

NETs 2017

Program at-a-Glance

Friday, July 14, 2017		
09:30-16:00	Registration	
09:30-10:00	Tea Break	
10:00-12:00	Session A1	
12:00-14:00	Lunch	
14:00-16:00	Session A2	
16:00-16:30	Tea Break	
Saturday, July 15, 2017		
09:30-16:00	Registration	
09:30-10:00	Tea Break	
10:00-12:00	Session B1	Session C1
12:00-14:00	Lunch	
14:00-16:00	Session B2	Session C2
16:00-16:30	Tea Break	
Sunday, July 16, 2017		
09:30-16:00	Registration	
09:30-10:00	Tea Break	
10:00-12:00	Session D1	Session E1
12:00-14:00	Lunch	
14:00-16:00	Session D2	Session E2
16:00-16:30	Tea Break	

Saturday, July 15, 2017

Session C1

10:00-12:00

Session Chair: Teresa Tiaojung Hsu

Cheng Shiu University

A STUDY OF THE MULTIPLE MEDIATION OF TRUST IN E-BANK FROM A CROSS-CULTURAL COMPARISON BETWEEN INDONESIA AND TAIWAN

Shu-Yi Liaw	National Pingtung University of Science and Technology
Nur Aisyah Dwi Hediarsi	National Pingtung University of Science and Technology
Thi Mai Le	National Pingtung University of Science and Technology

HOW DOES OPEN INNOVATION AFFECT PERFORMANCE? IS THE INTEGRATION MECHANISM MATTER?

Teresa Tiaojung Hsu	Cheng Shiu University
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INNOVATION STRATEGY AND NPD PERFORMANCE —THE MEDIATING ROLE OF TEAM SENSEMAKING

Tien-Shang Lee	Kun Shan University
Adriana Amaya Rivas	Escuela Superior Politécnica del Litoral, ESPOL, ESPAE
	Graduate Scho

WHAT MOTIVATES ADOLESCENT STUDENTS TO USE FACEBOOK? THE MODERATING ROLE OF POPULARITY

Hui-Min Lai	Chienkuo Technology University
Pi-Jung Hsieh	Chia Nan University of Pharmacy and Science
Po-Wen Cheng	National Changhua University of Education

WHY ARE PEOPLE RELIANT ON THE FALSE PRODUCT INFORMATION TO MAKE A PURCHASE DECISION UNDER A HIGH PERCEIVED RISK SITUATION?

Wen-Hsuan Lee	Ming Chi University of Technology
Yu-Hsun Lin	Ming Chi University of Technology
Hong Ming Liu	Ming Chi University of Technology

A Study of the Multiple Mediation of Trust in E-bank From a Cross-cultural Comparison between Indonesia and Taiwan

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ABSTRACT

The internet banking sectors need to investigate the right strategy in providing customer satisfaction and increasing customer loyalty. Based on the previous empirical researches, this study emphasizes on the importance of trust's dimensions, including benevolence, professional ability, and integrity as the mediator of the relationship between customer satisfaction and customer loyalty. This study compared two countries, Indonesia and Taiwan. Data were collected from 300 internet banking users in the four biggest banks from each country. Total 600 samples were analyzed using SPSS and SmartPLS 2.0 M3 software for Partial Least Square (PLS) analysis. The major findings are (1) Customer satisfaction has a positive direct effect on customer loyalty. (2) Benevolence has the highest mediation effect on the relationship between customer satisfaction and customer loyalty, so it becomes the most important elements of trust. (3) Benevolence has positive significant effect as the mediator of customer satisfaction to customer loyalty in Indonesia. Same condition occurred in Taiwan. It happened because of the internet banking users in both countries prefer to become loyal towards the internet banking site, which really care about their well-being, not just their own profit. (4) Professional ability significantly mediates the effect of customer satisfaction to customer loyalty in Indonesia. Meanwhile, in Taiwan, professional ability doesn't have mediation effect on the relationship between customer satisfaction and customer loyalty. This due to their experience of technology, other internet banking sites can provide the same quality of services, therefore, it is easy to influence users in switching their favored internet banking site. (5) In Indonesia, integrity doesn't mediate the effect of customer satisfaction on customer loyalty, because the internet banking users are more aware of honesty and fulfillment of promises. This related to the degree of crime and corruptions that happened in Indonesia. Whereas, in Taiwan, internet banking users support integrity can be a mediator on the effect of customer satisfaction on customer loyalty. The results of this research, which was based on a comparison survey, give researchers and practicing managers alike valuable information on how the importance of trust's elements that affect the relationship between customer satisfaction and customer loyalty.

Keywords: Customer Satisfaction, Trust, Benevolence, Ability, Integrity, Customer Loyalty.

1. Introduction

In recent years, the advancement in technological developments in information technology has led to the evolution of internet banking in the banking industry. The evolution of Internet Banking has fundamentally transformed the way banks traditionally conduct their businesses and the ways consumers perform their banking activities. Today internet banking has experienced phenomenal growth and has become one of the main avenues for banks to deliver their products and services (Wong, Loh, Yap, and Bak, 2009). The most rapidly growing financial-service Web sites were of the transaction variety where the customer could access basic services (e.g., checking account balance, transferring funds, and paying bills) and, in a growing number of cases, access extended services (including access to credit and the ability to make investment in securities). Consumers and e-retailers often face spatial and temporal separation as a result transactions carried out online often do not involve a simultaneous transaction of goods (or services) and money (Grabner-Kräuter and Faullant, 2008). This delay in time means that consumers can become increasingly uncertain whether the other party will actually perform their side of the transaction. Another reason for the increased need for trust in the online contexts is consumers' fear for the safety of their personal information due to hackers or other harmful possibilities (Yoon, 2002).

Trust is essential in situations where risk, uncertainty and interdependence exist (Wong et al., 2009), and the online environment certainly encapsulates these factors. In an online environment, there is no direct physical contact between buyer and seller. Trust is important in online environments because the consumer has few tangible and verifiable cues regarding the service provider's capabilities and intentions (Urban, Sultan, and Qualls, 2000). Particularly in online banking, although the trading interface may appear fast and convenient, the background processes, such as order flow, price discovery, and order execution, remain largely inscrutable (Konana, Menon, and Balasubramanian, 2000). Different organizations have taken different approaches to building trust. Slenders (2011) found that there are three elements that must be in place before trust exists. They are benevolence (trustee caring and motivation to act in the truster's interests), ability (competence of the trustee to do what the truster needs), and integrity (trustee honesty and promise keeping). The convergence of these three dimensions is where trust truly exists. If one is missing, trust does not exist. For example, based on the research done by Chen and Dhillon (2003), trust in an internet vendor is a key driver to realize a sale, and then it is of paramount importance to focus attention on abilities necessary to deliver a product or service, benevolence and the general integrity of the business.

From a marketing perspective, some researchers have considered trust to be a major precursor of customer loyalty (Harris and Goode, 2004). The positive effect of trust on loyalty relates to the fact that trust leads to consistency and competency in the behavior of the parties in the future, so that both parties in the future so that both parties will continue to obtain profits from the relationship. Trust can reduce the risk in the relationship between companies and customers. Kassim and Abdullah (2010) found that customer loyalty was affected by Satisfaction and trust. Satisfied customer will have trust on a firm; then, it affects loyalty. Customer loyalty requires a stage of achievement for the firm so as to demonstrate the consistency of the relationship between the customer and the company. Customer loyalty can reduce marketing costs and the company can survive a very tight competition. So, in here we can know that trust can be a mediator between customer satisfaction and customer loyalty.

This research explored the mediating effect of trust dimensions, such as benevolence, ability, and integrity becomes the mediation between customer satisfaction and customer loyalty. This research used the multi-mediation model, in order to compare which dimension of trust that has most significantly mediation effect to influence the relationship between customer satisfaction and customer loyalty. And cross-cultural comparison between two countries Taiwan and Indonesia will be identified.

The research can develop the concept of customer satisfaction, trust, and customer loyalty in the study of marketing knowledge. Additional information concerning with customer satisfaction, trust, and customer loyalty in internet banking and also recommend to increase the marketing that conducted by internet banking.

2. Literature review

2.1. Customer loyalty

According to Kocoglu (2012), customer loyalty is the long and un-interrupted retention of the relationship by offering service that meets and even goes beyond the customer needs. Customer loyalty is defined with consideration paid to the amount of buying for a given trademark. Based on this, the company strives to provide products and services to its customers' superior value compared to its competitors given. Company that able to survive and succeed is a company that has a strong focus on its customers. The foundation for the company to survive is to have loyal customer, it is the goal of all companies. Loyal customers will provide better profits for the company because customers made repeat purchases.

In a business context, loyalty has been used to describe the willingness of customers to continue the subscription, purchase, and use products and services, and to recommend the product or service to a friend or colleague. Building customer loyalty is not easy, because the choice becomes more and more customers, and customers become increasingly critical in choosing a product or service, so it appears that requests which ultimately demand the increasing of service standards. Customer loyalty plays an important role in a company, it maintain their financial means increasing performance and maintaining the viability of the company. Kotler and Keller (2012) defines loyalty as a deeply held commitment to re-buy or re-patronize a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause switching behavior.

Looking at the relationship between supplier and customer, customer loyalty can be defined and measured in terms of the amount and the quality of transactions between both parties. Customers will declare themselves loyal to a supplier through feelings and perceptions of (high) satisfaction, trough positive attitudes and trough certain preferences for the supplier, meaning that customers will be willing to repurchase from this supplier as stated by Hollensen (2010). Loyal customers will give more business to the company exponentially with time, when the level of satisfaction and comfort increased. Customer loyalty can be achieved by providing the best service and ensure customers are completely satisfied. It can't happen if not everyone in the company involved to improve the quality and retain customers.

2.2. The relationship between customer satisfaction and loyalty

In business organizations, the customer is an important component of the company. The first thing that must be established in creating customer loyalty is customer satisfaction. Satisfaction is the basic motivation for the ongoing purchase of goods and services (Kim et al., 2008). Customer satisfaction is a variable that connects the moderator variable service quality, trust, and customer loyalty (Liao and Wu, 2009).

Customer satisfaction is a valuable thing for the sake of retaining customers. From the overall activities performed by the company, will ultimately lead to the given value on customer satisfaction felt. Whether the buyer is satisfied after purchase depends on the offer's performance in relation to the buyer's expectations. In general Kotler and Keller (2012) define satisfaction as a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations. As this definition, satisfaction is a function of perceived performance and expectations. If the performance fall shorts of expectations, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted.

Kim et al. (2008) defined satisfaction as the consumer's fulfillment response; hence satisfaction involves minimum two stimuli, an outcome and a comparison referent. Customer satisfaction is viewed as a complex determinant with both cognitive and affective component. Liao and Wu (2009) stated that satisfaction can also be described as reflecting the emotional evaluation of the extent to which customers found owning and using the product or service the company will generate positive feelings. Satisfaction is the consumer's response to the evaluation of the discrepancy between prior expectations and the perception of the actual performance of the product after its consumption (Liao and Wu, 2009).

For customer-centered companies customer satisfaction is both a goal and a marketing tool. Companies need to be especially concerned with their customer satisfaction level today because the Internet provides a tool for consumer to quickly spread both good and bad word of mouth to the rest of the world. Some customers set up their own Web site to air grievances and galvanize protest, targeting high-profile brand (Kotler and Keller, 2012).

Many companies are aiming for high satisfaction because customers who are just satisfied still find it easy to switch when a better offer comes along. Those who are highly satisfied are much less ready to switch. High satisfaction or delight creates an emotional bond with the brand, not just a rational preference. The result is high customer loyalty (Kotler, 2000). Retain existing customers and strengthen Customer Loyalty is important for companies to gain competitive advantage (Deng et al., 2010). Liao and Wu (2009) mentioned that customer satisfaction is a key to increasing customer loyalty. Therefore, many companies focus on achieving customer satisfaction, thus Customer Loyalty can be improved and maintained. Anderson in (Liao and Wu, 2009), states that customer satisfaction has the potential to affect retention intentions and customer buying behavior, so this will have an impact on customer loyalty. According to the finding in the study by Kassim and Abdullah (2010), it supported that customer satisfaction is antecedents and positively related to customer loyalty. In services, the relationship between satisfaction and loyalty were done by several researchers (Akbar And Parvez, 2009; Chen et al., 2013; Prougestaporn, Visansakon, and Saowapakpongchai, 2015). We propose hypothesis as: **H₁**: Customer satisfaction has a positive direct effect on customer loyalty.

2.3. The mediating role of dimensions of trust

Kim et al. (2008) defined trust as set of specific relationship intentions dealing primarily with integrity, benevolence, competence, and predictability. It emphasized the role of trust as being central to the success of building customer relationship. Dwyer and Tanner (2002) stated that trust as the belief that a party's word or promise is reliable and a party will fulfill his or her obligations in an exchange relationship. The

trusting party derives confidence from a belief that the other party is consistent, honest, fair, responsible, and helpful. And other research have mentions about trust and its dimensions like Hollensen (2010), Kotler and Keller (2012), Chu et al. (2012). Slenders (2011) found that there are three elements that must be in place before trust exists. They are benevolence, integrity, and ability. The convergence of these three dimensions is where trust truly exists. If one is missing, trust does not exist.

Benevolence

Slenders (2011) describe benevolence is “the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive”. Benevolence has to do with caring about the other person, about not having a vested interest, and not benefiting from the relationship. The trustee is genuinely interested in the trustor’s welfare and motivated to seek joint gain, the trustee has motives beneficial to the trustor when new conditions arise for which a commitment was not made.

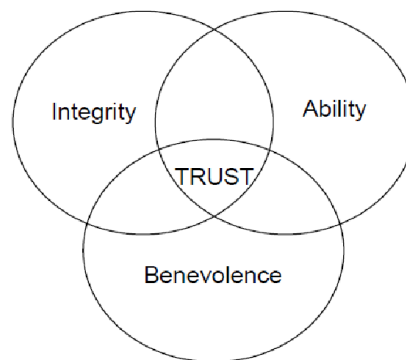


Figure 1. The Elements of Trust

Professional Ability

Professional ability is having knowledge, skills, or competencies that allow an individual to have influence in a specific area (Slenders, 2011). What this means is that individual must be knowledgeable or skilful in the area that is important to the individual who is the trustor. It was supported by Komiak and Benbasat (2004), who defined ability in various ways: the belief that a trustee has the ability or power to do for a trustor what the trustor needs to be done; trust in trustee’s technical capabilities, skills, and know-how; trust in technically competent performance to be counted on; the belief that a trustee is capable of fulfilling the contract; or trust in the skills, competencies and perceived expertise that enable a trustee to perform effectively in some specific domain.

Integrity

Integrity “involves the trustor’s perception that the trustee adheres to a set of principles that the trustor finds acceptable” (Slenders, 2011). This means that each individual in the relationship must be on the same wavelength with respect to what those principles are. They may be explicitly discussed, but more likely are implicitly assumed to exist and agreed to. Komiak and Benbasat (2004) defined Integrity as the belief that a trustee makes good faith agreements, tell the truth, and fulfill promises; or as the trustor’s perception that the trustee adheres to a set of principles that the trustor finds acceptable.

In a marketing point of view, it is stated that the development of trust should be a fundamental component of the implementation of targeted marketing to lead to the creation of customer relations. Customers should be able to feel that they can rely on the company, that the company is trustworthy. However, building trust takes a long time and can only develop after repeated meetings with customers. More importantly, trust develops after an individual takes risks in dealing with partners.

Madjid et al. (2013) found that customer trust mediates the influence of customer satisfaction on customer loyalty. It supported by Horppu et al. (2008), which found the positive linkage between website satisfactions, website trust, and website loyalty in the development of the online brand relationship was substantiated. Kim et al. (2008), in their study speculated that a customer's satisfaction from experience with a specific online retailer leads to trust and commitment (loyalty) to a relationship. Chu et al. (2012), Kassim and Abdullah (2010), and Al-dweeri et al. (2017) found that trust have positive impact on e-loyalty along with customer satisfaction. They also provide insight into the role trust in internet banking, especially when online users confront the unfamiliar, uncertain, and unsafe virtual transaction environment, e-banking providers must gain trust from users. According to Chen and Dhillon (2003), they determined overall trust of a consumer in an internet vendor with three dimensions, competence (ability), integrity, and benevolence. It supported by Slenders (2011), who stated that three elements, ability, integrity, and benevolence must be in place. If one is missing, trust does not exist. Therefore

Hypothesis 2: Benevolence is a mediator of the relationship between customer satisfaction and customer loyalty

Hypothesis 3: Ability is a mediator of the relationship between customer satisfaction and customer loyalty

Hypothesis 4: Integrity is a mediator of the relationship between customer satisfaction and customer loyalty

3. Research methodology

It intends to examine the trust and the multiple mediation of trust in the relationship between customer satisfaction and customer loyalty on internet banking user. The research model for our study was shown in figure 2. This research based on the previous research conducted by Deng et al. (2010); Liao and Wu (2009); Yang et al. (2009); Kuo, Wu, and Deng (2009); Chu et al. (2012); Sheng and Liu (2010); Kassim and Abdullah (2010), Chen (2012), and Ladhari and Leclerc (2013). So, this study aims to test the importance of trust's dimensions, including benevolence, professional ability, and integrity as the mediator of the relationship between customer satisfaction and customer loyalty.

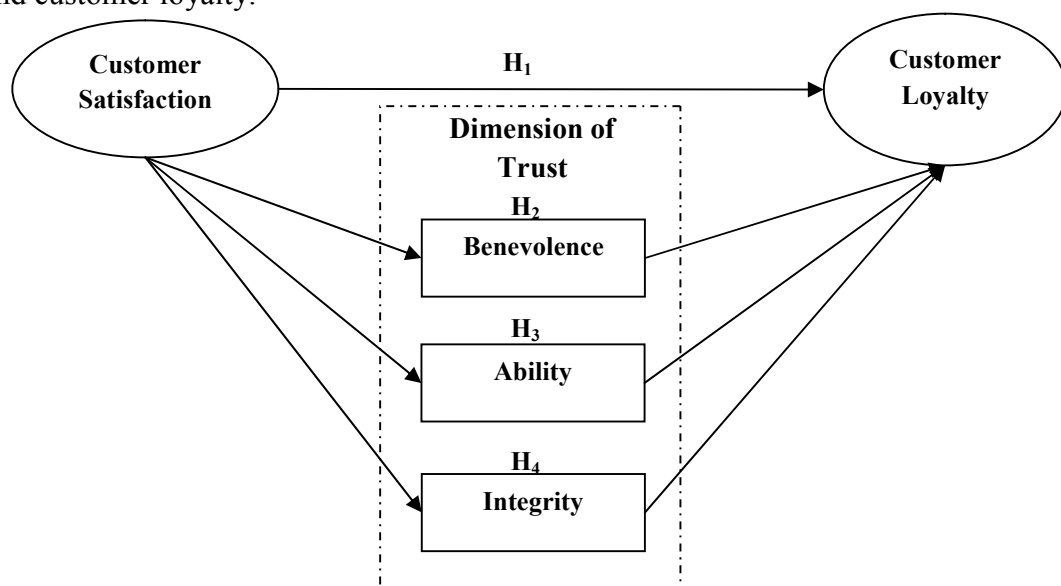


Figure 2. Research model

The questionnaire for this present study was adopted from the previous literature and validated with a pilot test. All responses to questions were made using a five-point Likert scale (1-Strongly disagree to 5=strongly agree). The variables' constructs, items is as table 1.

Table 1. Variable constructs definition

Construct	Items	Sources
Satisfaction	Feeling wise to choose the internet banking	Kassim and Abdullah (2010); Chu et al. (2012); Kim et al. (2008); Sheng and Liu (2010); Liao and Wu (2009); Deng et al. (2010)
	Internet banking capability of providing the total solution	
	E-service always conforms to the requirement of customer	
	Customer satisfied with the e-service internet banking provide	
Benevolence	Believe e-banking site would act in best interest.	Kassim and Abdullah (2010); Liao and Wu (2009); Kim et al. (2008); McKnight, Choudhury, and Kacmar (2002); Chu et al. (2012); Komiak and Benbasat (2004)
	Believe this e-banking site would do its best to help.	
	E-banking site is interested in customer well-being.	
Ability	The competency and effectiveness of e-banking site in providing banking service	Kassim and Abdullah (2010); Liao and Wu (2009); Kim et al. (2008); McKnight, Choudhury, and Kacmar (2002); Chu et al. (2012); Komiak and Benbasat (2004)
	The banking site performs the role of giving banking service very well.	
	The capability and the proficiently of e-banking site as internet banking service provider	
Integrity	Trust to dealing with e-banking site	Kassim and Abdullah (2010); Roostika (2011); Chu et al. (2012); Liao and Wu (2009); Yang et al. (2009);
	Characterize the e-banking site as honest.	
	Sincerity and genuinely of e-banking site	
Loyalty	Intend to continue doing business with this e-banking	Kassim and Abdullah (2010); Roostika (2011); Chu et al. (2012); Liao and Wu (2009); Yang et al. (2009);
	Customer don't think of changing this e-banking easily	
	Recommend the e-banking service to other people	
	Recommend this e-banking site to others	

In this study, the research conducted in two countries, Indonesia and Taiwan. Determining the location is based on the consideration that: 1) Indonesia and Taiwan are developing countries in Asia ; 2) The difference culture that they have; 3) Both of this country, have lots of banks which provide e-banking services; 4) The people in both country already get used with banking activity in order to do their financial activities. Thus, as some of the reasons mentioned above, Indonesia and Taiwan are chosen to be the location of the research. The population is the total number of internet banking user of four biggest banks in Indonesia (Bank Mandiri, Bank Negara Indonesia, Bank Central Asia, and Bank Rakyat Indonesia) and Taiwan (Taiwan Cooperative Bank, Taishin Financial Holding, First Financial Holding, and Chinatrust Financial Holding).

According to Kline (2005), although there are no absolute standards in the literature about the relation between sample size and path model complexity, the following recommendations are offered: a desirable goal is to have the ratio of the number of cases to the number of free parameters be 20:1; a 10:1 ratio, however, may be a more realistic target. Thus, based on this research path model, this study should have a minimum sample size of 300 cases for each country. So this research would use 600 valid samples, which consists of 300 internet banking users in Indonesia, and 300 internet banking users in Taiwan.

Demographics of the respondents consist of bank, usage duration, and usage frequency, types of service, gender, age, occupation, and education. In Indonesia, the major respondents from Bank Mandiri, Bank Negara Indonesia and Bank Central Asia (almost 30% for each bank), and 13% use Bank Rakyat Indonesia. Meanwhile, in Taiwan, the major respondents are from First Financial Holding, Taiwan Cooperative Bank, Chinatrust Financial Holding and Taishin Financial Holding with 39.8%, 22.7%, 18.8% and 18.8% respectively. The most customers' usage duration is from 3 months to 3 years in Taiwan and Indonesia (72.7% and 55.5%). The largest respondents in Indonesia have 1-3 times per week (43.2%) to use e-bank service, but less than once per week in Taiwan (59.4%). The majority respondents use e-service types includes check the balance, money transfer, e-payment and e-purchase in both countries. Because none of the other individual characteristics of demographic like as gender, age, occupation and education in both countries has significant effect, so they do not be further considered.

4. Results and Discussion

Two-stage analytical procedure was used to analyze the data. First, a confirmatory factor analytics was done to assess the measurement model. Second, the structural model was examined. We used SPSS and Smart PLS 2.0 to conduct the analysis. Reliability analysis was tested by Cronbach's α coefficient as table 2. The cronbach's α is range from 0.65 to 0.794. All factors with a reliability coefficient above 0.6 recommended value 0.5 (Hair et al., 2010).were considered to be acceptable in this study.

Table 2. Reliabilities among the variables

Variable	Items	Indonesia			Taiwan		
		Cronbach's α	M	Std	Cronbach's α	M	Std
Customer Satisfaction	4	0.771	3.907	0.533	0.774	3.854	0.454
Benevolence	3	0.730	3.694	0.524	0.688	3.742	0.539
Ability	3	0.650	4.005	0.447	0.666	3.888	0.445
Integrity	3	0.734	3.631	0.489	0.853	3.766	0.586
Customer Loyalty	2	0.794	3.833	0.537	0.757	3.717	0.564

4.1. Measurement model

The evaluation of the reflective measurement models examines its reliability and validity (Henseler et al., 2009). According to Hair et al. (2014), the outer loadings should be higher than 0.40, the indicator which have outer loadings less than 0.40 should be eliminated from the models and an average variance extracted (AVE), it should have value 0.50 or higher. Table 3 shows the composite reliability and average variance extracted in the final measurement. The outer loadings were checked: the lowest value is 0.584, which is higher the recommended value of 0.4. Convergent

validity was assessed by examining AVE from the measures; it ranged from 0.587 to 0.773, well above the recommended value of 0.5, thus showing convergent validity.

Based on the results on table 4, it can be seen that this model already passed the requirement of discriminant validity: For the Fornell-Larcker criterion, the square root of AVE of each construct in Indonesian model and Taiwan model are higher than its highest correlation with any other construct (Henseler et al., 2009). It means this model already have discriminant validity, either in Indonesia or Taiwan models.

The evaluation of formative measurement models, at the indicator level, tests for potential multicollinearity between items and analyzes weights (Henseler et al., 2009). The SPSS program performs a collinearity test. Resulting VIF values for all constructs in the model. According to the results, for Indonesia Model, L3 has the lowest tolerance level (0.262) and the highest VIF value (3.822), and for Taiwan Model, L3 has the lowest tolerance level (0.400) and the highest VIF value (2.500). Hence, the tolerance level and VIF values are uniformly higher and below the threshold value of 0.2 and 5. Therefore, the collinearity does not reach critical levels in any of the construct and is not an issue for the further estimation of the PLS model.

Table 3. Convergent validity of multiple mediation model

Variable	Path	Indonesia		Taiwan	
		Outer Loadings	AVE	Outer Loadings	AVE
Customer Satisfaction (CS)	CS1 <- CS	0.673	0.591	0.698	0.598
	CS2 <- CS	0.847		0.775	
	CS3 <- CS	0.793		0.819	
	CS4 <- CS	0.751		0.797	
Customer Loyalty (CL)	L1 <- CL	0.789	0.622	0.658	0.585
	L2 <- CL	0.692		0.691	
	L3 <- CL	0.842		0.858	
	L4 <- CL	0.823		0.833	
Benevolence (T1)	T1_1 <- T1	0.831	0.646	0.615	0.618
	T1_2 <- T1	0.819		0.876	
	T1_3 <- T1	0.760		0.841	
Ability (T2)	T2_4 <- T2	0.584	0.587	0.651	0.600
	T2_5 <- T2	0.860		0.789	
	T2_6 <- T2	0.826		0.869	
Integrity (T3)	T3_7 <- T3	0.803	0.650	0.832	0.773
	T3_8 <- T3	0.754		0.894	
	T3_9 <- T3	0.858		0.910	

Table 4. Matrix of discriminant validity in multiple mediation model

Indonesia						Taiwan					
	CL	CS	T1	T2	T3		CL	CS	T1	T2	T3
CL	0.789					CL	0.765				
CS	0.617	0.769				CS	0.426	0.774			
T1	0.522	0.449	0.804			T1	0.512	0.494	0.786		
T2	0.504	0.574	0.466	0.766		T2	0.349	0.611	0.579	0.775	
T3	0.399	0.360	0.598	0.399	0.806	T3	0.475	0.484	0.600	0.456	0.879

Note: CS = Customer Satisfaction, T1 = Benevolence, T2 = Ability, T3 = Integrity, CL = Customer Loyalty

4.2. Structural model

4.2.1. The impact of customer satisfaction on customer loyalty

Based on the results in Table 5, the direct effect of customer satisfaction (CS) is significant effect in Indonesia ($\beta = 0.414$, $p = 0.000$) and Taiwan ($\beta = 0.198$, $p = 0.000$). So, *hypothesis H_1 is supported in Indonesia and Taiwan*. It means customer satisfaction has a positive direct effect on customer loyalty. This result is consistent with the researches which conducted by Kasiri et al. (2017); Picón (2014), Kuo et al. (2009), Chu et al. (2012), Sheng and Liu (2010), Akbar and Parvez (2009), and Ladhari and Leclerc (2013) about customer satisfaction has positively and significantly influence on customer loyalty. Customer satisfaction is a key to increasing customer loyalty. Therefore, the internet banking provider should improve their customer satisfaction in order to make them more loyal to their internet banking site. The result shows that the capability of e-service that provided by internet banking to give total solution for customer is still become the main consideration to brings more satisfaction to the consumers.

4.2.2. The mediation effect test of benevolence, ability and integrity

Tests on the mediation hypotheses (H_2 , H_3 and H_4) use an application of the analytical approach that Preacher and Hayes (2008) described. As Table 5 and figure 3, we obtained β -coefficient, z-value, standard error (SE) and p-value by Sobel test.

In Indonesia, benevolence and ability are significant mediators in relationship between satisfaction and loyalty ($\beta = 0.109$; $z = 3.682$; $p = 0.000$) and ($\beta = 0.076$; $z = 2.637$; $p = 0.008$) respectively. So, *these results supported hypothesis H_2 and H_3 in Indonesia model*. It is consistent with the researches by Flavián et al. (2006) and Singh and Sirdeshmukh (2000), which support benevolence and ability mediates the effect of customer satisfaction on customer loyalty. However, integrity doesn't have significant mediating effect on the relationship between customer satisfaction and customer loyalty ($\beta = 0.019$; $z = 1.116$, $p = 0.264$). It means, *hypothesis H_4 is not supported in Indonesia model*.

Based on the results of direct and indirect effects, the direct effect size is higher than indirect effect, because the direct effect takes 67% of the total size in this multiple mediation model, while the indirect effect just only have 33% (17,69% for benevolence, 12,31% for ability, and 3% for integrity) and the total effect of Indonesia multiple mediation model is 0.617, it means that in Indonesia, satisfied customer can be loyal to the internet banking without need to have trust on it. So, the internet banking providers need to improve their e-service to meet the customer need and expectation of their e-service in the internet banking site.

In Taiwan, benevolence and integrity are significant mediator in relationship between satisfaction and loyalty ($\beta = 0.156$; $z = 4.97$; $p = 0.000$) and ($\beta = 0.103$; $z = 3.591$; $p = 0.000$) respectively. So, *these results supported hypothesis H_2 and H_4 in Taiwan model*. It is consistent with the researches by Singh and Sirdeshmukh (2000), Flavián et al. (2006), and Ball et al. (2004). However, ability doesn't have significant mediating effect on the relationship between customer satisfaction and customer loyalty ($\beta = -0.032$; $z = -0.804$; $p = 0.421$). It means, *hypothesis H_3 is not supported in Taiwan model*. It is consistent with the researches by Madjid et al. (2013).

Based on the results of direct and indirect effects, reversibility with Indonesia, the indirect effect size is higher than direct effect, because it takes 53.42% of the total size in this multi mediation model, and the total effect of Taiwan multi mediation model is 0.426. And the highest mediation effect is benevolence (36.69%), followed by integrity (24.19%). It means that in Taiwan, to gain the level of customer loyalty, the internet banking provider need to not only care with how to satisfy their customers, but also need to care how to gain their trust.

Table 5. Group Comparison of Multiple Mediation Model

	Indonesia			Taiwan			Comparison test	
	β	SE	z	β	SE	z	Diff	t -value
CS \rightarrow CL	0.414	0.038		0.198	0.057		0.215	3.184**
CS \rightarrow T1	0.450	0.046		0.494	0.035		-0.045	-0.768
T1 \rightarrow CL	0.243	0.061		0.316	0.060		-0.073	-0.863
CS \rightarrow T2	0.574	0.028		0.611	0.037		-0.038	-0.804
T2 \rightarrow CL	0.132	0.050		-0.052	0.065		0.184	2.274*
CS \rightarrow T3	0.360	0.049		0.484	0.033		-0.124	-2.094
T3 \rightarrow CL	0.052	0.046		0.213	0.057		-0.161	-2.213*
CS \rightarrow T1 \rightarrow CL	0.109	0.030	3.682***	0.156	0.031	4.972***	-0.047	-1.091
CS \rightarrow T2 \rightarrow CL	0.076	0.029	2.637**	-0.032	0.040	-0.804	0.108	2.222**
CS \rightarrow T3 \rightarrow CL	0.019	0.017	1.116	0.103	0.029	3.591***	-0.084	-2.571**

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CS = Customer Satisfaction, T1 = Benevolence, T2 = Ability, T3 = Integrity, CL = Customer Loyalty

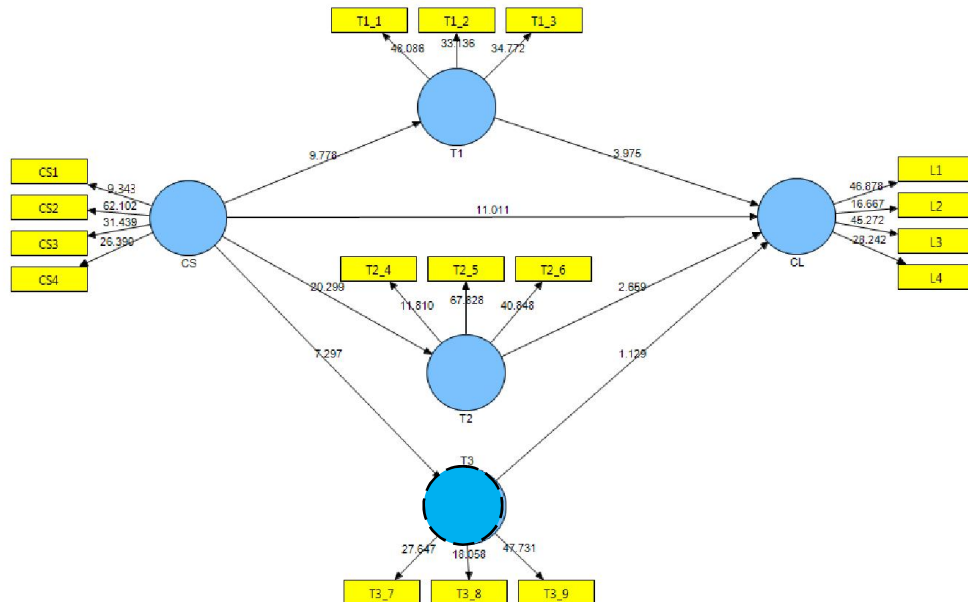
**Figure 3(a).** Structural Model of Multiple Mediation Model (Indonesia)

Figure 3(b). Structural Model of Multiple Mediation Model (Taiwan)

4.3.3. Group Comparison of Multiple Mediation Model

Based on the results in table 5, the multiple mediation model of two countries, have significant difference on three paths of direct and indirect effect.

First, the path of the direct effect of customer satisfaction (CS) on customer loyalty (CL), this path shows the significant difference between models application in Indonesia and Taiwan (β Diff= 0.215; $t = 3.184$; $p = 0.002$). This difference shows that the internet banking in Indonesia can be loyal after they satisfied with their internet banking usage, meanwhile in Taiwan, the customer are not easy to be loyal, even if they already satisfied with the internet banking service, the internet banking providers need to make the customer trust to their internet banking site. It may be can explained that Taiwan banks provided e-service is early than Indonesia, so Taiwanese customers required more satisfaction.

Second, path of ability (T2) as the mediation between customer satisfaction (CS) and customer loyalty (CL), shows significant difference between models application in Indonesia and Taiwan (β Diff = 0.018; $t = 2.222$; $p = 0.027$). It occurred because of the path of ability (T2) influence customer loyalty (CL), shows significant difference between two models application (β Diff = 0.184; $t = 2.274$; $p = 0.024$). It shows that in Indonesia, ability has positive significant effect as the mediator between customer satisfaction (CS) and customer loyalty (CL). Meanwhile, in Taiwan, it is not significant. So, in Taiwan, the internet banking providers need to improve their competency and effectiveness of e-banking site, the performance of their internet banking service, and also the capability proficiently of their internet banking site as internet banking service provider. This improvement has a purpose to establish the customer loyalty after they satisfied with their internet banking site.

Third, path of integrity (T3) as the mediation between customer satisfaction (CS) and customer loyalty (CL), shows significant difference between models application in Indonesia and Taiwan (β Diff = -0.084; t = -2.571; p = -0.011). It can be explained by the path of integrity (T3) influence customer loyalty (CL) have significant difference between two models application (β Diff = -0.103; t = -2.094; p = -0.037). Integrity has

positive significant effect as the mediator between customer satisfaction (CS) and customer loyalty (CL) in Taiwan. Meanwhile, in Indonesia, it is not significant. So, in Indonesia, to improve their customer loyalty, the internet banking providers need to make good faith agreements, tell the truth, and fulfill promises. This improvement has a purpose to establish the customer loyalty after they are satisfied with their internet banking site.

5. Conclusions and limitations

This research provides empirical research about the impact of trust's dimensions as the mediator of the relationship between customer satisfaction and customer loyalty.

The direct effect of customer satisfaction is not very strong, but it still positively significantly influences customer loyalty in Taiwan and Indonesia. It means that, in both countries, the higher customer satisfaction, it will increase customer loyalty on Internet Banking, and vice versa. This situation happened in both countries, because internet banking users as the customer of internet banking site, they already experienced and evaluated the provided service, and they will give the response, but how they respond to it, depends on how satisfied they are. They will compare their expectation with the real performance of the internet banking site, whether it matches, or exceeds, or might be far from their expectation. If they are highly satisfied, they probably want to re-use their internet banking site for longer time, or they will talk to another person about their internet banking site. This kind of responses can show how loyal the internet banking user is to their internet banking site.

Benevolence has the highest mediation effect on the relationship between customer satisfaction and customer loyalty. In Indonesia, benevolence has a significant effect as the mediator of customer satisfaction on customer loyalty. The same condition occurred in Taiwan. It happened because of the internet banking users in both countries prefer to become loyal towards the internet banking site, which really care about their well-being, not just their own profit. To obtain the customer loyalty, the internet banking providers can't just focus on how to increase the customer satisfaction, but also need to establish and increase the level of benevolence on their internet banking site user.

Ability significantly mediates the effect of customer satisfaction on customer loyalty in Indonesia. The internet banking providers need to obtain and increase the customer satisfaction, to increase the level of ability as the dimensions of Trust, in order to increase the customer loyalty. Meanwhile, in Taiwan, ability doesn't have a mediator effect on the relationship between customer satisfaction and customer loyalty.

In Indonesia, integrity doesn't mediate the effect of customer satisfaction on customer loyalty. Whereas, in Taiwan, integrity has a significant mediator effect on the relationship between customer satisfaction and customer loyalty, they support integrity can be a mediator on the effect of customer satisfaction on customer loyalty.

The main contributions of this research are to define and compare trust's dimensions, as the mediator in the relationship between customer satisfaction and customer loyalty, and also compared the integrated framework which applied in the two countries, Indonesia and Taiwan. Among the three dimensions of trust, the most important is benevolence, because this dimension has a significant effect in both countries, as the mediator between customer satisfaction and customer loyalty. Meanwhile, another two dimensions (ability and integrity), are just significant in one of two countries. Benevolence has to do with caring about the other person, about not having a vested interest, and not benefiting from the relationship. The internet banking providers need to be genuinely interested in the internet banking user welfare and motivated to seek joint gain, the internet banking providers also need to have motives

beneficial to the customer when new conditions arise for which a commitment was not made.

A few practical suggestions for internet banking providers, (1) to make the customer believe the internet banking site would act in best interest, the bank as providers can offer the internet service menu that suitable for the customer needs, so the bank can guarantee they can give service that meet with the financial activity that suitable for customer interest; (2) to make the customer believe that the internet banking site would do its best to help them, not just provide the best online service, the banks as the providers needs to offer offline customer service, who will stand-by for 24hours/7days to help the customer whenever they need them, especially when they have problem with their financial transaction on the internet banking site.

Limitations and future research

This research had certain limitation. First, it was too few for some constructs or variables; future research should be careful with the minimum number of indicators. It should be more than three indicators to get the better description of the construct or variables. Future research should examine the antecedents of customer satisfaction as another variables, how its influence to trust and customer loyalty, and its outcomes on business performance. Second, the sample of this study was obtained and focused on internet banking users of four biggest banks in Taiwan and Indonesia. Therefore, the result can only be generalized at internet banking field and cannot be generalized to the other fields. Another, the research in e-commerce will be very dynamic, future research can use the time-series analysis.

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