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# SERVICE QUALITY AND CUSTOMER LOYALTY AMONG FOREIGN USERS OF MALAYSIAN TELECOMMUNICATION SERVICES

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## Abstract

The telecommunication industry is identified as the most important sector nowadays. During the pandemic period, this was one of the sectors not negatively impacted but rather saw a positive growth due to the high demand of internet services. In Malaysia, an estimated 3 million individual foreigners utilise these services and it has the potential to be the largest market segment. However, the service providers always face the challenge of retaining customers and their loyalty in the long run. Users are exposed to numerous quality service options, resulting in them frequently switching their service providers. Thus, this study aims to ascertain how service quality which consists of accessibility, reliability, communication and security, influence customer loyalty among individual foreigners using telecommunication services in Malaysia. The study was conducted quantitatively, with 385 questionnaires distributed among individual foreigners who use telecommunication services in Malaysia; a face-to-face conventional method of data collection was employed. All responses were gathered in the MS Excel format and further analysed using the partial least square structural equation model (PLS-SEM) technique. The results determined three dimensions of service quality - accessibility, reliability and communication had a positive and significant impact on customer loyalty among individual foreigners, while security was found not to have an impact on customer loyalty. As the development of telecommunication industry intensifies, these findings could inform the Malaysian telecommunication providers of ways to improve their service quality by focusing on accessibility, reliability and communication aspects, in the hope of retaining their loyal users in the long run.

*Keywords:* Service quality, customer loyalty, telecommunication services, foreign users

## 1. Introduction

The telecommunications industry in Malaysia is a vast industry that consists of market players such as TM, Maxis Berhad, Celcom Axiata Berhad, Digi.Com Berhad and TIME dotCOmBerhad. According to Bhattacharjee et al. (2018), the broadband internet service is a well-established business line in the competitive market that is slow-cycle, and most businesses are seeking to gain sustainable market share by winning foreign customers' loyalty and increasing the value of their customers. In the telecommunications sector, the operation of telecommunications service centres is very significant and fundamental to the activity of the company. Quality of service delivery does reflect the needs of consumers when there is an occurrence of service performance failure (Cheng et al., 2021; Lee & Sparks, 2007). Telecommunication service centres are also a way to draw new customers as well as cater for enquiries and services sought by current customers to ensure their loyalty. It is recognized in marketing research that acquiring new customers is more costly than retaining current ones (Reichheld, 1993).

Service quality is one of the competitiveness factors that have captured the interest of telecommunication service providers because it is difficult to define and quantify due to a lack of consensus as to what constitutes the best service quality (Kumar, 2017; Cheng et al., 2021). Hence, because services are intangible, indivisible and perishable, it is sometimes difficult for customers to evaluate service quality in comparison to product quality. As a result of increased competition and deregulation, many retail companies, including telecommunication companies, are looking for more lucrative means to distinguish the products (Leninkumar, 2016). Since the types of products are varied, it is hard for the company to provide equivalent standard of satisfaction of all groups of consumer, although if a customer has a good experience with a service provider (Dubey & Tiwari, 2016). Therefore, knowing the elements that influence customer brand loyalty in the service industry is vital (Kumar, 2017). This also includes foreigners with Malaysia recently ranked fourth highest as a retirement destination for foreigners according to an established magazine that stated that foreign customer loyalty is also vital for the telecommunications industry (Wong, 2015).

Statista (2020) outlined the Malaysian immigrant's number is estimated 3.43 million, which is a significant number of people who may be potential customers for local telecommunication firms. Telecom companies always face challenges in terms of retaining customers and ensuring their loyalty in order to achieve long-term profit. Telecommunication service providers are aware that retaining consumers is the most difficult challenge for telecommunication firms since mobile users frequently change their mobile service providers. Customers have numerous options to choose from among telecommunication mobile companies in a very competitive market (Al-Hashedi & Abkar, 2017). Moreover, clients, both citizens and non-citizens, who are dissatisfied with services can easily switch to a new telecom operator, and even switch operators without changing their phone numbers, thanks to portability. Hence, for an operator it is essential to both attract new customers and retain old customers (Ali, 2017). With the increasing competitiveness in the industry, telecom companies have realised that they can enhance their performance by focusing more on client retention.

A favorable linear association between service quality and two loyalty constructs - repurchase intention and willingness to recommend, has also been discovered (Izogo, 2017). When loyal clients are pleased with the highest level of service quality offered by the service provider, they will suggest the service

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to others, assuring that only high-quality services will be accepted by prospective customers (Karyose et al., 2017). Many research done on examining the influence of service quality on customer loyalty. Loyalty of customer was found to be linked to all five dimensions of service quality namely tangibility, responsiveness, reliability, assurance and empathy (Dubey & Tiwari, 2016).

The exploration of the relationship between service quality and foreign customer loyalty in telecom companies in Malaysia may benefit both telecom companies and foreign customers of the telecom companies, thus improving the telecom companies' performance. Foreign customers will know which telecom companies in Malaysia have the best criteria for them to choose from and in which they can trust. Chaudhuri and Holbrook (2001) similarly with Garbarino and Johnson (1999) found that the ability to put one's trust in another has been identified as a significant driver of loyalty. For the telecommunication companies, this research highlights how factors and dimensions of service quality helps to retain foreign customer loyalty and thereby achieve long-term profits. The sector will be able to implement technical advancements into their services to further satisfy their present customer base whilst also attracting new prospective customers as a result of the accessibility determination.

The literature has generally investigated customer loyalty in the telecommunications sector by taking into account the customers' views of a company. There are very few instances where customer loyalty has been investigated within a sub-segment of the overall customer experience. In the case of Malaysia, one example of this sub-segment is the individual foreign customer. Foreign customers form a significant market segment in the telecommunications industry (Bhattacharjee et al., 2018). Given that there are several telecommunication providers in Malaysia, foreign users of the telecommunications sectors have many telecommunication providers to select from and, in addition, they tend to switch providers for better deals. Foreign individuals using telecommunications look out for offers and benefits promised by the telecommunication providers and do not hesitate to switch providers to take advantage of these attractive offers. As such, this segment of customers does not show loyalty to a particular telecommunication service provider as their only concerned is the benefits they can obtain from a telecommunication service provider (Ting et al., 2020; Naz et al., 2021). Therefore, present findings will assist future researchers to carry out more advanced research that focuses on the important factors by having dedicated market segment users as the respondents.

## 1.1. Customer loyalty

Customer loyalty has a substantial impact towards the success of a company and has been identified as a critical aspect in achieving a competitive edge over competitors in a highly competitive and dynamic market. A foreign customer is defined as a customer who is a foreign government, an entity established under the laws of a nation other than Malaysia, or an individual who is not a citizen of Malaysia. In order for a business to be successful, customer loyalty must be fostered. This is especially true when customer acquisition alone does not result in long-term success. Superior customer loyalty in service businesses results in more income, decreased expenditure of customer acquisition, as well as lowering the serving recurring customers cost, hence contribute to enhanced profitability (Reichheld 1993; Reichheld & Sasser, 1990). The goal of generating client loyalty is, in fact, an underlying purpose of strategic market planning (Kotler, 1997).

For starters, it is far less expensive to maintain existing consumers than it is to acquire new ones (Kotler, 2010). Furthermore, loyal clients are more inclined than non-loyal customers to speak favorably about their last experience, subsequently provide opportunity for good image of the service provider through the word-of-mouth (Shoemaker & Lewis, 1999). Thirdly, it ensures the continuity of the connection between clients and providers of services. Finally, firms may adopt a better indirect marketing approach that is more focused, since they keep information about the customer's purchasing history including the loyal customer group. Access towards this group of clients is better as compared to the first-time customers. Furthermore, aims of recurring customer group can precisely be done by using similar information, while stimulating responses to the firm's recent promotions (Reid & Reid, 1993).

To put it in a broader context, customer loyalty is something that they might relate directly to brands, services, stores and product categories for example, skincare products and activities like running. This article uses the term "customer loyalty" rather than "brand loyalty" to stress that loyalty is a quality of individuals rather than something inherent in a product or a service. Unfortunately, there is not a commonly accepted definition for this (Dick & Basu, 1994; Oliver, 1999). Consumers' loyalty may be influenced by many reasons, however in common, their loyalty is related to a good product purchasing experience, thus encouraging them to repeat their buying. Compared to the new customers, the loyal group consume extra 67% in buying goods. This group of customer contribute almost 80% of firm's income, even though they may represented by only 20% of the total customers (Thakur & Workman, 2016). In other contexts, customer loyalty can be described as the general emotion or attitude that leads a consumer to contemplate repeating a purchased product or service. Oliver (1999) highlighted the definition of customer loyalty which is a promise of customers to obtain particular firms' goods within an extended time duration without concerning towards any new offers by competitors, hence not compelled to switching intention. This group of customers always provide good opinion towards the firm, recommend it to other perople, as well as participate in repurchase behaviour (Dimitriades, 2006). According to Lam et al. (2004), customer loyalty is evidenced by a customer's continued usage of a service provider and by the customer's referral of a service provider to others. Furthermore, it is assumed that the purchasers want to make purchases from the organisation on a regular basis in order to maintain a long-term connection with the organisation (Dick & Basu, 1994; Fornell, 1992). The level of loyalty shown by customers to various businesses (Nyadzayo & Khajehzadeh, 2016) may be the reason of the firms' victory. Therefore, in order to sustain the firm's loyal customers, proper strategy and marketing methods should be deployed (Jiang & Zhang, 2016).

### 1.2. Accessibility

Foreign customers need to be able to access a product and services easily. This means providing various channels for foreign customers to purchase the product. They need to make it easier for foreign customers in doing business. Companies that value customer experience make themselves easily accessible to customers in the channel of customer choice. According to Benedict and Ko (2004), perceptions of shopping virtually and its intentions, may inclined by the exogenic means, not just the characteristics of customer, features of the product and purchasing habits, but also trust in online shopping and previous online shopping experiences. According to empirical study, one factor influencing consumers' desire to make online purchases is how convenient the internet is (Wu & Wang, 2014). According to the National

Retail Federation, with more information and possibilities to compare items and pricing available online, customers have access to broader product variety as well as the convenience and ease of discovering preferred products online, (Butler & Peppard, 1998). However, Lim and Dubinsky (2004) found that customers hardly can have chance on physically touch the goods prior to buying, making them reluctant to purchase online. In conjunction, the following hypothesis is recommended:

H1: There is a significant and positive relationship between accessibility and customer loyalty among foreign users of telecommunication services in Malaysia.

### 1.3. Reliability

Most managers agree that success is determined by companies that are willing to improve service quality in response to customer demands, with quality that traditionally viewed as the competitive advantage factor. As a result, effort of offering better quality product are set as top priority for every company (Yuen & Chan, 2010). According to Yuen and Chan (2010), the reliability component of service refers to whether or not the service provided is error-free, produces consistent results and provides consistent service quality. The capacity to perform the promised service consistently and accurately, and thereby keeping its promise to consumers is referred to as reliability. To attain reliability, service providers must meet certain conditions, including performing the service correctly the first time and always keeping their promises to customers (Iddrisu et al., 2015). Reliability has a crucial role in the operations of the conventional service operators and can include the accuracy of billings, quotations, records and commitment to fulfil orders (Fida et al., 2020).

Many authors and academics have emphasised the importance of customer satisfaction, as well as displeasure, as indicators of a company's success or failure in meeting consumer expectations. By going beyond consumer expectations, besides having a more satisfied customer, this has further increase loyalties among foreign consumer, lowering the rate of losing, thus increase the rate of retaining them (Fida et al., 2020). According to research conducted by Iddrisu et al. (2015), customer loyalty is observed to be positively influenced by reliability. The outcome is also in line with past research by Nguyen and Leblanc (2001) and Bellini et al. (2005). Another piece of research on customer loyalty indicated that service reliability is an important driver of consumer happiness and loyalty, thus consistent with previous by Al Darey and Saleh (2009) who also discovered that consumer loyalty is influenced by reliability (Agyei & Kilika, 2013). Reliability, which is the capacity to provide the promised service with consistency and accuracy, is paramount as customers of telecommunication services must subscribe to a dependable and accurate service that is backed up by excellent after-sales service provided by knowledgeable employees (Belwal & Amireh, 2018). As Odunlami and Matthew (2015) suggest that loyal customers derived from their satisfaction, thus bring to the linkage of increasing the reliability of services to satisfy customer demand. This has forced businesses to embrace new competitive and innovative strategies that will help them obtain a competitive advantage in the form of a loyal client base (Khan & Fasih, 2014). As a result, based on the above discussion, this study proposes:

H2: There is a significant and positive relationship between reliability and customer loyalty among foreign users of telecommunication services in Malaysia.

### 1.4. Communication

Communication is a seller-buyer form of communication that has a substantial impact on an organization's decision-making process. Furthermore, it encourages both the seller and the buyer to play their roles successfully during a transaction, resulting in a satisfactory trade (Dimyati, 2018). Communication refers to the ability to provide customers with timely, reliable and correct information. Every organization uses communication which is defined by helpfulness, positivism, timeliness, utility, and pleasantness, with little to no energy spent by the consumer to understand and identify the communication's application (Alawni et al., 2015).

Customer loyalty can be sparked by using two phases of communication. Communication creates awareness, customer choices, persuades potential buyers and stimulates buying decisions in the early stages. Communication in the later stages requires maintaining regular contact with clients, delivering correct and timely information and service updates, as well as proactive contacts in the event of concerns (Alawni et al., 2015). Communication is an important aspect of service quality and, in order to have a positive impact, it must meet customer expectations as an outcome of the interaction that occurs in the relationship (Hänninen & Karjaluoto, 2017). Therefore, managers in service businesses that are not well-differentiated in terms of basic offerings should understand that well-structured and meaningful communication has a significant impact on customer perceptions because it leads to customer loyalty and repurchase intent (Ball et al., 2004). The communicator must understand how the communication takes place. The communicator must be aware of how communication occurs. A skilled communicator must be able to deliver the message to the receiver clearly during the communication process. A communication process model may also show marketers how to influence or modify customers' attitudes through persuasive communication implementation design in the form of final purchases, highly satisfied customer and good comments spread by word of mouth (Dimyati, 2018). Based on the argument presented, the research proposes that:

H3: There is a significant and positive relationship between communication and customer loyalty among foreign users of telecommunication services in Malaysia.

### 1.5. Security

Foreign customers seek effective security when it comes to choosing a telecommunication service company. Security refers to the privacy of information and physical protection of the customer that is ensured by the service provider (Parasuraman et al., 1985). TM offers wireless set-top boxes along with a single telephone set, adapters and charger cables for the installation of a broadband line within the user area (Telekom Malaysia, 2015). It is also important to ensure that these things are safe and that they are properly secured to prevent any electric-contact.

Three forms of privacy (Holvast, 2007; Rosenberg, 2000) are: 1. the privacy of a person, which applies to the security of a person from undue intrusion such as physical search, 2. informational privacy which relates to the regulation of whether, and 3. how personal data can be obtained, stored, processed and disseminated. According to Acquisti (2004), we normally unable to behave as economically rational that pertain to our privacy. Acquisti (2004) claims that decisions related to privacy are influenced from insufficient knowledge, restricted judgement as well as emotional, including confirmation bias and inflated

discounting. When considering telecommunication service provider to be used, customers are influenced by factors such as those stated. Personal information is not a coherent object Kokolakis (2017). Telecom companies have a great responsibility to protect users' privacy by ensuring their security is strong. According to Veiga and Eloff (2007) security policies must be enforced within the company by proper procedures and compliance monitoring. Hence, security could influence foreign customers' loyalty towards particular telecommunication companies. Thus, based on the above argument, this study proposes that:

H4: There is a significant and positive relationship between security and customer loyalty among individual foreign users of telecommunication services in Malaysia.

## 2. Methodology

This study employed a questionnaire survey to collect all necessary information from individual foreigners who use telecommunication services in Malaysia. The survey instruments for this study were adopted from (Ball et al., 2004; Kumar, 2017; Liao et al., 2007; Smith et al., 1996). The questionnaire contains three sections, namely A, B and C. The first section (Section A) includes the respondent's demographic information, while Section B contained questions related to service qualities namely accessibility, reliability, communication and security. Section C consisted of items relating to foreign customer loyalty.

Prior to the questionnaire distribution, the list of telecommunication service providers was identified according to the Northern zone (Kedah, Perlis Pulau Pinang, Perak), Central zone (Selangor, WP Kuala Lumpur, Negeri Sembilan), Southern zone (Johor, Melaka) and East Coast zone (Kelantan, Terengganu, Pahang) of Malaysia. Next, one state from each zone was selected based on the highest number of individual foreigners in that particular state. Pulau Pinang, Kuala Lumpur, Johor and Pahang were selected representing the respective Northern, Central, Southern and East Cost zones. This form of sampling technique employed by the researchers was used to identify a location for the study and is referred to as cluster sampling. Within these states, study focused on their main cities: Georgetown (Pulau Pinang), Kuala Lumpur (WP Kuala Lumpur), Johor Baharu (Johor) and Kuantan (Pahang). The exact location of the service providers identified for the study was selected through a systematic random sampling technique drawn from the list of a company's providers' locations. The same process was initiated for each telecommunication company. For example, DiGi in Georgetown consisted of 30 outlets. It was decided to choose one in every 5 outlets, resulting in 6 outlets involved in the data collection. The researchers stood at the entrance of each service provider's outlet identified as the location of study. The selection of customers was carried out using a systematic random selection technique in which one in every five customers who came to the outlet were asked: Are you a foreigner? If they were, the researchers asked their willingness to participate in the survey. They were given the questionnaire to complete if the agreed to be a survey respondent. Their co-operation was shown by an affirmative response. The respondents were then assured that the survey would only take them around 10 minutes to complete, and a table, chair and writing instrument were provided to make the process easier. The interviewer collected the questionnaires once they were finished and gave them to the researchers when it was time. A total of 385 valid replies were gathered from all identified locations of the telecommunication provider at the conclusion of the data collection period. A traditional approach of data collecting was used in this study whereby the selected

respondents completed the questionnaire physically by answering the questions with a pen. The distribution and collection of the questionnaires was conducted in accordance with all accepted procedures for conducting research, including obtaining permission, using third parties to facilitate communication between the researchers and respondents, seeking voluntary participation, and ensuring that research ethics were upheld.

In order to assess the outer and inner model proposed in earlier studies, this research deploy the Partial Least Square Structural Equation Modelling (PLS-SEM) using SmartPLS (v.3.2.8) (Hair et al., 2017; Hair et al., 2019). Henseler et al. (2015) recommended for PLS to cover the two-step procedure, whereby it evaluates of the outer and inner model. Additionally, it is the best applicable method for multivariate analysis that is currently established and being chosen in most Social Sciences studies (Hair et al., 2019).

## 3. Findings

The demographic profile of the respondents is shown in Table 1.

**Table 1.** Demographic profile

| Characteristic | Categories | Number | Percentage |
|---|---|---|---|
| Gender | Male | 78 | 20.3 |
| | Female | 78 | 20.3 |
| Age | < 20 years old | 179 | 46.5 |
| | 20 – 29 years old | 188 | 48.8 |
| | 30 – 39 years old | 8 | 2.1 |
| | 40 – 49 years old | 8 | 2.1 |
| | > 50 years old | 2 | 0.5 |
| Highest Academic Qualification | Secondary School or equivalent | 95 | 24.7 |
| | Home Country Certificate | 30 | 7.8 |
| | Certificate / Diploma | 102 | 26.5 |
| | Degree | 132 | 34.3 |
| | Post-Graduate | 26 | 6.8 |
| Marital Status | Single | 365 | 94.8 |
| | Married | 16 | 4.2 |
| | Divorced | 4 | 1.0 |

A total of 385 respondents responded to the survey. Among them, 78 respondents were male (20.3%) and 307 respondents were female (79.7%). For age, majority of respondents are less than 20 years old (46.5%) and 20 to 29 years old (48.8%). As for academic qualification, the highest was Degree level (34.3%), followed by Certificate / Diploma level (26.5%) and Secondary School level (95%). Lastly, for the Marital Status, most of the respondents were Single with 365 respondents (94.8%).

### 3.1. Measurement model assessment

The following Table 2 and Figure 1 show the measurement model, item loadings, construct reliability and convergent validity resulted from the analysis.

**Table 2.** Measurement model, item loadings, construct reliability and convergent validity

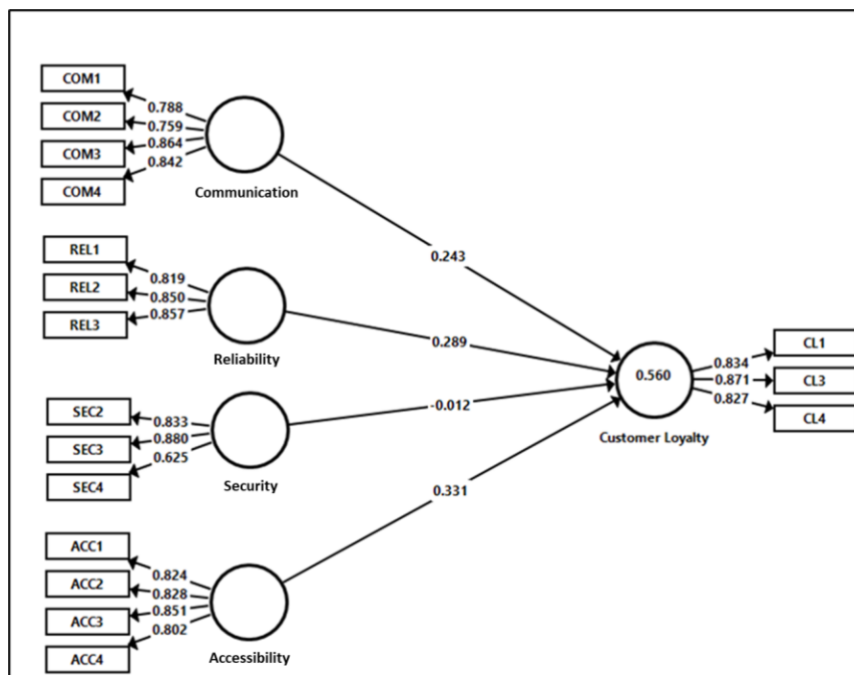| Variables | Item | Loadings | Cronbach's Alpha (>0.7) | Composite Reliability (>0.7) | Average Variance Extracted (>0.5) |
|---|---|---|---|---|---|
| Communication | COM1 | 0.788 | | | |
| | COM2 | 0.759 | 0.837 | 0.887 | 0.663 |
| | COM3 | 0.864 | | | |
| | COM4 | 0.842 | | | |
| Reliability | REL1 | 0.819 | | | |
| | REL2 | 0.85 | 0.795 | 0.88 | 0.709 |
| | REL3 | 0.857 | | | |
| Security | SEC2 | 0.833 | | | |
| | SEC3 | 0.88 | 0.722 | 0.827 | 0.62 |
| | SEC4 | 0.625 | | | |
| Accessibility | ACC1 | 0.824 | | | |
| | ACC2 | 0.828 | 0.847 | 0.896 | 0.683 |
| | ACC3 | 0.851 | | | |
| | ACC4 | 0.802 | | | |
| Customer Loyalty | CL1 | 0.834 | | | |
| | CL3 | 0.871 | 0.801 | 0.882 | 0.713 |
| | CL4 | 0.827 | | | |



**Figure 1.** Measurement model

      Anderson and Gerbing (1988) highlighted the parts of the measurement of the model as convergent validity, discriminant validity and construct reliability. When the scores from two instruments that measure similar concept are highly correlated, then only the convergent validity is convinced (Sekaran & Bougie, 2016). Hair et al. (2017) suggested that in order to assess the convergent validity of the reflective construct, the outer loadings of the factors and the average variance extracted (AVE) needs to be analyzed. The outer

loadings (indicator reliability) should score the value of 0.600 and above (Hair et al., 2017). However, nine items were removed from analysis (from multiple factors of REL4, SEC1 and CL2) due to a poor outer loading, with the score value less than 0.600. Remaining items, ranging from 0.652 and 0.880, were accepted (above 0.600) (Hair et al., 2020). In addition, pertaining to the construct reliability, the values has to be more than 0.70 (Hair et al., 2017) to ensure Cronbach's alpha (CA) and composite reliability (CR) acceptable. Values ranged from 0.722 to 0.847 and 0.827 to 0.887, respectively found in this study, resulting it to achieve the threshold. The condition deemed as satisfactory when the Average Variance Extracted (AVE), a common measure of convergent validity, valued higher than 0.500. The confirming convergent validity is proven when the AVE found ranged between 0.620 and 0.713 (Hair et al., 2017).

Meanwhile, the discriminant validity results are shown in Table 3.

**Table 3.** Discriminant validity

| | Accessibility | Communication | Customer Loyalty | Reliability | Security |
|---|---|---|---|---|---|
| Accessibility | | | | | |
| Communication | 0.716 | | | | |
| Customer Loyalty | 0.791 | 0.776 | | | |
| Reliability | 0.757 | 0.837 | 0.824 | | |
| Security | 0.289 | 0.300 | 0.238 | 0.269 | |

Henseler et al. (2015) suggested that the assessment technique of discriminant validity is done using the HTMT, whereby it implies the ratio of correlations within the construct to correlations between the constructs. The HTMT criterion found in this study, satisfy the HTMT90 or HTMT85 (Franke & Sarstedt, 2019). It has met the threshold value of Franke and Sarstedt (2019), with the highest square root of 0.837. Thus, the discriminant validity are established, as the indication of these two criteria.

### 3.2. Structural model assessment

As for hypotheses testing, the structural model was examined immediately after the measurement model of the reliability and validity are verified. Table 4 shows the acceptance of three hypotheses out of the proposed four. Accessibility ($\beta = 0.399$, t = 7.975, p < 0.001) has a positive effect on customer loyalty. Correspondingly, reliability ($\beta = 0.350$, t = 6.582, p <0.001) also significantly influences customer loyalty, and communication ($\beta = 0.182$, t = 3.454, p = 0.001) has a significant impact on customer loyalty. While security has no effect on customer loyalty ($\beta = -0.012$, t = 0.309, p > 0.001). Thus, hypotheses of direct effect (H1, H2, and H3) were accepted. It is also revealed that, with $\beta = 0.399$, accessibility is found to impacted customer loyalty the most.

It is considered that the R-square value of 0.560 for customer loyalty suggested a moderate to substantial effect, in terms of the model's explanatory power (Hair et al., 2019). 56% of the variation in Customer Loyalty was due to the independent factors investigated in this study. The balance of 44% of the variation of Customer Loyalty was due to factors not investigated in this study. Additionally, by deploying Stone-Geisser blindfolding sample in predictive relevance, Q-square values shown are greater than 0. Thus, the research model effectively predicted for customer loyalty (Q2 = 0.500) (Hair et al., 2019).

**Table 4.** Hypotheses testing – bootstrapping

| Hypotheses | Beta, β | Standard Deviation | T Value | P Values | Decision | R2 | Q2 |
|---|---|---|---|---|---|---|---|
| Accessibility -> Customer Loyalty | 0.331 | 0.05 | 6.661 | 0 | Accepted | 0.560 | 0.500 |
| Reliability -> Customer Loyalty | 0.289 | 0.054 | 5.324 | 0 | Accepted | | |
| Communication -> Customer Loyalty | 0.243 | 0.062 | 3.900 | 0 | Accepted | | |
| Security -> Customer Loyalty | -0.012 | 0.038 | 0.309 | 0.758 | Rejected | | |

The model suggests that the dimension of accessibility has an effect on customer loyalty, followed by reliability and communication. The current study findings align with the findings of previous studies in checking the relationship between the service quality dimensions and customer loyalty in a different context. Bhattacharjee et al. (2018) mentions that customers can simply access a service provider if it has a sufficient number of supporting options available online. Tiong et al. (2011) and El-Sherie and Ghanem (2016) found free wireless communications and Wi-Fi network accessibility both which contribute to a better consumer experience. Kheng et al. (2010), states that reliability is the capability to provide the given service consistently and accurately, and Zeithaml and Bitner (2003) proved customers may anticipate returning to a given business for services if the company has a reputation for providing outstanding service and keeping their claims. Communication is important in the early stages of the sales process because it raises awareness, expands consumer options, persuades potential customers and inspires them to make a purchase (Ndubisi & Wah, 2005). However, security predicted was rejected due to the lack of awareness among the foreign users of security issues. Moreover, most telecommunication providers frequently keep their security issues under wraps to avoid negative press.

## 4.   Discussion

In terms of communication, most respondents agreed that they have an easy and satisfactory relationship with their telecommunication service provider. The telecommunication service providers were reported to keep the respondents consistently informed of the new products and services. The personal service and advice given by telecommunication service providers is also accurate and provides respondents with clear and transparent information.

In relation to reliability, the respondents felt that their telecommunication service provider was dependable. When they have problems, the provider is reassuring and sympathetic. The telecommunication service provider provides its services at the time they promise to do so and always keeps respondent's records accurately.

In relation to accessibility, the respondents found that it is simple to use services provided by their telecommunication service provider. They learned to use the services quickly and the services are understandable and clear. They can easily access self-help information from their telecommunication service provider.

In terms of security, the respondents do not seem to be bothered when their telecommunication service provider asks for their personal information and accept that telecommunication service providers devote more time and effort to preventing unauthorized access to personal information.

## 5. Conclusions

The dramatic increase in competition in telecommunication business sectors primarily drew more attention to the marketing methods. Retention is more crucial than acquisition in terms of marketing methods. Different countries' telecommunications marketplaces are practically saturated. As a result, providers who create client loyalty secure many profitable partnerships at the expense of providers who do not (Reichheld & Schefter, 2000). The findings in this study emphasized the importance of service quality (accessibility, reliability and communication) in creating and maintaining customer loyalty. Although security was found not to have an impact on customer loyalty, it must not be totally neglected. In reality, consumers would definitely stop shopping at a store that had had security issues and thereby compromise customer loyalty. It is suggested that future studies explore other groups of respondents that might be more security conscious, hence resulting in better results from the study.

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