using SPSS and Amos. As a result, the findings showed that service quality significantly positive influences on customer loyalty through customer satisfaction, while trust was found to significantly negative influence on customer loyalty. Furthermore, other proposed variables, namely bank image (BIM), brand awareness (BAW), and e-word of mouth (eWOM), significantly positive influence on customer loyalty (CL).

## 6. Implications

### *Implications on the conceptual model*

As  $R^2=0.704$ , the proposed conceptual model was statistically significant in explaining 70.4% of the variability of customer loyalty for the study of commercial bank customers in Phnom Penh city. The model was new in studying the factors influencing customer loyalty, especially in Cambodia. For the fitness of the model, the study suggested deleting nine items of service quality (SQ), two items of trust (TRU), one item of customer satisfaction (SAT), and one item of bank image (BIM). This study suggested using all six variables in other research fields because Cronbach's alpha of all variables was very high, ranging from 0.779 to 0.902.

### *Implications on the management practice*

The study found that customer satisfaction (SAT), service quality (SQ), trust (TRU), bank image (BIM), brand awareness (BAW), and e-word of mouth (eWOM) influence customer

loyalty in commercial banks. Thus, this study offered several implications for the management of commercial banks:

- Improving service quality
- Paying attention to customers' trust by adopting a long-term customer relationship strategy rather than focusing only on short-term satisfaction
- Enhancing customer satisfaction
- Increasing the positive of bank image, brand awareness, and e-word of mouth.

#### *Limitations and suggestions for future research*

Unquestionably, all kinds of research have limitations, and this study was not different. First, the study mainly focused on a sample size of only 310 respondents who were customers of commercial banks in Phnom Penh. Moreover, most people living in the city have access to an Internet connection and experience with bank products or services. Secondly, due to time limitations, the study did not apply an exploratory study design to seek details and insight into customer loyalty. Finally, the study examined only the six factors, namely customer satisfaction, service quality, trust, bank image, brand awareness, and e-word of mouth. Some other factors have not been examined in the adopted conceptual model.

Because of these limitations, it is suggested future research increase the sample size to other customers of commercial banks located in the provinces. Moreover, future researchers can also conduct an exploratory study on customer loyalty and examine the perspective of both customers and bank product or service providers. Lastly, this study suggested that future researchers integrate other elements or factors besides these variables for their studies. Furthermore, based on the result of this study, which found the negative influence of trust on customer loyalty, potentially caused by a lack of care or performance from banks, this study suggests future researcher focus on this factor in a specific commercial bank.

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