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Impact of the Bank's Image and Reputation on Customer's Loyalty through Customer's Trust: A Case of Commercial Banks in Ho Chi Minh City

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Abstract

In a global environment, the impact of a company's brand image and reputation on customers' beliefs, attitudes and behaviors becomes a critical issue. For banks, the strength of image and reputation has quickly become a crucial leverage for differentiation and success. In addition, the banking industry is sensitive to risks, especially in the digital environment. Customer's trust is a key factor affecting the decision to make transactions with banks and customer loyalty. This study is to examine the relationship between bank image and reputation, customer's trust, and loyalty. The study was conducted for commercial banks in Ho Chi Minh City. The results show the bank's brand image and reputation have a direct positive impact on customer loyalty. At the same time, customer trust plays a mediating role in this relationship. In addition, this study affirms that the determinants of image and reputation are core services, communication, chief executive reputation, responsiveness, social responsibility, and quality of human resources of banks. The components of customer trust are calculus-based trust, knowledge-based trust and identity-based trust from the perspective of Shapiro, Sheppard, and Cheraskin.

Keywords

Corporate Image and Reputation, Customer Loyalty, Customer Trust

1. Introduction

The concept of customer loyalty has strongly attracted theorists and practitioners alike (Jensen & Hansen, 2006; Ansah, 2020). Analyzing the factors that influence customer loyalty (LOY) provides valuable information that can be used

to shape customer behavior and attitudes. Customer LOY is best described by two criteria: emotional and behavioral. The emotional category represents the customer attitude. It represents emotions and perceptions. The behavioral category is represented by the repeat purchase of products and services and recommending them to other potential customers (Skowron & Skowron, 2012; Setyawati & Raharja, 2018). However, understanding of customer LOY cannot be achieved without the customer trust (TRU) in a brand.

There are several factors that determine the customer's LOY, but the role of TRU is critical. Researchers have found that customer TRU in the suppliers is the foundation of customer LOY with the source of products and services (Doney & Cannon, 1997). TRU is an essential element of a partnership that generates tangible economic benefits for all stakeholders. TRU is based on mutual goodwill in market transactions, where stakeholders offer something of value and expect action in return (Morgan & Hunt, 1994). Based on a literature review (Suki, 2011; Kiyani et al., 2012; Danesh et al., 2012; Orzan, 2016; Hur et al., 2014), TRU of customer is viewed as a multidimensional concept. There are many factors that affect TRU in a brand. One of the recognized crucial factors is the brand image and reputation (IMG). Studies on IMG show that the result of improving a business positive image to its stakeholders can be customer satisfaction and loyalty. Generally speaking, the researchers have developed different frameworks related to the relationship of IMG of business, customer TRU in brand and customer LOY. However, studies on the impact of brand IMG on customer LOY through the customer TRU and the determinants of the bank IMG and the customer TRU are still extremely limited.

Based on theoretical review and related studies, the research gaps on the relationship between the bank IMG, customer TRU in the bank and customer LOY are identified as follows: Firstly, previous studies have not been conducted in the really uncertain environment of the financial and money markets of countries that are transitioning to a market economy such as Vietnam; Secondly, the study of trust as a higher order construct (HOC) with its constituent elements rarely found in previous studies; Thirdly, the IMG of the bank and customer TRU in the bank are complex, multidimensional concepts, so they should be considered as a higher order latent construct to reduce measurement errors related to the SEM. Therefore, this study attempts to fill up these identified gaps.

The overall objective of present study is to examine the impact of business IMG on customer LOY along with the testing of customer TRU as a mediation in the relationship between business IMG and the LOY of customers of commercial banks in HCMC as well as to provide management implications to improve customer LOY.

The following specific objectives are pursued: First, identifying relationship between constructs business IMG, LOY and TRU of customer of commercial banks in HCMC and testing of customer TRU as a mediation in the relationship between business IMG and the LOY of customers of commercial banks in

HCMC; Second, determining the components of IMG and TRU latent constructs; Third, examining the impacts of demographic variables on the relationships between the concepts in the research model; Final, suggesting the managerial implications to increase customer LOY towards commercial banks in HCMC.

The research questions are: First, do bank IMG and customer TRU influence LOY of customers of commercial banks in HCMC? Second, what are the determinants of brand IMG of commercial banks in HCMC? Third, is there an impact of demographic variables on the relationships between the concepts in the research model? Fourth, what managerial implications to increase customer LOY towards commercial banks in HCMC should be suggested?

The study consists of 6 parts, namely: 1) Introduction; 2) Literature review; 3) Research method; 4) Results; 5) discussions, and 6) Conclusion and implications.

2. Literature Review

2.1. Social Exchange Theory

Social exchange theory is a concept based on the idea that social behavior is the result of an exchange process. According to this theory, people weigh the potential benefits and risks of their social relationships. When the risk outweighs the reward, they end or abandon the relationship. The purpose of this exchange is to maximize benefits and minimize costs. According to Esmaeili et al. (2015), trust is fundamental to reduce uncertainty and risk in business transactions.

2.2. Customer Loyalty

Singh & Sirdeshmukh (2000: p. 151) argue that "consumer's loyalty is emerging as the marketplace currency for the twenty-first century". Edvardsson et al. (2000) consider LOY as the tendency or intention of customers to repurchase from the same business. LOY has been considered as a decisive factor for a business to achieve success (Flavi'an et al., 2006). Pfeifer (2005) asserts that, for banking institutions, the service cost of a loyalty customer is about five or six times lower than that of a new customer. Walsh et al. (2005) argues that it is better to serve existing customers before acquiring new ones. LOY is developed using approaches that reinforce and develop a positive state of mind and related behaviors.

2.3. Bank Image and Reputation

Business image is defined as the immediate mental picture that an individual holds of the organization (Foroudi et al., 2014) that is formed based on customer needs, overall consumption experience (Aydin & Özer, 2005). Business image refers to the general impression created in the minds of customers or the public about a particular organization (Aydin & Ozer, 2005; Wang, 2010). The IMG of a bank reflects the quality standards of products and services in the eyes of the public and is considered a key element in the marketing strategy of banks. A study on the loyalty of Ghanaian students to banking services showed that be-

sides overall service quality satisfaction, bank image is considered the second consideration when choosing banking services (Narteh, 2013). Research by Yavas et al. (2014) shows that the external image of a bank has more influence than the internal image. According to Clemes et al. (2010), a good reputation will strengthen customer confidence in the bank. Research results of Flavián et al. (2005), Nguyen et al. (2013) or Setiawan & Sayuti (2017) and Yazid et al. (2020) also shows that the image and reputation of the business affect TRU, and TRU positively affects customer LOY.

When a business has a good IMG, the customers of that business often have high morale of reliability in its operations (Park et al., 2012). Therefore, IMG is a crucial factor for any business if it is to gain consumer TRU. In addition, consumers are likely to share the IMG of a business with others, and this plays a key role in increasing trust (Teo & Liu, 2007). From there, the research hypothesis is formulated as:

H1: The image and reputation of the banks have a positive influence on loyalty of customers of commercial banks in Ho Chi Minh City.

2.4. Core Services

Bank interest rates and service fees directly affect customer satisfaction and customer retention (Clemes et al., 2010). Previous studies have assessed the perceived value of a service as a trade-off between price and benefit received. Therefore, failure to fulfill customer expectations will lead to a decrease in LOY of customers (Estiri et al., 2011; Rombe & Ponirin, 2014). Research results by Amin et al. (2011) found that non-Muslim Malaysian customers placed a high premium on a wide range of products and profitability when considering switching intentions. In addition, large corporate clients also rely on core products offered by banks (Fragata & Muñoz-Gallego, 2009). Therefore, banks should offer special benefits such as higher return on investment or longer loan payback period based on the needs and size of the business. In addition to the traditional product portfolio such as savings accounts, checking accounts and investment accounts, innovative products are also important for increasing competitive advantage in the banking industry. The hypothesis is proposed as follows:

H1.1: Core Services will positively affect the bank's image and reputation.

2.5. Responsiveness

Responsiveness is defined as the ability to respond to customer requests in a timely and flexible manner. Mariappan (2006) argues that the information technology revolution has brought about amazing changes that no other sector has been affected as much as banking. Banks must adopt technology to provide their services and at the same time reduce costs by creating value-added services for customers (Zhu, Wymer, & Chen, 2002). Through technology, banks can consistently and quickly respond to customer requests, which will enhance customer satisfaction and loyalty. Dilijonas et al. (2009) determined that the factors that contribute to the timeliness of banking services are responsiveness and trust.

Theoretically, responsiveness is the third component of the perceived service quality (Parasuraman et al., 1985, 1991) and service quality positively affects the image and reputation of the service provider (Darmawan et al., 2017). In addition, Momeni et al. (2013) and Muok & Mutuku (2019) also confirm the positive response to the image and reputation of the business. Therefore, we can expect that responsiveness affects the business IMG. However, the study by Suharto & Finny (2018) shows that there is no direct influence of responsiveness on corporate image and reputation. Therefore, the objective of this study is to re-examine the impact of responsiveness on the IMG of the bank. The hypothesis is proposed as follows:

H1.2: Responsiveness will positively affect bank image and reputation.

2.6. CEO Reputation

The personal reputation of a business chief executive officer can have a significant impact on the business. The executives of large, powerful corporations are public figures who often build IMG well beyond of the scope of reputation with shareholders, customers, and employees (Agyei et al., 2013: p. 16). The reputation of the CEO can add value to the market value of the business through customer LOY Harrison (2005). According to Harrison, the results of one research among influential stakeholders of businesses show that about 50% of a business reputation is attributed to the CEO in US, and the two-thirds for Germany. Therefore, the hypothesis is stated as follows:

H1.3: CEO reputation will positively affect bank image and reputation.

2.7. Corporate Social Responsibility

Corporate social responsibility (CSR) refers to voluntary initiatives by businesses to protect the natural environment and promote the well-being of society and organizational employees. One of the essential aspects of CSR is corporate philanthropy. The way in which consumers perceive CSR can influence purchase intention and brand IMG. Research by Mohr et al. (2005) found that product evaluation, firm and purchase intention depend on the amount and nature of CSR information shared.

Studies show that CSR affects brand image in terms of perception and sentiment (He & Li, 2011) because it provides information about the firm values (Martínez et al., 2014). Wu & Wang (2014) also asserts this relationship. There is a consensus that brand image is reinforced by CSR (Maldonado et al., 2017). Thus, the hypothesis is developed as follows:

H1.4: Corporate Social Responsibility will positively affect the bank's image and reputation.

2.8. Quality of Human Resources

Human resources (HR) are often referred to as workers who have an important role to play in supporting and ensuring sustainable economic growth (Wahyudi

et al., 2006). According to Hrab (2014), QHR are: 1) having knowledge and expertise used to face challenges and problems; 2) possess effective communication skills; 3) disciplined and able to manage time; 4) trustworthy, professional personnel must be trustworthy to create their own reputation; 5) be objective when evaluating work-related or employee problems; and 6) able to train, develop and as a mentor. According to Langear & Eiglier (1983), QHR includes three indicators, including 1) capacity; 2) results of efforts; and 3) behavior and attitudes.

Employees have a significant role in shaping the perceptions of other stakeholders of the business (Harris & de Chernatony, 2001). Particularly, in the service industries, employees contribute to the formation of brand reputation through the quality of their interactions with customers (Davies et al., 2003; Helm, 2007). Therefore, the hypothesis is articulated as follows:

H1.5: Quality of Human Resources will positively affect the bank's image and reputation.

2.9. Communication

Communication is defined as the reliability, timeliness and accuracy of information exchanged. Simpson and Mayo (1997) argue that communication is a key element at the beginning of any relationship. According to Goodman and Dion (2001), the importance of effective communication for social and business relationships is widely accepted. Communication is not only considered to be a key determinant of relationship effectiveness but has also been described as the glue that holds industrial marketing relationships together (Coote et al., 2003).

Communication plays a significant role in increasing brand image. As brand communication is developed, the brand image also increases as expected. Conducted studies have found that communication has a significant and positive influence on brand image (Kotler, 2008; Afriani et al., 2019). Thus, the hypothesis is formulated as follows:

H1.6: Communication will positively affect the bank's image and reputation.

2.10. Customer Trust

Economists consider trust to be a kind of implicit contracting; sociologists consider universal beliefs to make social life possible; Psychologists define a belief as an individual generalized expectation that a promise or statement made by another individual is consistently reliable (Lewicki & Bunker, 1995).

Previous researchers have found that trust mediates the relationship between customer satisfaction and loyalty to certain banks. The reason is some customers are not able to distinguish the products and services offered by the banks. Therefore, trust plays a key role in determining the level of loyalty to service providers. Trust is formed when customers believe that the bank will perform as promised and trust employees of ability and courtesy (Yap et al., 2012). Tahir Jan and Abdullah (2014) report that trust in the banking sector raises awareness of the critical success importance related to technology factors. The quality of

bank operations management and ability to maintain confidential customer details are said to build customer TRU and thus increase satisfaction levels. Furthermore, some researchers say higher overall service quality will lead to trustworthiness and positively increase customer LOY. For that reason, banks must constantly improve the quality of their products and services to gain a better reputation to attract customers and retain existing customers (Amin et al., 2013; Gillani & Awan, 2013).

An attempt to link the development of TRU and the development of relationships in the context of the business is suggested by (Shapiro et al., 1992), the authors propose three forms of trust: based on deterrence (Calculus-based trust), knowledge-based trust and identity-based trust. The research hypothesis is articulated as follows:

H2: Customer trust positively affects customer loyalty.

2.11. Calculus-Based Trust/Deterrence-Based Trust

The foundation of calculus-based trust (CLT) is the consistency of behavior that people will do what they say that they will. Behavioral consistency is maintained because of the risk of punishment if consistency is not sustained (Lewicki & Bunker, 1995). A broader view of this type of belief is not only the fear of punishment for violating the TRU but also the reward for preserving the belief. At this level, TRU is a continuum, market-oriented, economic calculation, and this value arises from a comparison of the results of creating and maintaining a relationship against the costs of maintaining the relationships (Williamson, 1981).

As such, TRU based on deterrence is the most basic level of TRU in any relationship. A CLT is that there are rules in place to prevent one person from taking advantage of or harming another. In society, there are laws that govern the behavior of individuals and organizations. Engaging in business, the parties have guarantee contracts so that one party can trust the other to keep their agreement. Within organizations, there are policies and procedures that provide boundaries for how the organization interacts with and treats its stakeholders. If those principles are violated, the violator will receive the related consequences. The research hypothesis is the following:

H2.1: Customer calculus-based trust will positively affect customer trust.

2.12. Knowledge-Based Trust

The foundation of knowledge-based trust (KLT) is the ability to predict behavior. Knowledge-based trust occurs when an individual has information about others to understand their behavior (Lewicki & Bunker, 1995). Thus, KLT means that an individual or organization has sufficient experience with another individual or partner and is knowledgeable about their attitudes, behaviors, and behaviors in relation to each other. Over time, we have had enough experience and consistent performance of trustworthy behavior that we believe we can trust each other on matters stemming from relationships. This is the level of trust that most

of our professional relationships experience. The research hypothesis is proposed:

H2.2: Customer knowledge-based trust will positively affect customer trust.

2.13. Identity-Based Trust

The identity-based trust (IDT) is based on complete awareness of the wishes and intentions of others. In this form, trust occurs because each party fully understands the other, agrees, sympathizes, and approves of what the other wants and can act on it. Trust in identity allows one party to act as an agent for the other (Lewicki & Bunker, 1995). In other words, identity-based trust is the level of trust experienced in so-called relationships. This level of trust means we have hopes, dreams, goals, ambitions, fears, and doubts. Identity-based trust is not appropriate for every relationship. This level of trust is often reserved for the most important people in our lives such as family and close friends. However, with the right boundaries established, this level of trust can unlock higher levels of productivity, creativity, and performance in organizations.

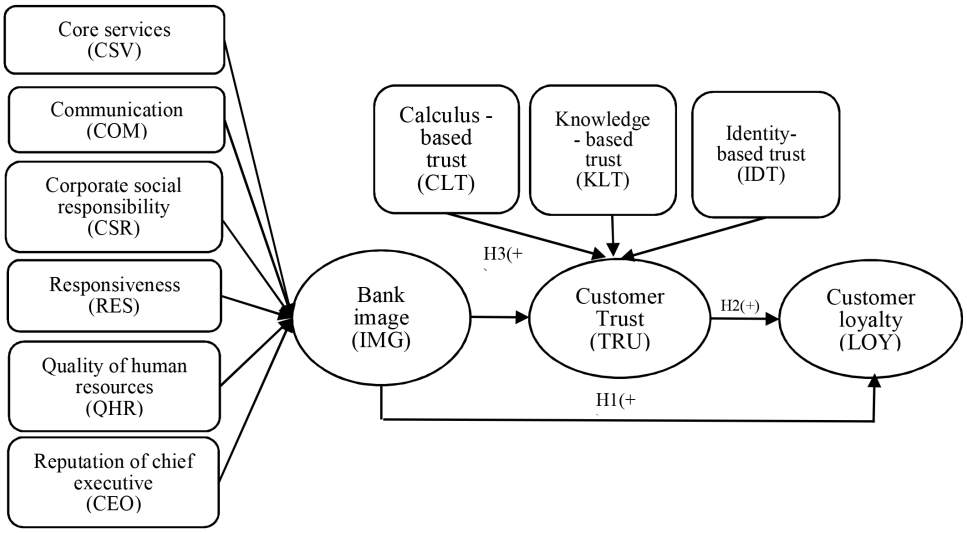
Research results by Flavián et al. (2005), Nguyen et al. (2013), Setiawan & Sayuti (2017), and Yazid et al. (2020) show that trust positively affects customer loyalty. From there, the research hypotheses are formulated as follows:

H2.3: Customer identity-based trust will positively affect customer trust.

H3: The image and reputation of the bank have a positive influence on customer trust.

H4: Customer trust plays a mediating role in the relationship between bank image and reputation and customer loyalty.

2.14. The Proposed Research Model (Figure 1)



Source: The authors.

Figure 1. Research model.

3. Research Method

3.1. Qualitative Research

To re-evaluate the proposed research model and the suitability of the scale with the research context, the method of interviewing experts using a structured questionnaire was implemented. Although, in practice, the researchers usually use a range between three and seven participants for each group, the composition of a focus group should satisfy the following requirements: Firstly, homogeneity among participants: all member share knowledge and experience about banking; Secondly, the certain heterogeneity: the existence of "conflict" among participants is a key issue to make the best of a focus group; Thirdly, focus group size determines both the quantity and quality of the information needed to obtain and the length of time for clarification of questions. To obtain the most abundant information under the specific conditions of this study, the authors decided the composition of focus group is 9 people, who are acquire knowledge and gain experiences in banking field, including people working in banks, lecturers and researchers from universities, and experienced customers. Before the interview, the contents on the research topic were sent to the experts. At the end of the interview process, the author summarizes the qualitative research results and uses these results for the next research steps.

Based on results of focus group, the authors performed pilot testing the reliability of the questionnaires to adjust if necessary. The survey respondents are 30 customers of banks in HCMC. The sampling method is convenient. The results show that the questionnaire does not need to be adjusted.

3.2. Preliminary Study in Quantitative Research

To make a preliminary assessment of the reliability of the scale built in the qualitative preliminary study, the quantitative preliminary research was carried out. The research sample is 100 observations selected by convenience. Respondents are customers who are dealing with banks. Data were collected at the transaction points of banks. SmartPLS 4 is utilized for data processing. The verification is done to evaluate the value of the indicators, the reliability and validity, the convergent and discriminant values.

Research results show that Outer loadings of all indicators is greater than 0.7; except those of KLT2, QHR4, CEO3 is greater than 0.5. However, EVA of the constructs CEO, QHR and KLT is greater than 0.5 so that indicators KLT2, QHR4, CEO3 are accepted (see Table 1).

Cronbach's Alpha is all variables greater than 0.7 and the composite reliability (CR) is greater than 0.850. This means that the scales have high reliability and explain ability for the research concepts in the model. Extracted variance (AVE) of all scales satisfy the condition greater than 0.5. This proves that the scales are all convergent (see Table 2).

Discriminant validity was assessed by using the HTMT and Fornell-Larcker

criteria. The HTMT index of the indicators is equal to or less than 0.431 (< 0.85) (see Table 3).

Table 1. Reliability and validity of scales.

INDICATORS	CEO	CLT	COM	CSR	CSV	IDT	KLT	LOY	QHR	RES
CEO1	0.926									
CEO2	0.806									
CEO3	0.648									
CEO4	0.830									
CLT1		0.837								
CLT2		0.843								
CLT3		0.851								
CLT4		0.812								
COM1			0.885							
COM2			0.930							
COM3			0.892							
COM4			0.939							
CSR1				0.866						
CSR2				0.867						
CSR3				0.886						
CSR4				0.928						
CSV1					0.809					
CSV2					0.796					
CSV3					0.871					
CSV4					0.878					
IDT1						0.789				
IDT2						0.799				
IDT3						0.892				
IDT4						0.900				
KLT1							0.741			
KLT2							0.614			
KLT3							0.890			
KLT4							0.882			
LOY1								0.949		
LOY2								0.937		
LOY3								0.833		

Continued

LOY4	0.929		
QHR1		0.838	
QHR2		0.704	
QHR3		0.836	
QHR4		0.549	
QHR5		0.897	
RES1			0.868
RES2			0.720
RES3			0.865
RES4			0.895

Source: Results of data processing.

Table 2. Reliability and validity of scales.

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CEO	0.818	0.846	0.882	0.654
CLT	0.857	0.860	0.903	0.699
COM	0.932	0.944	0.952	0.831
CSR	0.909	0.913	0.937	0.787
CSV	0.861	0.876	0.905	0.704
IDT	0.867	0.873	0.910	0.716
KLT	0.800	0.921	0.867	0.624
LOY	0.933	0.940	0.952	0.834
QHR	0.824	0.862	0.880	0.600
RES	0.859	0.880	0.905	0.705

Source: Results of data processing.

Fornell-Larcker criteria show that the square roots of AVE are all larger than the coefficients in the same column (see Table 4). Thus, the scale achieves discriminant validity.

3.3. Quantitative Research

Research using direct interview technique by questionnaire with 5-level Likert scale sent to customers who have transactions with commercial banks in HCMC. SmartPLS 4 software is utilized to process the collected data.

3.3.1. Sample Size

The sample size is determined with an unknown population according to

Table 3. The Heterotrait-Monotrait ratio of correlations (HTMT).

Constructs	CEO	CLT	COM	CSR	CSV	IDT	KLT	LOY	QHR	RES
CEO										
CLT	0.165									
COM	0.179	0.164								
CSR	0.092	0.205	0.068							
CSV	0.113	0.250	0.108	0.383						
IDT	0.123	0.479	0.151	0.217	0.295					
KLT	0.171	0.154	0.117	0.303	0.378	0.285				
LOY	0.087	0.206	0.267	0.412	0.554	0.377	0.435			
QHR	0.284	0.372	0.092	0.161	0.268	0.325	0.175	0.345		
RES	0.143	0.251	0.102	0.096	0.132	0.212	0.182	0.140	0.088	

Source: Results of data processing.

Table 4. Fornell-Larcker criteria.

Constructs	CEO	CLT	COM	CSR	CSV	IDT	KLT	LOY	QHR	RES
CEO	0.809									
CLT	−0.051	0.836								
COM	−0.035	0.134	0.912							
CSR	−0.044	0.182	−0.029	0.887						
CSV	−0.060	0.222	0.083	0.343	0.839					
IDT	−0.098	0.419	0.137	0.198	0.263	0.846				
KLT	−0.136	0.076	0.044	0.187	0.346	0.279	0.790			
LOY	−0.077	0.187	0.249	0.384	0.509	0.343	0.445	0.913		
QHR	−0.218	0.316	−0.001	0.142	0.229	0.281	0.154	0.304	0.775	
RES	−0.116	0.222	0.082	0.081	0.090	0.178	0.150	0.123	0.041	0.840

Source: Results of data processing.

Cochran's (1977) formula:

$$n = Z^2 * p*(1-p)/e^2 \quad (1)$$

where:

n: is sample size to be determined.

Z: is the value of looking up the Z distribution table based on the selected reliability. (Typically, the 95% confidence interval used corresponds to $Z = 1.96$).

p: is success rate n sample size estimation (usually choose $p = 0.5$).

e: is permissible error with the most common being ±0.05.

Thus, $n = 1.962 * 0.5 * (1 - 0.5)/0.05 * 0.05 = 384$ observations.

However, to ensure high representativeness of the sample for the population,

the authors project the sample size of this study is 500 observations.

3.3.2. Data Collection Method

Theoretical documents were selected for review from Google scholar, Directory of open access journals (DOAJ), JSTOR, EBSCO, Scopus… The experimental data were collected by survey questionnaire. The respondents are customers who have had transactions with commercial banks in HCMC for at least 1 year. Questionnaires are sent directly to customers at transaction points/points of sale of banks. 550 questionnaires were distributed, 530 questionnaires were collected, and 520 questionnaires were valid.

There is always bound to be some degree of lying in surveys. To minimize the possibility of dishonesty, the authors try not to use trigger questions related to behavior, beliefs, and dependence; to include redundant questions; to limit emphasis on the importance of this study; to make short time to interview (immediate response), and to avoid offering material incentives.

3.3.3. Measurement Scales

Based on the reviewed literature, the authors develop a scale to measure the influence of the bank IMG, the customer TRU and the customer LOY, and identify and measure the components of the bank IMG as well as the customer TRU components including 41 observed variables (see **Table 5**).

3.3.4. Methods and Tests

The PLS-SEM method was performed to extend an existing structural theory and explain the relationship between many variables simultaneously. Evaluation of the lower order construct (LOC) reflective measurement model was performed by testing outer loadings, construct reliability and validity by means of Cronbach's alpha, composite reliability (CR) and convergence (AVE), and

Table 5. Measurement scales.

Constructs	Encoded scales	Quantity of observables	References
Core services	CSV	4	Madubashini et al. (2021)
Communication	COM	4	Morgan and Hunt (1994); Theron et al. (2006)
Chief executive reputation	CEO	4	Spector (1991); Chen & Chung (2017)
Responsiveness	RES	4	Parasuraman et al. (1991)
Corporate social responsibility	CSR	4	Garcia et al. (2005); Fatma et al. (2015)
Quality of human resources	QHR	5	Parasuraman et al. (1994a, 1994b)
Calculus-based trust	CLT	4	Lewicki & Bunker (1995); Shapiro et al. (1992)
Knowledge-based trust	KLT	4	Shapiro et al. (1992)
Identity-based trust	IDT	4	Shapiro et al. (1992)
Customer Loyalty	LOY	4	Flavián et al. (2015)

Source: Own study.

discriminant validity was tested by HTMT, Fornell-Lacrker coefficients as well as cross loadings. For the formative HOC model, evaluating the degree of convergence is performed by redundant analysis, evaluating the degree of external multicollinearity (Outer VIF), and assessing the statistical significance level of the weights (Outer weights) are conducted. Structural model evaluation is done by multicollinearity test, R^2, f^2, Q^2 evaluation, path coefficients as well as direct and indirect effects assessment, structural model robust check, and MGA also is performed.

4. Results

4.1. Descriptive Statistics

Formal quantitative study sample has 520 observations. The respondents are females with 59.6% contribution in the survey and males were with 40.4%. Pertaining to respondent education level, high school accounts for 6.9%; Intermediate level accounts for 17.7%, college and university account for 62.5%, and post-graduate accounts for 12.9%. Respondents are in employment with state agencies account for 23.8%; with enterprises account for 36.2%; with hospitals and schools account for 14.6%; and with others account for 25.4%. The respondents fall underage group of 15 to 30 years old account for 18.5%; group from 31 to 45 years old account for 41.3% and over 45 years old account for 40.2%. Respondents are in transaction time with banks from 1 to 4 years account for 24%, from 5 to 10 years account for 41.3% and over 10 years account for 34.6% (see Table 6).

Table 6. Frequency of observation.

Characteristics		Frequency	Rate (%)
Sex	Female	310	59.6
	Male	210	40.4
Age	From 15 to 30	96	18.5
	From 31 to 45	215	41.3
	Over 45	209	40.2
Number of years in transaction with the bank	From 1 to 4	125	24.0
	From 5 to 10	215	41.3
	Over 10	180	34.6
Education	Secondary school	36	6.9
	Community college	92	17.7
	Graduated	325	62.5
	Postgraduate	67	12.9
Workplace	Public sector	124	23.8
	Corporations	188	36.2
	Hospitals/schools	76	14.6
	Others	132	25.4

Source: The results of data processing.

4.2. Descriptive

The average value of the scales is moderate and varies from 3.19 to 3.79. The standard deviation of the scale ranges from 0.687 to 1.097. The scales with high standard deviation are CSR, HRM, IDT. This shows that there is a substantial difference between the opinions of the respondents. The mean of indicators ranges from 3.15 to 3.85 (see Tables 7(a)-(e)). The results also indicate that the coefficient of variations (CV) of over 40% of observations is greater than 0.25. This indicates that the extent of variability in relation to the mean of the population is really high, especially for CSR, HRM and IDT.

Table 7. (a) Mean and standard deviation of indicators; (b) Mean and standard deviation of indicators; (c) Mean and standard deviation of indicators; (d) Mean and standard deviation of indicators; (e) Mean and standard deviation of indicators.

(a)

Scale RES			Scale CSV		
Indicators	**Mean**	**Std. Deviation**	**Indicators**	**Mean**	**Std. Deviation**
RES1	3.66	0.714	CSV1	3.24	0.929
RES2	3.64	0.608	CSV2	3.15	1.014
RES3	3.63	0.794	CSV3	3.17	0.964
RES4	3.66	0.631	CSV4	3.18	0.897
RES	3.65	0.687	CSV	3.19	0.951

(b)

Scale CSR			Scale COM		
Indicators	**Mean**	**Std. Deviation**	**Indicators**	**Mean**	**Std. Deviation**
CSR1	3.33	0.990	COM1	3.84	0.881
CSR2	3.15	1.014	COM2	3.79	0.896
CSR3	3.45	1.202	COM3	3.74	0.751
CSR4	3.45	1.188	COM4	3.77	0.693
CSR	**3.35**	**1.097**	**COM**	**3.79**	**0.805**

(c)

Scale CEO			Scale IDT		
Indicators	**Mean**	**Std. Deviation**	**Indicators**	**Mean**	**Std. Deviation**
CEO1	3.69	0.689	IDT1	3.37	1.151
CEO2	3.57	0.853	IDT2	3.31	1.202
CEO3	3.71	0.812	IDT3	3.45	1.188
CEO4	3.85	0.679	IDT4	3.43	0.799
CEO	**3.71**	**0.758**	**IDT**	**3.39**	**1.085**

(d)

Scale HRM			Scale LOY		
Indicators	**Mean**	**Std. Deviation**	**Indicators**	**Mean**	**Std. Deviation**
HRM1	3.54	0.992	LOY1	3.64	1.033
HRM2	3.52	0.851	LOY2	3.78	0.815
HRM3	3.57	1.127	LOY3	3.60	0.794
HRM4	3.72	0.902	LOY4	3.64	0.969
HRM5	3.52	1.165	LOY5	3.66	0.862
HRM	**3.57**	**1.007**	**LOY**	**3.66**	**0.895**

(e)

Scale CLT			Scale KLT		
Indicators	**Mean**	**Std. Deviation**	**Indicators**	**Mean**	**Std. Deviation**
CLT1	3.60	0.855	KLT1	3.63	1.085
CLT2	3.69	0.979	KLT2	3.79	0.947
CLT3	3.55	0.911	KLT3	3.70	0.822
CLT4	3.57	0.816	KLT4	3.67	0.703
CLT	**3.60**	**0.890**	**KLT**	**3.70**	**0.889**

Source: The results of data processing.

4.3. Evaluation of Measurement Model for Lower Order Construct (LOC)

4.3.1. Validating Reflective Indicators

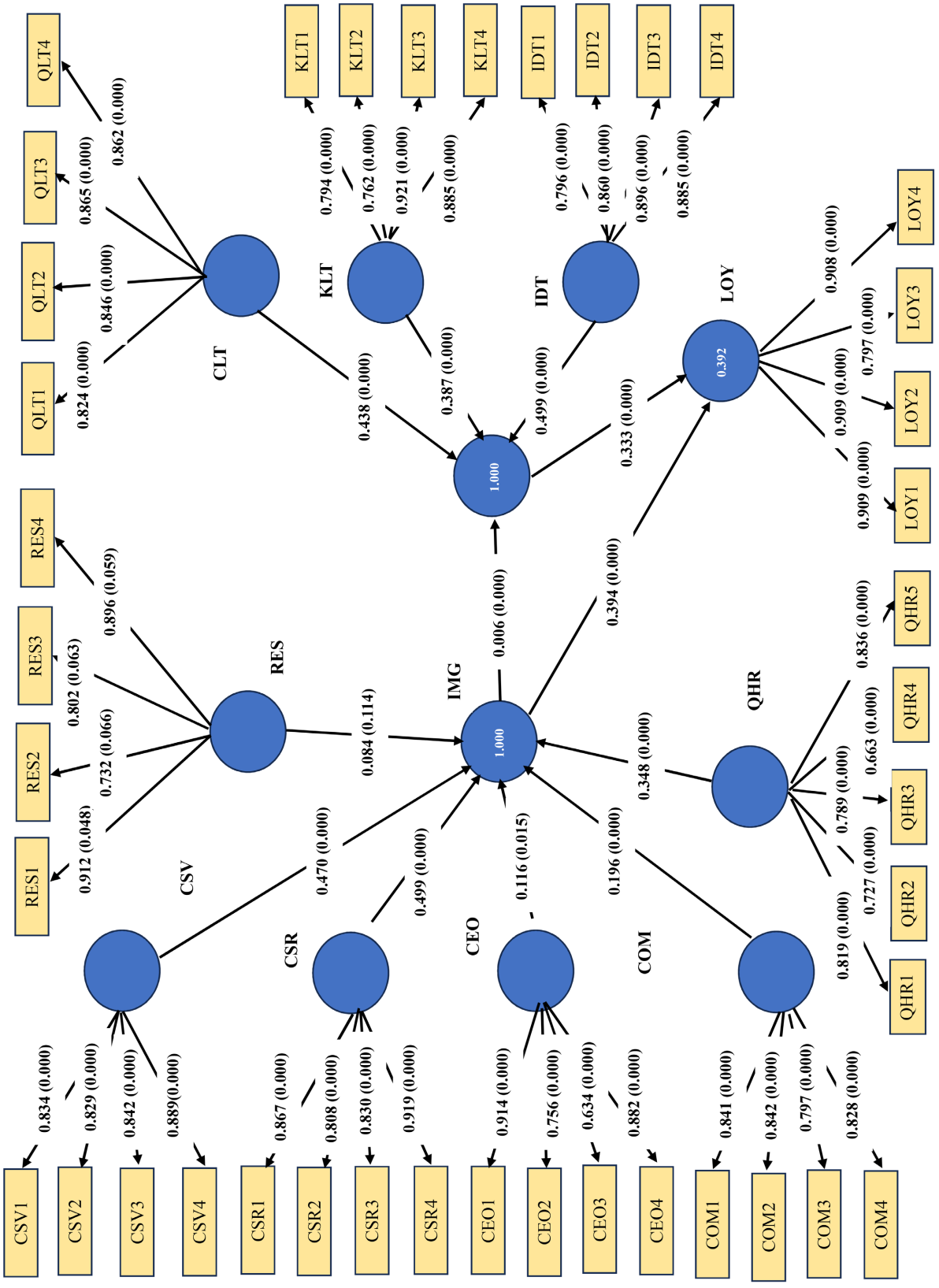
The analysis results show that the outer loadings of the indicators are all greater than 0.7, except for the variables CEO3 which is 0.628 and QHR4 which is 0.663. However, because the outer loadings are greater than 0.4 and AVE coefficient of latent variable CEO = 0.647 > 0.5 and QHR is 0.592 > 0.5 (see Table 8), the variables CEO3 and QHR4 are accepted, therefore. This means that the observed variables all converge on the underlying concepts in the scale. Thus, the scales achieve the reliability of each indicator (see Figure 2).

4.3.2. Construct Reliability and Validity

The construct reliability assessment results show that the Cronbach's Alpha of all constructs is greater than 0.7 and the composite reliability (CR) is greater than 0.878. This means that the scales have high reliability and explain ability for the research concepts in the model. Extracted variance (AVE) of all scales satisfy the condition greater than 0.5. This proves that the scales are all convergent (see Table 8).

4.3.3. Discriminant Validity

Discriminant validity was assessed using the HTMT and Fornell-Larcker criteria.



Source: Results of data processing.

Figure 2. Path coefficients of LOC.

The analysis results show that the HTMT index of the latent variables is less than 0.85 (see Table 8). In addition, the results of the evaluation of the discriminant validity according to Fornell-Larcker criteria show that the square roots of AVE are all larger than the coefficients in the same column (see Table 9 and Table 10). Thus, the scale achieves discriminant validity from HTMT and Fornell-Larcker criteria. Cross loading test results also show that the indicators are accepted because loadings are larger cross loadings with a level above 0.3. Complete Bootstrapping to evaluate the HTMT index was performed with a sample size of 5000. The results show that the confidence intervals of HTMT do not contain the value 1. Thus, the scale has a high degree of discriminant validity. That is, indicators that measure one latent construct do not measure another latent construct.

Table 8. Construct Reliability and validity.

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CEO	0.808	0.820	0.878	0.647
CLT	0.871	0.872	0.912	0.722
COM	0.861	0.995	0.897	0.684
CSR	0.878	0.881	0.917	0.734
CSV	0.873	0.879	0.913	0.724
IDT	0.882	0.882	0.919	0.739
KLT	0.864	0.908	0.907	0.711
QHR	0.826	0.836	0.878	0.592
RES	0.858	0.922	0.904	0.703

Source: Results of data processing.

Table 9. Discriminant validity (HTMT).

Constructs	CEO	CLT	COM	CSR	CSV	IDT	KLT	QHR	RES
CEO									
CLT	0.069								
COM	0.062	0.118							
CSR	0.068	0.329	0.114						
CSV	0.115	0.317	0.086	0.407					
IDT	0.165	0.458	0.137	0.326	0.312				
KLT	0.077	0.273	0.076	0.292	0.133	0.370			
QHR	0.067	0.247	0.086	0.138	0.214	0.280	0.190		
RES	0.100	0.060	0.131	0.047	0.063	0.173	0.080	0.048	

Source: Results of data processing.

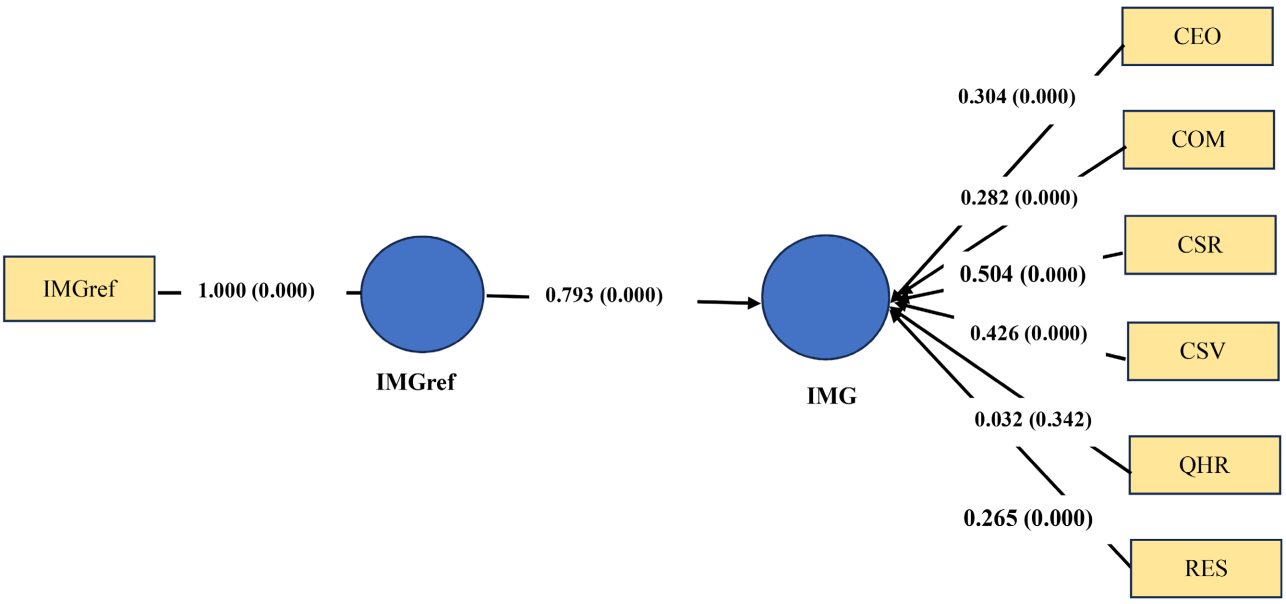
4.4. Evaluation of Measurement Model for Higher Order Construct (HOC)

Evaluation of formative measurement model of IMG and TRU latent variables is done by embedded two stage method. The results of the convergence analysis by the redundant analysis for the IMG latent variable (Figure 3) show that the beta coefficient is 0.793, the R^2 coefficient is 0.628 and adjusted R^2 is 0.628. For the latent construct TRU (Figure 4) with beta coefficient of 0.760, the R^2 of 0.579 and adjusted R^2 of 0.579. The results of testing multicollinearity (VIF) between the indicators of the formative and reflective models show that the VIF values of the indicators are all less than 5 (see Table 11). The results of evaluating the

Table 10. Discriminant validity (Fornell-Larcker).

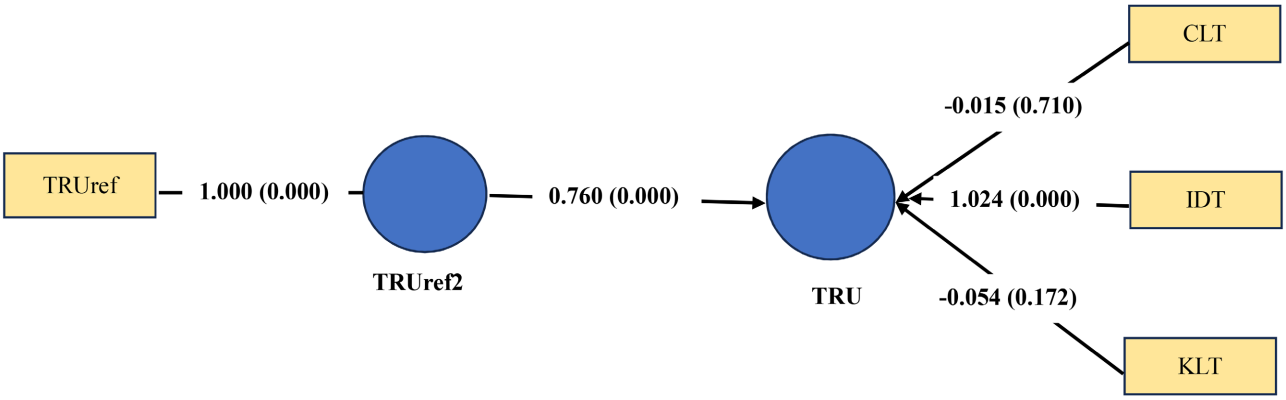
Constructs	CEO	CLT	COM	CSR	CSV	IDT	KLT	QHR	RES
CEO	0.824								
CLT	0.056	0.849							
COM	0.013	0.032	0.842						
CSR	0.045	0.293	0.146	0.881					
CSV	0.097	0.281	0.093	0.364	0.851				
IDT	0.142	0.406	0.159	0.293	0.278	0.874			
KLT	0.009	0.257	0.069	0.280	0.091	0.352	0.856		
QHR	0.018	0.223	0.098	0.127	0.193	0.256	0.180	0.870	
RES	0.084	0.052	0.103	0.038	0.057	0.158	0.068	-0.040	0.859

Source: Results of data processing.



Source: Results of data processing.

Figure 3. Formative model of construct IMG.



Source: Results of data processing.

Figure 4. Formative model of construct TRU.

Table 11. Testing results of higher order construct (HOC).

HOC	LOC	Outer Weights	*P* value	T statistics	Outer loadings	VIF
IMG	CEO	0.082	0.037	2.092	0.164	1.010
	RES	0.126	0.037	2.006	0.151	1.019
	CSV	0.316	0.000	9.862	0.628	1.179
	QHR	0.468	0.000	10.412	0.602	1.045
	CSR	0.563	0.000	18.571	0.766	1.170
	COM	0.168	0.000	4.809	0.330	1.037
TRU	CLT	0.391	0.000	12.122	0.708	1.216
	KLT	0.414	0.000	12.938	0.701	1.167
	IDT	0.523	0.000	21.129	0.829	1.305
LOY	LOY1	0.235	0.000	75.999	0.891	3.184
	LOY2	0.236	0.000	133.343	0.917	4.780
	LOY3	0.196	0.000	39.858	0.793	2.110
	LOY4	0.220	0.000	102.965	0.898	3.621
	LOY5	0.240	0.000	141.783	0.925	4.822

Source: Results of data processing.

statistical significance of the weights by bootstrapping with a sample size of 5,000 shows that all the indicators for the formative model have a significance level of *P* value < 0.05.

4.4.1. Analyzing Structural Model

Collinearity statistics (VIF)

Analysis for the outer model shows that the VIF coefficients of latent constructs and other variables in the higher order model are all less than 5. With the inner model, the values of VIF are all less than 3 (see Table 11). Thus, the mod-

els of each component have met the requirements of multicollinearity.

Coefficient of determination (R^2)

The results in Table 12 show that the structural model with the dependent variable TRU has an R^2 of 0.228, which is assessed as having a weak determination, and the independent variables can only explain 22.8% of variation of the dependent variable. The structural model with the dependent variable LOY has an R^2 of 0.4. Thus, the independent variables explain 40% of the variation of the dependent variable, which is assessed as also having a weak determination.

Effect size of independent variables on dependent variables

The results of analysis of f^2 show that, effect size of IMG on LOY and IMG on TRU are moderate with f^2 are 0.209 and 0.296 respectively < 0.35. Effect size of TRU on LOY is low, with f^2 of 0.141 < 0.15 (see Table 13).

Evaluation of predictive relevance (Q^2 coefficient)

The results of analysis of Q^2 by blindfolding with Case 7 (see Table 14) show that, among the component models, the model related to IMG has no predictive relevance, with zero Q^2; followed by the low predictive relevance of TRU, with an Q^2 of 0.123 and the medium predictive relevance of LOY, with an Q^2 of 0.314, finally.

Table 12. R^2 statistics.

Construct	R-square			Adjusted R-square			Description by Hair et al. (2013)
	Original sample	*P* value	T value	Original sample	*P* value	T value	
LOY	0.400	0.000	12.399	0.397	0.000	12.280	Weak
TRU	0.228	0.000	7.472	0.227	0.000	7.409	Weak

Source: Results of data processing.

Table 13. f^2 statistics.

Paths	Original sample	Sample mean	*P* values	t value	Effect size
IMG -> LOY	0.209	0.216	0.000	4.232	Moderate
IMG -> TRU	0.296	0.312	0.000	5.591	Moderate
TRU -> LOY	0.141	0.143	0.000	3.445	Low

Source: Results of data processing.

Table 14. Q^2 statistics.

Construct	SSO	SSE	Q^2 (Q^2 = 1-SSE/SSO)	Predictive relevance
IMG	483.645	483.645	0.000	No relevance
LOY	370.177	254.075	0.314	Moderate
TRU	231.204	202.777	0.123	Low

Source: Results of data processing.

Bootstrapping

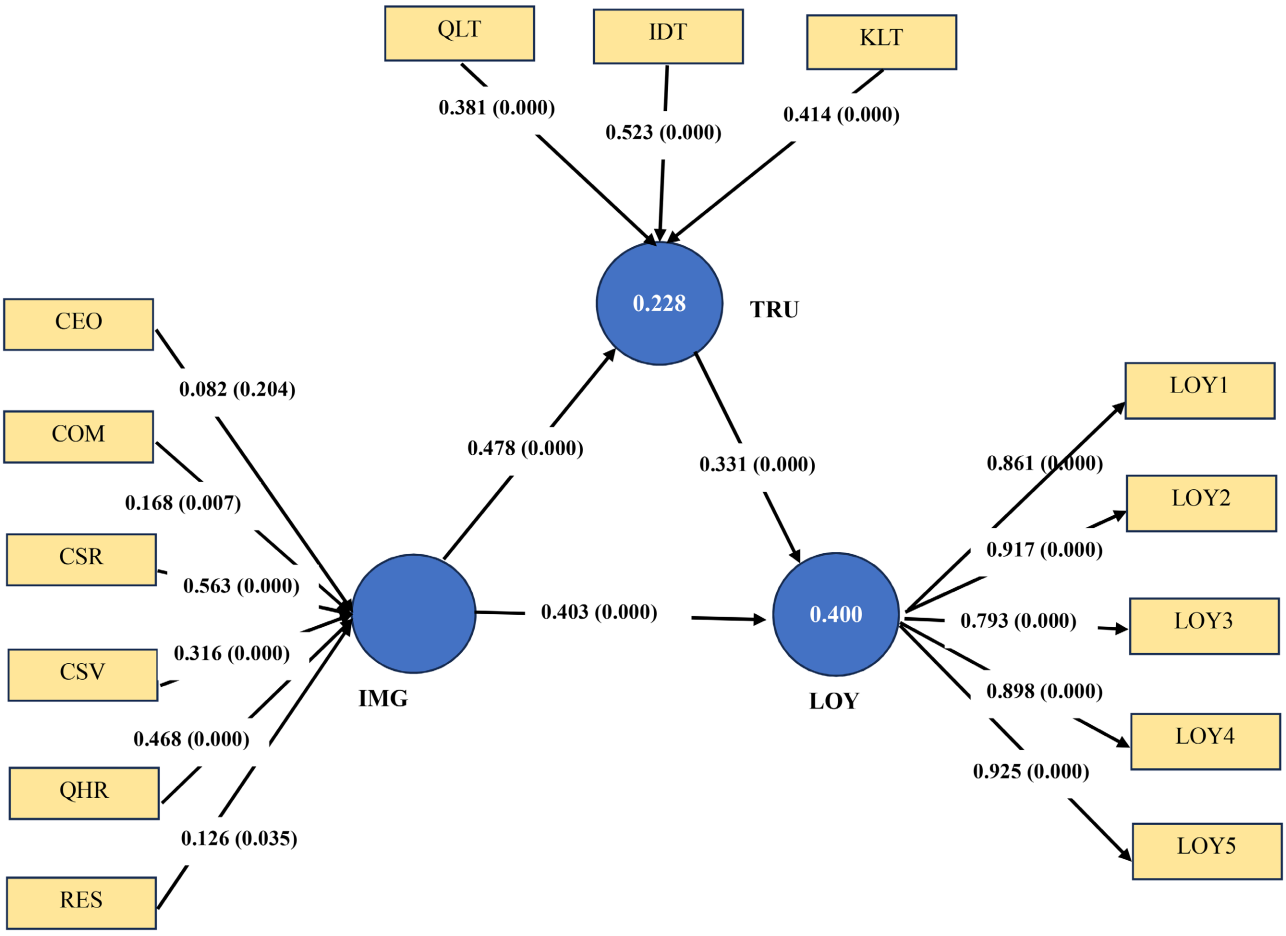
To evaluate the statistical significance and impact of the regression coefficients, bootstrapping technique with sample number N = 5000 was used. The results of direct impact, indirect impact and total impact estimation are shown in Table 15.

According to the graphical output of outer model (Figure 5), IMG and TRU directly affect the dependent variable LOY. Meanwhile, IMG -> LOY has a path coefficient of 0.403, with *P* value < 0.05. IMG -> TRU path has a path coefficient of 0.478, with a p-value of zero. The analysis results also show that TRU has a

Table 15. Path coefficients of structural model.

Paths	Original sample	Sample mean	*P* values	t value
IMG -> LOY	0.403	0.406	0.000	9.883
IMG -> TRU	0.478	0.485	0.000	15.137
TRU -> LOY	0.331	0.329	0.000	7.568

Source: Results of data processing.



Source: Results of data processing.

Figure 5. Path coefficients of higher order construct (HOC) model.

direct effect on LOY with a beta coefficient of 0.331, with a p-value of zero.

Specific indirect effects

Total effects

Mediating role of TRU

The data in Table 16 and Table 17 show that IMG -> TRU, IMG -> LOY and TRU -> LOY are all statistically significant. Thus, TRU has a partial and complementary effect (see Table 18).

Table 16. Specific indirect effects.

Paths	Original sample	Sample mean	T statistics	*P* values
IMG -> TRU -> LOY	0.158	0.160	6.629	0.000

Source: Results of data processing.

Table 17. Total effects.

Paths	Original sample	Sample mean	T statistics	*P* values
IMG -> LOY	0.561	0.566	19.493	0.000
IMG -> TRU	0.478	0.485	15.137	0.000
TRU -> LOY	0.331	0.329	7.568	0.000

Source: Results of data processing.

Table 18. Direct effect, indirect effects, and total effects.

Independent Variables \ Dependent variable	Type of effects	TRU	LOY
IMG	Direct	0.478	0.403
	Indirect	0.000	0.158
	Total	**0.478**	**0.561**
TRU	Direct	0.000	0.331
	Indirect	0.000	0.000
	Total	**0.000**	**0.331**

Source: Results of data processing.

4.4.2. Structural Model Robustness Check

The structural model robustness check of this study is conducted in terms of nonlinear effects, endogeneity, and unobserved heterogeneity in a PLS-SEM framework.

Standard model assessment

The evaluation of the measurement models by means of reliability and validity discriminant validity using HTMT criterion (see Table 19).

Assessment of nonlinear effects

The assessment of quadratic effects between 1) IMG and LOY, IMG and TRU; 2) RES, CSV, CEO, COM, and CSR and IMG; 3) TRU and KLT, IDT, and CLT was

conducted. The results of bootstrapping with 5000 samples and using no sign changes indicate that neither of the nonlinear effects is significant.

Nonlinear effects analysis results show that only the path between TRU -> LOY and CLT -> TRU has a non-linear effect with *P* value < 0.05, but with a small effect size with $f^2 < 0.015$ (see Table 20). We, therefore, conclude that the linear effects model is robust.

Table 19. Assessment of discriminant validity using the HTMT.

	GC (QHR)	GC (TRU)	GC (CLT)	GC (RES)	GC (CSV)	GC (CSR)	GC (COM)	GC (IDT)	GC (IMG)	GC (KLT)	GC (CEO)
GC (QHR)											
GC (TRU)	0.253										
GC (CLT)	0.187	0.727									
GC (RES)	0.041	0.114	0.040								
GC (CSV)	0.148	0.293	0.261	0.041							
GC (CSR)	0.086	0.377	0.259	0.023	0.353						
GC (COM)	0.070	0.108	0.029	0.102	0.077	0.124					
GC (IDT)	0.223	0.799	0.412	0.152	0.291	0.285	0.143				
GC (IMG)	0.461	0.465	0.336	0.135	0.735	0.725	0.338	0.429			
GC (KLT)	0.137	0.650	0.204	0.076	0.125	0.288	0.069	0.325	0.268		
GC (CEO)	0.013	0.073	0.029	0.074	0.056	0.064	0.022	0.105	0.180	0.035	

Source: Results of data processing.

Table 20. Assessment of nonlinear effects.

Paths	Coefficients	PCI	T value	*P* value	f^2	Effects
QE (IMG) -> LOY	−0.059	[−0.059; 0.003]	1.855	0.064	0.008	Small
QE (IMG) -> TRU	0.000	[0.000; 0.001]	0.204	0.838	0.000	Small
QE (RES) -> IMG	0.000	[0.000; 0.001]	0.260	0.795	0.000	Small
QE (CSV) -> IMG	0.000	[0.000; 0.001]	0.225	0.822	0.000	Small
QE (CSR) -> IMG	−0.001	[−0.001; 0.000]	1.856	0.064	0.011	Small
QE (CEO) -> IMG	0.000	[0.000; 0.001]	0.082	0.934	0.000	Small
QE (TRU) -> LOY	−0.060	[−0.060; −0.006]	2.203	0.028	0.009	Small
QE (IDT) -> TRU	−0.001	[−0.001; 0.000]	2.002	0.046	0.011	Small
QE (KLT) -> TRU	0.000	[0.000; 0.001]	0.193	0.847	0.000	Small
QE (CLT) -> TRU	0.000	[0.000; 0.001]	0.259	0.796	0.000	Small
QE (COM) -> IMG	−0.002	[−0.001; 0.000]	1.792	0.073	0.017	Medium
QE (QHR) -> IMG	0.000	[0.000;0.011]	0.471	0.638	0.002	Small

Source: Results of data processing.

Assessment of endogeneity

The assessment of endogeneity was conducted using Gaussian Copula. The effects between 1) IMG and LOY, IMG and TRU; 2) RES, CSV, CEO, COM, and CSR and IMG; 3) TRU and KLT, IDT, and CLT were conducted. The results of bootstrapping with 5000 samples and using no sign changes indicate that neither of endogeneity effects is significant, except for IMG -> LOY. The path between IMG -> LOY has the endogeneity effect with *P* value = 0.021 and PCI does not contain value one (see Table 21). We could conclude that the linear effects model is robust, therefore.

Assessment of unobserved heterogeneity

The unobserved heterogeneity of the model is assessed wit FIMIX-PLS. Steps in FIMIX are: 1) running the FIMIX-PLS procedure; 2) determining the number of segments; 3) explanation of latent segment structure; and 4) estimating segment-specific models. The theoretical minimum number of segments is given by largest integer when dividing the sample size "n" by the minimum sample size min (Hair et al., 2006). According to G*Power, the minimum size is 89. Therefore, the minimum number of segments is 520/89 = 5.84. So, we decided the minimum number of segments for assessment of unobserved heterogeneity is six. Model selection criteria of 6 segments are shown in Table 22 below.

Jointly, the analyses do not ambiguously point to a specific segmentation solution because the AIC3, CAIC, MDL5, AIC4 and BIC have the same number of segments. Therefore, we can assume that unobserved heterogeneity is not at a critical level, which supports the results of the entire data set's analysis.

Table 21. Assessment of endogeneity.

Paths	Sample mean (M)	PCI	T statistics (|O/STDEV|)	*P* values
GC (CLT) -> TRU	0.001	[−0.005; 0.008]	0.528	0.598
GC (KLT) -> TRU	0.000	[−0.005; 0.005]	0.336	0.737
GC (IDT) -> TRU	−0.001	[−0.007; 0.006]	0.074	0.941
GC (TRU) -> LOY	−0.212	[−0.841; 0.408]	0.391	0.696
GC (IMG) -> LOY	−0.654	[−1.261; −0.069]	2.309	0.021
GC (IMG) -> TRU	−0.007	[−0.019; 0.004]	1.306	0.192
GC (QHR) -> IMG	0.001	[−0.008; 0.009]	0.064	0.949
GC (COM) -> IMG	0.000	[−0.009; 0.010]	0.652	0.515
GC (CEO) -> IMG	0.000	[−0.009; 0.009]	0.176	0.861
GC (CSR) -> IMG	−0.001	[−0.017; 0.010]	0.500	0.617
GC (CSV) -> IMG	0.008	[−0.006; 0.022]	1.500	0.134
GC (RES) -> IMG	0.002	[−0.008; 0.013]	0.257	0.797

Source: Results of data processing.

Table 22. Assessment of unobserved heterogeneity.

Criterion	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Optimal number of segments by this criteria
AIC (Akaike's information criterion)	−3864.06	−3847.78	−3825.96	−3803.36	−3785.71	−3761.76	1
AIC3 (modified AIC with Factor 3)	−3849.06	−3816.78	−3778.96	−3740.36	−3706.71	−3666.76	1
AIC4 (modified AIC with Factor 4)	−3834.06	−3785.78	−3731.96	−3677.36	−3627.71	−3571.76	1
BIC (Bayesian information criterion)	−3800.26	−3715.91	−3626.03	−3535.37	−3449.66	−3357.65	1
CAIC (consistent AIC)	−3785.26	−3684.91	−3579.03	−3472.37	−3370.66	−3262.65	1
HQ (Hannan-Quinn criterion)	−3839.07	−3796.12	−3747.64	−3698.38	−3654.07	−3603.45	1
MDL5 (minimum description length with factor 5)	−3425.03	−2940.44	−2450.31	−1959.41	−1473.45	−981.19	1
LnL (LogLikelihood)	1947.03	1954.89	1959.98	1964.68	1971.86	1975.88	1
EN (normed entropy statistic)	0.00	0.15	0.56	0.60	0.69	0.67	6
NFI (non-fuzzy index)	0.00	0.18	0.59	0.57	0.62	0.58	
NEC (normalized entropy criterion)	0.00	441.71	228.71	210.05	163.44	172.20	

Source: Results of data processing.

4.5. Multigroup Analysis (MGA)

The multigroup analysis allows us to evaluate if pre-defined data groups have significant differences in their group-specific parameter estimates. The results of the multigroup analysis (MGA) performed with the MICOM analysis technique showed no difference in the path coefficients in the model under the moderation of gender. Therefore, the customer's gender does not moderate the relationship of the variables in the model.

The results of assessing the impact of the customer education level show that the path coefficient of IMG -> TRU has a difference under the impact of education level between postgraduate and university-college as well as postgraduate and intermediate level (see Table 23).

The results of the assessment of the impact of the customer employment place show that the path coefficient of IMG -> LOY has a difference under the impact of employment place between enterprises and hospitals & schools (see Table 24).

The results of assessing the impact of customer transaction time with the bank show that the path coefficient of TRU -> LOY has a difference under the impact of customer transaction time under 5 years and under 10 years (see Table 25).

5. Discussion

Research results show that LOY is influenced by TRU and IMG of commercial banks in HCMC. The results are consistent with the study by Narteh & Kuad

Table 23. Effect of education level.

Paths	Postgraduate-University & college			Postgraduate-Intermediate level		
	Postgraduate	University & college	Difference	Postgraduate	Intermediate level	Difference
IMG -> TRU	0.665	0.485	0.180	0.665	0.554	0.110

Source: Results of data processing.

Table 24. Effect of employment place.

Paths	Enterprises-Hospitals & schools		
	Enterprises	Hospitals & schools	Difference
IMG -> LOY	0.326	0.605	−0.279

Source: Results of data processing.

Table 25. Effect of transaction time.

Paths	Under 10 years-Under 5 years			Under 10 years-Over 10 years		
	Under 10 years	Under 5 years	Difference	Over 10 years	Under 10 years	Difference
TRU -> LOY	0.424	0.295	0.128	0.210	0.424	−0.214

Source: Results of data processing.

(2014), Yavas et al. (2014), Upamannyu et al. (2014) and Ogba & Tan (2009). IMG is a HOC. The components of IMG are CSV, COM, CEO, RES, CSR, and QHR. TRU also is a HOC. The determinants of TRU are CLT, KLT, and IDT. Thus, all research hypotheses are accepted. Specifically:

Bank IMG has a direct and indirect effect on customer LOY with a regression coefficient β = 0.561, in which direct with β = 0.403 and indirect with β = 0.158. IMG is composed of CSR with coefficient β = 0.563, QHR with coefficient β = 0.468, CSV with coefficient β = 0.316, COM with coefficient β = 0.168, RES with coefficient β = 0.126 and CEO with coefficient β = 0.082. Thus, if a bank has a good IMG, it will increase customer LOY.

Customer TRU directly affects LOY, with regression coefficient β = 0.331, and plays a mediating role in the relationship between IMG and LOY with regression coefficient β = 0.478. TRU is composed of IDT, with coefficient β = 0.532, KLT with coefficient β = 0.414, and CLT, with coefficient β = 0.391.

The results of MGA with MICOM technique showed that there was a difference in the path coefficients under the moderation of the demographic variables indicating, education, workplace, and transaction time with the bank. In general, for customers with a postgraduate education level, the IMG -> TRU path coefficient is higher than those of university-college and high school. Customers with less than 10 years of transaction time with the bank have a higher TRU -> LOY path coefficient than those with less than 5 years and more than 10 years of transaction time (see Table 26).

Therefore, banks need to focus on: First, customers with high level of education

Table 26. Results of MGA.

Paths	Highest path coefficients under moderation of the demographic variables		
	Education level Postgraduate	Workplace Hospitals & Schools	Transaction time Less than 10 years
IMG -> LOY	x	0.605	x
IMG -> TRU	0.665	x	x
TRU -> LOY	x	x	0.420

Source: Results of data processing.

because this is the customer group with the highest moderating influence between the relationship of IMG -> TRU. For this group, TRU in banks is based on knowledge rather than feelings. Second, customers who work in hospitals & schools (or the like) have the highest moderating influence between the relationships of IMG -> LOY. In general, they are people with high professional expertise, so their LOY is often based on IMG factors rather than TRU on calculus-based, knowledge-based, or identity-based. Finally, to increase the loyalty of customers with short transaction times, banks need to strengthen their TRU in banks.

The research model building is a multidimensional higher order model that facilitates checking the overall complexity and evaluating the operation of the IMG and TRU concepts. In addition, the higher order construct model provides a means to reduce collinearity between constructs and helps to reduce the number of path model relationships. The higher order model of IMG and TRU constructs is a formative that allows the identification of key components of multi-dimensional concepts.

6. Conclusion and Implications

Thus, the research hypotheses are accepted, and the specific objectives of the research are achieved. Customer LOY is influenced by their TRU and bank IMG in HCMC, VN. IMG and TRU are HOC, formative models. The components of IMG are CSV, COM, CEO, RES, CSR of the bank and QHR, and the components of TRU are CLT, KNT, and IDT. In addition, there are differences in the path coefficients IMG -> LOY, TRU -> LOY and TRU -> LOY under the moderation of demographic variables such as working area, transaction time with bank.

The use of higher order formative model allows to measure the impact of the antecedents of the latent construct of IMG and TRU on customer LOY.

To increase customer LOY and develop customer base, banks need an effective branding strategy. To increase IMG, the bank needs to focus on CSR strategy, take measures to improve the QHR, develop the bank's CSV, develop COM with stakeholders, and focus building the IMG of leaders in general and of CEO,

particularly.

Customer TRU in a bank has a positive effect on customer LOY. Transactions with banks can be risky, especially in the digital area. Banks need to constantly strengthen TRU. Increasing customer trust based on identity or based on knowledge or deterrence will increase customer LOY.

The structural model is conducted the robust check in PLS-SEM of nonlinear effects, endogeneity, and unobserved heterogeneity. From the results of checking, we could assume that the structural model is robust.

This study has some limitations. Firstly, customer satisfaction is a critical factor affecting trust and loyalty but has not been considered. Secondly, the study did not consider the antecedents of loyalty. Finally, the research scope is not wide enough to generalize the findings into theory. The purpose of generalising the findings is to ensure that insights from qualitative inquiry are recognized as important sources of evidence for practice. For generalization, the findings of this research, mixed methods research, replication of studies, integration of evidence with other places needed to pay critical attention. These limitations suggest for future studies.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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