**A Cross-cultural Comparison in E-bank based on Multiple Mediation of Trust**

**ABSTRACT**

The aim of this study is to test the importance of trust’s dimensions, including benevolence, ability, and integrity as the mediators of the relationship between customer satisfaction and loyalty. This study compared two countries, Indonesia and Taiwan with data from 300 internet banking users in the four biggest banks from each country. Total 600 samples were analyzed using SPSS and SmartPLS 2.0 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 loyalty, thus it is the most important elements of trust. (3) In Indonesia, benevolence and ability have positive significant effect as the mediators of customer satisfaction to customer loyalty. Meanwhile, integrity doesn’t mediate the effect of customer satisfaction on customer loyalty, because the internet banking users are aware of honesty and fulfillment of promises. (4) In Taiwan, benevolence and integrity have positive significant effect as the mediators of customer satisfaction to customer loyalty. Whereas, ability doesn’t have mediation effect on the relationship between customer satisfaction and customer loyalty. The findings of this survey will greatly contribute in providing researchers and managers valuable information on 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

**INTRODUCTION**

In recent years, 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, & Bak, 2009). The most fast growing financial service on the websites were the transaction variety where the customer could access basic services (e.g., checking account balance, transferring funds, and paying bills) and, in a growing access advanced services (including access to credit and the ability to make investment in security). Consumers often face temporal separation as a result transactions carried out online and do not involve a simultaneous transaction of services and money (Grabner-Kräuter & Faullant, 2008). This situation means that consumers can become increasingly uncertain whether the other parties 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 and other harmful possibilities (Yoon, 2002).

Trust exists in situations where there is risk, uncertainty and interdependence (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, & 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, & Balasubramanian, 2000). Slenders (2011) found that three elements 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). Trust in an internet vendor is a key which lead customers to focus attention on their service (Chen & Dhillon, 2003).

From a marketing point of view, some researchers have considered trust as a major precursor of customer loyalty (Harris & Goode, 2004). Trust can reduce the risk in the relationship between company and their customers. Kassim and Abdullah (2010) found that customer loyalty was affected by satisfaction and trust. Satisfied customer will have trust in a company; then, it affects to their loyalty. 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.

Many of the previous researchers uses different sub-dimensions for each construct in their research, so it caused the research results they get to be different and there are inconsistent prior results with limited research about country comparison in the framework of customer satisfaction, trust and customer loyalty, especially on the internet banking context. This research, therefore, was aimed to reveal and illuminate the effect of customer satisfaction to customer loyalty. Based on the mapping result of the prior research, it concludes that there is a systematical effort to refine the relationship between satisfaction and loyalty variables; yet, the mediating variable in between customer satisfaction and customer loyalty variables is still developing and arguable. Some previous studies, discuss about trust, which become the mediator on the relationship between both of them, but the role of each dimension of trust have been partly neglected in many studies conducted in developing countries. So, this research emphasizes the importance of trust as the mediation between customer satisfaction and customer loyalty.

This research aims to explore the mediating effect of trust dimensions, such as benevolence, ability, and integrity between customer satisfaction and customer loyalty. The study uses the multi-mediation model, in order to compare which dimension of trust has most significantly mediation effect to influence the relationship between customer satisfaction and customer loyalty. The study further conducts a cross-cultural comparison between two countries Taiwan and Indonesia is identified. The research can develop the concept of customer satisfaction, trust, and customer loyalty in the study of marketing knowledge.

**LITERATURE REVIEW**

**Customer loyalty**

According to Kocoglu (2012), loyalty is the long and un-interrupted retention of the relationship by offering service that meets and even goes beyond the customer needs. Based on this, the company strives to provide products and services to its customers’ superior value compared to those given by its competitors. The company is able to survive, succeed, and focus on its customers. The foundation for the company to survive is to have loyal customer, and it should be the golden goal of all companies. Loyal customers will provide better profits for the company because customers can make ​​repeat purchases.

In a business context, loyalty has been used to describe the willingness of customers to continue the subscription, purchase, and recommend products and services to friends or colleagues. Building customer loyalty is not easy, because customers become increasingly critical in choosing a product or service. Customer loyalty plays an important role in a company, by maintaining its financial status and the viability of the company. Kotler and Keller (2012) defined loyalty as a deeply held commitment to re-buy preferred products or services in the future despite situational influences and marketing efforts having the potential to cause switching behavior.

Customers will declare themselves loyal to a supplier through feelings and perceptions of satisfaction, positive attitudes and certain preferences for the supplier, meaning that customers will be willing to repurchase from this supplier as stated by Hollensen (2010). Customer satisfaction and customer belief are some of the factors that can build customer loyalty that will contribute to the long-term relationship between the customer and the e-service provider (Sobihah et al., 2015). Loyal customers will give more interactions 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 ensuring customers are completely satisfied. Customer loyalty is beneficial for the bank in the sense that loyal customers contributes to the continuity of the bank (van Esterik-Plasmeijer, van Esterik-Plasmeijer, van Raaij, & van Raaij, 2017).

**The relationship between customer satisfaction and loyalty**

In business organizations, the customer is an important component of the company. The first thing which 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 as service quality, trust, and customer loyalty (Liao & Wu, 2009). Customer satisfaction is a valuable thing for the sake of retaining customers. 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) defined satisfaction is as a person’s feelings of happy or disappointment resulting from comparing a product’s perceived performance in relation to his or her expectations. If the performance falls short of expectations, the customer is dissatisfied. However, if the performance matches the expectations, the customer is satisfied. Finally, if the performance exceeds expectations, the customer is highly satisfied or delighted.

Kim et al. (2008) further defined satisfaction as the consumer’s fulfillment responses; 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 components. 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.

Many companies are aiming to bring high satisfaction for their customers. Customers who are highly satisfied will be less ready to switch, thus demonstrating high customer loyalty (Kotler, 2000). Retaining existing customers and strengthen loyal customer is important for companies to gain competitive advantage (Deng et al., 2010). Liao and Wu (2009) mentioned that customer satisfaction is a key in increasing customer loyalty. Therefore, many companies focus on achieving customer satisfaction, thereby improving customer loyalty. Liao and Wu (2009 stated that customer satisfaction has the potential to affect retention intentions and customer buying behavior, which eventually impacts customer loyalty. In their study, Kassim and Abdullah (2010) reported 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 & Parvez, 2009; Chen et al., 2013; Prougestaporn, Visansakon, & Saowapakpongchai, 2015; Bricci, Fragata, & Antunes, 2016). Customer satisfaction is one of the main antecedents of customer loyalty (Setó-Pamies, 2012). This leads us to propose the first hypothesis of the model.

*Hypothesis (H1): Customer satisfaction has a positive direct effect on customer loyalty.*

**The mediating role of dimensions of trust**

Kim et al. (2008) defined trust as a set of specific relationship intentions dealing primarily with integrity, benevolence, competence, and predictability. It illustrated the role of trust as being vital 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 other party is consistent, honest, fair, responsible, and helpful. Usman (2015) provided that trust is an important element for the performance of customer relationship management (CRM) and e-banking adoption. Another researches have mentioned about trust and its dimensions like as van Esterik-Plasmeijer, van Esterik-Plasmeijer, van Raaij, & van Raaij (2017); Hollensen (2010), Kotler and Keller (2012), Chu et al. (2012). Slenders (2011) found that there are three elements of trust. They are benevolence, integrity, and ability. If one is missing, trust does not exist.

***Benevolence***

Slenders (2011) described benevolence as “the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive”. Benevolence acts with caring about the other person, not having 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 motived beneficial to the trustor when new conditions arise for which a commitment was not made.

***Ability***

Ability is having knowledge, skills, or competencies that allow an individual to have influence in a specific area (Slenders, 2011). It means that individual must be knowledgeable or skillful in the area that is important to trustor. This premise 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; 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 direction with others based on their principle. Komiak and Benbasat (2004) defined integrity as the belief that a trustee makes good faith agreements, tell the truth, and fulfill promises; or the trustor’s perception that the trustee will follow the initial agreement.

Madjid et al. (2013) found that customer’ trust mediates the influence of customer satisfaction on customer loyalty. These findings were supported by Horppu et al. (2008), who found a positive linkage between website satisfactions, website trust, and website loyalty in the development of the online brand relationship was substantiated. Kim et al. (2008) further speculated that a customer’s satisfaction from experience with a specific online retailer leads to trust and commitment (loyalty) to a relationship. Mentioned in report of Capgemini (2012) that although having high satisfaction, 40 percent of customers are not sure whether they will stay with the primary bank. Chu et al. (2012), Kassim and Abdullah (2010), and Al-dweeri et al. (2017) mentioned that trust have a positive impact on e-loyalty, along with customer satisfaction. They also provided an 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. In their study, Chen and Dhillon (2003) determined overall customer’s trust in an internet vendor with three dimensions, competence (ability), integrity, and benevolence. This claim was further 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 (H2): Benevolence is a mediator of the relationship between customer satisfaction and customer loyalty*

*Hypothesis (H3): Ability is a mediator of the relationship between customer satisfaction and customer loyalty*

*Hypothesis (H4): Integrity is a mediator of the relationship between customer satisfaction and customer loyalty*

**METHODOLOGY**

This study examines the multiple mediation of trust in the relationship between customer satisfaction and customer loyalty on internet banking user. The research model for our study is shown in figure 1. The study is based on the previous research which 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); Ladhari and Leclerc (2013); and Chen (2012). Therefore, this study aims to test the importance of the three dimensions of trust, which are: benevolence, ability, and integrity as the mediator of the relationship between customer satisfaction and customer loyalty.

**Dimension of Trust**

**Ability**

**Integrity**

**H1**

**H2**

**H3**

**H4**

**Benevolence**

**Figure 1. Research model**

The questionnaire was adopted from the previous studies and validated with a pilot test. All responses were made using a five-point Likert scale (1-Strongly disagree to 5-Strongly agree). The variable constructs, items are as shown in 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 |
| 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 |
| 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 |

This research study was conducted in two countries, Indonesia and Taiwan. The choice of the location study was 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 large number of banks which provide e-banking services; 4) The people in both countries are well informed with banking and other financial activities. The target population of the study were four biggest banks that provides internet banking facilities in both countries: Indonesia (Bank Mandiri, Bank Negara Indonesia, Bank Central Asia, and Bank Rakyat Indonesia) and Taiwan respectively (Taiwan Cooperative Bank, Taishin Financial Holding, First Financial Holding, and Chinatrust Financial Holding).

In determination of the sample size, the study followed the recommendations by Kline (2005). A desirable goal was to have the ratio of the number of cases to the number of free parameters be 20:1 or a 10:1 ratio. Based on this research path model, this study had a minimum sample size of 300 cases for each country. Therefore, this means the total population was 600 valid samples, which consisted of 300 internet banking users in Indonesia, and 300 internet banking users in Taiwan.

Demographics of the respondents consisted 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% in Bank Rakyat Indonesia. Meanwhile, in Taiwan, the major respondents were 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 was 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 of the respondents used e-service types which included: check the balance, money transfer, e-payment and e-purchase in both countries. For Indonesian respondents, there are 31.8% respondents are 17 – 23 years old, 40.9% respondents are 24 – 30 years old, 18.9% respondents are 31 – 37 years old, and 8.3% of respondents are 38 – 44 years old. Whereas, for Taiwanese respondents, there are 32% respondents are 17 – 23 years old, 37.5% respondents are 24 – 30 years old, 11.7% respondents are 31 – 37 years old, 8.6% of respondents are 38 – 44 years old, and 10.2% respondents are 45 – 51 years old. About education level, in Indonesia, respondents with senior high school education level are 24.2% of respondents, bachelor’s degree is 53.8% respondents, and for master’s degree are 22% of respondents. Meanwhile in Taiwan, respondents with Bachelor’s Degree education level are 39.8% of respondents and for Master’s Degree are 60.2% of respondents. Because none of the other individual characteristics of demographic like as gender, age, occupation and education in both countries have significant effect, so they do not be further considered.

**RESULTS AND DISCUSSION**

Two-stage analytical procedure was used to analyze the data. Firstly, a confirmatory factor analytics was done to assess the measurement model. Secondly, the structural model was examined. We used SPSS and Smart PLS 2.0 to conduct the data analysis. Reliability analysis was tested by Cronbach’s α coefficient as shown in table 2. The cronbach’s α is range from 0.650 to 0.853. 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** | | |
| **M** | **Std** | **Cronbach’s** | **M** | **Std** | **Cronbach’s** |
| Customer Satisfaction | 4 | 3.907 | 0.533 | 0.771 | 3.854 | 0.454 | 0.774 |
| Benevolence | 3 | 3.694 | 0.524 | 0.730 | 3.742 | 0.539 | 0.688 |
| Ability | 3 | 4.005 | 0.447 | 0.650 | 3.888 | 0.445 | 0.666 |
| Integrity | 3 | 3.631 | 0.489 | 0.734 | 3.766 | 0.586 | 0.853 |
| Customer Loyalty | 2 | 3.833 | 0.537 | 0.794 | 3.717 | 0.564 | 0.757 |

**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 was 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 have already 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). A collinearity test was performed by SPSS program. Resulting VIF values achieved good condition 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** | **Average Variance Extracted** (**AVE)** | **Outer Loadings** | **Average Variance Extracted** (**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 | | | | | | | | | | | |

**Structural model**

*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 (*β* = 0.414, *p* = 0.000) and Taiwan (*β* = 0.198, *p* = 0.000). *So, hypothesis H1 is supported in Indonesia and Taiwan*. It means customer satisfaction has a positive direct effect on customer loyalty. The results are consistent with several studies including Kasiri et al. (2017); Picón (2014), Ladhari and Leclerc (2013); Kuo et al. (2009); Sheng and Liu (2010); Akbar and Parvez (2009) and Chu et al. (2012). They found that customer satisfaction had a positive and significant influence on customer loyalty. Customer satisfaction was found to be a key on increasing customer loyalty. These finding therefore, implies that internet banking providers should strive to improve their customer satisfaction in order to make them more loyal to them.

*The mediation effect test of benevolence, ability and integrity*

Tests on the mediation hypotheses (H2, H3 and H4) used an application of the analytical approach that Preacher and Hayes (2008) described. As Table 5, we obtained *β-*coefficient*,* z-value, standard error (SE) and *p*-value by Sobel test.

**In Indonesia,** benevolence and ability were found to be significant mediators in relationship between satisfaction and loyalty (*β* =0.109; *z* = 3.682; *p* = 0.000) and (*β* = 0.076; *z* = 2.637; *p* = 0.008). *So, these results supported hypothesis H2 and H3 in Indonesia model*. These findings are consistent with findings from Flavián et al. (2006) and Singh and Sirdeshmukh (2000), as they both supported that benevolence and ability mediates the effect of customer satisfaction on customer loyalty. However, integrity was found to be not having statistical significant mediating effects on the relationship between customer satisfaction and customer loyalty (*β* =0.019; *z* = 1.116, *p* = 0.264). This therefore means, *hypothesis H4 was 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 had 33% (17.69% for benevolence, 12.31% for ability, and 3% for integrity) and the total effect of Indonesia multiple mediation model was 0.617, and this implies that in Indonesia, satisfied customers can be loyal to the internet banking without need to have trust on it. So, the internet banking providers need to improve their e-services to meet the customers’ need and their expectation of their e-services in the internet banking site.

**In Taiwan,** benevolence and integrity are significant mediator in relationship between satisfaction and loyalty (*β* = 0.156; *z* = 4.97; *p* = 0.000) and (*β* =0.103; *z* = 3.591; *p* = 0.000) respectively. So, *these results supported hypothesis H2 and H4 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 (*β* = - 0.032; *z* = - 0.804; *p* = 0.421). It means, *hypothesis H3 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 🡪CL** | 0.414 | 0.038 |  | 0.198 | 0.057 |  | 0.215 | 3.184\*\* |
| **CS 🡪 T1** | 0.450 | 0.046 |  | 0.494 | 0.035 |  | -0.045 | -0.768 |
| **T1 🡪 CL** | 0.243 | 0.061 |  | 0.316 | 0.060 |  | -0.073 | -0.863 |
| **CS 🡪 T2** | 0.574 | 0.028 |  | 0.611 | 0.037 |  | -0.038 | -0.804 |
| **T2 🡪 CL** | 0.132 | 0.050 |  | -0.052 | 0.065 |  | 0.184 | 2.274\* |
| **CS 🡪 T3** | 0.360 | 0.049 |  | 0.484 | 0.033 |  | -0.124 | -2.094 |
| **T3 🡪 CL** | 0.052 | 0.046 |  | 0.213 | 0.057 |  | -0.161 | -2.213\* |
| **CS 🡪 T1🡪 CL** | 0.109 | 0.030 | 3.682\*\*\* | 0.156 | 0.031 | 4.972\*\*\* | -0.047 | -1.091 |
| **CS 🡪 T2🡪 CL** | 0.076 | 0.029 | 2.637\*\* | -0.032 | 0.040 | - 0.804 | 0.108 | 2.222\*\* |
| **CS 🡪 T3🡪 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

*Group Comparison of Multiple Mediation Model*

Based on the results in Table 5, the multiple mediation models of two countries had significant difference on three paths of direct and indirect effect.

First, the path of the direct effect of customer satisfaction (CS) was on customer loyalty (CL), this path revealed the significant different 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 customers are satisfied with their internet banking usage, meanwhile in Taiwan, the customers are not easy to be loyal, even if they already satisfied with the internet banking service, the internet banking providers need to make the customers’ trust their internet banking site. However, this may be explained by the fact that technological advancement in Taiwan was earlier that in Indonesia hence Taiwan customers are more accustomed to e-services, thus Taiwanese customers required more satisfaction.

Second, path of ability (T2) as the mediation between customer satisfaction (CS) and customer loyalty (CL), showed significant difference of model application in Indonesia and Taiwan (*β* *Diff* = 0.018; *t* = 2.222; *p* = 0.027). This 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 demonstrates that in Indonesia, ability had a 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 could 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), showed 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 makes good faith agreements, tell the truth, and fulfill promises. This improvement has a purpose to establish the customer loyalty after they satisfied with their internet banking site.

**CONCLUSIONS AND LIMITATIONS**

**Conclusions**

This study is about “A cross-cultural comparison in e-bank based on multiple mediation of trust”. To examine the research hypothesis, this research used analysis of Partial Least Square. The results of data analysis can be seen in Table 6.

Table 6 The Finding of Hypothesis Analysis

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Hypothesis** | **Finding** | |
| **Indonesia** | **Taiwan** |
| **H1** | Customer Satisfaction has a positive effect on Trust | Supported | Supported |
| **H2** | Benevolence is a mediator of the relationship between Customer Satisfaction and Customer Loyalty | Supported | Supported |
| **H3** | Ability is a mediator of the relationship between Customer Satisfaction and Customer Loyalty | Supported | Not Supported |
| **H4** | Integrity is a mediator of the relationship between Customer Satisfaction and Customer Loyalty | Not Supported | Supported |

The direct effect of customer satisfaction is not very strong, but it still positively significant 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 response it, depends on how satisfied they are. They will compare their expectation with the real performance of the internet banking site, whether it match, or exceed, or might be fall shorts from their expectation. If they highly satisfied, they probably want to re-use their internet banking site for longer time, or they will talk to another people about their internet banking site. This kind of responses can show how loyal the internet banking user to their internet banking site.

Benevolence had the highest mediation effect on the relationship between customer satisfaction and customer loyalty. In Indonesia, benevolence had significant effect as the mediator of customer satisfaction on customer loyalty. 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 increasing the level of benevolence on their internet banking site user.

Ability was found to have significantly mediating the effects on customer satisfaction and 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 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 significant mediator effect on the relationship between customer satisfaction and customer loyalty, they support integrity can be mediator on the effect of customer satisfaction on customer loyalty.

The main contributions of this research were to define and compare trust’s dimensions, as the mediator in the relationship between customer satisfaction and customer satisfaction, 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 significant effect in both countries, as the mediator between customer satisfaction and customer loyalty. Meanwhile, another two dimensions (ability and integrity), just significant in one of two countries. 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 needs 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 baking 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 limitations. First, it was too few 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 variable, 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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