DOCTORAL THESIS

ANALYSING THE FACTORS AFFECTING CUSTOMER LOYALTY IN E-COMMERCE IN VIETNAM

by

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ABSTRACT

The research, empirically, is to identify the determinants of customer loyalty in e-commerce in Vietnam from their perspective, using statistical method. Additionally, the research also examines differences in consumers' loyalty perceptions between various demographic groups.

Using quantitative research with 476 millennial customers adopting Structural Equation Modelling, the research shows the causal links of website quality, price, perceived value, and perceived switching costs as the measuring variables toward satisfaction and trust, and fortifying loyalty. The empirical findings confirm the correlation of satisfaction and trust, satisfaction and loyalty, and trust and loyalty. Website quality has slight influences on satisfaction and trust, and qualified influence on loyalty. Price shows its impact on loyalty but not satisfaction or trust. Perceived value has limited meaning in fostering either satisfaction, trust, or loyalty. And perceived switching cost is confirmed to have influence on satisfaction and loyalty. The measurement model deletes the presence of customer commitment in the circle of associations. Considering antecedents of loyalty, system quality, informational quality, service quality, price, switching costs and promotional programs affect customers' intention to spread WOM. And, website quality, price, and switching costs have significant impact on their intention to repurchase. As differences in consumption behaviours between demographics groups, female customers and married ones with children tend to demonstrate a stronger intention to spread WOM, repurchase and attitudinal loyalty. Meanwhile, there is no evidence to support significant differences between age or income groups in relation to loyal behaviour.

This research contributes to the body of literature by adding new insights into the existing knowledge of e-loyalty, in an emerging and unexplored market. It also contributes to explaining the social reality by theoretical and practical implications for better improving customers' e-loyalty in the ecommerce landscape.

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1.1.1 Customer loyalty 4.0

In the business context nowadays, it is well accepted that competition between firms is only becoming more intense. Firms are using their resources to create a competitive edge against competitors in terms of both quantity and quality. Furthermore, fast-changing business environments and customers' mounting power have driven firms toward customer-centric strategies.

A customer-centric strategy is a business approach that has been widely adopted by world leading businesses in various industries. It involves maximising customer experience both before and after purchases in order to drive repurchases, elicit customers' loyal behaviour and advance growth. Customer-centric strategy is a broad concept that is not limited to providing outstanding customer service but creating and nurturing a relationship between the brand and the customers. In recent decades, new technologies and the universalization of the internet have facilitated customer relationship management, yet at the same time made it more challenging for firms to differentiate against their competitors.

Together with a gradual shift of focus towards customers, intangible assets such as human resources, brand equity and their outputs such as customer satisfaction and customer loyalty have become *the* essence of sustainable competitive advantages (Teece, 2007; Chien & Tsai, 2012). Measuring intangible assets can be difficult. Hence, the challenge lies in quantifying the financial impact of customer centricity by determining the optimal levels of investment in such measures as customer satisfaction and loyalty. Among them, customer satisfaction and customer loyalty have been considered as among the most important potential competitive edges (Pan et al., 2012). Such the 4.0 era that exposes significant changes in marketing and customer relationship management, the customer-centric is declared as the evitable trend when the market is crowded by supplies. The table distinguishes the differences of marketing across era: marketing 1.0, marketing 2.0, marketing 3.0 and now, marketing 4.0.

Comparison of Marketing eras,

Feature	**Marketing 1.0**	**Marketing 2.0**	**Marketing 3.0**	**Marketing 4.0**
Concentration	Product-oriented	Consumer-oriented	Marketing oriented toward people	Human-centered, deepened by customer journey in the shopping process
Aims	Selling products	Satisfaction and customer retention	Positive values offered	Inspiring customers to co-create new content and products/ services
The way companies perceive the market	Mass customers with material needs	Intelligent customers driven by reason & emotions	Customers with reason, heart and soul	Netizen man (customers of the networks)
Key marketing concept	Product development	Diversification and distinct on the market	Providing higher values	Anthropomorphizing of brands
Marketing guidelines	The specificity of products	Positioning the company and product	Mission, vision and company values	Promoting contents and creating brands

Value proposition	Functional	Functional and emotional	Functional and emotional and spiritual	Commitment and trust
Interactions with consumers	Collective approach, one-to-many transactions	Individual approach, one-to-one relations	Relationships and cooperation 'many to many'	Relations based on functioning of the networking, an enormous generations of consumers

Source: Wereda and Wozniak (2019), Table 1.

The customer-centric philosophy has been furthered by scholars' attempts to transform the intangible beliefs into scientific models. A dominant belief among customer-centric advocates is that customer loyalty provides the key to the long-term wellbeing of an organization. The cost of retaining a customer is generally considered cheaper than the cost of acquiring a new one (Reichheld & Sasser, 1990). Furthermore, scholars believe that the potential benefits brought by a loyal customer are beyond measurable financial profits. A loyal customer tends to not only make repetitive purchases but also demonstrates willingness to purchase other products that are introduced by the company. They also have more likelihood to engage in positive word-of-mouth about the company and its products; and on the other hand, they are less likely to be attracted by competing brands or to change brands due to more beneficial prices. Since loyal customers often make routine transactions, costs related to customer service and education can be reduced.

In this context, both practitioners and researchers have searched for the most important antecedents of customer loyalty. Many studies in the relationship marketing literature have demonstrated that customer satisfaction is one of the most popular determinants of customer loyalty (Flint et al. 2011, etc.). Although there is a consensus among researchers that satisfaction can be a basis for achieving loyalty, researchers also agree that the satisfaction-loyalty relationship should have more ingredients.

1.1.2 Customer loyalty in emerging markets

In mature markets, many firms pursue a brand approach because having high brand equity appeals not only to customers but also other participants in the supply chain including suppliers, intermediaries, business partners, investors and the environment and society as a whole (Osarenkhoe, 2006). In less developed economies, unfortunately, limited research has focused on the drivers of brand loyalty.

Court et al. (2009) in a McKinsey and Company's publication suggested that the decision-making process has transformed from a tunnel analogy: *initial consideration – weigh options – buy*, to a circular journey. In the circular process, customers start with considering their needs, then move on to evaluating brands and making purchase decisions, to assessing their experience, which forms the next buying loop. In past decades, the service industries have rapidly switched attention towards the fourth node in this circular journey, in which customers evaluate, recall their experience and decide whether or not they are willing to continue shopping with the same brand.

Emerging markets have become the dynamics of world economic growth. Populous countries such as China, India and Indonesia have by far outstripped developed countries in terms of GDP growth in recent decades. Apart from economic development, emerging countries have shown enormous potential with a lot of managerial and governance competency on the side-lines. Despite such relevance, marketing research aimed at emerging markets has remained scarce and scattered. Thus, there is a high demand for in-depth understanding of these markets in both practical and academic enterprise.

The rigorous growth in economic power of these emerging markets has fuelled the rise of a new wave of wealthy customers with great propensity to spend. About a decade ago, the technological gap between developed and emerging markets explains how consumers in the latter have not fully experienced brand and product categories (Atsmon et al., 2012). Over the past few years, such gaps have narrowed, leading to rapidly changing competitive landscapes and consumer preferences in emerging markets (Bourlier & Gomez, 2016). The average customer in emerging countries is now presented with similar contemplation about product and brand choices. The rise of the internet, as stated, has narrowed the development gap between emerging and developed countries; that is to say, the advancement of digital platforms and the degree to which consumers absorb online shopping in emerging markets is no less than that in their counterparts amongst developed countries (Atsmon et al., 2012).

There are a few factors often named as obstacles in the process of performing market research in emerging markets (Sudhir et al., 2015). First is the size of the population and its heterogeneity. Emerging markets are large, multi-ethnic, growing swiftly, and exhibit wide variations in standards-of-living across the population. Second, the highly potential low-income segment has been underrepresented, compared to the affluent group and the middle class. Third, there are certain methodological obstacles related to the credibility and transparency of secondary data in emerging countries, which on the one hand allows room for researchers to engage in creative data collection methods (e.g. field experiment), but on the other hand makes the research more challenging.

Differences between developed and emerging countries have had us thinking which marketing approaches are transferrable from the former to the latter and which are not. Atsmon et al. (2012) opined that marketing and customer relationship management in emerging markets should take separate paths for different reasons. First, the power of word-of-mouth seemed to play a disproportionate role in shaping customers' perception of a product or brand. This probably may have come from the lack of trust between customers and brands, especially local; but it also can be linked to the tendency of people to live close to their families and take opinions from them in many emerging countries in the East such as China, India and south-east Asian countries.

A survey by McKinsey and Company (2009) revealed the relative importance of word-of-mouth between developed and emerging markets. Customers in various developed countries (such as the U.K and the U.S) as well as emerging countries in Asia and Africa were asked about the extent to which they were influenced by family/friend recommendations when it came to shopping. The survey in the U.K and the U.S. indicated that only 30-40% of the respondents considered family/friend opinions before making purchase decisions, while the proportion was significantly higher in China (69%).

Second, buyers in emerging countries are seen as more likely to remain loyal to their initial choice (Al-Shammari & Masri, 2016). Besides, the active evaluation stage seems to take longer among consumers in emerging countries; or this, as said, could be more precisely viewed from the cultural perspective.

1.1.3 E-retail

In the recent decade, online commerce has become an alternative to traditional brick-and-mortar shopping. Due to less time and efforts allocated to shopping activities and more to work life and other hobbies, people are looking for convenient options that both have their shopping needs fulfilled and at the same time maintain the joy of shopping; moving shopping activity online has seemed to be the answer (Berry & Cooper, 1990). Still e-commerce has its own weaknesses compared to physical stores, but it is the responsibility of marketers to amplify the advantages and minimise the disadvantages of e-commerce to keep customers shopping via the internet.

Customer loyalty in e-commerce has garnered immense attention from both scholars and practitioners (Emrich & Verhoef, 2015). E-commerce has emerged as a rising form of retail, which is largely driving people away from bricks-and-mortar shopping habits. The success of e-retail giants such as Amazon and EBay, as well as increasing participation in the online marketplace of traditional supermarkets, proves that the demand for online commerce will continue to increase.

In both online and offline commerce, customer acquisition has been recognized as cost intensive, and customers usually did not yield value until a few years into their relationship with the brand (Husain, 2017). In online commerce, however, it is also the volume, speed and variety of internet information that have made online retailers struggle in retaining existing customers while maintaining a competitive edge in appealing to a new audience (Al-Adwan & Al-Horani, 2019). Internet loyalty refers to customers' willingness to continue to purchase from the same website, and/or their lack of motivation to switch to another website (Flavian et al., 2006). Earlier literature mentioned a variety of factors that contributed to online loyalty, or e-loyalty for short, such as price, convenience, trust, informational content, customer service, delivery speed and so on (e.g. Reichheld & Schefter, 2000). In online environments, switching to another seller is less of a nuisance, and customers are easily re-targeted based on browse and search history. However, once an online commerce website succeeds in maintaining a long-standing relationship with its customers, the result can be immensely rewarding. As the cost of serving a return customer decreases and the number of purchases per customer increases over time, a loyal customer can be highly profitable. According to Al-Adwan and Al-Horani (2019), the online curve is significant, which explains why online businesses are massively driven by customer retention.

When we look closer at online commerce, it seems clear that the value of a return customer is much higher than that in offline environments. First, the cost of acquisition through online channels is much higher than offline channels. Second, online stores can expand their product portfolio more easily than traditional physical stores (Reichheld & Schefter, 2000), which means they can sell more to a pool of loyal customers compared to traditional retailers. All companies, regardless of industries, are making tremendous efforts to cultivate the internet to add value to a return customer.

Another aspect of e-retail that is quite distinct from traditional forms of retailing is e-referral, or online word-of-mouth, which has long been acknowledged as a source of new customer acquisition and a new focus of digital marketing (Gefen, 2002; Schmitt et al., 2013). Since the cost of new customers from referral sources is significantly lower, it takes e-retailers much less time to harvest profits from referred customers (Schmitt et al., 2013).

According to Srinivasan et al. (2002), developing customer e-loyalty is recognised as a huge challenge since *'competing businesses in the world of electronic commerce are only a few mouse clicks away',* and the customers are able to assess alternative choices with little effort and time. However, in contradiction of the above view that questions the loyalty of online customers, Shankar et al. (2003) stated that online customers not only bought frequently on websites with which they had developed a decent relationship, but also are inclined to combine their purchases using major online retailers, demonstrating a considerable tendency towards loyalty. Van-Riel et al. (2001) explain that loyal online customers buy and spend more than newly acquired customers. In addition, they can be served with minimal functional costs. These previous studies indicate that e-loyalty is valuable for e-retailers because it strengthens their survival chances in the strong competition environment encountered on the Internet.

1.1.4 E-commerce in Vietnam

E-commerce in the Asia-Pacific region

Asia-Pacific and North America are among the top regions for the highest consumption of e-commerce, at a total turnover of USD1057 billion and USD644 billion respectively in 2016 (E-commerce Foundation, 2017, cited in Choi & Do, 2018). Many prominent Asia-Pacific economies demonstrate huge advancement in e-commerce, but it is important for international businesses to understand that there is no one-size-fits-all approach even though these economies do share a few economic and socio-cultural characteristics. For example, ESCAP (2018) pointed out that certain APAC markets including Australia, New Zealand, China, South Korea and Singapore showed more interest in, or were more visibly exposed to, cross border commerce than other countries in the region. Another example is internet usage behaviour. According to a report by McKinsey and Company (2016), Indonesian e-commerce shoppers used mobile phones more than PCs, while New Zealand consumers' preference towards PCs was clear. There are more delicate differences between countries having similar socio-cultural and political backgrounds, such as countries having Confucian-Asian origins, but delicacy only makes marketers fall more easily into an overgeneralization trap.

E-commerce in Vietnam

Being a country in the South-east Asian region while carrying strong cultural resemblance to China, Vietnam has been acknowledged as a potential yet complicated market. With a population nearly reaching 100 million and a steady 7% annual GDP growth[1], Vietnam has become one of international brands' favourites in recent years. Despite tremendous growth in purchasing power and consumer awareness, Vietnamese consumers are still not quite acute about brand choice (Nguyen et al., 2011). A Taylor Nelson Sofres survey in 2004 (cited in Nguyen et al., 2011) revealed that nearly half of the respondents valued country of origin rather than brand name. Up until the last decade, most local firms were not familiarized with brand concepts and customer loyalty as a philosophy. Most of them used company names to promote their products instead of brands. It was only for the penetration of MNCs starting with Procter and Gamble that consumers started to shy away from purchasing products to purchasing brands. It was also due to such change of consumer view that local companies had to reform their marketing mind-sets. Now that the millennial generation has taken over, Vietnamese young consumer groups have become an important, full-potential pillar.

E-commerce has also found its way to other populated emerging markets including Vietnam. Statistics by e-Marketer have shown that the e-commerce sector of Vietnam is growing at 20% per year. In 2015, the Vietnamese e-commerce market was worth USD4.07 billion and projected to reach approximately USD7.5 billion by sales in 2025 (Choi & Do, 2018). The number of online shoppers grew 40% by the end of 2016 compared to 2014. Being a populated country with avid internet users (Statista, n.d.[2]), Vietnam has shown itself to be a fruitful market for e-commerce and in fact, investors from domestic conglomerates such as Vingroup and FPT to overseas investors such as Garena Singapore, Alibaba and Lazada have started to capitalise on its potential.

[1] WorldBank Data. (n.d.). World Development Indicators. Retreived from: http://datatopics.worldbank.org/world-development-indicators
[2] Statistia. (n.d.). Internet user penetration in Vietnam from 2017 to 2023. Retrieved from: https://www.statista.com/statistics/975063/internet-penetration-rate-in-vietnam/

The Vietnamese domestic e-commerce playfield has become more and more crowded, led by the major players such as Lazada, Tiki, Sendo, etc. Based on the globally successful model of Amazon and Alibaba, Lazada was launched in Vietnam in 2012, and it became a leading B2C e-marketplace in the Vietnamese e-commerce market. In Vietnam, the e-commerce market has enormous potential to grow bigger, but it also encounters many problems due to trust, intrinsic in Vietnamese traditional culture, and shopping habits. Therefore, in the context of growing e-commerce market in Vietnam, it is necessary to examine the governance factors leading to sustainable performance of e-commerce businesses.

Although e-commerce in Vietnam lags significantly behind that in Singapore, Indonesia, Malaysia and Thailand, the country is considered the fastest-growing digital economy in the region and its dynamic e-commerce market is unlocking new business opportunities and receiving attention from both domestic and foreign investors (EuraAsiaReview, 2020).

Merchant		Monthly Web Visits	AppStore Rank	PlayStore Rank
1	Shopee	38,589,400	#1	#1
2	Tiki	33,724,000	#2	#4
3	Lazada VN	28,306,700	#4	#3
4	Sen Đỏ	28,047,300	#3	#2
5	Thế Giới Di Động	25,349,000	#9	#5

Figure 1 Monthly visits to major e-commerce websites in Vietnam

E-commerce behaviour in Vietnam

Presumably there are three reasons for Vietnamese customers to go shopping online: competitive prices, better product selection and convenience. However, the market presents equally remarkable obstacles, including the dominant popularity of cash transactions, cases of online fraud that reduce customer trust, and the fierce competitiveness of bricks-and-mortar shops. Alongside competition from traditional shopping, e-commerce websites are competing against each other via investing heavily in branding, product and service differentiation, engaging themselves in price wars, launching attractive loyalty programmes and discounts, etc. They are fully aware that competition has benefited customers, increased their bargaining power, reduced switching costs thus making it more challenging and costly for them to maintain patronage. This has laid the foundation for the new marketing focus which has moved on from extensive advertising to increasing customer satisfaction and maintaining a long-term relationship with buyers.

The changing landscape in the e-commerce industry in Vietnam has not been fully documented in the academic literature due to its dynamics, unpredictability and rich potential. Due to low banking penetration, Vietnam has the smallest number of merchants offering credit card payment in Southeast Asia. While mobile wallets are becoming increasingly popular, the most popular payment method is cash on delivery (COD). This led to a 70% growth in the country's logistics and delivery businesses in 2019. Compared to other Asian countries, Vietnam has a relatively favourable legal environment for the development of e-commerce, with five out of six main laws fully enacted to regulate e-commerce activities.

The 2019 Global Digital Report found the average Vietnamese spends an average of 6 hours 42 minutes a day online, just above the global average but behind the Philippines, Thailand, Malaysia, Singapore and Indonesia. However, Vietnam also witnessed the sharpest increase in mobile traffic across Southeast Asia in 2017, as well as the highest conversion rate. It is therefore projected that Vietnamese consumers will spend more time and money online. Millennials' increasing use of mobile phones is considered the key factor driving this growth, as this group makes up more than 30 % of Vietnam's population.

Despite its vast potential, Vietnam's e-commerce market has to grapple with a number of *obstacles*. Vietnamese consumers, especially the younger generation, are particularly fond of purchasing goods on popular foreign e-commerce websites such as Amazon or eBay due to their sound reputation and wide range of products. In contrast, most Vietnamese enterprises are still underperforming compared to global competitors. They have not properly invested in researching customer tastes, and the quality and design of domestic products are sometimes still inferior to similar products made in other countries. The entry of Amazon into the Vietnam market in early 2019 has put firm pressure on existing domestic e-commerce players.

Domestic and international traders *(daigous)* have used e-commerce to cheat, sell counterfeit goods, infringe intellectual property rights and even trade banned goods. Online fraud such as stealing information, data, and bank accounts have put e-commerce under the spotlight, further affecting the growth of a strong and healthy digital economy. These unsafe online transactions have made consumers wary of making online purchases.

The Vietnam e-commerce Report 2019 showed that up to 50% of respondents were dissatisfied with online transactions, while another report indicated most respondents were concerned about the poor quality of products, with a huge disparity between what was advertised and delivered. Other constraints include fear of leaked personal information, the easier and faster shopping experience and similar prices at stores, the relatively complicated online purchasing process, high shipping costs and the fact that the Vietnamese continue to be the most avid savers in the Asia-Pacific region.

Tackles

There is a huge demand for online shopping among Vietnamese consumers and despite their preference for foreign e-commerce websites, a greater understanding of customer preference, needs, and shopping habits is on the side of domestic e-commerce providers. To gain consumer trust, they should provide products with certified origins and control fake and shoddy goods on their platforms. A programme that traces product origin is one recommendation, which can also be a means to promote themselves in a transparent manner. E-commerce players should also develop their own infrastructure to adapt to new challenges, ranging from order processing systems, warehouse capacity, to the speed of transport.

There is also a need for collaboration between companies and the government to ensure payment systems are reliable and customer information protected. To strengthen law enforcement, authorities can set up a cyber security agency as they upgrade both physical and digital connections between urban and non-urban populations and areas.

1.2 Research objectives

The presented challenges together with the lack of literature related to Vietnam's electronic commerce industry call for academic efforts to examine the factors that influence customer loyalty in this market. Although there have been quite a number of papers examining e-loyalty in various markets, such as *'A customer loyalty formation model in electronic commerce'* by Safa & Isamail (2013), focusing on the Malaysian market, or *'An integral model of e-loyalty from the consumer's perspective'* by Lopez-Miguens & Vazquez (2017) on Spanish customers, the cultural and market-state differences make it clearly necessary that the Vietnamese market be viewed separately. An empirical research on factors influencing customer loyalty in e-commerce in Vietnam will be expected to provide insights to help strategists, marketing practitioners and policy makers in enhancing their competitive advantage.

Generally, the research aims to examine customer behaviours by their perspectives when conducting the online shopping via e-commerce platforms. Acknowledging that in Vietnam, there is a spurious fashion of e-commerce shopping, for instance viewing products on personal Facebook and giving the inbox messages for orders to retailers. However, it does not matter to either sellers or buyers since their utmost purpose of selling the products and buying what are needed in the most convenient way as their perception. People tend to equalize the meaning of e-commerce shopping with shopping in the online environment via personal accounts of sellers in social networking sites. Additionally, do not take the shopping concentration and internet experience into account, consumption behaviours of people are always complicated and also rapidly changing by several motivators, influencers and drivers. They may change their choices either intentionally or unintentionally during the customer journey. And such, their assessments and feelings are also diversely fluctuated through touchpoints of service blueprint. Therefore, in practice, it is really to capture customer behaviours in a real time manner; however, it is widely accepted that using quantitative research to understand customers behaviours provides meaningful understandings of their responses during a specific period. The reflection is valid from periods to periods and could be generalized for cases by cases. In fact, the aim of examination in the scope of this study does not expect the in-depth exploration of underlying means by data collection, but the description and explanation of the whole e-commerce picture in Vietnam through the lens of customer relationship management by the real perspective of actual customers.

Developing from this aim, the core line of research objectives is to identify determinants of customer loyalty in e-commerce in Vietnam and investigate the link between the independent and dependent variables. Rather than focusing on a specific e-commerce brand, the researcher seeks to look on the extensive side to provide a general framework to the whole market, based on customers' characteristics and perceptions. The research objectives are developed as:

1. To identify determinants and antecedents of customer loyalty, supposed Vietnamese customers are familiar with the online shopping.

2. To investigate and determine the influencing relationships between antecedents and loyalty by the direct associations and with the interventions of moderators.

3. To supplement the general picture of Vietnam e-commerce industry for further actions and planning of e-commerce operators to achieve the levels of loyalty as their expectations.

There are two parts in the research objectives – (1) justifying by describing determinants and antecedents of customer loyalty in the e-commerce market of Vietnam; and (2) explaining if these determinants have influences on customer loyalty under which conditions – directly or through the moderating effects? In the second block, there is an interesting research intention that directs to the literature gaps: the difference between different demographic groups regarding their loyal behaviour towards an e-commerce website. Such, the research objective is not solely to reply the research aim of drawing the picture of the e-commerce landscape, but importantly, give the comprehension about customer behavioural features by their personal factors. However, do not extend the description and explanation purpose of this research, that comprehension is pulled by the description meaning and the breadth of the topic. The research objectives answer the queries of "what": what are the determinants of customer loyalty? What is the current shape of the Vietnam e-commerce industry? What are the behavioural expressions of customers toward e-commerce shopping?

1.3 Research questions

The fact that consumption behaviour is always the complex subject, and consumers' expectations are always changing is the real truth regardless of traditional commerce or e-commerce shopping formats. Yet, e-commerce shopping patterns, by their distinct nature of establishment and delivery, have the unique path of forming satisfaction and loyalty, as aforementioned. To be insisted, the focal interest of the research is to share the thirst for practical knowledge on customer loyalty in e-commerce in the Vietnam market. It binds the fundamental premise of this research to the urge of understanding the most basic constructs of reflections and influences on consumers' attitudes and behaviours when selecting and conducting the purchasing via e-commerce platforms. Given this centrepiece of thoughts, the prevalence in concern is toward ways to comprehend and measure customer loyalty in the field of e-commerce. More specially, the placement is in the context of emerging countries, and Vietnam is the example in this research. Accordingly, four research questions arise:

1. What are influencers of Vietnamese e-commerce users' loyalty to an e-commerce website? To what extent these factors influence the formation of a sense of loyalty with that site?

2. Acknowledging that there is the strong relationship between satisfaction and loyalty, how significant is it as the moderating effect of satisfaction in determining the loyalty in the e-commerce environment?

3. How is the perception of customer trust determining customer loyalty in the e-commerce environment?

4. Assuming that different groups of customers have unique reflections of loyalty, what are the differences regarding their patterns of loyal behaviour towards an e-commerce website?

1.4 Significance of the study

The research contributed to the knowledge base from a theoretical and managerial viewpoint. The theoretical contribution arises from gaps in the literature relating to the Vietnamese e-commerce sector and the effect of trust and commitment dimensions on the relationship between satisfaction and loyalty, where loyalty is segmented into true and spurious dimensions. Additionally, the research appears to be unique in the comparison of consumers' loyalty perceptions between various demographic groups. It is commonly found that although there are the vast availability of researches determining factors of customer loyalty, conflict results are shown by different researching domains (Kandampully et al., 2015). Furthermore, the reality in this industry highlights the consideration of customer heterogeneity, which most research has failed to thoroughly consider. Under the impact of this viewpoint, the huge threat of unrealistic analyses, errors, and inconsistencies in defining the moderating impacts of customer demographic characteristics has been existing years long (Floh et al., 2014; Fuentes-Blasco et al., 2014; Hair et al., 2016).

As regards the managerial implications, the research informs marketing practitioners and operational managers how their consumer relations and engagement efforts are improving or diminishing consumer loyalty. Application of the knowledge revealed through this research has the potential to provide insights into the effectiveness of current marketing and relationship programmes as well as to potentially shape future endeavours.

Despite the empirical evidence that endorses the significant influence of e-satisfaction and e-trust on e-loyalty, investigating the determinants of e-satisfaction and e-trust has been narrowly understood in the process of developing e-loyalty. Accordingly, it is important to investigate the role of potential components as critical determinants of e-satisfaction and e-trust in the model of e-loyalty. Moreover, Vietnam's online business has emerged as a new interest in the academic realm since 2010s. Therefore, the current academic studies are not sufficient in describing the real happening of this social trend. Majority of related studies include Vietnam as the national part of the Southeast Asia or using Vietnam country as the example to comparing with other contexts. Although there are certain attempts in explaining the picture of Vietnam e-commerce industry, the reflection is still limited within certain areas of determinants (Choi & Mai, 2018; Diallo & Seck, 2017; Le, et al., 2017; Liem and Le, 2011).

1.5 Preliminary interview

As the setting process of this research, in order to formulate the conceptual framework, the systematic literature review is utilized. This ensures the overview and inclusion of all possible causal links between loyalty and its antecedents and determinants in the context of the e-commerce environment from valid findings from other contexts. It could be considered as the collective version of best practices that match with the core content and research intention of this study. Using this framework and underlying theoretical measurements of variables, the advantage is to be propped by a qualified and valid direction of which connecting to which variables; however, the challenge is how to translate or transfer the voices of customers from other contexts where differences in e-commerce development landscape, and cultural features and consumption habits are inherently existing. This concern is answered by the use of preliminary interview session before composing the official questionnaire. Questions in this session are the replica version of what have been asked and found in previous studies. The main motive of using this kind of replica is to avoid the manipulation by own thoughts of the researcher that may distort the interview findings. This part is very important since it reflects the key insightful behaviours of a specific group of real customers. It was conducted with two focus groups participated by 6 members who are either casual online shoppers or online shopping enthusiasts. The design of this session was contemplating all possible options of questions, setting, sample features, and so on to ensure the right data to be collected. The key point in this part is that, the researcher has to analyse the collected data by the mean of qualitative findings. To avoid the remarkable involvement of subjective interpretation, the analysis process is rather straightforward by three steps – transcribing, theming and coding, and analysing the relations. The theming and coding follows exactly the theoretical guidance and couples with the causal links being defined in the conceptual framework. Causal links shown in this interview take the piloting role for further composing suitable contents of questions in the survey. It is expected that the involvement of the interview results will create the balance or harmony or embedment of practical voices from Vietnamese people into theoretical survey questions.

1.6 Limitations and delimitations

Despite the contribution of this research to the body of knowledge, there are a number of limitations that have been identified in the course of this research. The limitations are categorised around the sampling technique, the generalization of the research, the measurement instrument and the cross-sectional nature of the research.

First, the quantitative approach using quantified survey contains several problems. The methodology involves measuring human behaviour with numbers without providing the objects much chance to provide reasons for their judgment. The use of self-reporting to measure human behaviour is a common method among psychological researchers nowadays, but we have to admit that popularity does not always build up from quality but more from convenience. As discussed above, letting the respondents speculate their own behaviour may be biased, because that would reflect their views on the constructs instead of their actual behaviour. We have discussed above that adding a variable measuring the *actual action* will increase the reliability and validity of the research, and that would help with this limitation as well. However, the same problem exists about bringing customers' actual decisions for measurement, which still presents a huge challenge to the science of psychological research to date.

It also involves conducting a series of tests based on a complicated multi-step statistical procedure. Conducting such an experiment is challenging, as it requires an extra turn of data collection from the exact same respondents, within a time frame that is reasonable enough so that the memory from past purchase still remains in the customer's brain while at the same time, not too short so as not to miss any observation. All in all, the researcher believes that the methodology as presented fulfils the answering of the research questions effectively, which makes the research still live up to its basic requirements.

1.7 Structure of the research

The research intention insists on the explanation and description of the social reality: consumption behaviours toward online shopping via the e-commerce platforms by Vietnamese people in the Vietnam market. It means the study addresses the breadth of the topic rather than the depth of underlying meanings of behavioural expression. Or scientifically, it is to answer the question of 'what' are truly going on in the market. The intention deems to be rational by two main motives – (1) experiential conjecture about the immature development of e-commerce industry in Vietnam; and (2) the shortage of academic research about studies related to the topic in Vietnam context. Estimating that the e-commerce is in the first phase of development and thus, there would be several changes and improvements to maximize the potential of online shopping in the country. In addition, it is hard to further predict what the changes will be or the shape of the e-commerce industry in upcoming years if practical knowledge on this social trend in the current moment is not established. Such, this research would be the trigger of a wide spectrum of practical information about consumption behaviours in the e-commerce industry. Moreover, the interest is fortified by the immature nature of Vietnam market. Recalling the memory in 1990s when the supermarket format was rather new to Vietnamese people. Comparing to the current happening, how beautiful the transformation is. There is the belief that the route to achieve the development of e-commerce format in Vietnam may be similar. In fact, the current competition in the e-commerce market with both local and international players was more advanced compared to the first Citimart opened in 1993-1994. The current market shows the high preference and consumption habit toward online shopping. Many people are familiar with Tiki, Shopee, Lazada or Sendo, and also seeks for Special Sales Events from these e-commerce platforms. To top it all off, the research intention plus the practical shortage of researches on the topic in Vietnam market and the real happening in the country have defined the way of how this research's components are set out.

The detailed format concludes other six chapters, besides this Chapter 1. Chapter 2 of this research critically reviews the existing literature in respect of loyalty in the e-commerce setting. This chapter will summarise prior studies and discuss the literature gap that needs to be addressed. Chapter 3 presents the information collected from two focus group interviews. Chapter 4 summarises findings from the literature and focus group interviews to derive the conceptual model for the research. Chapter 5 provides a detailed presentation of the methodologies that are used in this research, whose results are then discussed and analysed in-depth in Chapter 6. Finally, Chapter 7 summarises the findings of the research, provides practical implications to marketers and suggestions for future research.

It is the straightforward process in developing the conceptual framework from existing studies and using it as the theoretical guidance for acquiring practical data from Vietnamese customers in the Vietnam e-commerce context. Such, there are four stages in the process: (1) systematic literature review to acquire best practices from other contexts to estimate the determinants of customer loyalty and their causal links, formulating the conceptual framework; (2) preliminary interview to create the gentle match between behavioural expressions of local customers and what have been found in the stage 1; (3) data collection and analysis; and (4) findings discussions, conclusion and implications. The use of systematic literature review is to overcome the limitation of lacking studies dedicated in the Vietnam e-commerce context whilst making use of the available source of researches from other markets to develop a qualified research model. Without the use of this source, it would take a lot of time to formulate the research model by collecting data both quantitative and qualitative, dealing with unstructured data and diverse findings, etc. Moreover, this way also deletes the partial meaning of findings within the scope of one study in one context.

Preliminary interview may not, in the first phase of thoughts, be suitable with the quantitative method in this study. However, the purpose of including this into the chapter layout is to produce the pre-estimation of the finding directions. The finding of this interview is to, combining to the results from the systematic literature review, enhances the practicality and properness of questions being self-composed for collecting practical data (which is presented in the chapter 5 and chapter 6). However useful the conceptual findings are, there would a huge gap in composing survey questions if there does not involve some senses of practical breath. It is the structure of using the voice of questions to turn into the voices of respondents; such the better and more practical design of questions, the more valid and realistic data quality is collected. Then, the stage 3 and 4 involve largely the use of deduction approach and quantitative method in analysing data and findings. It is expected that real reflection of the social trend will be performed without the intervention of experiential thoughts the researcher. It means, this method serves directly the research intention in describing the customer e-loyalty in the e-commerce context by its nature at the highest accuracy and authenticity. This straightforward process avoids unnecessary chaos by multi-dimensional reflections of customer behaviours; and also enhances the efficiency in concluding findings and generalizing the real picture of Vietnam e-commerce industry as it should be. Apart from that, the straightforward analysis of data ensures the purity of gathering observable data and scientifically producing statistical results that are more accurate and valuable for the research value.

2. LITERATURE REVIEW

Among the various forms of retail e-commerce, B2C (business-to-customer) is one of the most discussed. In the literature of B2C e-commerce, customer loyalty is one of the most important focuses since firms started to recognise the comparative benefits of retaining a customer over acquiring a new one. Overall, e-loyalty content belongs to three main divisions: (1) the determinants of customer loyalty, or conceptualization of e-loyalty in e-commerce context, (2) analysis of the effect of specific antecedent of e-loyalty and (3) measuring customer loyalty and strategy for customer retention, in which the first two divisions account for the majority of academic work in recent years (Yue et al., 2015).

Academic papers from books, journal articles to theses discuss the construct of e-loyalty from both theoretical and empirical perspectives, in which the overwhelming proportion of the existing literature take on an empirical approach via conceptual model and hypotheses testing. A wide range of targeted populations have been brought to discussion, usually separated by regions, countries, cultures, age, occupation, industries and other common demographic and psychographic characteristics. To summarise, among the most discussed antecedents of e-loyalty are customer satisfaction, trust, commitment, switching costs, perceived value and risk. In much other research, the authors account for the origins of each antecedent such as service quality, shopping experience, price and many others.

Attention towards measuring customer loyalty is less popular and the methodology retains limitations. The few works that exist on this sub-portfolio include Hou & Giang (2014), who built the evaluation system of customer loyalty for B2C enterprises (Hou & Zhang, 2014). Zhang (2013) evaluated customer loyalty in B2C from two aspects: the RFM method to evaluate customers' behaviour loyalty and the grey clustering method to evaluate attitude loyalty.

The need of systematic literature review

Loyalty and its antecedents are expressions belonging to the human behaviour topic. Human behaviour is always complicated with several abstract concepts. That is the reason why its inherent illustration is various, depending on specific contexts including the researching context, individual contexts, shopping contexts, market contexts, and so on. Therefore, it is not feasible to come up with a unified framework or strategy that could serve for all companies and customers. Even when examining the loyalty of one customer, the expression is also different from products, from buying platforms, and so on. For instance, in the context of e-commerce purchasing, the loyalty toward one platform is formulated through the complicated process of forming satisfaction toward different types of products upon different times of purchasing and consuming. Moreover, e-commerce shopping has unique features to be comparable and compared to ones of traditional commercial activities. It means the use of existing knowledge about traditional commerce to match with the new situation of online shopping may distort the understanding. Since the development of e-commerce is not similar across countries, it is not possible to duplicate the model in developed markets to apply in developing ones or vice versus. It should be the process of learning best practices and adopting to specific situations to come up the best-suited format for each context. Therefore, the examination of customer loyalty, its influencers and strategies many request the learning of a variety of best practices from different contexts and situations in order to find out the most optimal routes and combinations of resources and processes to perform strategic goals. It comes to the need in this stage in comprehending related concepts of loyalty and loyalty in e-commerce while exploring different angles of how to formulate e-loyalty strategies by acquiring current evidence from existing studies. Not only does this basic scientific activity optimize researching efforts in dealing with primary data, but it also supports the synthesis of evidence-based practices from other countries' contexts.

Systematic literature review utilizes the vast availability of related and relevant theories, concepts and discussions toward the topic of customer loyalty in the e-commerce environment to inquire into literature knowledge in need to perform this research. It is the synthesis version of appraised findings on the topic in an organized and understandable manner for advancing the conceptualization (Jesson, Matheson & Lacey, 2011). By the basic discipline of this approach, many stages and steps of collecting secondary data, structuring them in a logical arrangement, and analysing them with cohesive headings addressing the research objective will be conducted to ensure the accuracy and validity of the theoretical understandings (Bettany-Saltikov & McSherry, 2016). Since the purpose of using systematic literature review in this chapter is to equip a robust background of theoretical concepts and literature-based causal links of antecedents and determinants of customer loyalty, the findings of this scientific activity do not need generalizing, but conceptualizing for practical investigations of customer loyalty in the appointed context of the Vietnam market with Vietnamese people and four popular e-commerce platforms (Tiki, Lazada, Shopee and Sendo). Despite that, the systematic literature review follows the closely-knit process with four steps as usual – (a) collecting academic studies via qualified sources, including peer-reviewed journals and academic articles; (b) refining the number of studies by using keywords and scanning the abstracts; (c) generally evaluating articles to optimize the number of readings (data eligibility); and (d) analysing and drawing findings. The database is organized by eight headings before considering the literature gap. Literature gap is somehow the final reflection of the systematic literature review results, and it provides the hints for explanation and findings in the practical research with primary data from the Vietnam market. Eight headings are presented as (1) key concepts of e-commerce, customer loyalty, intention to purchase, intention to recommend and WOM, customer satisfaction, service quality, and customer trust; (2) antecedents of customer loyalty, including satisfaction, trust, and commitment; (3) determinants of customer loyalty in e-commerce, including quality, price, perceived switching costs; (4) customer loyalty and culture; (5) customer loyalty in an emerging online market; (6) customer segmentation; (7) strategies for e-loyalty; and (8) empirical models, including DeLone & McLean ISS, the SERVQUAL scale, Srinivasan's 8Cs model, and other e-loyalty ones.

With that structural headings, the systematic literature review allows the breakdown structure of the main topic into sub-topics that have certain correlations and relevance to the research problem. Different from traditional reviews, the utilization of this method is more flexible in achieving specific goals for each stage of researching. For example, with this adoption in the Literature Review Chapter, the conceptualized version of knowledge on customer loyalty in the e-commerce will be generated from multiple studies which are applied either quantitative or qualitative methods (Mengist, Soromessa & Legese, 2020). Traditionally, systematic reviews have been adopted to evaluate behavioural expressions of consumers, for instance satisfaction or loyalty by summarising and examining the results of controlled happenings and trials. It is also related to the concern of whether determinants and antecedents that are defined are able to reflect accurately attitudinal and behavioural expressions of people. It means the level of accuracy in reflection would be enhanced by the increased number of studies in the related field to general understandings and conceptual practices. Apart from that, since human behaviour is complex, it is not possible to answer all questions about factors influencing loyalty from only one study. Such, the format of evidence-based examination will endorse the multiple dimensions of thoughts and analysis. Another evidence to confirm the properness of using systematic literature review in this chapter is that, as discussed above, existing studies focusing on customer loyalty in e-commerce shopping in the Vietnam context is not abundant. On the other hand, available ones are often focusing on exploring the 'results' of actions, i.e. measuring loyalty levels or identifying causal links of determinants and antecedents of loyalty with loyalty by the breadth of reflection. There should be the lack of an overall view over the whole picture of customer journey or across touchpoints. Furthermore, although definitions of basic concepts such as satisfaction, trust, commitment, and loyalty have been discussed over years, due to the rapid changes of customer behaviours and the adoption into the new context of e-commerce in an emerging market (i.e. Vietnam), understandings of those concepts need revising and updating. Therefore, it suggests that without the synthesis and summary of the topics in various contexts, it should not be possible to formulate the completed version of the conceptual framework for this study.

This research applies the structural process of systematic literature review from the large database to the best-suited number of articles by the intensive filtering, refining and analysis. This process is supposed to be suitable with the scope of this research when there are a clear batch of keywords and estimated causal links between measurement variables of customer loyalty. Moreover, this process may take some time, but it allows the generalization of relevant factors on customer loyalty by their root inherence. This kind of review welcomes all studies both in quantitative and qualitative ways. Besides the applied structure, there are other kinds and structures of systematic literature review that could be adopted: scoping review, rapid review, narrative review, or meta-analysis. Indeed, scoping review shares the similar discipline and structural process as the systematic literature review; however, it has a more limited scope of inquiring data across evidence types and for different questions (Arksey, & O'Malley, 2005; Levac, Colquhoun & O'Brien, 2010; Peters, et al., 2015). Scoping review is the ideal tool to explore the literature on a given topic with clear indication of research volume and focus. Scoping review is, coupled with the ongoing research, often to examine emerging evidence that is still unclear (Armstrong, et al., 2011). In fact, although customer loyalty in the e-commerce retailing in the Vietnam market has not yet been explored thoroughly, it is not the new topic or vague evidence at the global scale. There are two main reasons that using systematic review is the choice in this study. Firstly, this human behaviour topic may include many biases in explaining and interpreting findings, so it requires the reflection from different views to enhance the reliability of findings for generating the conceptual research model (Munn, et al., 2018). This provides more spaces for leveraging gaps, deviations, and deficiencies in practices in specific contexts. Secondly, systematic review allows the broad collection of evidence from other countries' contexts, i.e. international evidence on the topic intensifies the results of literature view. The important point is to ensure the validity and robustness of data through the whole process of searching, filtering and refining to guarantee the right directions of review results meeting the research objectives.

2.1 Key concepts

2.1.1 E-commerce

Electronic commerce, often shortened as e-commerce, indicates the buying and selling activities that are conducted via internet-connected devices (Balabanis et al., 2006; Chintagunta et al., 2012; Bamfield, 2013). E-commerce is divided into five forms based on segmentation of participants: business-to-business (B2B), business-to-consumer (B2C), business-to-government (B2G), consumer-to-consumer (C2C) and mobile commerce or m-commerce (Chen et al., 2014). According to Nisar and Prabhakar (2017), e-commerce differentiates itself from traditional commerce in transaction locations and the absence of physical stores in the former. On the other hand, the authors as supported by other studies argue that online and offline consumers are drawn by similar benefits: location, convenience, knowledge, personality and price (Brynjolfsson et al., 2009; Pauwels et al., 2011; Cao & Li, 2015).

Another body of e-commerce literature follows the utilitarian-hedonic balance of user experience, in which they basically agree with the notion that both online and offline customers seek both *utilitarian benefits* such as searching for the desired products, comparing prices, etc. and *hedonic benefits*, which refer to the enjoyment of shopping, website appeal, etc. when making a purchase decision (Loiacono et al., 2002; Bilgihan et al., 2014; Bilgihan & Bujisic, 2015). Although parts of consumers achieve the state of satisfaction when they are satisfied by their basic needs of acquiring some product, many expect the 'full experience' (Loiacono et al., 2002), such as the enjoyment of looking at an aesthetically designed website, or being attentively served by customer service staff. Such hedonic aspects of shopping have been empirically proven to strengthen customers' willingness to return to the website (Koufaris, 2002).

2.1.2 Customer loyalty

2.1.2.1 Different stages of loyalty

Customer loyalty, which is also sometimes referred to as customer retention or retail patronage, is mentioned in many academic papers, news articles, and business plans (Nyadzayo & Khajehzadeh, 2016), but the debate on its definition has not reached any consensus. The concept of customer loyalty was first initiated by Day (1969), then developed further by Jacoby & Chestnut in their 1978 papers, in which it is looked at from two dimensions: *attitudinal* (or affective) and *behavioural*, in which the former denotes customers' positive feelings towards the service provider that triggers desire to make repeated purchases with that service provider (Oliver, 1999), while the latter indicates the actual action of repeat buying (Gremler & Brown, 1996) (e.g. Srinivasan et al., 2002; Anderson & Srinivasan, 2003; ; Ribbink et al., 2004; Balabanis et al., 2006; Floh & Treiblmaier, 2006). The attitudinal and behavioural relationships are sometimes re-termed as *psychological* and *process* loyalty in some papers (Chen, 2015). Consumer retention is usually lower in internet shopping (Turban et al., 2000; Kim et al., 2011) compared to traditional shopping.

Jacoby & Chestnut (1978) argue that an emotional connection or a set of consistently maintained beliefs between the user and the brand, or attitudinal loyalty, is needed to induce true loyalty. It has also been found that attitudinally loyal customers are remarkably less prone to negative information about the brand than casual buyers (Donio et al., 2006). Usually such beliefs and emotional connection can be measured by asking consumers to answer questions related to their attitudes about the brand (Dick & Basu, 1994), such as what attributes they think the brand possesses, or whether or not they will make further purchases with the brand. Overall, many contemporary researchers have been attached to the conceptualization of customer loyalty as a two-dimensioned construct including attitudinal loyalty and intentions for repurchase (Zeithaml et al., 1996; Baumann et al., 2011; Raza et al., 2012).

Chen (2015) also emphasises that it is indeed true the customer's attitudinal and behavioural favour of the company induce loyalty, but customer loyalty should only be acknowledged as the result of marketing efforts when there are competitors providing similar products or services in the market. This notion was recognised earlier in Day (1969) when the author pointed out that there was an unclear boundary between true loyalty and repeated purchasing due to lack of shopping options.

The Oliver model by Oliver (1997, 1999) suggested a more profound breakdown of customer loyalty, which consisted of four stages: (1) *cognitive, (2) affective, (3) conative and (4) action.* The Oliver model was widely recognised in the academic realm (Forgas-Coll et al., 2012), but it unfortunately did not go into practice as much as the simple two-way model discussed above. The cognitive stage in the model refers to users' judgment of selected aspects of the product or brand, the affective stage is triggered by the emotional connection that has been developed from the experience or consumption of such products, the conative stage indicates the behavioural intention of the customers, and the last stage – action – denotes the conversion of intention into action. This model is considered to have laid a founding brick to other subsequent loyalty theories, but the amount of validating research on the original model itself is limited (Caruana & Ewing, 2010).

Keller (2008), on the other hand, suggested that customers' loyal behaviour may go through four levels (1) behavioural loyalty, (2) attitudinal attachment, (3) sense of community, in which the customer develops a sense of belonging to the community associated with the product or brand, or develops emotional connection accordingly, and (4) active engagement, which denotes the strongest commitment where customers are willing to invest additional time, effort and money on the research and purchase of the same product or brand over time (Keller, 2008).

2.1.2.2 Benefits of customer loyalty

Customer loyalty provides multiple benefits to firms and is an important source of sustainable competitive advantage. Reichheld (1996) explains that a loyal customer is worth more than a new customer due to their attachment to the firm leading to higher motives to make repetitive purchases and spend money on the brand. This reduces acquisition costs, increases acquisitions via referrals, allows firms to set a price premium and ultimately reduce their cost structure (Reichheld, 1996). This argument is supported by Urbanek (2002, cited in Denoue & Saykiewicz, 2009). According to Urbanek (2002, cited in Denoue & Saykiewicz, 2009), brand loyalty is advantageous to firms as it shields firms against fierce competition, risks of brand extension and induces higher price elasticity of demand. Strong brand loyalty will ultimately result in higher profit margins due to lower marketing costs and total cost structure, solid market position, higher return on investment and increased barriers against new market entrants due to high switching costs.

2.1.3 Intention to repurchase

Attached to the concept of attitudinal loyalty is the concept of customer intentions to repurchase. Repurchase intention is defined as the buyer's judgment about purchasing from the same service provider (Hellier et al., 2003). It is often assumed that stronger attitudinal loyalty, i.e. interest, excitement and enjoyment about past shopping experience, should come together with a stronger intention to buy the product or use the service once again (Kassim & Abdulla, 2008). Therefore, measuring the magnitude of this positive attitude has become the focus of many predictive studies of repurchase intention (Oliver, 1997). Together with this, it is agreed that customers repurchase intentions indicate the behavioural component of customer loyalty.

2.1.4 Intention to recommend and Word of Mouth (WOM)

Besides intention to repurchase, intention to recommend is considered as a positive attitudinal outcome, and a signal of customer loyalty (Kassin & Abdulla, 2008). Zeithaml et al. (1988) define intention to recommend as having a causal relationship with attitudinal loyalty, hence it should be regarded as a behavioural intention. Intention to recommend has been largely discussed together with the concept of Word of Mouth (WOM), which refers to recommendations of an existing buyer about a brand, a product or a service provider whether positive or negative (Hennig-Thurau et al., 2004). Electronic WOM, as often abbreviated as e-WOM, refers to the WOM that takes place on the internet and when it is discussed as a marketing tool, the mentioning of e-WOM often involves the spreading of information to a large internet audience, whether by intention or otherwise (Hennig-Thurau et al., 2004). Many authors have acknowledged the power of WOM in today's marketing strategy due to the rise of social networks, which are not limited to social media platforms but also forums, communities, review websites or personal blogs (Gruen et al., 2006).

The growth of WOM marketing was driven by the growing need of online shoppers to seek others' recommendation before making purchase decisions (Hennig-Thurau & Walsh, 2003). The lack of physical contact between the potential buyers and the product makes it difficult for them to come up with an informed judgment about the product. Buyers also feel more convinced towards user-generated content compared to content broadcast by the seller (MacKinnon, 2012; Park et al., 2011). Nowadays, many people make their purchase decisions based on a single online review (Park et al., 2011), which explains why reviews, or e-WOM have become a major marketing tactic, in which businesses on the one hand strive to make their service attributes more appealing to trigger buyers' willingness to spread positive information about them, and on the other hand, utilise marketing repertoires to induce e-WOM. In fact, satisfied customers tend to be more willing to disseminate positive WOM (Narayandas, 1998).

2.1.5 Customer satisfaction

Customer satisfaction is one of the most popular topics in the academic literature. It is defined as the extent to which buyers display a positive attitude towards the service offered as their demands, wishes and expectations are fulfilled (Hellier et al., 2003). Kotler (2000) suggests that customers' judgment should be based on their prior expectations about the product or service. In the literature of loyalty, customer satisfaction is among the factors that are of immense relevance (Olsen & Johnson, 2003; Berjoyo et al., 2016). Customer satisfaction has been viewed as having influential impact on both attitudinal loyalty (Beerli et al., 2004) and behavioural loyalty (Beerli et al., 2004), although the multitude of the relationship is stronger with the former (Berjoyo et al., 2016). The relationship between customer satisfaction and attitudinal loyalty has been so robust that Reichheld (1993) called it a 'poor substitute' of loyalty. It is also noteworthy that, as emphasised by Olsen & Johnson (2003), there are two forms of satisfaction, labelled transaction specific and cumulative satisfaction. Transactional satisfaction refers to the satisfaction following any given service experience, while cumulative satisfaction refers to the summation of all previous experiences. Cumulative satisfaction is also referred to as overall satisfaction (Deng et al., 2010) and customers demonstrating satisfaction with a single transaction and those demonstrating a general, long-running feeling of satisfaction might not be equally loyal. That requires careful measurement while doing empirical research especially in the emphasis on separating different forms of satisfaction in the data collecting process.

Despite the considerable amount of work dedicated to justifying the link between satisfaction and loyal behaviour, a great number of studies have refuted the understanding of the former being a direct indicator of the latter (Oliver, 1999). Although there is often a strong tie between repeated satisfaction and the probability of repurchase, satisfaction does not always guarantee repeat purchase while dissatisfaction does not indicate the reverse. In fact, a great proportion of satisfied customers still defect (Oliver, 1999). Therefore, the overwhelming argument is that the concept of loyalty must be built upon variables beyond satisfaction which indicate stronger ties such as trust (e.g. Morgan & Hunt, 1994; Hart & Johnson, 1999, cited in Wong, 2014), or commitment (Shin et al., 2013), which are more likely to assure long-term relationship between the customers and the brand than transactional satisfaction.

2.1.6 Service quality

According to a definition by Bitner et al. (1990) and Santos (2003), service quality is the customers' judgment of the relative performance of the service and the service provider against its competitors. Lewis & Mitchell (1990) and Parasuraman et al. (2005) define service quality as the discrepancy between the customers' expectations and their actual experience. In the past, service quality was often used interchangeably with the customers' overall impression, or satisfaction level about the company (Parasuraman et al., 1988; Zeithaml, 1988; Bitner 1990).

However, in the modern literature, service quality and customer satisfaction are viewed as two separate constructs, where the former is an important factor driving the latter.

Contemporary studies viewed service quality as a two-dimension construct: outcome quality, which refers to whether or not the transaction returns what the customer wants, and process quality, which refers to the quality observed throughout the delivery of the service (Groonroos, 1983). In fact, process quality was not originally considered as a dimension of service quality until Groonroos (1983), Zeithaml (1988) and Swartz & Brown (1989) argue that judging a service based on outcome was one-sided and difficult for customers due to the many experiences and qualities besides service outcome that were unaccounted for. The dual characteristic of service quality remains the foundation for service quality empirical research and predictor customer responses used largely by firms. However, both appear to be complicated and multidimensional constructs, that the relative impact of each factor will vary among different settings (Haywood-Farmer, 1988; Bitner, 1990; Groonroos, 1984). For example, customer evaluation of a product differs between tangible and intangible products (Rushton & Carson, 1989). Similarly, the perceived service quality in the e-commerce environment is expected to take on a divergent approach from that in a bricks-and-mortar service setting (Santos, 2003; Kim et al., 2006) mostly due to the lack of physical contact between customers and service providers.

2.1.7 Customer trust

Customer trust is an important catalyst in fostering a long-lasting relationship between seller and buyer, hence a valuable asset and competitive advantage to a product or service provider. In the transactional relationship between product or service providers and customers, trust is defined as the confidence or belief that the former develops about the integrity and reliability of the former (Morgan & Hunt, 1994, Ranaweera & Phrabu, 2003). The trust by customers towards product or service provider is the centre of this research, despite trust being often viewed as a two-way relationship, which can occur at both the individual level (Rotter, 1967) and organizational level (Moorman et al., 1993). In online transactions, trust plays a crucial role due to the involvement of monetary transactions and the exchange of personal information (Hoffman et al., 1999, Friedman et al., 2000, Wang et al. 2003). Sometimes, trust does not result from customer perception of the brand but of the service itself (Parasuraman et al., 1985). For example, buyers can develop trust in e-commerce but not a particular website, but that can also induce repurchase intention with the website.

In the trust literature, trust in e-commerce can be understood in two different stages: pre-purchase and post-purchase (Kim et al., 2009; Zhang et al., 2011). Given we focus on investigating the impact of trust on repurchase intentions, this research focuses on trust at the post-purchase stage. Customer trust is proven to have a positive impact on both reducing online transactional risks and increasing loyalty to the website (Gefen, 2002). However, many other authors, for example Ribbink et al. (2004) argue that trust has more to do with customer satisfaction than customer loyalty. Before Gefen (2002) and Ribbink et al. (2004), Moorman et al. (1993) had proposed similar conclusions, where they believed that trust is a result of customer satisfaction, and might have influence on customer commitment and customer loyalty. Trust can be built upon various antecedents, which are not limited to the quality of the website but also industry regulations, contracts, the reputation of the website, and the reputation of the government, and so on. Although trust is recognised as having a key role in maintaining business relationships, it is also viewed as a challenge to managers (Bejou et al., 1998).

2.2 Antecedents of customer loyalty

2.2.1 Customer satisfaction

Literature on customer satisfaction in the e-commerce setting depicts a few notes. According to Kim et al. (2004), an online customer can form a judgment as either a customer or website viewer. This implies that the state of being satisfied can still be achieved with a highly aesthetically appealing but low usability website, or one with high usability yet boring appearance (Lindgaard & Dudek, 2003). In this regard, prior research using customer satisfaction and perceived quality of website may not fully explain customers repurchase intentions. For example, a user that enjoys the design features of the website but does not find the website useful may report high levels of satisfaction, which are triggered by their personal taste, but might not visit the website again for the purpose of purchasing.

Multiple studies have examined the constitution of customer satisfaction, among which Safa & Ismail (2013) have arrived at a relatively complete model for the online shopping context. In Safe & Ismail (2013) model, customer satisfaction, together with customer trust, is built upon technological factors, organizational factors and customer factors as illustrated in Figure 2 and Table 1.

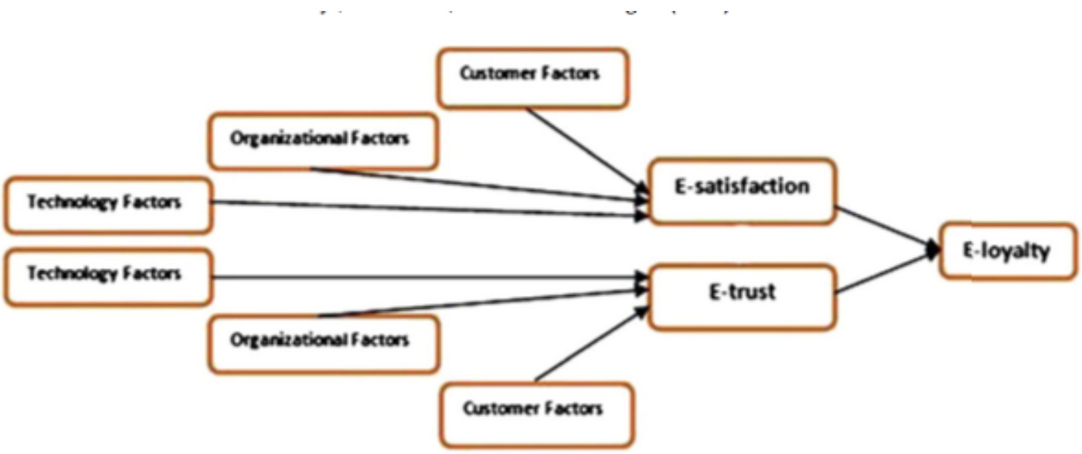


Figure 2 E-loyalty conceptual framework (Safa & Ismail, 2013)

Technological factors	Organizational factors	Customer factors
System quality (9 items) Information quality (5 items) Personalised web feature Language options Search and comparing facilities Product and service information Using other systems (5 items) Collecting and analysing customer information Fast and easy payment Buying and selling 24 h and 7 days	Customer segmentation Customise products Fast response to customer inquiries Variety of goods and services Rewards and discounts (2 items)	Perceived site quality Customer experience in e-commerce Less time transaction Perceived usefulness Perceived ease of use

Table 1 Factors that influence online customer satisfaction (Safa & Ismail, 2013)

Previous studies consider that satisfaction is a multidimensional conceptualization consisting of various aspects based on the feeling of the individual audience (e.g., McKinney et al., 2002). However, the complicated nature of the human feelings, personality, and preferences as well as the role of contextual factors such as culture and social influence have made it challenging for academic authors to design a universal framework for satisfaction. Many authors have attempted to segment customers, such as Johnson et al. (1997) based on consumption experience, or many others by country, age or gender. This has enlightened a fact that academic efforts on customer behaviour continue to draw interest despite the huge volume of literature that existed.

2.2.1.1 The relationship between satisfaction and attitudinal loyalty

Customer satisfaction is proven to have solid connections with trust, commitment and word-of-mouth intention, which are widely regarded as representations of attitudinal loyalty (Kim, Xu & Gupta, 2012; Liao et al., 2014; Caceres & Paparoidamis, 2007). Such relationships are evidenced in empirical studies (Woisetschlager et al., 2011; Kim, Xu & Gupta, 2012). Wetzels et al. (1998) emphasised the notably positive relationship between satisfaction and commitment. Additionally, based on the investigation by Sanchez-Franco et al. (2009), e-satisfaction can affect commitment in an e-commerce context.

2.2.1.2 The relationship between satisfaction and behavioural loyalty

Academicians have long attempted to examine the link between satisfaction and behavioural loyalty in the online setting (Ha et al., 2010; Yi & Gong, 2008). As discussed above, customer satisfaction is an important indicator towards repurchase intentions, and continuance intentions (Gremler et al., 2001; Chiu et al., 2012; Olsen & Johnson, 2003; Beerli et al., 2014; Berjoyo et al., 2016). In an early study, Hirschman (1970, cited in Hsu et al., 2014) introduced an exit-voice theory, where it is argued that customer satisfaction fosters loyal behaviour, while dissatisfaction may lead to customers choosing to 'exit' or 'voice' their feedbacks towards the service provider. Bhattacherjee (2001) and Oliver (1980) also recognised the contrasting behaviour between satisfied and dissatisfied customers. Overall, past literature has seemed to reach a consensus that customer satisfaction enhances repurchase intentions, or behavioural loyalty (Wu & Wang, 2006; Khalifa & Liu, 2007; Kulkarni et al., 2007; Chiu et al., 2012; Rose et al., 2012; Zheng et al., 2013), while dissatisfaction will lead to cessation of customer service use, or to complaints.

2.2.1.3 Dissatisfaction

Dissatisfaction is defined as a negative gap between customers' expectations and actual outcomes (Oliver, 1980; Ferguson & Johnston, 2011), which is contrary to satisfaction. It is regarded as both a cognitive and affective process. In the empirical literature, Audrain et al. (2008) are among the few authors that attempt to explore the consequences of dissatisfaction on customers' intentions with existing brands in the e-commerce setting.

Similar to satisfaction, customer dissatisfaction is also discussed in the literature. It is clear that customer satisfaction increases the probability of repurchase, dissatisfaction signals reduced behavioural loyalty (Lam et al., 2004). However, the literature on dissatisfaction is more tied to that on service recovery rather than being considered merely the opposite of satisfaction. According to Bitner et al. (1990), unhappy customers react to a service failure differently and often the motive to leave the brand is triggered by poor response to problems rather than the dissatisfaction in the first place. When customers decide to voice their complaints instead of making a departure from the brand, and complaint management is considered a chance to re-earn customer trust and strengthen loyal behaviour (Holloway & Beatty, 2003; Schoefer & Ennew, 2005). Unfortunately, firms are not always bestowed with such second opportunities. More often dissatisfied customers do not show their resentment and choose to abandon the brand (Colgate & Hedge, 2001) and this phenomenon can be more common in e-commerce due to the absence of any human touch.

2.2.2 Customer trust

Past work has pointed out a number of perceived risks that accompany online transactions: financial risk, product risk, concern for privacy and security risk (Bart et al., 2005; Connolly & Bannister, 2008; Winch & Joyce, 2006). The conceptualization of trust in this regard is closely linked with the literature of website security and privacy protection as mentioned above, where it is argued that security should be viewed as a customer perception rather than website feature. In other words, privacy and security concerns are all matters of trust.

In evaluating and developing a framework for trust, many authors including Ratnasingam et al. (2002) emphasise that e-commerce trust should not be viewed as mere trust towards the particular site but rather a wider conception of trust towards e-commerce paradigm and the 'underlying control mechanism', or termed technology trust that is universal to all online websites. Similarly, McCole et al. (2010) model e-trust as a three-way perception, which includes trust in internet infrastructure, trust in the specific brand, and trust in third-party service providers that facilitate the safe and fast online transactions.

Without doubt, customer trust is widely considered as a prerequisite for maintaining long-term relationships between buyer and seller, especially when perceived risks are high. In some past works, it is defined as a token of attitudinal loyalty (Kim, Xu & Gupta, 2012; Liao et al., 2014; Caceres & Paparoidamis, 2007). In online shopping, where the relationships are characterised with 'no touch' transactions, anonymity, and lack of control over fraud risks, trust becomes an indispensable factor of purchase decisions and intentions to revisit (Grabner-Krauter & Kaluscha, 2003; Wu et al., 2009). As discussed, the increased competition leading to lower perceived switching costs makes customer retention a more challenging task, and at the same time makes e-trust even more important (Mukherjee & Nath, 2007). That explains the academic attention on e-trust lately, with typical work by Eastlick et al., 2006; Horppu et al., 2008; Jin et al., 2008; Mejia et al., 2009; Mukherjee & Nath, 2007; or Shin et al. (2013).

Oliveira et al. (2017) introduced a model of trust in e-commerce as illustrated in Figure 3 with four main sources: customer characteristics, firm characteristics, website infrastructure and interactions. In this model, trust is considered from three facets: competence, integrity and benevolence, which is in line with Hwang & Kim (2007).

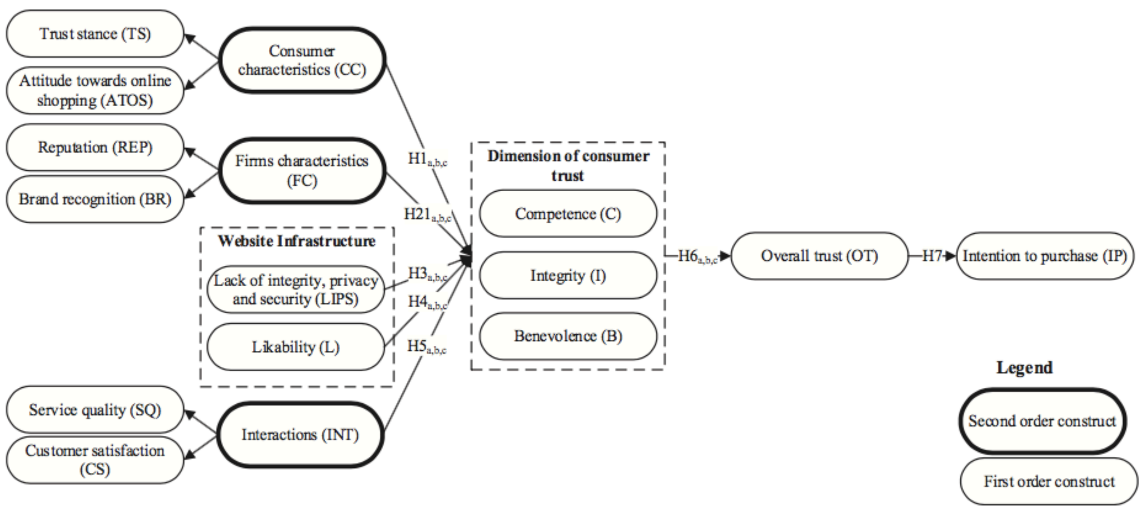


Figure 3 Modelling trust in e-commerce (Oliveira et al., 2017)

Customer characteristics indicate individual attitudes towards either the paradigm of online shopping (Crespo & Bosque, 2010) or trust stances towards a specific brand. It is believed that customers only consent to disclose their personal information with an internet site when they trust the site (Palvia, 2009).

Firm characteristics: Customers develop trust towards a brand when there is a high chance that the brand will behave favourably towards them, and this belief contains the perceived risks that customers agree to compromise in return for entering a trading relationship with that partner (Hong & Cho, 2011). In the case of e-commerce, perceived brand reputation and brand recognition of the website are directly related to customer trust (Teo & Liu, 2005; Nguyen & LeBranc, 2001).

Website infrastructure: In line with the arguments above about website security and levels of perceived risks, website usability is an important prerequisite for the establishment of trust (Roy et al., 2001).

Interaction contains service quality and customer satisfaction. Customer attitudes towards and interactions with the service provider are highly determined by content quality (Huang & Benyoucef, 2013), intention to shop online, shopping experience, and general purchase behaviour (Weisberg et al., 2011, cited in Samritwong, 2012).

Despite a wide body of literature supporting the role of trust development in e-loyalty, many authors have not been satisfied with the argument (Harris & Goode, 2004; Oliver, 1999). These authors disagree with the presumption that trust and satisfaction are antecedents of customer loyalty, for several reasons: (1) the links between trust and loyalty are weak and insignificant, (2) there are more important antecedents of loyalty than trust or satisfaction, (3) the conceptualization of customer retention has been ambiguous and inconsistent across studies and (4) the presence of catalyst factors in empirical studies that mingle with the findings about the trust-loyalty relationship. Therefore, as Ranaweera et al. (2005) realised, the understanding of trust in determining an e-loyalty model requires consideration of moderating factors under the different circumstances and varied customer characteristics.

2.2.3 Customer commitment

Nurturing customer commitment has long been identified as a key factor in maintaining long-standing business relationship between e-commerce websites and shoppers (Morgan & Hunt, 1994). It is defined by Dwyer et al. (1987) as demonstration of the persistence of the relationship between the seller and buyers, irrespective of it being an intrinsic drive or explicit behaviour. According to Wu et al. (2014), it symbolises a willingness to maintain a long-standing exchange relationship of a buyer towards a service provider. Customer commitment is recognised as one of the closest stages for firms to attain customers' loyal behaviour. It is also widely linked to many other behavioural variables related to loyalty such as trust, WOM intentions, repurchase intentions, brand switching behaviour, and considered a basis of sustainable relationships.

Empirical evidence suggests that highly engaged customers tend to remain loyal to the e-commerce site (Cater & Zabkar, 2009; Dagger et al., 2009). Since commitment is cultivated upon a high perceived value that customers believe they benefit from purchasing from the brand, it is natural that committed customers will feel the need to return the favour by staying loyal to the firm (Wong & Sohal, 2006). The argument holds true in both offline and online shopping environments, as seen in the number of conceptualization models where customer commitment is included. For example, Mukherjee & Nath (2007) suggested that trust positively influences commitment, and commitment drives attitudinal and behavioural loyalty. Several other authors depict the close link between trust and commitment, such as Gounaris (2005), Eastlick et al. (2006) and Shin et al. (2013). In Shin et al. (2013), repurchase intention is conceptualized on

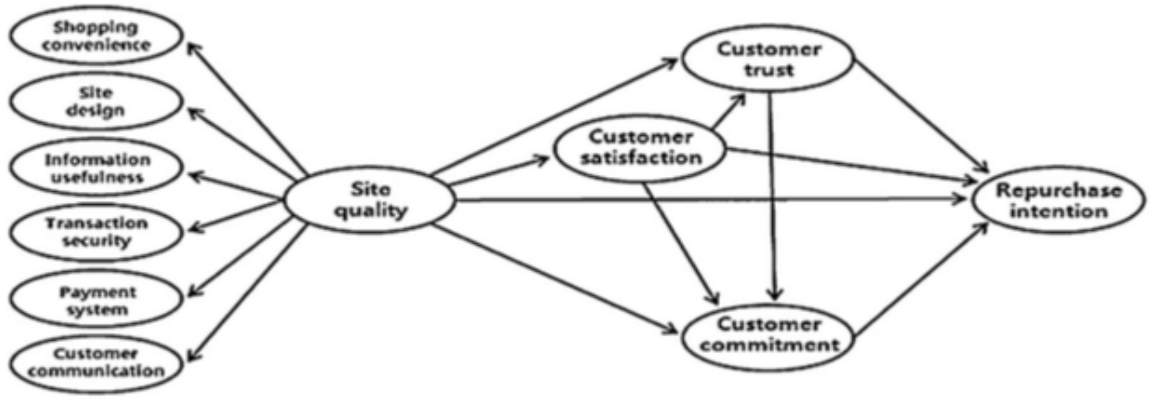


Figure 4 Modelling commitment on site quality (Shin et al., 2013)

The three known antecedents of loyalty: customer satisfaction, trust and commitment, are mentioned in many studies as having interactive relationship. Shin et al. (2013)'s model in Figure 4 also reflects the interaction between the three variables, in which it is seen that customer satisfaction is a driver of trust and commitment (not to mention repurchase intention, as discussed above), while trust drives commitment, and commitment is the highest level of customer engagement. In Li et al. (2006), commitment is also constructed on customer satisfaction and customer trust as antecedents. Satisfaction with the interaction that begins at the outset of the relationship tends to lead to the development of trust and continuous relationships (Ramaseshan et al., 2006). On a similar page, satisfaction towards a website often leads to trust (Horppu et al., 2008). Customer satisfaction with site characteristics of internet shopping will affect e-commitment because e-trust and e-commitment are interactive (Mukherjee & Nath, 2007).

These examinations are done before/ during or post purchase

The interesting point when discussing the antecedents of customer loyalty, named satisfaction, trust, and commitment is related to when those constructs are performed and formulated during the purchasing process. Studies show the causal links of satisfaction as the antecedents of trust and commitment before having the convergent effect on the formulation of loyalty (Oliveria, et al., 2017; Shin, et al., 2013), it does not come clear that those results were observed and recorded during the customer journey or the buying decision-making process. By the definition of satisfaction, it is inferred that the process of having trust and commitment leading to loyalty should be performed (1) in the post-purchase phase towards the consumption of a single product; and/or (2) 'during the purchase' phase onwards to the extent of cumulative purchases at one e-commerce place. As the ripple effect, the positive assessment (attitudinal loyalty) which is achieved from a specific purchase after consumption is a prior for the next purchase (behavioural loyalty). It means the experiential satisfaction (from the previous purchase) decides following actions even in the pre and during period of 'this purchase'. Such, it is not critical to distinguish which phase of the customer journey in which a specific feeling toward a particular purchase is constructed; but, it is significant to measure attitudinal loyalty of customers throughout the process they are shopping with a commercial page.

Back to the bare concern of that, if declaring the importance of cumulative feelings leading to particular actions upon phases of purchases, measurement variables of satisfaction should be observed in which phases? Pre-experience toward a brand or a product is one of the best predictors of people's upcoming actions when filtering options and selecting alternatives for final choices of purchase. As Shin, et al. (2013), site quality has the important impact on satisfaction; but how do people assess the quality of the 'site quality'? Hence, as the iterative circle, the boundary of pre, during or post purchases is diverse, depending on what they tend to consume, and in which means they plan to buy products.

2.3 Determinants of customer loyalty in e-commerce

Considerable efforts have been put into studying the impacts of different factors on customer loyalty (Grewal et al., 1998; Pan & Zinkhan, 2006; Lee & Yang, 2013). On the other hand, customer loyalty, or retail patronage in the e-commerce environment has yet to produce some satisfactory results (Ganesh et al., 2010; Cho, 2015; Emrich & Verhoef, 2015). Many hedonic and utilitarian aspects of service have been put under study (Childers et al., 2002; Kim et al., 2007). For example, Ganesh et al. (2010) examined the effects of product variety and assortment, and store perception on customer loyalty. Wang et al. (2011) looked at the aesthetic aspect of website, while other service aspects are discussed by Lee & Yang (2013) and Cho (2015). Kandampully et al. (2015) proposed a model including customer satisfaction, perceived switching costs (PSC), service quality, customer perceived value, trust, customer commitment and brand experience. Eastlick et al. (2006), Ha & Stoel (2009), and Caruana & Ewing (2010) looked at service quality, customer satisfaction, trust and commitment.

2.3.1 Quality

Many academic studies have been dedicated to the study of website quality in e-commerce (Zeithaml et al., 2002; Loiacono et al., 2002; Wolfinbarger & Gilly, 2003; Yang & Fang, 2004; Cristobal et al., 2007). As Hausman & Siekpe (2009) reckon, an effective website has to be able to signify the essence of both 'machine' and 'human' elements of service, although almost no face-to-face interactions are present. Focus in the website quality literature are attempts to forecast consumer behaviour such as in Taylor & Strutton (2009), estimate customer satisfaction level with website quality (Alpar, 2001), or determine customer's probable purchase intention (e.g. Loiacono et al., 2002).

Among the notable works are those incorporating the Technology Acceptance Model (TAM) such as Chiu et al. (2009), Lee et al. (2011), and Wen et al. (2011), in which factors specified in the model including perceived ease of use, perceived usefulness, beside functionality, privacy and reliability are acknowledged as antecedents of customer loyalty. Bauer et al. (2006) developed a model based on the hedonic and utilitarian characteristic of online satisfaction and evidenced that website quality is a construct of enjoyment, reliability, process and responsiveness. Zhang et al. (2011) took a different approach and concluded that website usability played an important role in customers repurchase intention. A model by Szymanski & Hise (2000), on the other hand, is based on four factors: convenience, product specifications, site design and security.

Meanwhile, Srinivansan et al. (2002) suggested an 8Cs model of website quality (customization, contact interactivity, care, community, convenience, cultivation, choice, and character), which apparently required laborious work related to constructing the model and developing a measuring scale for each element in the model, although several important factors were not mentioned such as site security. Empirically, Kim et al. (2009) concluded that aesthetic quality, convenience and the enjoyable nature of online shopping directly influence online customers' satisfaction level, while no significant relationships were found between communication, information and customization with the focused variable. In summary, Chen et al. (2013) propose a success guideline for e-commerce websites, in which they introduce four key elements: user comfort, fun, stimulating customer engagement, and strengthening the likelihood of a purchase.

Tsai (2017) summarises that website quality contains utilitarian, emotional and symbolic (hedonic) dimensions.

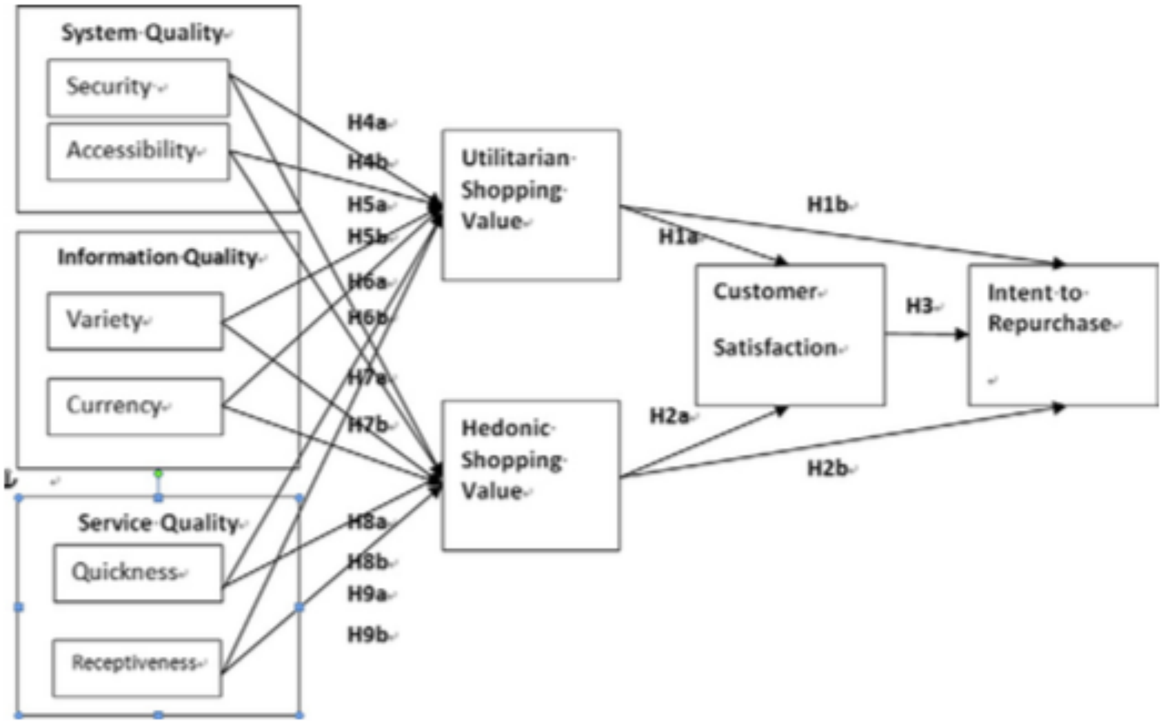


Figure 5 Customer value and customer loyalty (Kim et al., 2012)

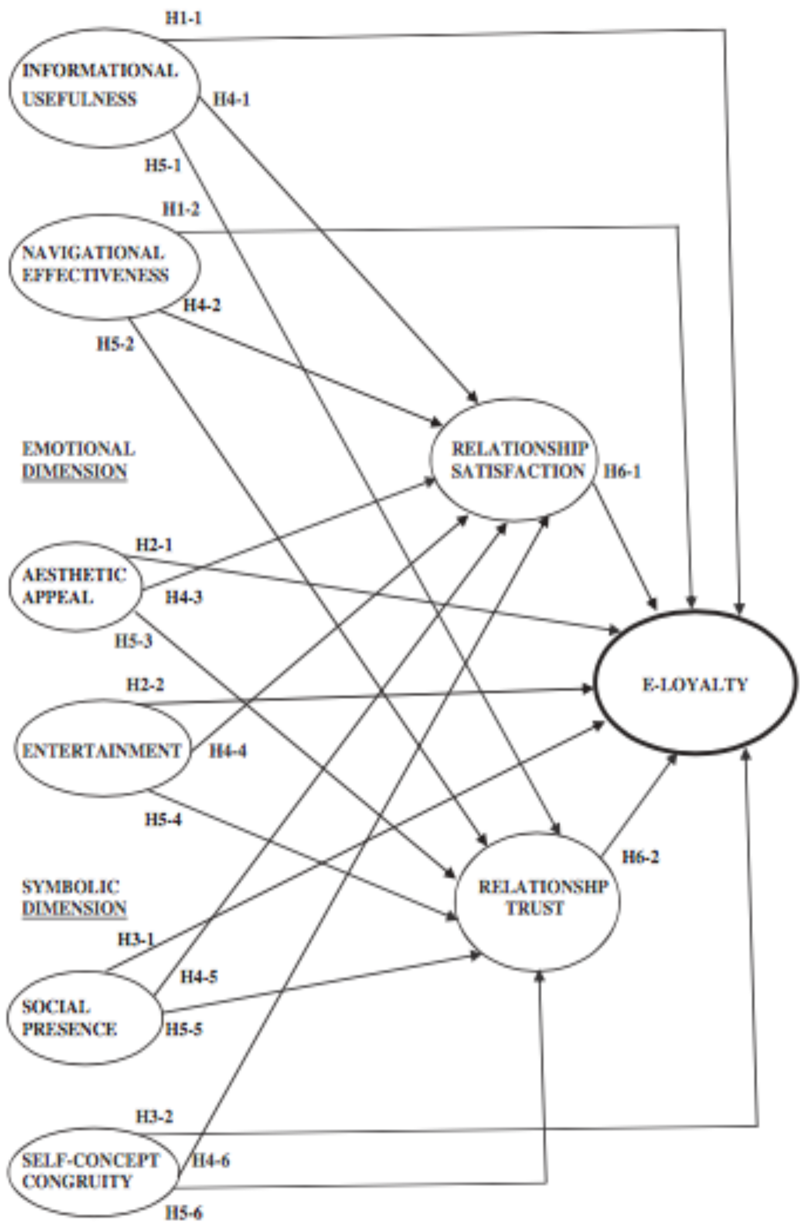


Figure 6 E-loyalty driven by website quality framework (Tsai, 2017)

2.3.1.1 Utilitarian dimensions

a) Convenience/perceived ease of use

The paradigm shift in shopping has partly been the consequence of the fact that people have been looking for time saving shopping options especially mandatory shopping daily needs, and online shopping is one of such options (Berry & Cooper, 1990; Kumar & Kashyap, 2018).

With less time budgeted for shopping, the need for shopping convenience has become more important, although this concept was first mentioned since almost a century ago. Copeland (1923, cited in Audrain-Pontevia et al., 2013) was among the pioneer authors that discussed convenience in retail marketing, in which 'convenience' was defined by the measure of time and effort spent on the buying of a product. This definition continued to facilitate the mainstream understanding of the concept and lay the groundwork for other research.

Convenience in marketing, as characterised by the amount of time and effort spent in purchasing a consumer product, indicates the non-monetary costs that influence consumer behaviour besides monetary costs (i.e. prices) (Bender, 1964; Hermann & Beik, 1968, cited in Duarte et al., 2018). This notion has been understood well by retail practitioners, as they keep looking for new improvements in speed and ease of use for purchasing platforms in order to facilitate the purchasing process (Shaheed, 2004).

The concept of convenience had already been widely discussed in traditional shopping platforms, well before the invasion of electronic commerce. During the era when shopping at bricks-and-mortar supermarkets and stores was the sole option, the time-related aspect of convenience was mainly associated with queuing time (Gehrt & Yale, 1993). As noted above, the time wasted through waiting can be counted as a non-monetary cost, but it also represents an opportunity cost (Berry et al., 2002) for consumers. The more time shoppers take to complete a purchasing transaction, the lower the level of service convenience (Berry et al., 2002).

The effort aspect of convenience points to more aspects of shopping including information searching, locating the physical stores, transportation, shopping efforts (Emrich et al., 2015) and completing the checkout process (Berry et al., 2002). According to Duarte et al. (2018), these activities require an effort that is not only physical but also contains cognitive and emotional factors. Hui et al. (1998) find that the amount of effort spent does not only reduce convenience but also may induce frustration and negative feedback.

Seiders et al. (2000) say that convenience is a valuable competitive advantage in retailing. Despite this, Farquhar & Rowley (2009) argue that convenience should be looked at as a proxy of customer effort rather than a service attribute offered by the service providers. Empirical evidence has revealed that convenience is an important factor in establishing and maintaining the relationship between shoppers and retailers (Seiders et al., 2005); the failure to provide service convenience has, as stated above, been associated with low acquisition rate (Keaveney, 1995; Pan & Zinkhan, 2006) and negative feedback (Hui et al., 1998).

The construct of convenience has remained an arguable topic. While most contemporary authors developed their frameworks around the basic elements of time and effort as set by Copeland (1923) (Yale & Venkatesh, 1986; Berry, 2000; Berry et al., 2002; Seiders et al., 2007), there has been no consensus regarding what constitutes time and effort (Reimers & Chao, 2014; Seiders et al., 2007). Berry et al. (2002) suggested a framework of five dimensions to convenience including decision, access, transaction, benefit and post-benefit convenience. Seiders et al. (2007) then attempted to develop a SERVCON scale based on Berry et al. (2002)'s five elements, but this framework does not apply well to the online shopping environment. In response to this literature gap at that time, Beauchamp & Ponder (2010) proposed a hybrid conceptual model that is applicable to both physical and online store shoppers with four factors: access, search, transaction and possession. A similar framework was introduced by Jiang et al. in 2013, in which an evaluation stage is added between the search and transaction phase. Overall, the existing literature has debated over seven dimensions of convenience that are linked to different stages of the buying process: access, search, evaluation, attentiveness, transaction, possession and post-purchase.

Access convenience: Access convenience refers to the time spent and ease of access to the shopping platform (Seiders et al., 2000). Unlike in bricks-and-mortar stores and supermarkets, access convenience indicates the location of stores, availability of transportation, etc., the physical location factor in online shopping is irrelevant as online purchases can be performed with any internet-connected device regardless of geographical location. Instead, access convenience in e-commerce denotes the accessibility of websites as in speed and availability, which according to King & Liou, is one of the most important determinants of customer experience in online shopping. E-commerce websites have employed more user-friendly and easy to remember URL's, having tools for automatic bookmarking and placing ads strategically on social media websites.

Search convenience is the ‘speed and ease with which consumers identify and select products they wish to buy’ (Beauchamp & Ponder, 2010)

Evaluation convenience is associated with the availability of detailed yet easy-to-understand product descriptions, using various presentation features, such as text, graphics, and video, on the website of the company (Jiang et al., 2013).

Attentiveness convenience refers to the extent to which online retailers provide personalised services and attention to their customers (Jun et al., 2004; Pappas et al., 2016; Mosteller et al., 2014).

Transaction convenience is defined as the ‘speed and ease with which consumers can affect or amend transactions’ (Beauchamp & Ponder, 2010).

Possession convenience: Seiders et al., (2000) define possession convenience ‘as the speed and ease with which consumers can obtain desired products’ which includes factors related to production planning, stocking policy and shipping and delivery times. Therefore, to compete with traditional shopping, sites must shorten the time between checkout and delivery.

Post-possession convenience: Post-possession relates ‘to the consumer's perceived time and effort expenditure when reinitiating contact with a company after purchasing the intended product (Berry et al., 2002). Service failure, such as transaction problems, customer complaints, defective products or services can make a customer change his/her judgment (Seiders et al., 2007).

b) Product offering

Product-related specifications are frequently discussed in e-commerce offering literature, in which two of the most mentioned elements are product quality and product assortment, alternatively defined as product variety (Pan & Zinkhan, 2006). Product assortment is defined as the variety of items available for sale on the website (Levy & Weitz, 1995; Pan & Zinkhan, 2006, cited in Davari et al., 2016). In recent years, enriching product range has been one major focus of online shopping businesses in their ambition to overcome traditional retailers (Bhatnagar & Syam, 2014; Dukes et al., 2009), mostly because product assortment has become a weakness for the physical form of stores due to high costs associated with storage and inventory (Bhatnagar & Syam, 2014; Dukes et al., 2009; Noble et al., 2005). It was empirically evidenced in previous literature that product assortment helps facilitate the utilitarian needs of customers (Bhatnagar & Syam, 2014; Park & Kim, 2003), hence increases the chance customers will remain loyal to the website.

c) Informational usefulness

Informational usefulness refers to *‘the cognitive specification of online users for the website design elements concerning the provision of adequate, timely information coupled with visual* *and verbal portrayals, so online users are familiarised with product and service offerings in order to make appropriate purchase decisions'* (Safa & Ismail, 2013; Mutingi, 2014; Rezaei, et al., 2014). An e-commerce website which is considered to be well contented should consist of relevant, accurate and helpful information (Sinha et al., 2001) that enables customers to make informed purchase decisions (Surjadjaja et al., 2003) and make online experience more endearing (Cai et al., 2004). Overall, Tan & Wei (2006) summarise that the information provided in an e-commerce website has to be satisfactory in four dimensions: intrinsic information quality, contextual information quality, representational information quality, and accessibility information quality. Poorly displayed content not only generates negative impressions about brand image (Lin, 2010) but also increase the opportunity for switching brands (Beaird, 2007), which all in turn affect purchase rate and customer retention.

2.3.1.2 Emotional dimensions

The emotional dimensions highlight the hedonic characteristics of online commerce experience. In website design, it denotes the ability of the creator to deliver the aesthetic appeal, the 'fun' and entertainment factor that are able to stimulate an emotional touch in those who view it (Loureiro et al., 2013; Vaiciukynaite & Gatautis, 2013; Anche et al., 2014). The aesthetic appeal in website design can be found in various website elements such as style, colour mix, layout, font, etc., or a combination of all (Loureiro et al., 2013; Spreer & Kallweit, 2014). The 'fun' or entertainment factor is driven by the feeling of excitement, enjoyment or amusement delivered through website elements such as animation, taglines, video clips, sounds, interactive applications and many others (Anche et al., 2014; Vaiciukynaite & Gatautis, 2013). It is proven via empirical studies that websites containing high aesthetic and entertainment values are often rewarded with stronger customer attitudinal loyalty, as seen in their stronger willingness to revisit the site or spread positive WOM (Chen et al., 2010; Vaiciukynaite & Gatautis, 2013; Bastida & Huan, 2014; Eroğlu 2014).

Researchers have gone into details, an example of which is Manganari et al. (2009), who suggest that using appropriate colour can help garner customer attention because some colours are known to be associated with typical moods. Clever use of colour combinations triggers emotional positivity among an audience, which in turn will speed up the purchase decision-making process and possibilities of WOM (Gorn et al., 2004). Rosen & Purinton (2004) discussed the arrangement of graphic design in the website and suggested that such graphics be kept simple and carry meaningful messages. The texts, similarly, should be kept short and simple (Nielsen, 2000, cited in Wong, 2014) but informative.

2.3.1.3 Symbolic dimension

The symbolic dimension of an e-commerce website alludes to the design elements that gratify social motivations for shared awareness and self-expression (Junglas et al., 2013; Phelan et al., 2013; Uzunoğlu & Kip, 2014). Such design elements are inserted into the website via intentions to create an impression that website users are surrounded by social interaction although no face-to-face contact occurs, and most service touch points are enabled by machines. For example, community building, forums, customer feedback contests, chat rooms, chat boxes, profile creation and profile customization, etc. all induce the sense of community (Tussyadiah, 2014; Uzunoglu & Kip, 2014) which may help strengthen the long-term bond between users and the vendor.

Self-concept congruity as termed by Tsai et al. (2017) also refers to the website elements that enable customers to characterise themselves, or to promote a personality or a self-concept in the virtual community (Merolla et al. 2012; Walker & Lynn, 2013). Similarly, a website can use design elements to signify its personality, for example a metaphorical depiction of products, use of uniform styled images, narrative content, use of tones and styles, etc. that make customers feel identified with (George & Anandkumar, 2014; Tussyadiah, 2014). E-commerce websites that succeed in delivering strong social presence and self-concept congruity can attract more loyal customers (Junglas et al. 2013; Phelan et al. 2013; Uzunoglu & Kip, 2014).

2.3.1.4 System security

Security concerns in online transactions have become the talk of recent years (Gommans et al., 2001; Hoffman et al., 1999; Kukar-Kinney & Close, 2010) due to the increasing rate of cyberspace fraud, information leakage, and privacy violation cases. de Kerviler et al. (2016) say that concerns about informational privacy and security represent the biggest hindrance to the widespread adoption of e-commerce. As a result, providing safe, secured and convenient payment methods has also become the technical focus in e-commerce website development, and at the same time a marketing attempt. As Javadi et al. (2012) say, the fear of losing money, getting credit card information stolen, or having personal information disclosed to unintended parties make customers churn or abandon their carts (Bolton, 2015 cited in Davari et al., 2016; Kukar-Kinney & Close, 2010), or discontinue shopping online. Therefore, creating a reliable, trusted platform reduces such psychological fear and increases patronage. However, despite the recognition of security risks in e-commerce, few papers have provided empirical evidence on the contextual factors that may affect customer loyalty (Chang & Tseng, 2013; Cho, 2015).

Of course, the limited amount of empirical study regarding website security has pointed out that severe security breach cases have occurred every year, and the psychological risk in this regard remains one of the biggest risks perceived by potential online customers. For example, e-Bay case of information leakage entailed not only monetary costs but also rising customer concerns and reduced revisit rates (Mishkin, 2014 cited in Davari et al., 2016). However, not all authors recognise security and privacy as serious concerns to customers, due to the belief that fraud should be viewed as mishap and in most cases cannot be controlled by either service provider or buyers (Nepomuceno et al., 2014). Depending on the real situation, it is up to the customers that the seller should be blamed or no one should be at fault (Davari et al., 2016). Therefore, the responsibility of e-commerce website should be wrapped up about providing a sense of security and once it succeeds in doing so, higher retail patronage can be expected (Davari et al., 2016).

2.3.1.5 Service recovery

Service recovery is another subject that is noted as a concern by many researchers and retail practitioners, although it is still an open topic in the online domain. It is true that service providers have to encounter service failures as part of their business process, albeit unwanted. Service failure happens when the actual experience does not meet customers' prior expectations, which in turns might reduce their trust and commitment and lead to them leaving a website (Wang et al., 2010) or spreading negative WOM (Weun et al., 2004). In this sense, firms are aware that sending in a complaint is in fact a more desirable response from dissatisfied customers, since they are giving firms a second chance to have problems fixed (Chang et al., 2013). Researchers have largely pointed out that successful handling of service failures has boosting effects on customer satisfaction and customer loyalty (Miller et al., 2000; Maxham, 2001; Sousa & Voss, 2009; Chang et al., 2013). In other words, when a frustrated customer has their issued served and solved justifiably, they become even happier and more attached to the website than before.

Unfortunately, the literature on service recovery in e-commerce remains limited, although it has been widely discussed in the offline shopping context. However, the findings from such research about offline shopping, despite being good reference, are not entirely applicable to the online context. Again, the participation of technology and the fact that it plays a dominant role in the delivery of e-service have set apart traditional and online shopping (Holloway & Beatty, 2003). Since the two forms of shopping involve different amount of human interaction and the moderating role of technological assistance, the process of handling service failure, as well as the issues and difficulties that entail differ fundamentally.

Meuter et al. (2000) summarises online failures into four categories: (1) technological (e.g. website malfunctions, payment processing failure, etc.), (2) process (e.g. no delivery), (3) inconvenience (e.g. poor website navigation, poor design), and (4) failure due to customer initiatives (e.g. customer cannot log into their profile page due to forgotten password). Most service recovery research has concentrated on the second type of failure while the others are also important in shaping customer perception about the service quality of the firm. The three remaining forms of failures, which are technology, design and customers' own initiatives-driven, however, all relate to the customers' inability to adapt to technology, or the technology's failure to facilitate customers' needs.

2.3.2 Price

Price is an important predictor of customer behaviour in the service sector. It is described as the monetary sacrifice that customers have to pay in exchange for their desired product or service, which includes some 'quality signal' of such (Lichtenstein et al. 1993, Zeithaml 1988). In earlier literature, attention on price competitiveness in e-commerce was visible (e.g., Chang and Wildt 1994, Zeithaml 1988, Kim et al., 2012). In some previous work, the conceptualization of price included both monetary costs and non-monetary costs (Zeithaml, 1988) such as time and effort spent on purchasing a product (Downs, 1961), or e-risk (Sweeney et al., 1999; Grewal et al., 2003). Such aspects of price are now known more popularly under different concepts and discussed separately from monetary price, as the academic realm on e-commerce widens.

The implication of price and trust perception is that internet vendors can choose to pursue price-based or trust-based strategy or a balance of both. Compared to price competitiveness, trust building is costlier (Jarvenpaa et al., 2000, Singh & Sirdeshmukh, 2000). To compromise between these two factors, e-vendors need to consider the relative importance of price and trust on their different targeted groups; and this explains why such an empirical research is necessary. For example, Reibstein (2002) proved that price impacts more on potential customers and less so to repeat customers. Creating a large price gap between competitors would also turn trust into an insignificant antecedent for customer loyalty (Li et al. 2012).

2.3.2.1 Price level versus price fairness

It is also argued that the concept of 'price' in shopping does not always refer to the superlative understanding of figures and numbers, but the relative perception of a quoted price against some others, which is termed *transaction utility*. Transaction utility is described as the difference between the quoted price and the 'reference price' of the product, which could be a price offered by a competitor, a price the customer was offered on their last purchase, or a price they are promised via advertisement or sales messages (Puto, 1987). This argument was supported by Zeithaml (1982), Jacobby & Olson (1997), Dodds et al. (1991), who delivered different explanations pointing to a fact that customers remember, rather than the objective prices, their own judgment (i.e. price fairness). From here price perception is formed and this would affect their purchase decision.

The importance of low price in e-commerce was highlighted by Dodds et al. (1991), or Garbarino & Maxwell (2010), who argued that the 'no-touch' identity of online shopping had reduced the possibility for e-vendors to differentiate their service quality (Klein, 1998, cited in Kim et al., 2012), thus making price competitiveness the primary focus of competitive advantage. In the recent years, academics have turned heads from the relevance of low-price and rather than that, focus on the many other factors that add value to the service such as trust building and brand reputation. Compared to price, the focus has largely shifted to perceived value (Yoon et al., 2014) or the relative value between price and service quality. It justifies an assumption that customers are willing to pay a higher monetary price for premium service quality. Between e-commerce companies, price advantage is only meaningful when all conditions are comparable.

Such argument, however, does not point to the notion that price is not a determinant of customer loyalty. Literature has empirically evidenced that price perception affects customer return rate, although the relationship is weak (Jiang & Rosenbloom, 2005 cited in Liao et al., 2017; Valvi & West, 2013). In another study, Swaid & Wigand (2009) named price tolerance as one of the determinants of customer loyalty, and found a positive relationship between this variable and some service quality aspects. Many authors argue that price might not influence customer loyalty but instead has a strong presence in the antecedents of loyalty such as perceived quality (Pan et al., 2002), perceived value or customer trust (Li et al., 2012). Price perception shapes customers' attitude towards a website (Han & Ryu, 2009), for example low price is often associated with poorer service quality (Pan et al., 2002). In summary, even though the empirical literature on the role of price on e-loyalty remains ambiguous, it clearly is a factor for consideration (Chiang & Dholakia, 2003; Chiou et al., 2010).

2.3.2.2 Perceived value

Perceived value, abbreviated as PV, is a versatile concept (Hu et al., 2009). Zeithaml (1988) referred to customer value as 'value for money' (Emery, 1969, cited in Graciola et al., 2018), which is customers' judgment of transaction utility based on their perception of benefits and sacrifice. On the same note, Monroe (2007, cited in Yoon et al., 2014) defined it as the relative ratio between perceived gain and perceived loss, in which the common trade-offs used in empirical research are service quality and price respectively. An earlier research by Grewal et al. (1998) had confirmed the link between price and service quality and customer perceived value. This conceptualization of value has led to a practical formula that is common in retailing: *value = quality/price*. It denotes that when confronted with either reduction or increment in price or service quality, customers will evaluate the relative change in value in order to decide whether to continue their relationship with an existing website (Kim & Damhorst, 2010; Ko et al., 2011, Yoon et al., 2014).

Meanwhile, perceived value can be interpreted as a multidimensional construct according to Sheth et al. (1991), Sánchez et al., (2006), Sweeney & Soutar (2001) or Senic & Manikovic (2014). For example, Senic & Manikovic (2013), who pursued similar conceptualization with Sheth et al. (1991) and Sweeney & Soutar (2001), view customer value under four dimensions: emotional value, functional value, social value and monetary value, as illustrated in Figure 7.

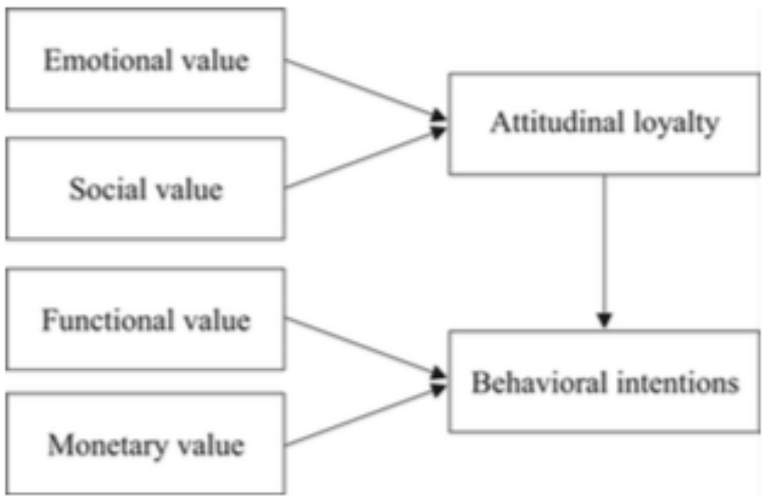


Figure 7 Different components of customer perceived value on customer loyalty (Senic & Marinkovic, 2014)

Despite the various understandings of value, it has always been viewed as a reliable predictor of purchasing behaviour under any circumstance (Hu et al., 2009) and an important prerequisite for loyalty (Chen & Cheng, 2012). In this research, 'perceived value' takes on the former interpretation as the relative importance of gains and losses; the different aspects of customer values are discussed separately in other sections.

2.3.2.3 The moderating effect of price sensitivity

Another price-related topic in the literature besides price level, price fairness and perceived price value is price sensitivity, which is defined by Erdem et al. (2002) as the *'weight and/or influence conjoined to price in a consumer's evaluation of a service or product'.* It indicates the extent to which customers react to changes in prices (Monroe, 1973; Wakefield & Inman, 1993) and their purchasing behaviour is adjusted due to such changes (Bucklin et al., 1995; Wakefield & Inman, 2003). Erdem et al. (2002) add that customers tend to be more sensitive to prices when competition increases, substitute websites are available in a handful and switching costs become lower. Also, a repeat customer is inclined to react more negatively to price changes since they believe that they should benefit from revisiting (Lee & Fay, 2017). The same authors argue that quality-driven shoppers are more tolerant towards price adjustments.

It is important to review academic efforts on price sensitivity since its position is wildly varied between cultures. For example, Shrivastva et al. (2016) found that consumption behaviour towards price changes showed sharp differences between the urban and rural populations. Gupta (2011) in a country-level study evidenced that Indian customers are highly conscious about prices, which was probably the result of low trust and the fear of being 'ripped-off'. Gupta also observed that Indian men in their 20s and 30s are more price-sensitive compared to their female counterparts. Similar differences are also observed across stores and products or services in some other studies. Shrivastva et al. (2016) concluded that price sensitivity is determined by the attractiveness of the product in the sense that attractiveness offsets the pain of suffering higher monetary loss.

Although examining the price-sensitive level of targeted audience is important in designing a product's marketing mix, the academic literature appears to fall short in many facets, such as the effects of social situations (Graciola et al., 2018). In the customer retention literature, price sensitivity plays the moderating role in determining the relationship between price level, price fairness and price pleasure with repurchase intention. Understanding price sensitivity of the targeted audience is, therefore, a prerequisite to studying the effect of price on customer loyalty. It implies that separating targeted audience by demographics (Hoch et al., 1995) or psychographics (Urbany et al., 1996) is necessary especially when the research is on the country level and there is no specific focus on a good or service. Examining price-behaviour is essentially important in this research due to the assumption stated in the beginning suggesting that competitive price is one of the principal motives for Vietnamese customers to adopt internet shopping. Despite this, it appears that the process needs hard work due to the absence of past records in this regard.

2.3.3 Perceived switching costs

Switching costs is a long-standing economic concept, which is defined as the *'cost involved in changing from one seller to another'* (Heide & Weiss, 1995), which includes both monetary and non-monetary costs (Dick & Basu, 1994; Burnham et al., 2003; Jones et al., 2002; Sharma & Patterson, 2000). Broadly, research has pointed out five main components of switching costs: (1) learning costs, (2) artificial costs, (3) uncertainty costs, (4) search and evaluation costs, and (5) brand relationship loss costs (e.g. relationships with sales staff) (Ghazali et al., 2016). Numerous works have rationalised the link between switching costs with firms' benefits such as profitability (Beggs & Klemperer, 1992; Burnham et al., 2003), barriers against new market entrants, and sustainable competitive advantages (Stan et al., 2013).

However, literature focusing on perceived switching costs (PSC) as a moderator of customer loyalty has only taken off recently (Lam et al., 2004; Yang & Peterson, 2003; Wang, 2010). Even so, the findings suggest contradictory results (Jones et al. 2000; Burnham et al. 2003). For example, Jones et al. (2000) evidenced that higher switching costs weaken the link between customer satisfaction and loyalty while Lee et al. (2001) concluded on the opposite and Lam et al. (2004) did not find a significant relationship between the variables. Wang (2010) argued that customers are willing to stick with current shopping choice despite worsening service quality if the benefits of switching would not be able to offset perceived costs related to searching for a new supplier. Meanwhile, Bell et al. (2005) evidenced that PSC had only minimal role and could not interfere with the link between service quality and customer loyalty.

The lack of consensus in PSC literature might be attributed to the variations in PSC components chosen for the respective study. For example, Jones et al. (2000) and Wang (2010) focused on PSC related to service quality fluctuations, while Lam et al. (2004) discussed loyalty benefits such as points redemption or membership card use. The impacts of customer benefit programmes are also varied due to cultural differences; this will be discussed in another section.

One of the reasons why e-loyalty is often tied to being a weak link compared to traditional shopping is due to its low PSC (Liang & Chen, 2009). Technological updates, new thresholds of internet speed and facility allow customers to visit another website within a click (Chang & Chen, 2008), while store switching in offline shopping requires additional efforts on transportation. However, this only supports the assumption that loyalty in two contexts differs in magnitude and it does not refute the direct relationship between PSC and loyalty since other psychological, monetary and social considerations still exist.

2.3.3.1 Attractiveness of competitors

Judgment of alternative options is a certain motivation during the shopping process. It also proves great importance in determining the willingness of customers to stay with their current brand (Patterson & Smith, 2003; Rust & Kannan, 2003). On the one hand, past research has shown that when perceived switching cost is high, customers will feel demotivated to explore other choices and find switching to another brand less desirable (Kim & Son, 2009). In summary, the existing perception of switching costs that was pre-formed in the customer's mind will affect (1) his or her motivation to consider alternatives (Heide & Weiss, 1995), (2) his or her efforts in searching for a replacement (Weiss & Heide, 1993) and (3) his or her tendency to do so (Zauberman, 2003).

In this two-way correlation, it is also made clear that the attractiveness of parallel brands negatively affects customer loyalty (Hirschman, 1970; Ping, 1993), or increases the probability of switching (Bendapudi & Berry, 1997; Jones et al., 2000; Sharma & Patterson, 2000). Rusbult et al. (1982) suggested a similar conclusion, saying that the stronger perception of high quality alternatives drives exit decisions while reducing the motivation to stay. Similarly, Jones et al. (2002) and Yim et al. (2007) evidenced that competition directly influenced customer commitment and intention to repurchase.

2.3.3.2 Loyalty programs

Lam et al. (2004) suggest that *'part of switching cost may involve loyalty benefits that have to be given up by a customer when his or her relationship with the service provider ends. The enjoyment of these benefits may lead the customer to recommend the provider to other customers'* (p. 297). It means that loyalty programmes influence not only behavioural loyalty but also attitudinal loyalty. It is true that the impact of loyalty programmes on customer loyalty originally fell into the realm of perceived switching costs, but it is also connected with price benefits and perceived service quality. The role of loyalty programmes or -commerce repertoires in retaining customers has also become an area for debate.

Loyalty schemes and loyalty cards have become a common repertoire retailer use to engage customers both behaviourally and emotionally, in which the famous retailing brand TESCO is arguably the first pioneer (Turner & Wilson, 2006). Loyalty programmes are proven to enable contentedness and strengthen customer engagement (Broekhuizen & Peelen, 1997) and it was the same philosophy based on which such programmes were borne. When customers participate in loyalty programmes such as signing for membership or a point redemption program, perceived benefits drive loyalty behaviour (Bolton et al., 2000). In other words, loyalty schemes trigger some form of conditioned behaviour as customers are rewarded for their loyalty to the organization.

The perceived benefits of loyalty schemes are often viewed as monetary or non-monetary. The monetary benefits, or 'hard benefits' include direct benefits such as rebates, discounts, coupons, 'buy three for two', etc. while non-monetary benefits are feelings of attachment (Mulhern & Duffy, 2004). However, many researchers have pointed out that the influx of loyalty schemes has led to overload when a customer's interest is divided among many retailing vendors. At this point, the customer would no longer find loyalty schemes appealing as the perceived benefits do not compensate the efforts spent on fulfilling the conditions of the program.

In the academic literature of loyalty schemes, the effectiveness of a loyalty program is often measured by the achievement or non-achievement of a predefined customer behaviour (Keh & Lee, 2006). A popular methodology employed by many loyalty scheme studies is to compare the behaviour of members and non-members (Bruneau et al., 2018). However, such an approach cannot separate members by their engagement level, or in other words engaged members versus those that simply register for the programmes without making efforts to achieve the promised benefits. Some other studies take diverse approaches, such as examining the frequency of loyalty card presentation as an indicator of loyalty (Evanschitzky et al., 2012), or customer reaction to redemption programmes (Bridson et al., 2008; Dorotic et al., 2012). Steinhoff & Palmatier (2016) records the proportion of members actually receiving the awards as an indicator of programme engagement. In general, there has been no comprehensive approach to measuring the effect of loyalty programmes on customer loyalty, whether behavioural or attitudinal.

Findings from studies on loyalty programmes do not support their assumed importance in the marketing mix. Despite their popularity, empirical evidence about loyalty programs' impact on customer loyalty has generated split conclusions. Authors that found a positive relationship include Keh & Lee (2006), Lewis (2004) or Liu (2007), while Magi (2003), or Meyer-Waarden & Benavent (2009) found the link quite ambiguous. A number of components of loyalty schemes are chosen as determining factors including designs (Noble et al., 2014; Yi & Jeon, 2003; Zhang & Breugelmans, 2011). However, evaluating the success of loyalty schemes needs empirical evidence from the customers' perspective, which seems to be a missing piece in the existing body of literature (Meyer-Waarden & Benavent, 2009).

These examinations are done before/ during or post purchase

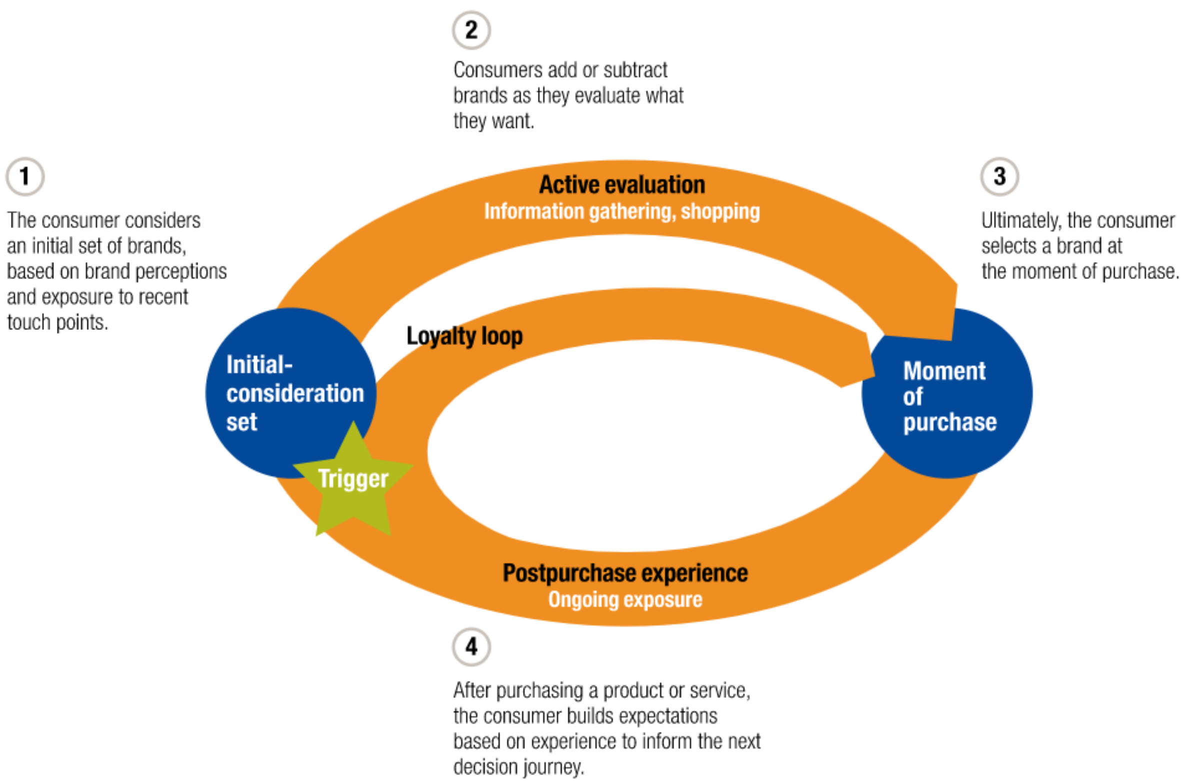
Similar to the concern when discussing the antecedents of loyalty, when and in which the influences of determinants of loyalty are upholding the most on the formulation of satisfaction, trust, and commitment showing the sense of loyalty in e-commerce? More complicated than the understanding of antecedent constructs, determinants of e-loyalty include a series of measurement variables reflecting utilitarian and hedonic feelings such as product quality, collections, store perception, price, service quality, perceived switching costs, perceived values, website quality, brand experience, etc., along with predictors as customer satisfaction, trust, commitment, and so on (Caruana & Ewing, 2010; Cho, 2015; Eastlick, et al., 2006; Ganesh, et al., 2010; Ha & Stoel, 2009; Kandampully, et al., 2015; Lee & Yang, 2013; Wang, et al., 2011; and so on). In studies about quality as the determinants of loyalty, consumer behavior should be observed from the pre- to the post-purchase process in which website quality is the first pillar that creates positive advocacy of people to continue the scrolling and searching (Loiacono, et al., 2002; Taylor & Strutton, 2009; and so on). By mentioning the TAM model or factors as convenience, product specifications, site designs or web quality (Chiu, et al., 2009; Lee, et al., 2011; Srinivansan, et al., 2002; Szymanski & Hise, 2000; & so on), it could not be denied that examining determinants of loyalty must start from the first spot and sustain throughout the whole process of considering, deciding, purchasing, consuming and evaluating. Apart from that, involving utilitarian, symbolic and hedonic dimensions into considerations means to the investigation of the whole customer journey with themselves and with the brand/ the site and the product (Kim, et al., 2012). Viewing an example from the customer value and customer loyalty model by Kim, et al. (2012) (see Figure 5), information quality takes the important role in the pre-purchase or the step of information searching and evaluating (the purchase decision-making process); system quality is more important in the step of option verifying and alternatives filtering; whilst service quality is crucial in the during- and post-purchase phase. Such, the remark insists on the longitudinal examination of the whole purchase process when claiming determinants of loyalty. It generates the need of understanding the decision- making process or the customer journey in order to identify which determinants are best described and formulated in which stages or phases of this kind of a complex journey.

If it becomes clear that utilitarian dimensions must be examined from the beginning or they have specific roles across phase, the interesting part is toward the symbolic (hedonic) dimensions. By the nature of meaning, hedonic feelings could only be formatted when experiencing the consumption. However, the note in this e-commerce world is that symbolic meaning is not only to show with others, or from others' eyes but also to indulge individual ease and comfort when shopping (without the lens of others). Whether there is the gratification of social motivations for people to buy online or expose the loyalty toward a specific e-commerce page? Whether people share their comments and praise their own purchases from specific e-commerce platforms with others for the purpose of gaining self-actualization? Either the answer 'yes' or 'no', there should not be the case of one customer having symbolic motivation with a brand new product/ name that they have no experience before. Implicitly, the examination of hedonic feeling could not be in isolation with other aspects, namely utilitarian and emotional ones. This explanation is also adaptive to the investigation of perceived values that impacting behavioural intentions and attitudinal loyalty (Senic & Marinkovic, 2014). In short, it is hard to distinguish phases of pre-, during- or post-purchase that specific constructs are observed, recorded and formulated since there are several cross-impacts between factors influencing one action of people. Moreover, purchasing is the simple action of clicking the 'order' and 'payment'; the process leading to a specific purchase is not that kind of simplicity as it may look, though.

Customer journey

When mentioning the stance of pre-, during- and post-purchase, the meaning of purchasing process leads to the queries of how customers conduct their buying and experience their consumption. Adding in this comment, the necessity of examining the customer journey arise. As suggested by Court, et al. (2009), consumption behaviour should be captured by a broader view on the purchase decision-making process: a circular journey in which the needs of consumption start the process and followed by evaluations of purchase decisions. Experience from one consumption in the post-purchase phase will form the next buying loop. This circular or iteration shape reflects better the consequences and inter-influences of previous purchases with the following either in one platform or toward one kind of products. The recalling of experience to evaluate for the next in the circular journey is inherent to the core concept of the correlation of loyalty and its antecedents and determinants that is being discussed vastly by many scholars and practitioners.

Customer journey supports, in both academic and practical fields, the understanding of customers' minds. Although challenging, this kind of knowledge is worth investing since it provides the key to activate the tunnel of retaining customers' purchases by making more satisfied and motivate their trust, commitment, and loyalty. In other words, customer journey shows the paradigmatic shifts of customers' experience when using a service delivery (Stone & Divine, 2013). And that, it could be widely adopted in operations, marketing and management to design better offerings and interactions with customers to achieve business goals (Zomerdijk & Voss, 2010). By a wide range of goals and purposes in designing services, in various ways, customer journey can be drawn out by interactions of customers with company internals, reflecting the level of satisfaction that may be formulated (Rawson, Duncan & Jones, 2013; Wechsler, 2012). Such, customer experience could be enriched in any dots within the customer journey or during customers' lifetime value (Kumar & Shah, 2009). It is not the case of companies creating values for customers but the design of customer-centric service practices to enhance their attitudinal loyalty in a long run (Lemon & Verhoef, 2016). Through a series of rational touchpoints, customers' experience is created either by sense, affection, cognition, action, relations or a combined version. This multidimensional version of behaviour best explains the complicatedness of how one customer constructs their satisfaction, trust, and commitment toward a specific company/ brand/ shopping site before maintaining their loyalty (Verhoef, et al., 2009). Acknowledging that several marketing and branding concepts involve in the explanation of customer experience throughout the customer journey, within the scope of this research, it is supposed that the overall experience of customers covers types of experience: brand experience (brands of products), product experience, technology experience, interaction experience, website experience, service experience, relationship experience, and other related ones. Moreover, the focus in examining the customer journey is not to gut out root causes of experience, but to see if attitudinal and behavioural loyalty of customers are performed throughout or with specific touchpoints. The examination of customer journey perceives open-ended process comparable to the ladder of loyalty (Nichita, Vulpoi & Toader, 2012); and that links directly with the aim of researching: exploring factors influencing loyalty of customers in the e-commerce context.



Source: Court, et al. (2009)

Recognizing problems and identifying needs of consumption is the first stage of the decision-making process (Kotler and Keller, 2008). And it is the input for triggering the real journey of exposing oneself into the journey of purchasing – consuming – experiencing or the funnel analogy as presented above. Explicitly, the initial consideration set of the customer journey has a wider scope of consideration than touchpoints in the first and second stages of decision-making process (problem recognition – information search – alternative evaluation – purchase decision – post-purchase behaviour); and that, reflects the voice of determinants of loyalty as aforementioned. Previous experience with the shopping site or attitudinal loyalty toward that platform is likely to be the critical factor influencing behaviours of consumers in deciding this set. Moreover, determinants of loyalty are listed into the initial consideration set. For instance, in the e-commerce industry, utilitarian dimensions as website quality, functional values, price, etc. significantly direct the consideration of consumers. They also act as the 'push' factor in this funnel process. Such, as the circular shape, the stage 4 (results of post-purchase) is the motivator in forming the result of stage 1: customers buy with a specific e-commerce site when they have good experience with them from their previous experience. According to Court, et al. (2009), the process of considering which brand to be best suited for final selection, people are facing a plethora of information, influencers and options. Given the context of the Vietnam market as an example, the e-commerce industry is constituted by hand-counted players such as Lazada, Shopee, Tiki and Sendo. In that situation, the competitiveness between those businesses is even acuter when single player attempts to produce as much as possible favourable information to achieve the positive assessment during the active evaluation. By the limited number of participants, e-commerce retailing in Vietnam witnesses the mixture of format of share of purchases by three different stages: (a) high percentage of purchases in initial considerations due to limited number of e-commerce choices (as Autos model), (b) moderate to high shares during the active evaluation (as skin care model), and (c) high percentage of buying in the loyalty loop (as the Auto insurance model) (Court, et al., 2009). When products are similar and promotion is happening across e-commerce platform, things to compare and consider are not many; hence, the purchase decision could be concluded in the initial consideration stage (case a). When product categories/ assortments are various, the thing to consider by customers is not the ecommerce platform, but products themselves. By having attractive promotion, great delivery options, positive previous experience, etc. e-commerce retailer could encourage the purchase of customers (case b). And case c is rather obvious to the extent of sales performance when one e-commerce retailer has a stable group of loyal customers.

In fact, there have not been completed knowledge and stable usage of the 'customer journey' terminology either in academic or practical researches (Folstad, Kvale & Halvorsrud, 2013). Yet, the core of its concept has been referred since the beginning of 1990s as the process of customers interacting with service providers to fulfil their goals of using services (Folstad, et al., 2013; Whittle & Foster, 1991). The process uncovers a series of interactions and touchpoints that being designed by providers and received and assessed by customers (Clatworthy, 2011). From the perspective of customers, their journey may be rather complicated with multiple touchpoints due to the high volume of consumption by different products and various providers (Wechsler, 2012). In the context of e-commerce retailing, there is the interesting implication: multiple touchpoints of one customer could be generated with only one e-commerce retailer for different products. It means the e-commerce company could predict the volume of interactions that a customer is having with different products traded. Such, implicitly, e-commerce companies have more chances to perform service recovery by balancing attitudinal reflections of customers towards different products. It is slightly different from the traditional commerce when only the customer knows how many touchpoints that they are having with how many brands and products. Accordingly, the customer journey of consumers with one e-commerce platform in the online environment would be the convergent line of single journeys for each product.

Extending the approach of customer journey, the related concept is service blueprints which is similar to customer journey map when mentioning flows of interactions and processes to support the service delivery and customers' need fulfilment (Folstad & Kvale, 2018). Instead of viewing from the customers' point of view as the customer journey concept, the combination of service blueprint allows companies to review their underlying organizations of processes and infrastructure in producing services (Zomerdijk & Voss, 2010). From this angle of examination, companies could impact utilitarian and emotional values perceived by customers by suitable designs of loyalty antecedents and loyalty. Positive results of this kind of impacting may produce positive attitudinal loyalty. Such, there is the blending of customers' expectations and experience by companies throughout customer journey by controlling touchpoints and managing how to adapt expectations of customers. Copying this exploration into the correlation map of loyalty antecedents – satisfaction, trust, and commitment, the indication is that the satisfaction, trust, and commitment are achieved by single touchpoints; and their cumulative form produces the customer satisfaction, trust, and commitment levels that are often mentioned. For example, when using the e-commerce platform, such as Tiki, assumedly the first touchpoint is the direct interaction with the homepage of the web. It is hard for one to produce the consumption satisfaction if they do not satisfy with the website quality and the interaction in this first touchpoint. However, this judgment is probably not valid in the loyalty loop. Since customers have the supreme trust and commitment to buy with a specific e-commerce place, they could be less severe in dealing with perceived issues. The fact shows that depending on which stages in the customer journey that one customer is in, their journey maps or service blueprinting shape are with or without many adjustments. So, by knowing the concept of customer journey, it becomes clear that the line between pre-, during- and post-purchase in examining the formation of satisfaction, trust, commitment, and loyalty is rather dynamic. It does not mean that this argument degrades the importance of understandings about behavioural changes of customers during phases of decision-making process. It provides another angle of thoughts for designing and managing better the quality of multiple touchpoints across the broader process of serving and retaining customers. This perspective is also suitable for the e-commerce retailers who can not gain differentiations via products, but perceived quality of offerings. Since they could not control the quality of products (since it is in hand of individual traders), Lazada, Tiki, Shopee or Sendo are able to forge the competition by focusing on improving touchpoint quality, along with other operation management decisions. With the circular shape, customers and companies are all putting themselves into the round of continuous ‘push’ and ‘pull’ and reflection to fulfil individual needs and expectations.

2.4 Customer loyalty and culture

It has long been believed that cultural and social norms determine a major part in people’s perception and behaviour towards things (Markus & Kitayama, 1991). In many business cases, culture is responsible for the success or failure of a new market penetration. In the context of increasing internationalization of firms, market practitioners are also well aware of the cultural impacts in determining appropriate marketing mixes (Penaloza & Gilly, 1999). The academic literature has likewise pointed out that cultural factors have a moderating effect on marketing strategies of firms and customers’ shopping behaviour (Taylor & Miracle, 1996; Ueltschy & Ryans, 1997; Grier & Brumbaugh, 1999; Green, 1999; Simester et al., 2000). Furthermore, the emergence of internet-based businesses has turned the need to study cultural influences into a must (Choi & Geistfeld, 2003; Tian & Emery, 2002).

Several authors have attempted to study the cultural differences in customer shopping behaviour in the internet environment, such as Shiu & Dawson (2002), who compared two Western countries and two Oriental countries and Bin et al. (2003), who noticed a difference in perceived risks between Chinese customers and a few other countries.

Remarkably in respect of this topic of research, there are some works that discuss Asian cultures, particularly the Confucian culture to which the Vietnamese adhere and whether they belong together with neighbouring countries such as China, South Korea and several others. They recognise the significant dimensions of culture that have a great impact on customer behaviour including collectivism, large power distance and high avoidance of uncertainty (Hofstede, 1994; Banks, 1997; Hofstede & Bond, 1998). These characteristics denote common behaviour observable within the Asian culture such as a strong sense of community, a tendency toward social harmony, high social influence, submissive behaviour in groups (Park & Kim, 2003), agreeableness, respect towards the opinion of the majority, and high levels of perceived risks. It suggests that factors such as perceived risks and the impact of social opinion might be stronger in Vietnam compared to non-Confucian countries and these could be major factors that determine their adoption or denial of e-commerce.

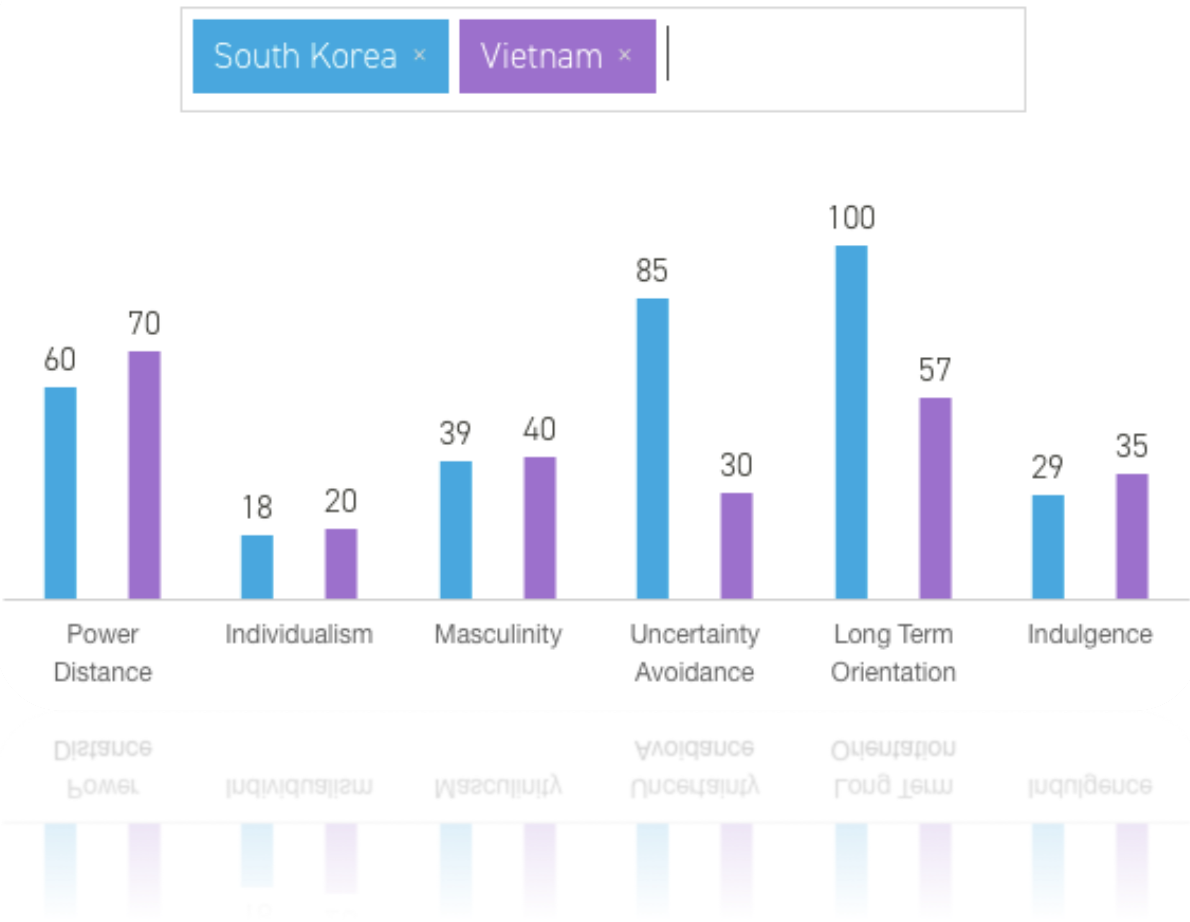


Figure 8 Comparison of Hofstede cultural dimensions, Vietnam vs. South Korea

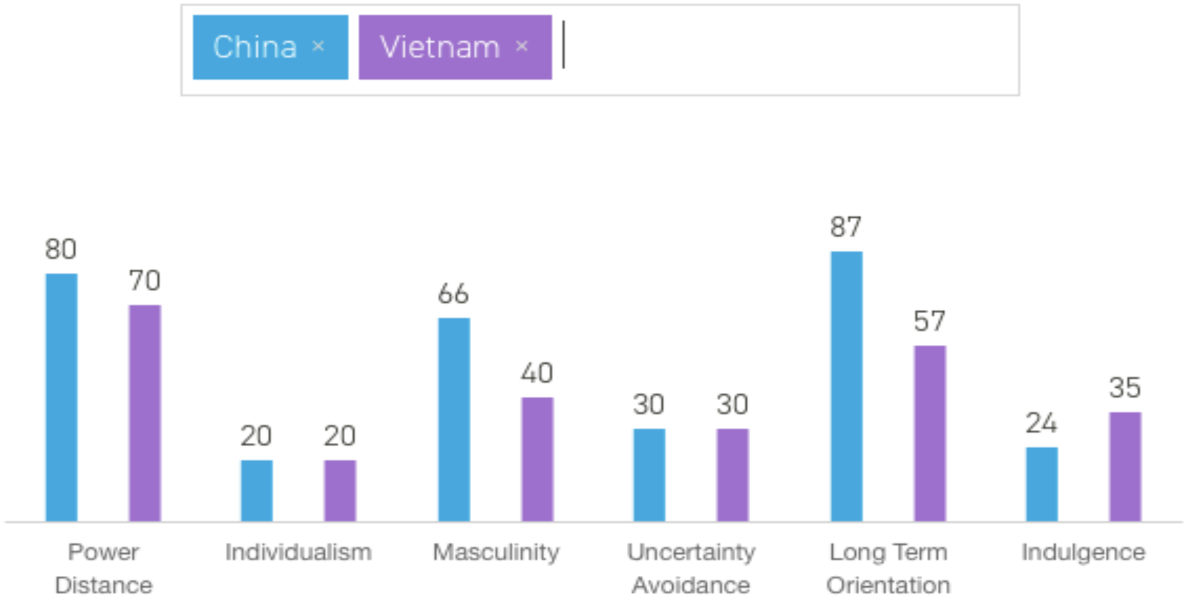


Figure 9 Comparison of Hofstede cultural dimensions, Vietnam vs. China

There have been no empirical studies considering the Vietnamese e-commerce market. In fact, the marketing literature has barely given a satisfactory answer to cultural impacts and cultural differences in e-commerce, although the issue has attracted quite a body of work in relation to traditional shopping (Gracia et al., 2015). Among the few studies on this topic, Steenkamp & Geyskens (2006) discovered that collectivist and low-trusting cultures have a different perception towards website value compared to individualist cultures. Also, De Mooji & Hofstede (2002) suggested that marketing strategists take account of avoidance of uncertainty and long-term orientation in customer segmentation and marketing mix planning for new markets. In a Confucian cultural context, Park & Kim (2003) recognise that shoppers are more influenced by peers compared to those in, for example, the U.S.

2.4.1 Impact of loyalty programs

Another domain that is subject to cultural differences is the impact of loyalty programmes on customer repetitive purchase behaviour. Many empirical studies have submitted findings indicating that the effects of such loyalty schemes vary between countries. For example, Bellizzi & Bristol (2004) concluded that membership cards did not have a significant impact on customer loyalty in the retailing context in the U.S. A few other studies of Western countries including Ergin et al. (2007) on the Turkish market, Meyer-Waarden (2008) on France, or Turner & Wilson (2006) on the U.K provide mixed conclusions where cultural differences were noted as a key explanation.

To be specific, empirical research by Straughan & Albers-Miller (2001) determined that in a retail context individualism had a negative relationship with loyalty, while avoidance of uncertainly had a positive correlation with loyalty. Kivetz & Simonson (2003) studied the impact of cultural differences and individual characteristics, for example demographics, sense of belonging to a community, or the desire to be socially recognised, in choosing suitable loyalty schemes. The Asian culture also has received some academic attention (Ganesan, 2001), in which the common understanding points to the radical difference between Asian/Confucian culture and their Western counterparts. Empirically, for example, Noordhoff et al. (2004) concluded that loyalty schemes had certain influence on Dutch customers' attitudinal loyalty, such schemes exerted no impact on Singaporean customers although in general, Singaporean customers demonstrated higher levels of store loyalty.

In an earlier study by Eng and Kim (2006) on Korea (representing Confucian culture) the authors found that e-newsletters strengthened customer affiliation. Meanwhile, bonus points and price discounts were not as effective. They also suggested that based on their collectivist trait, Koreans followed referrals by family and friends and would appreciate the idea of online discussions and community sharing forums of sorts. The Hofstede graph above shows that South Korea and Vietnam share several cultural traits such as collectivism, power distance, masculinity and indulgence, while they radically differ in uncertainty avoidance and long-term orientation, apart from being both Confucian cultures. That makes the findings from Eng and

Kim (2006) more or less valuable towards this research, although not entirely so given the age of their research.

2.4.2 Trust and privacy concerns

Customers' perception of uncertainty also lends some voice to the argument about the cultural differences in trust and privacy concerns. A person's view of the safety of the internet largely depends on his or her overall inclination towards uncertain situations, and empirically speaking, people are more willing to disclose sensitive information when the perceived uncertainty is low (Pavlou et al., 2007) and the level of trust is high (Belanger et al., 2002; Dinev & Hart, 2006; Norberg et al., 2007; Van Slyke et al., 2006). In other words, people in countries with a low uncertainty avoidance index (e.g Vietnam or China) are less motivated to assess the credibility of the trustee, here an e-commerce website, when making decisions (Doney et al., 1998). In this regard, Bellman et al. (2004) conducted a study of 38 countries to find out that privacy concerns vary between cultures, but Vietnam was not included in the sample.

2.4.3 Reference to current research

Via digesting the cultural implications of consumer behaviour research, it has come to light how Vietnamese customers might possibly behave under certain circumstances, as mirrored in research about similar cultures such as China and South Korea. Due to the lack of direct academic attempts to study the Vietnamese market, such references provide valuable insights to help form a presumption about the relative importance of each antecedent towards Vietnamese customers' attitudinal and behavioural loyalty. For example, the findings about collectivist and individualist tendencies suggest that collectivist cultures are more likely to adopt recommendations from their communities (Eng & Kim, 2006) and thus WOM, e-WOM and referral-based tactics should pull more weight in the marketing mix. On the other hand, due to a low uncertainty avoidance index (see Hofstede), Vietnamese customers are expected to pay less attention to a website's credibility (Doney et al., 1998), meaning trust might not have a significant relationship with loyalty. Of course, there is a wider range of segmentation choices that researchers have to take note of, such as internet shopping concentration, educational background, technological proficiency and many others; culture is still one of the most important root causes that shape people's behaviour (Dinev & Hart, 2006). There will be judgment about whether the theories about cultural differences hold true in Vietnam based on empirical evidence provided in the next chapters.

The relevance of cultural studies is also significant in achieving the third research objective. Since the relevance of loyalty antecedents may vary depending on the characteristics of each market (Harris & Goode, 2004; Oliver, 1999), it is essential to investigate the influence of such factors under different cultures in order to develop web sites adapted to country-specific cultural characteristics. The research also sheds light on whether similar cultures are suitable with similar marketing approaches. For example, the use of 'guanxi' (i.e. networks or connections) in relationship marketing, which is widely discussed in literature on the Chinese (Lee et al., 2018), might be a suggestion for practitioners in the Vietnamese market, given the cultural similarities between the two countries.

2.5 Customer loyalty in an emerging online market

Although e-commerce seems to have made its way into developed countries, this form of shopping is still considered as an innovation in emerging markets (Almousa, 2013). Online patronage is significantly lower in these countries, probably due to the lack of infrastructure supporting internet shopping which includes telecommunications, logistics, technological basis and a firm regulatory framework (Martinsons, 2008). Perceived trust and purchase confidence in developing markets is also believed to be lower due to the prevalence of unbranded goods and uncertified dealers (Sheth, 2011). Both the widespread marketing of unbranded goods and the insignificant presence of branded goods drive trust level lower in these markets. Said factors reduce customer trust in e-commerce and as a result place a negative impact on loyalty (Ashraf et al., 2014; Lee & Turban, 2001).

2.5.1 Government regulations

The lack of established regulations at the state level is a hindrance to customers' long-term engagement with online shopping. In this instance, several authors including Milberg et al. (2000) argue that regulatory approach to informational privacy and corporate law in general are reflections of the culture where they are held. Such studies emphasise that regulations affect customer trust and acceptance of e-commerce, and it is culture that guides governmental behaviour. The various regulatory models adapted by different countries especially related to information protection may also be the result of cultural values, as the findings of Milberg et al. (2000) suggest, where cultural values influence individuals, and governmental and organizational outlooks on information privacy. Studies also show that cultural factors have stronger influences on consumer behaviour (Dinev et al., 2006, 2008; Milberg et al., 2000). These authors suggest that in a seemingly regulated market, customers' belief and thoughts determine their willingness to accept or remain loyal to e-commerce, regardless of the presence of solid legal frameworks.

2.5.2 Social development

As indicated by the survey of global e-commerce adoption, there exists a potential for e-commerce to become an integral part of every society (Nielsen, 2014). Yet, the percentage of online shoppers in every country varies. For instance, internet penetration within developed countries is higher than in developing countries (Nielsen, 2014). While this may be attributed to differences in standards of living as well as the economic infrastructure within these countries, national culture may subvert these considerations. Moreover, the availability of well-established online sellers such as Amazon and EBay may undermine the deficient technological and economic infrastructures. The readiness of institutions to govern and regulate e-commerce is an essential element, but one lacking in developing countries the trust necessary to conduct e-business

2.5.3 Customer behaviour

It is known that customers in a developed market behave differently to those in developing markets. An example of this is depicted by Denoue & Saykiewicz (2009) in how marketers in developed markets are more interested in branding activities. As a matter of fact, however, most concepts and theories in consumer research and marketing strategy have been developed and tested in the existing established markets, some of which were then replicated in emerging markets. This provides a biased perspective of emerging markets when they are looked at through the institutional-cultural lenses of developed markets (Sharma et al., 2018). Therefore, the need to perform empirical research in emerging markets is considerable.

2.6 Customer segmentation

Another antecedent that is believed to make an important contribution towards loyalty behaviour among e-customers is demographic factors. It is almost impossible to account for all individual needs and wants, although it has to be admitted that no two people have identical behaviour under any circumstances (Mazzoni et al., 2007). Therefore, categorizing customers based on their personal characteristics such as age, gender, culture, educational background, or income, etc. (Laroche et al., 1986) via the so-called process of customer segmentation will help marketers develop more suitable marketing mixes and avoid generalization especially when the audience is highly idiosyncratic. In the academic realm, demographic segmentation also plays a great moderating role in delivering the most reliable and unbiased findings (Mittal & Kumakura, 2001; Homburg & Giering, 2001).

2.6.1 Internet experience

Internet experience is accumulated through customers' visiting different websites and becoming familiarised with different online services (Nysveen & Pedersen, 2004). In the domain of electronic shopping, Liang and Huang (1998) empirically found that customer expectations vary along with their internet experience. Blake and Neuendorf (2003) and Citrin et al. (2000) argued that e-commerce patrons are often those highly familiar with internet services and although there has been no empirical research considering internet experience and customer loyalty so far, it might be assumed that users with richer internet experience will be more likely to be stick with online shopping compared to those that have a looser touch with online activities.

Overall, internet experience positively influences customer attitudes towards web services (Bruner & Kumar, 2000) and their adaptation to information processing in the web environment (Chang, 2006; Cheney et al., 1986). The moderating effect of internet experience started to become noticed in a study focusing on website effectiveness by Nysveen & Pedersen (2004). Past findings lean towards an argument that internet experience should be included as a control variable in online customer behaviour research, because it partly shapes customers' perceptions, attitudes and behaviour, where internet shopping is no exception. When users are more familiar with web applications, they might be more motivated to stay and explore the site. As a result, this study looks to placing internet experience into the loyalty model as a moderator.

2.6.2 Gender

Gender is widely discussed in marketing papers due to the perceived differences in outlook between men and women, which influence their behaviour and decision-making. Overall, men are viewed as 'masculine' and task-oriented while women are more 'feminine' and relationship-oriented; and from these basic traits they develop different thinking, perception and produce different judgments (Karatepe, 2011). Richard et al. (2010) say the fundamental difference in men and women's judgments lies in the depth of processing, in which women are viewed as having an attention for details and taking account of multiple sources of information, while men arrive at final decisions in a much simpler and timely manner (Babakus & Yavas 2008; Karatepe, 2011; Richard et al., 2010). Women also tend to attach value to the interpersonal relationship and emotional values with sellers (Sanchez-Franco et al., 2009). In online shopping, men and women demonstrate different approaches to information processing and reaction to the web environment. In line with other findings about gender characteristics, the study by Richard et al. (2010) point out that men spend less time on pre-purchase assessment but tend to be more committed to online shopping. They also appear to have more confidence in web services and advertisements, compared to traditional media (Wolin & Korgaonkar, 2003).

The role of gender in e-loyalty studies remains quite unexploited, where it is mostly taken as a control variable. Among the few papers that give thought to gender roles in consumer behaviour, especially customer satisfaction and behavioural loyalty, conclusions are mixed (Sanchez-Hernandez et al., 2010). For example, Choi et al. (2015) evidence that gender or age does not suggest any implications in service quality assessment. In research about internet banking, despite being not directly related to this research, Paswan et al., (2004) and Karatepe (2011) found out that women value assurance and empathy dimensions more than men, and more than the other service quality dimensions. However, gender does not moderate the effect of both the service environment dimension and the interaction quality dimension on customers' satisfaction. As Sanchez-Franco et al. (2009) argued, among men the link between customer satisfaction and commitment and that between customer trust and e-loyalty are more significant than among women, but women demonstrated stronger loyalty behaviour when commitment is set.

2.6.3 Age

Age has an important moderating effect in consumer behaviour research (Yoon & Cole, 2008), as users differing in ages form different interpretations of marketing communication and develop different attitudes accordingly (Patterson et al., 1997). Literature has pointed out that mature customers are less motivated to switch brands and more likely to stick with their current choices of products (Yoon & Cole, 2008; Patterson, 2007) especially when online shopping is brought into play. This might be explained by the presumption that older customers are less proficient in technology and at the same time they have less desire to explore and build upon their technological knowledge (Im, Bayus & Mason, 2003). In other words, older customers are more inclined to resist technology-based service mainly because they find it challenging to process the relevant mechanisms.

Literature also supports a common assumption that older customers tend to exhibit stronger loyal behaviour compared to younger customers (Wood, 2004; Patterson, 2007), as older customers are deemed more conservative and reluctant to experiment with new brands or changing their shopping patterns. Older users are more concerned about risks, and staying loyal with a trusted brand is one strategy for them to maintain such a goal (Zeithaml & Gilly, 1987). On the contrary, younger generations tend to be more impulsive in their purchasing behaviour, and generally do not find nuisance in exploring new brands or products (Sharma et al., 2012).

In this regard, many authors such as Moschis (1994, cited in Fernandes, Proenca & Rambocas, n.d.) have explained this contrast via the social exchange theory, in which they argue that older people naturally develop a sense of satisfaction in maintaining few qualified social relationships, hence they tend to be more loyal and have their shopping experience maximised with only a few selected brands. Mata & Nunes (2010) approached this phenomenon via a cognitive learning theory, which is relatively consistent with the argument about technology acceptance above. They explain that the physical and psychological changes that develop with age negatively affect their ability to digest information (Im et al., 2008) and make informed judgments. Beside cognitive malfunctions that play a key role, physical problems with, for example, hearing and vision also deprive them of absorbing new technologies (Smith & Baltes, 1997). However, there has been a lack of empirical evidence to accommodate such speculations.

2.6.4 Shopping concentration

Volume is another important segmentation within customer behaviour research (Goldsmith & Litvin, 1999). Separating big groups of customers by frequency and volume of shopping (i.e. heavy shoppers versus light shoppers) will help firms control their mix based on their behavioural and attitudinal differences. Past studies have pointed out that heavy and light shoppers have different concerns when making shopping decisions on the internet. For example, Alba & Hutchinson (1987) evidenced that light shoppers cared most about price level and price value, while heavy shoppers tend to take into account a well-rounded record of the website including website quality, credibility, customer service, etc., apart from price and perceived value. Different concentrations in shopping might also affect trust levels, which in turn affects their satisfaction level and loyalty to the brand.

2.7 Strategies for e-loyalty

2.7.1 Communication systems in customer relationship marketing

With the rapid development of the internet and technology, the information systems to cultivate and enhance customer loyalty take many forms. Significant among them are e-CRM, Recommendation and personalization system and Network community.

2.7.1.1 E-CRM

Customer relationship management (CRM) is not new in-service businesses. It has become widely integrated in traditional markets, and even more so in e-commerce. The literature points to positive feedback on e-CRM systems, such as Bahn & Fischer (2003), Gurau et al. (2003) and Hadaya & Cassivi (2009). Bahn & Fischer (2003) analysed the benefits of integrating e-CRM in relationship marketing. Gurau et al. (2003) developed a customer-centred CRM model based on measurement of customer loyalty and life-time value, which set forth marketing strategies and tactics. Meanwhile, Hadaya & Cassivi (2009) took a look at the evolution of CRM in e-commerce settings, while Romano & Fjermestad (2003) studied the five elements of CRM in e-commerce service: customer management, business model, marketing strategies, knowledge management and technological updates.

2.7.1.2 Personalization system

Recommendation and personalization systems reduce the inconvenience related to information searching and increase customer utility. Such systems reduce the probability of customers leaving site hence increase switching costs and strengthen site loyalty. A successful recommendation system is often based upon attractive site content and effective technology. As Hinz & Eckert (2010) argued, technological advancement decides the success of search and keyword recommendation systems. In another note, Chellappa & Sin (2005) studied service personalization and concluded that it has important implications for building trust and brand loyalty. These authors also found a connection between recommendation systems and personalization, in which the former serves as a basis and supporter of the latter. Gao et al. (2010) and Repschlaeger et al. (2013) explored state-of-the-art technology paradigms adopted for the personalization process, in which Repschlaeger et al. (2013) mentioned cloud technology. On the other hand, Holland and Kießling (2004) recommended customer data mining and preference matching techniques.

2.7.1.3 Online reviews and user-generated content

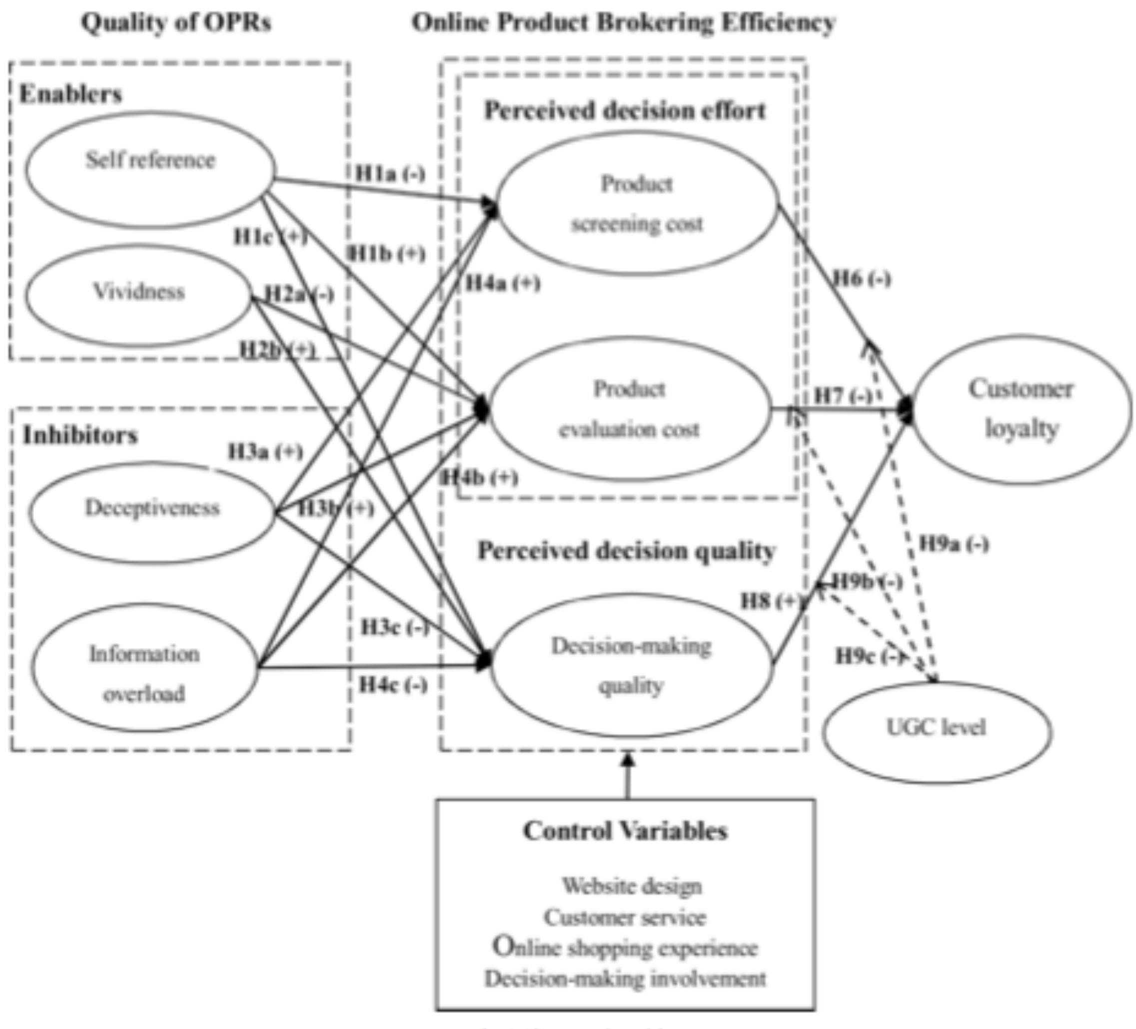


Figure 10 The relationship between online product recommendations (OPRs) and customer loyalty (Zhang et al., 2018)

A body of literature on customer loyalty has examined how online reviews, online product recommendations or user-generated contents have become important sources of customer acquisition and retention. According to Mathwick & Mosteller (2016), the effect of online reviews accounts for 20-50% of customers' purchase decisions. This is derived from the fact that customers tend to look for comments on their desired products from past buyers and the internet has made that process far easier than in the era of traditional word-of-mouth recommendations.

The remarkable effect of customer reviews has changed the mainstream marketing philosophy from acquisition-focused to retention-focused with an increased proportion of WOM and user-generated content (UGC) repertoires (Chen & Xie, 2008). Two common approaches to enriching UGC on the internet are customer reviews and professional reviews by third-party websites (e.g. TripAdvisor, PC World, etc.). Both methods are promoted based on the common belief that customers tend to trust 'objective' feedback and recommendation more than content generated by service providers via sponsored advertorials (Bickart & Schindler, 2001; Godes & Mayzlin, 2004). UGC, which usually comprises stories, experience and sharing, emotions which are believed to be extracted from real experience and may arouse positive emotions, which induce feelings of satisfaction, desire, or trust towards a website (Benlian et al., 2012). UGC serves to trigger positive emotions, which ease out the perceived inconvenience of decision-making effort and increase customer loyalty. Besides, both the production and absorption of online reviews elicit the sense of belonging to a community and growing engagement with the website (Ren et al., 2012).

It is also important to recall that satisfaction, trust and commitment motivate buyers to write positive reviews (Hennig-Thurau et al., 2004; Ranaweera & Prabhu, 2003; Thakur, 2018). It means that the underlying principles of WOM-based marketing communication are customer satisfaction, trust and commitment building. As Thakur (2018) suggested, e-retailers should identify the factors that motivate their customers to write an online review and, at the same time, focus on strategies to increase customer engagement levels, as this is the source of repurchase intention and willingness to spread positive e-WOM.

2.7.1.4 Network community

Online communities, social networks and online reviews provide customers with a convenient platform for exchanging information. This interaction also influences e-commerce customer loyalty. Hu et al. (2008) regarded online reviews as reputation enhancers and analyse the characteristics and prescription impact of online reviews on product sales. Pai and Yeh (2007) built a relational model containing information- sharing, interaction, using attitudes and intentions. They studied the intention differences between different groups of users and found features of information sharing and perception of entertainment that can enhance the using intention of customers. The study of Song & Kim (2006) revealed how social factors influence the ‘using’ intention of services in virtual communities, allowing managers and researchers to learn more about the using behaviour of customers. Albert et al. (2014) found the publishing frequency and perceived value of customers in hotel’s online communities had an impact on purchase intentions. Kim et al. (2009) built a model to study the 292 members of a virtual community and found success factors. The research results provide guidance to the virtual community for marketing practitioners.

2.7.2 E-commerce policy in the international business context

The rapid growth of e-commerce in emerging countries has challenged policy makers in making laws and regulations that facilitate development in a sustainable format. The thriving of online shopping in recent decades has made it easier for consumers to shop abroad, but shoppers’ lack of understanding of consumer rights beyond their borders, let alone language barriers, is a counter to potential huge demand. Furthermore, the lack of trust towards online vendors due to the absence of physical contact requires state authorities to take proactive measures to monitor e-commerce ecosystems where they operate.

Not only leading countries in the West (Cardona et al., 2015) but emerging countries in Asia are also pushing strong agendas to bring e-commerce policies to the table. Among emerging markets, China’s foreign trade has seemed to benefit hugely from e-commerce (Su et al., 2019). Thus, developing and maintaining sustainability in cross-border e-commerce has been one of the industry's top priorities in past decade (Ou & Zhong, 2015; Shi, 2016; Yuan, 2017). As of now, the Chinese government has been actively intervening in international e-commerce activities (Su et al., 2019). In earlier years, the focus was on supervision of payments and transactions of goods. In later years, the government decided that there should be no "one-sided" manner in enforcing e-commerce laws. Since 2015, the Chinese government has been pursuing a comprehensive approach in moderating cross-border e-commerce, as can be seen in the significant increase in both width and depth of relevant policies (Su et al., 2019). Besides, smaller "informal economies" in Southeast Asian such as Thailand (Lam, 2019) are aiming at formalizing the e-commerce industry using laws and regulations. However, there is a lack of literature relevant to this context in the Vietnamese market.

Regulations have significance in e-commerce "companies' attempts to manage customer experiences. Big data plays a significant role in boosting customer experience via personalization of services (Akter & Wamba, 2016), dynamic pricing, or counterfeit detection (Najbert, 2016; Gai et al., 2015), to name but a few. As e-commerce businesses increasingly rely on big data, concerns have been raised regarding ethics and privacy issues (Martin, 2015; Boritz & No, 2011; Martin et al., 2017). The increasing use of big data analytics in the e-commerce industry raises questions about companies' use of consumer data, despite consumers' lack of knowledge of how their personal data are and will be treated (Akter & Wamba, 2016; Christl, 2017). On the one hand, consumers succumb to having their personal information exposed (Lenz, 2019), when they are satisfied with the benefits they get in return for trading such information.

Concerns about data privacy have been translated into laws in certain countries (Sen & Borle, 2015). However, the legal gaps between developed and developing markets suggest that e-commerce companies face huge legal risks when conducting cross-border transactions.

2.8 Empirical models

This section investigates the empirical models widely employed by academic researchers on the topic. The author decided to focus on three famous models due to their wide application: DeLone & McLean's Information System Success (ISS) model (1992), the SERVQUAL scale of service quality (Parasuraman et al., 1988) and Srinivasan et al.'s 8Cs model (2002). In fact, conceptual models of e-loyalty add up to a huge variance.

2.8.1 DeLone & McLean ISS model

DeLone & McLean's Information System Success (ISS) model, which was first introduced in 1992, was a conceptualizing model of customer satisfaction and behavioural loyalty dedicated to e-commerce marketing. The model specifies that customer behaviour is formed upon customers' perception of the composite value generated by the brand, via three components: system quality, information quality and service quality.

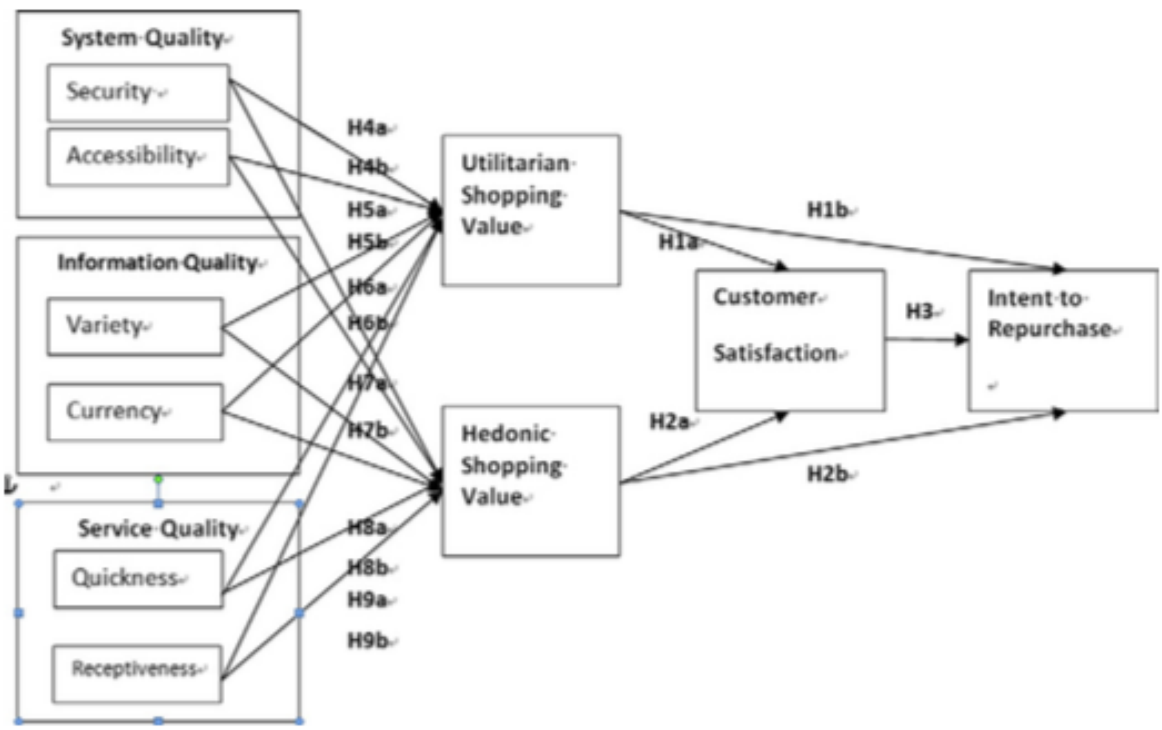


Figure 11 Information system success (ISS) model of customer behavioural loyalty (DeLone & McLean, 1992, 2004), model adapted by Kim et al. (2012)

System quality: In the revised ISS model, DeLone & McLean (2004) suggested that system quality of an e-commerce website is measured by five breakdowns: usability, availability, reliability, adaptability, and response. However, the adaptation of ISS with regard to specifications of system quality vary greatly. Belanger et al. (2012) argue that security and privacy indicators should be added, while Chen et al. (2013) proposed that system quality could be measured only by usability and system availability. In Kim et al. (2012), system quality is defined by security and accessibility.

Information quality: Delone & McLean's ISS model (1992, 2004) together with Lederer et al. (2000) proposed that the quality of the content provided was a key factor contributing to the information transmission process and customers' perception of benefits. 'Information', which consists of website content including product information, images, etc., should be complete, relevant to customer needs, eligible and personalised. Kim et al. (2009) and many other authors empirically proved that the aesthetic appeal of the website together with in-formativeness and convenience affect customers' purchase decisions. Chen et al. (2013) argued that information quality is built upon three elements: organization, in-formativeness and entertainment/joy. The model by Kim et al. (2012) reasoned that informational quality affects the hedonistic and utilitarian values of shopping, which in turn influence consumers' judgment about satisfaction levels (Gefen et al., 2003) as well as trust (Lee & Chung, 2009; Gefen et al., 2003; Kassim et al., 2012) and intention to repurchase.

Service quality: The dimensions chosen to represent service quality in the literature of the ISS model vary to a great degree. Many authors employ the SERVQUAL scale to measure service quality. Yoo & Donthu (2001) proposed a SITEQUAL scale dedicated to e-commerce service quality, consisting of web design, assurance, customer service and order processing. Chen et al. (2013) used trust and empathy to represent service quality. Meanwhile, Kim et al. (2012) and Lee & Chung (2009) used responsiveness and receptiveness, in which both brought on scale the hedonic-utilitarian value theory. In most empirical studies, perceived service quality is found to have significant impact on customer satisfaction, and in turn loyalty.

2.8.2 The SERVQUAL scale

The SERVQUAL is in fact a scale to measure service quality that is applied in a wide range of industries including e-commerce. It was first introduced by Parasuraman et al. (1985) and supported by Parasuraman et al. (1988), Cronin and Taylor (1992), and became a popular framework for numerous empirical studies. The original SERVQUAL scale was a gap analysis based on the perception of service quality as the difference between expectations and actual experience. It measures the gap between customer expectation and customer experience on five dimensions of service: tangibles, reliability, response assurance and empathy. A few recent studies pointed out that SERVQUAL was not the ideal model in an online context (e.g Gefen, 2002) and suggested that the five-dimensioned model be flipped into a three-dimensioned model consisting of tangibles, assurance and empathy, in which tangibles still contain the original elements of itself, reliability and responsiveness in the original model.

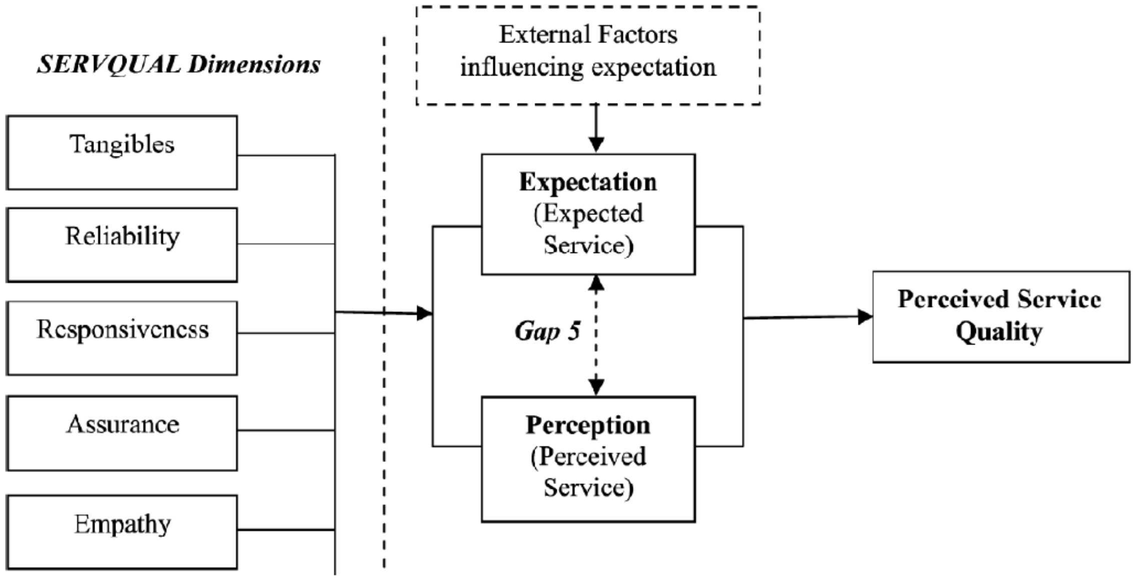


Figure 12 SERVQUAL model (Parasuraman et al., 1988)

Web site design or layout/Tangibles: As evidenced, website quality is indicated as an essential driver for purchase decisions (Gefen, 2002, Wolfinbarger & Gilly, 2003, Zeithaml et al., 2002, etc.). Recalling previous discussions, website quality contains a wide spectrum of elements from utilitarian quality such as informational sufficiency, convenience and product assortment, to hedonic values such as content, visual appeal, style, or emotional connection and trustworthiness including security and privacy perception (Luo et al. 2010). Website experience has a strong influence on the development of customer trust (Egger, 2000, cited in Kassim & Abdullah, 2008). Gefen (2002) empirically found that *tangibles* are the most important determinant of customer trust, which leads to loyalty.

Ease of use/Reliability: Ease of use or reliability in the original model is a determinant of service quality, which in turn influences satisfaction and trust (Gefen, 2002; Gummerus et al., 2004). The composition of ease of use includes items such as accessibility of information, functionality, order processing and navigational convenience (Reibstein, 2002; Ribbink et al., 2004).

Responsiveness: This measures a company's ability and willingness to provide prompt service when customers have questions/problems (Gefen, 2002, Zeithaml et al., 2002). Understanding customer requirements and developing the service based on responsive feedback enhances service satisfaction and also increases customer trust (Gefen, 2002; Gummerus et al., 2004). However, in practice, many companies have failed in this dimension (Kaynama & Black, 2000).

Personalization or customization/Empathy: This reflects the degree to which information or a service is tailored to meet the needs of the individual visitor (Lee, 2005). This dimension has become more important and is an essential part of online service quality (Zeithaml, 2000). The concept of personalization consists of four components in an e-commerce setting: personal attention; preferences; understanding the specific needs of customers; and information regarding a product's modification. However, some of the previous studies (Gefen, 2002, Ribbink et al., 2004) have found that this dimension (empathy) is a somewhat less important aspect of service quality in building trust.

Assurance. Finally, the assurance dimension is concerned with customers' perceived security and privacy, which are essential factors in e-commerce settings (Eriksson et al., 2005; Mukherjee & Nath, 2003; Wang et al., 2003). These items are related to issues such as online transaction security, efforts at increasing customer trust in online organizations and privacy

(Gefen, 2002; Ribbink et al., 2004). However, Wolfinbarger & Gilly (2003) found no effect of security/privacy on customer satisfaction and loyalty.

In the service marketing literature, however, there has been some debate concerning the appropriate manner to operationalise the service quality construct, the causal order between satisfaction and quality, and the process by which customers update the evaluation of quality (Bebko, 2000; Brown & Swartz, 1989). Even though currently there is a lack of consensus in the literature, it has been the most extensively and successfully used service quality measurement in the twenty-first century to date (Tsoukatos & Rand, 2006).

2.8.3 Srinivasan's 8Cs model

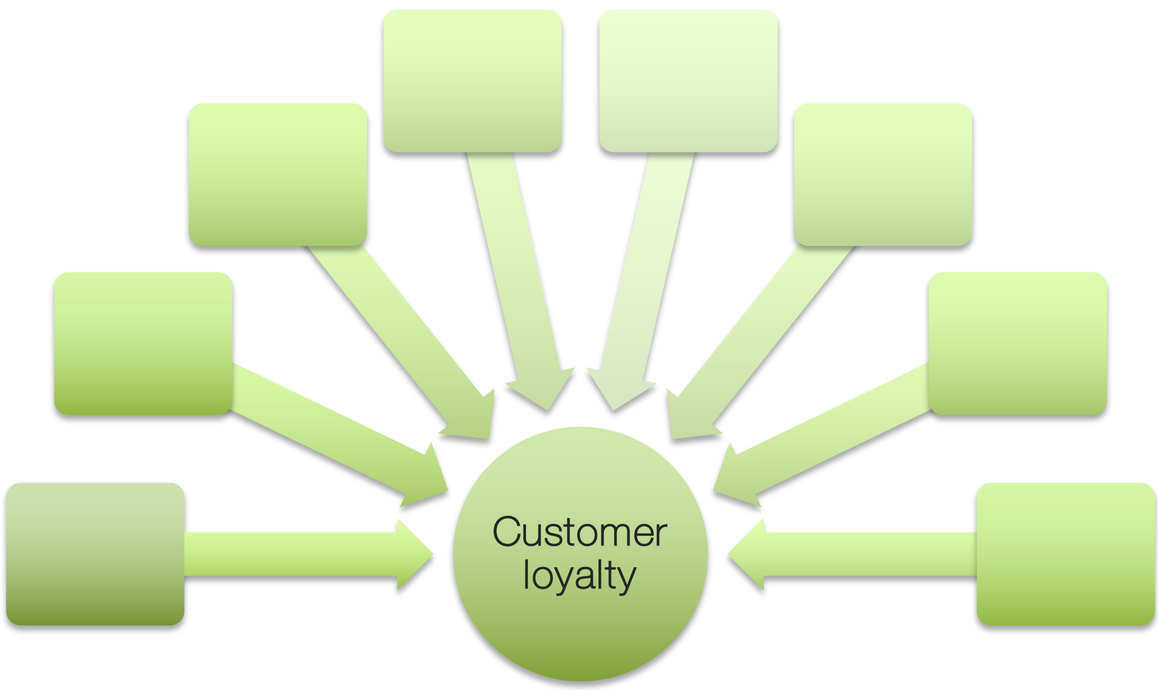


Figure 13 Customer loyalty model by Srinivasan et al. (2002)

Srinivasan et al. (2002) proposed an 8Cs model focusing on website characteristics based on interviews with 42 individuals including online shoppers, web designers and e-commerce executives. The 8 factors that are identified to have important impacts on customer loyalty are

(1) customization, (2) contact interactivity, (3) cultivation, (4) care, (5) community, (6) choice, (7) convenience and (8) character. The Srinivasan's 8C model is often adopted in researches relating to customer loyalty in the e-commerce environment since it could cultivate the multi-facets of thoughts on how customers are influenced and impacted by a higher rate of convenience and customization in shopping. Comparing the e-commerce and traditional shopping formats, customization in e-commerce could be achieved intensively by the power of technological advances, such as big data, internet of things, AI adoption, and so on. Without the limitation on the amount of information retrieved by single customer, perceived usefulness in shopping online with e-commerce platforms is, thus, endorsed (along with several unique convenience factors).

Customization refers to the ability of the website to facilitate tailored products, service and online shopping environments to every single customer. A highly customised website increases the chance that customers' needs are matched and at the same time, reduces the nuisance of navigating around the large product selection to look for their desirable purchase (Kahn, 1998). There are many underlying reasons of why the customization capability of e-commerce platform has the direct influences on e-loyalty. To bear in mind that people may select to shop online via e-commerce sites to save shopping time or deal with their busy stance. It is the way that people arrange their schedule and create the balance between works and social life. Such, the greater time they could save through the searching, evaluating and selecting process the better chance that their positive feelings or satisfaction with the purchase will be increased. Do not mention the technical side of how customization or personalization is achieved, its results enhance the chance of customers to purchase with the platform through a quicker focus on what they need. It also relates to the performance of perceived service quality in matching the right information in need and products being wanted. It could be said that customization is one of the key factors that intensifies the adoption of this model in the e-loyalty situation. The point is that how e-commerce platforms could produce the accurate tailoring to narrow options and optimize customers' confusion. The more precise the product recommendation, the stronger competitive advantage of the platform in serving customers. Matching with the SERVQUAL model, this antecedent is the strong predictor of the empathy which envisions the long-term relationship between customers and e-retailers.

Contact interactivity refers to the non-human tools and human assistance provided by the e-website to facilitate customer – service provider communication. Contact interactivity refers to the non-human tools and human assistance provided by the e-website to facilitate customer – service provider communication. By that, this antecedent could enhance the engagement level of customers toward e-retailers. Interactivity has various fashion of illustration, for instance sufficient product information, rapid navigation of the website, quick replies to inquiries, online reviews/ user-generated comments, and so on. Deeper thought, the interactivity is, using the core concept of service quality model by Parasuraman, et al. (1985, 1988), falling into the quality of responsiveness, reliability and an extent of assurance for customers. Indeed, contact interactivity cannot produce the high rate of responsiveness, but a strong contributor for the smooth flows of consumption feeling rapidly responding to concerns. Making use of technological advancement, through the interactive searching process, perceived values of shoppers will be increased in a more dynamic and personalized manner. If store density is one of the constraining factors for people to have the comfort in shopping in traditional format, the amount of reviews and the number of other buyers are the important indicators for persuading the purchase. Face-to-face advices in offline shopping space is somehow unavailable, but online reviews and UGC could be used the motivator of impulse buying. The point for e-commerce retailers is to design the navigation process that fosters the interactivity in the way that improves the comfort in choice of customers (Srinivasan, Anderson & Ponnavolu, 2002).

Cultivation is the degree to which the e-tailer feeds customers with sufficient information to lengthen their stay and widen their interest. It involves the use of customer databases to 'cultivate' customer interest and cross-sell products (Berger, 1998). Cultivation proves the ability of e-commerce platforms in using data and turning it into useful information to serve customers. The role of having and supplying accurate and desired information is once again confirmed with this C. During the purchase decision making process or the customer journey, information appears in every step by different intervening levels. The common expression of 'cultivation' is the recommendation of related products, combo purchase or flash sales. In the marketing terminology, it does not simple the information being presented on the screen, but the purchasing stimuli or push factors to activate the desire of buying other products, or even reconsidering the current choices for a better one. Internally, in order to perform this C, e-commerce platforms need investing into information technology infrastructure and information management techniques to extend the ability of the website in recording a larger amount of people's expressions and actions on the sites, in analysing a bigger pond of data, in providing more practical functions facilitating the shopping, and so on. Acknowledging that e-commerce platform is propped by advance technologies to develop and growth; the potential of cultivation in increasing individual business shares and improving customer satisfaction has forged them into the circle of pursuing technology and upgrading the capabilities of internal technology teams.

Care relates to both pre- and post-purchase interface and customer service that help in both the processing of the transaction and maintaining a long-standing relationship with the buyer. When the first three Cs are more inclined to the information-generated values to facilitate the shopping for customers, care imitates the 'humanity' part of serving. E-commerce platforms have the detective eyes on details to ensure the absence of breakdowns in service or else, having rapid responses and solutions to deal with them if bad events occur. The question is besides the function of chatting with retailers, giving queries, emailing to complain, etc., what are other expressions of this C that a platform operator must take notice on? In fact, it turns to the capability of that company in assigning their internal business processes and technological capacity in keeping customers with all necessary information and warns related to the purchases, for instance delays in delivery, delivery options, status of products, etc., and diminishing the number of disruptions. Care is important in nurturing the attitudinal loyalty and purchase retention for achieving customer loyalty in long term (Srinivasan, et al., 2002).

Community refers to the availability of an arena created by the website to facilitate the exchange of information between customers, the main purpose of which is to enable positive WOM and reviews (Hagel & Armstrong, 1997), as well as to increase customer engagement via stimulating their sense of belonging within a social group (Bhattacharya et al., 1995). This virtual community may have greater influence on the purchase decisions than the offline one in the traditional shopping environment. the power of WOM, online reviews or user-generated comments (UGCs) has been confirmed by many studies to have tremendous impacts on the choices of customers. This is even more significant since the chance to have 'real touches' on products is omitted in the online landscape (Jattamart, Kwangsawad & Boonkasem, 2019; Rimadias, et al., 2021). The concerning point is whether the influence of this virtual community directs to purchase intention/ re-purchasing actions or expresses customer loyalty? Many studies confirm the connection of WOM and online reviews on purchase intention (Hajli, 2019; Rosa, Iisnawati & Daud, 2019; Zhao, et al., 2020). Also, other studies show the contribution of having positive eWOM into the process of generating satisfaction and trust addressing loyalty (Alhulail, Dick & Abareshi, 2018; Tran & Strutton, 2020; Wandoko, Panggati & Sukmanigsih, 2020). Such that, community could be captured by two meanings – (a) the practical evidence for the quality of products and popular tastes and preferences toward products' consumption; and (b) suitable incentives from e-commerce platforms to encourage people to leave comments and share ideas. It is noted that online reviews on e-commerce platforms and in the 'comment' box of each product cannot be dealt with as the way of social media-based comments. This is the part of social interactions and informational exchange between customers that enhances the credibility of the platform. However, it must be aware that this is the uncontrollable source of information since being generated directly from customers (do not mention technical involvements to hide or highlight comments). It means the virtual community does not only provide the real insights (captured through data analysis) but also challenge the service recovery ability of e-commerce platforms (in case of negative comments).

Choice refers to product assortment, **convenience** denotes perceived ease of use. Choice and convenience are the two distinct features of e-commerce shopping that shows the advantage of this shopping format compared to the traditional one. Without the limitation of physical spaces for merchandising, e-commerce platform allows the seamless accessibility of customers with a large assortment of products. Combined with the cultivation and customization, customer could enjoy the perfect one-stop shopping model that is designed for their personalized demands at ease. However, this feature gives the burden for the logistical arrangements of e-commerce platforms within their alliances and links with smaller retailers, distributors, and suppliers. Similar as the choice, convenience is what people are seeking to deal with the busier life. When there are several factors from the services cape, processes, people, procedures to be taken into account in traditional shopping to ensure the shopping convenience, e-commerce shopping could exceed these constructs. The point is how choice and convenience could enhance the customer e-loyalty. Srinisavan, et al. (2002) declare this relation through the bridge of having satisfaction with the purchases and consumption. However, whether it is true when choice and convenience are the two basic features of online shopping. The absence of them would destroy the shopping experience and motivation of customers, rather than their presence enhances the mood of shopping.

Lastly, character is the distinct image or personality created by the website to enhance brand recognition. This implies the self-brand congruency in expressing the personal image and values in the eyes of others. Or it is inclined to serve for hedonic or emotional feelings when shopping rather than functional ones. With the e-commerce platforms in which the assortments of products and brands are largely various, it seems hard for one to find the congruency with single brands. Extending the thought, if following the concept of Srinisavan, et al. (2002), how come and in which ways customer could build their perceived congruency with an ecommerce platform? Whether it is the case that 'I buy from Amazon because of its innovation and activeness' or 'I buy from Amazon because of its large collections of brands and products at good price'. Or, in the Vietnam market, whether it exists the awkward reason of customers to choose Tiki – the local one or Shopee – the foreign one is because of people's congruency with their origin? 'I am a Vietnamese people, so I support the local platform' or 'I love a modern style of living, so I prefer to shop with foreign sites.'. In fact, there are no exact answers for these kinds of intricate questions; yet by the common sense, the formulation of self-congruency with an e-commerce brand should be involved other factors or further qualitative investigations.

Although the model provides a clear picture of components on customers' e-loyalty, its weakness is toward the failure to take into account individual-level variables that also may have an impact such as customer inertia and other variables that are jointly determined by individual and business level factors (such as reposed trust and satisfaction) may also impact e-loyalty (Reinartz & Kumar, 2000). Also, the suitability of the internet for online retailing depends to a large extent on the characteristics of the products and services being marketed

(Peterson et al., 1997). This model does not control such differences across product and service categories.

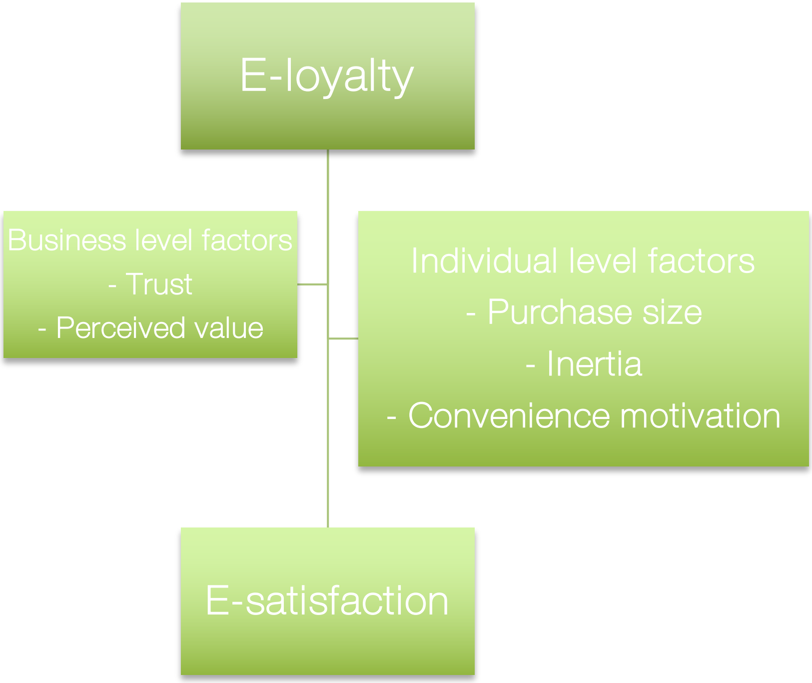


Figure 14 E-loyalty model by Anderson & Srinivasan (2003)

In Anderson and Srinivasan's model (2003), the researchers examined the impact of customer satisfaction on customer loyalty in e-commerce settings, considering the moderating effects of several business and individual level factors. The findings point out that e-satisfaction is an important antecedent of e-loyalty, but the moderators play essential roles: (1) business level factors such as accumulated trust and perceived value and (2) consumer level factors including customer shopping habits, convenience and volume of purchases. The Anderson & Srinivasan model addresses the weakness in Srinivasan (2002) research that demographic factors and customer profiles were not taken into account. However, the model did not fully account for determinants of customer satisfaction, and the number of individual level factors included did not reflect all the demographic and psychographic differences at the buyer level.

2.8.4 Other e-loyalty models

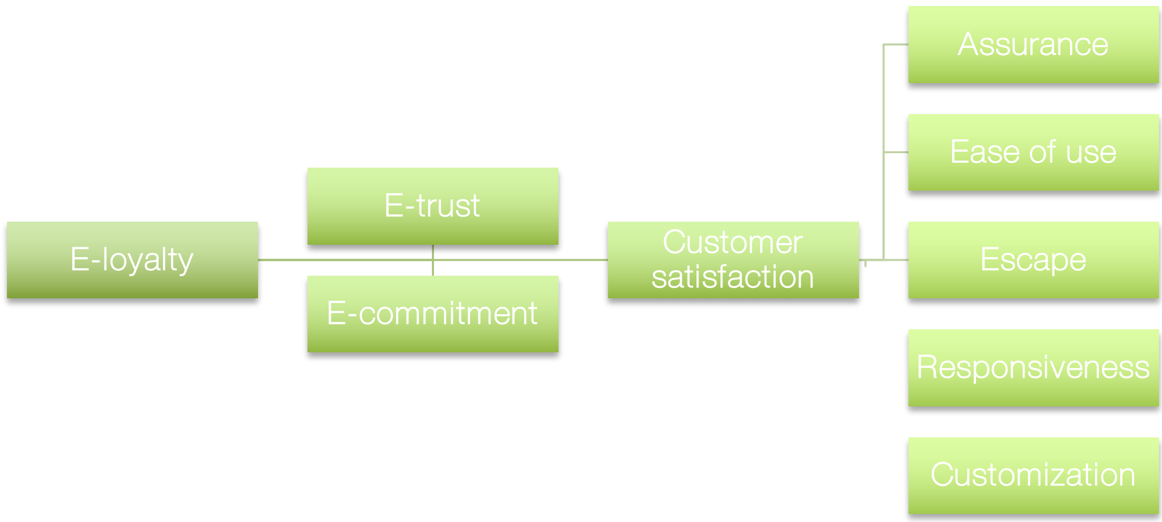


Figure 15 Conceptualizing e-loyalty by Ribbink et al. (2004)

Ribbink et al. (2004) employed the SERVQUAL scale as proxies for service dimensions that affect customer satisfaction. In this model, customer trust and customer commitment have moderating roles in the relationship between customer satisfaction and customer loyalty, unlike its determining role as in the Safa and Ismail (2013) model. Although the model provides a relatively complete account of e-loyalty antecedents, it only looks at dimensions of website quality without considering other non-quality factors such as price fairness, perceived value, competition, loyalty incentives, etc. For this reason, despite being an interesting conceptual model, Ribbink et al. (2004) is only partly relevant to the objectives of this research.

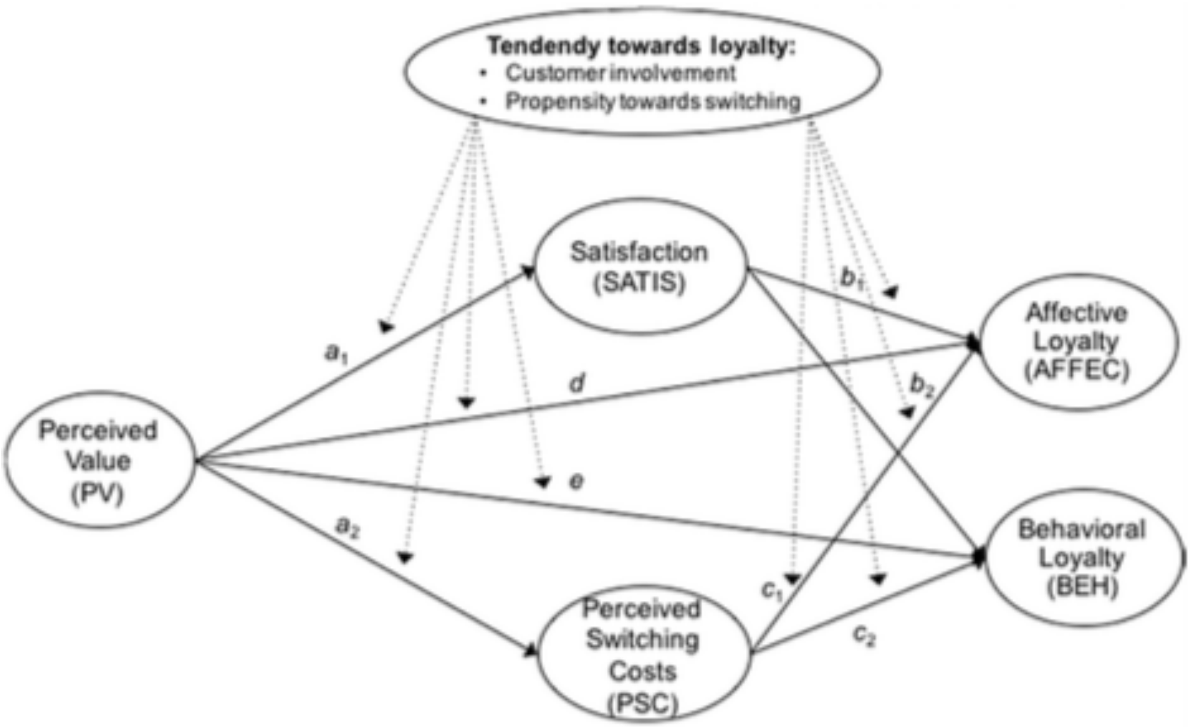


Figure 16 A mediating and multi-group model of customer loyalty (Picon-Berjoyo et al., 2016)

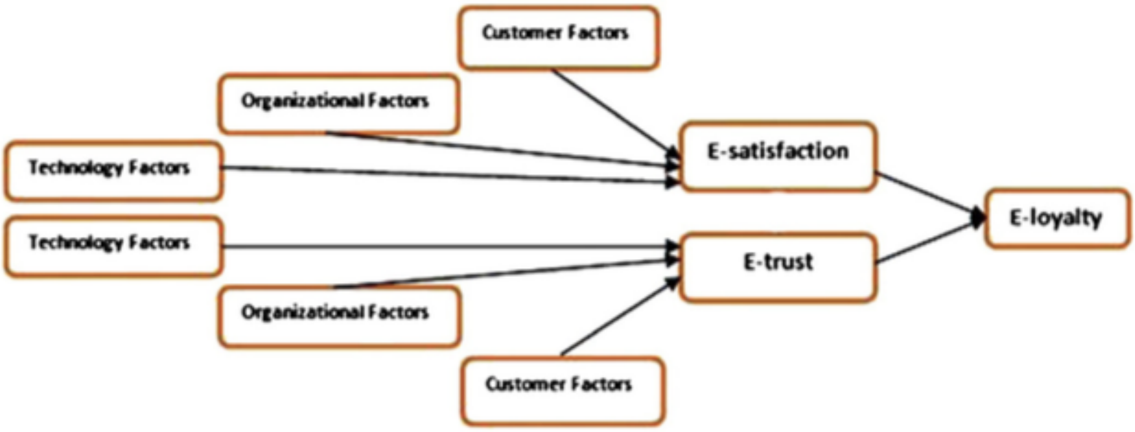


Figure 17 A customer loyalty formation model in electronic commerce (Safa & Ismail, 2013)

Safa and Ismail (2013) developed a formation model dedicated to e-commerce, in which e-satisfaction and e-trust (as antecedents of e-loyalty) are determined by customer factors, organizational factors and technology factors as explained in section 2.2.1. This model is a summarization of literature on service quality, rearranged into three dimensions. The Safa and Ismail model provides quite a full account of all service quality factors. It is meaningful in selecting the service dimensions (e.g. fast and easy payment, variety of goods and services, etc.) that represent website quality in the research model. In this research, customer trust has a separate role unlike Ribbink et al. (2004), were it was considered as a moderator in the satisfaction-loyalty relationship.

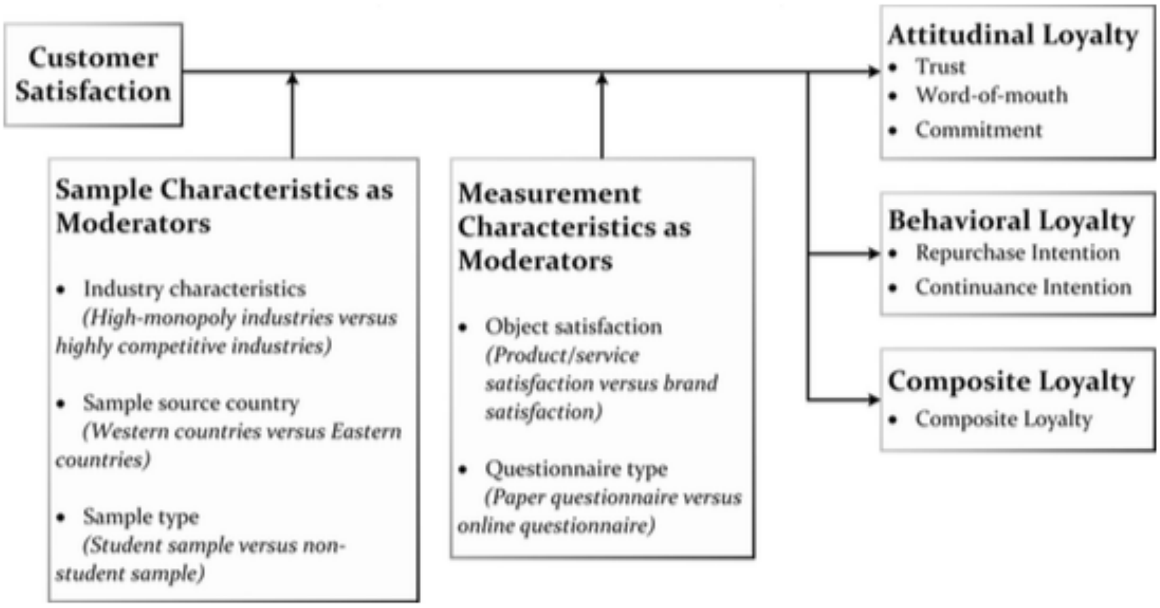


Figure 18 A meta-analysis on the relationship between customer satisfaction and customer loyalty in online commerce context (Wang et al., 2018)

Similar to Picon-Berjoyo et al. (2016), Wang et al. (2018) look at customer loyalty as a composition of attitudinal and behavioural loyalty, which is also an approach taken in this research. A contribution of Wang et al. (2018) is their consideration of sample and measurement characteristics such as industry characteristics, questionnaire type, etc. (as illustrated above). A few other studies have also addressed the moderating effect of different demographics (Ladhari & Leclerc, 2013; Kim et al., 2016, Ballesta et al., 2018, etc.) and psychographic factors, but the lack, or in most cases, the opting out of full accounting for such moderating variables remains the biggest limitation of empirical research on the subject (see Table 2).

Table 2 Literature of customer loyalty in e-commerce

Authors	**Variables**	**Limitations**

Srinivasan et al. (2002)	Customization, Contact interactivity, Cultivation, Care, Community, Choice, Convenience and Character	The model failed to take into account individual-level variables such as customer inertia and other variables that are jointly determined by individual and business level factors (such as reposed trust and satisfaction) may also impact e-loyalty (Reinartz & Kumar, 2000); characteristics of the products and services being marketed (Peterson et al., 1997).
Anderson and Srinivasan (2003)	Accounting for the moderating effects of business level factors and individual level factors	The model did not fully account for determinants of customer satisfaction, and the number of individual level factors included did not reflect all the demographic and psychographic differences at the buyer level.
Eastlick et al. (2006), Ha and Stoel (2009), Caruana, Ewing (2010) and Well et al. (2011)	Service quality, Customer satisfaction, Customer trust & Customer commitment	
Thirumalai and Sinha (2005)	Product selection, website performance, customer support, ease of ordering, on-time delivery, product information, price, and shipping and handling.	These models proposed different compositions of service dimensions in service quality of an e-retailer. They serve the sole purpose of explaining the relationship between service quality and customer loyalty, rather than providing an adequate
Lee et al. (2009)	Privacy, Ease of use, Evaluation, Service quality, Speed of delivery,	

	Stability, Security, Payment, Product assortment & Low price	formation model of e-loyalty. These three studies represent the focus of a body of literature in the subject (which is to identify the service dimensions that affect customer loyalty) but do not properly reflect the volume of research.
Chiou et al. (2009)	Responsiveness (RS), Ease of use (EU), Fulfillment (FF), Personalization (PL), Individualized attention (IA), Visual appearance (VA), Information quality (IQ), Trust (TT), & Security/privacy (SP)	
Picon-Berjoyo et al. (2016)	Perceived value (PV), Perceived switching costs (PSC), Customer satisfaction, Customer involvement & Propensity towards switching	The model did not include variables related to the characteristics of the customer, such as the degree of attractiveness of alternatives available in the market (Capraro et al., 2003), previous experience with alternative providers (Burnham et al., 2003), and the length of the relationship (Jones et al., 2002).
Wang et al. (2018)	Meta-analysis of Satisfaction-Loyalty Relationship in e-commerce: Sample and Measurement Characteristics as Moderators	The research accounted for sample and measurement characteristics, but lacked primary data to support the theory provided.

2.9 Methodology

2.9.1 Quantitative research

It is remarkable that the overwhelming majority of academic research focusing on conceptualizing e-loyalty employs a quantitative approach (e.g. Bhattacharya, 1997; Hsu et al., 2014; Lopez-Miguens & Vazquez, 2017; Liao et al., 2017) using primary data collected first-hand from customers. In other words, most studies looked at e-loyalty from the customer's perspective and adopted statistical methods to validate hypotheses or confirm existing theories on some targeted population. For example, Lopez-Miguens and Vazquez (2017) performed an empirical survey on the Spanish population aged 16 to 74 on a four-way model including satisfaction, trust, switching barriers and website quality using online questionnaires to find that the four factors contributed to 86.6% of the total variance of e-loyalty. Another example is Srinivasan et al. (2002), who performed a survey on a random sample of 1,211 e-commerce customers in New York using the 8Cs model. Guzel et al. (2013) approached a narrower population of under- and post-graduate students in two Turkish cities using printed and online questionnaires. Most of the time survey questions are devised from past research and customer responses are coded into Likert scales of five or seven points.

The common weakness in many of the aforementioned studies is the lack of moderating variables such as individual characteristics, psychographics (Ariff et al., 2013), respondents' profiles such as gender, age or internet experience (Chang & Chen, 2008), shopping frequency with e-commerce websites, average amount of spending dedicated to online shopping, and several other factors such as those as explained in previous sections. Likewise, much research committed to a national or regional scale (e.g. Lopez-Miguens & Vazquez, 2017) yet failed to take account of the behavioural differences between different cultures, social classes and backgrounds, which led to the possibility of generalization. In such cases, there is a need for a corresponding study in a comparable market to ensure that cultural factors are properly accounted for. It is noteworthy, however, that empirical models have a *'practical limit on the number of variables that (it) can take into consideration'* (Yousafzai et al., 2005). In other words, researchers can only include a limited number of variables in their model.

Sampling methods also contribute to the reliability of research. A few researchers such as Lopez-Miguens and Vazquez (2017) or Safa and Ismail (2013) employ incomplete random sampling techniques (e.g. snowballing sampling). Such methods, despite being imperfect forms of random sampling, are acknowledged as being appropriate in the online context due to the inability to access a more suitable framework (AIMC, 2008, cited in Lopez-Miguens & Vazquez, 2017).

Another limitation relating to the quantitative method without backup by preliminary qualitative research is the possible omission of relevant variables and relationships in the measurement and structural models. As for the measurement models, one wonders whether all variables have considered the necessary items to collect their conceptual domain. Although, as mentioned, several methods have been employed to ensure content validity, it is possible that a new literature review allows us to identify items that have not been considered in any of the variables of interest.

Several authors including Chintagunta et al. (2012), Luo & Bhattacharya et al. (2016) and Nisar & Prabhakar (2017) took quite a divergence from the conventional approach. They employed a longitudinal approach using the pre-conducted American Customer Satisfaction Index (CSI) and Consumer Price Index (CPI) to examine the link between customer spending and customer satisfaction over a four-year period. However, this approach is more applicable in developed markets where data transparency and professionalism are not at issue. In emerging and developing markets, research institute and statistics companies lack the general competency and experience to provide reliable customer data on a national scale. Also, using historical data may produce outdated findings, since past behaviour does not always reflect current behaviour, especially in dynamic emerging e-commerce markets.

2.9.2 Qualitative research

In qualitative research, some scholars proposed the corresponding measures of cultivating customer loyalty by stating customer characteristics and meaning, as the obstacles in cultivating customer loyalty. According to Yue et al. (2015), cultivating customer loyalty should start with good reputation and website image, personalised service, experience marketing network, network community, emotional experience, customer care communication, customer database management analysis and the improvement of platform values or transfer costs.

Ow (2001) along with a few other authors took a qualitative approach using focused interviews, as they believed that the preference towards a quantitative approach produced biased perceptions about the relationships between the variables and customer loyalty. It fails to capture the dynamic process of constructing loyalty and customer relationship maintenance (Fournier & Yao, 1997). Besides, it provides a more-or-less superficial understanding of customer psychology, aggravated by the high likelihood of overgeneralization (see Table 3).

Authors/Year	**Methodology**	**Limitations**
Pennanen and Paakki (2005)	Qualitative analysis using semi-structured interviews	The number of interviewees is relatively low. A few factors were not accounted for, such as consumers' past experiences in using e-commerce, demographics like age and gender, and the service provider's web site (for example, the logic or usability of the web site)
Homsud and Chaveesuk (2014)	Theoretical, proposed model of customer loyalty	Lack of empirical evidence supporting the model.

Wang et al. (2018)	Meta-analysis of Satisfaction-Loyalty Relationship in e-commerce: Sample and Measurement Characteristics as Moderators	The study compiles 77 studies from multiple fields to test the relationship between customer satisfaction and their loyal behaviour in the e-commerce setting. The meta-analytic findings are limited by the lack of primary data to support the theory provided, which hindered the testing of the correlations between e-satisfaction and loyalty performance.
Lopez-Miguens and Vazquez (2017)	Survey-based quantitative research	Snowball sampling, failure to consider demographic and psychographic factors. Although the developed scales are timeless, the age of the data can lead to some of the results of the model to explain e-loyalty not reflecting the current situation, and the proposed relationships have different intensities.
Safa and Ismail (2013)	Customer factors, organizational factors and technological factors	Generalization of the findings is identified as a weakness, but rather than one that is specific to this particular research, it is a weakness often associated with quantitative studies. Non-complete random sampling was applied for data collection because of the restrictions concerning access to online customers in the research environment.

Table 3 Methodology in e-loyalty research

2.10 Literature gap

2.10.1 Accounting for customer demographics

It can be seen that the literature addressing the determining factors of customer loyalty is extensive and diverse (Kandampully et al., 2015) and in many domains empirical research has provided conflicting results. On the one hand, the inconsistent results reflect the cultural, as well as demographic (e.g. age, gender, income, educational background, etc.) and psychographic (e.g. taste, personality, interest, value, etc.) differences between the populations under research. On the other, it points out great variations of the set of variables taken into account, and the type of product or service being studied. The nature of e-commerce makes it more complicated, because it bears the characteristics of not only retailing but also a wide variety of product types. Therefore, there has never been a satisfactory account of e-loyalty in the e-commerce context.

As pointed out earlier, the reality in this industry highlights the consideration of customer heterogeneity, which most research has failed to thoroughly consider. Despite the large volume of empirical studies, it can be seen that there is hardly any work that gives reference to all possible moderators related to customer heterogeneity. In fact, recent research (e.g. Fuentes-Blasco et al., 2014; Hair et al., 2016) has pointed out that the use of an aggregated market perspective can induce unrealistic analyses, errors, and inconsistencies in the estimated parameters. Therefore, the essence of moderators related to customer characteristics has received increasing spotlight in recent years since researchers have started to recognise the flaws in the traditional aggregated market approach (Floh et al., 2014).

2.10.2 Vietnam

Since the 2010s, Vietnam's online business has emerged as a new interest in the academic realm. There have been a number of published journals, albeit humble, on customer behaviour in various domains. The most explored markets so far are e-banking and e-tourism. Researchers have attempted to explain the Vietnamese' consumption behaviour including loyalty using a wide variety of theoretical frameworks. For example, Liem and Le (2011) adopted the six-factor model from Sin (2005, cited in Le et al., 2017), which consists of trust, shared value, communication, empathy and reciprocity, to explain customer loyalty.

A research entitled *'How store service quality affects attitude toward store brands in emerging countries: Effects of brand cues and the cultural context'*, by Diallo and Seck (2017) addresses the cultural impact in the relationship between service quality and customer attitude towards brand, using two emerging e-commerce markets (Brazil and Vietnam). In the research, it was pointed out that the strength of brand identity mediates the impacts of service quality aspects such as ambiance, customer service, and responsiveness towards brand perception. In both markets, perceived price value is found to have an important role, while perceived risk is found to be a non-significant variable. Notably, the effects of the service quality elements are stronger in the Brazilian market than in Vietnam. Overall, the research shows that the two markets demonstrate certain similarities in their purchase behaviour. In other academic attempts, Vietnam is often grouped with other Southeast Asian countries, but no significant academic efforts are found.

In a rare attempt on e-retailing, Choi and Mai (2018) employed the SERVQUAL factors in justifying loyal behaviour in B2C e-commerce, using trust as a moderator, and found that trust serves a significant moderating role and all factors except for convenience are related to customers' intention to repurchase. It was also revealed that concerns about product quality and security are the biggest setbacks that reduce the motivation to adopt e-commerce among Vietnamese customers, which is consistent with its conservative culture and risk-averse attitude. This research focuses on the moderating effect of trust in bridging service quality with loyal behaviour where no other antecedents of loyalty were included apart from service quality. However, it provided good insight given the limited number of empirical research on the Vietnam e-commerce market. The empirical model is also relatively fit as the five elements of service quality account for 71% of total fluctuations in customer loyalty. However, its failure to address customer profiles and other facets of loyalty suggests that further attempts could produce a model that more adequately accounts for e-loyalty in Vietnam.

3. PRELIMINARY INTERVIEW

As aforementioned, the research adopts the quantitative approach to examine the research hypotheses. However, with this kind of topic which relates to human behavioural expressions, it requires a deeper reflection in interpretation of findings. It is recognized that, in this arrangement, the depth of reflections hardly rely on the quality of what being asked or what being collected from practical evidence. As the choice, primary data is the main source of empirical findings; hence, acquiring qualified data with the capability of illustrating multi-dimensional thoughts of customers becomes the key for research value. Drilling back the process of acquiring data, more than just a survey, other means of data collection could be utilized to create a diverse batch of data. In fact, there are many studies confirming the suitability of using qualitative method to explain human behavioural topics in social sciences with purposive sampling, and interviews (Dudwick, et al., 2006; Gopaldas, 2016; Mohajan, 2018). By means of exploring attitudes and emotions of mass population toward the shopping via e-commerce platforms, qualitative method deems to provide in-depth reflection (Tong, et al., 2012). Yet, the process of conducting qualitative-based researches is not straightforward and requires a large degree of individual interpretation and sense of experiences to conclude findings (Mohajan, 2018). Although the researcher is one of the customers of e-commerce platforms, the ability of generalizing findings above individual thoughts and behaviours of several other customers is probably over the head. Involving that constraint, the consideration of how to adopt the quantitative method to explain behavioural expressions arises. Definitely, the adoption of quantitative method in human behaviour-related researches has certain problems; and that asks for the greater cautiousness in designing suitable paradigms and composing questions to facilitate the quality of statistical data analysis procedures (Toomela, 2010). Furthermore, depending on the purpose of researching, the use of quantitative method is inevitable in describing human behaviours. For example, it is necessary to forecast behavioural expressions of people in a specific environment and particular actions. It is the quantitative description of human behaviour by using quantifiable and measurable factors (Peng, et al., 2012). Or in the concern of customer loyalty in e-commerce environment, loyalty either attitudinal or behavioural is the reflection of customers' behaviour when deciding the purchase, buying, consuming, and experiencing the products/ services by their specific conditions and expectations. Since the population of the research addresses the behavioural expression of the mass population, it is not feasible to use critical reflections of one or fifty single cases in order to conduct the generalization of findings. But it may involve the forecast of causal links from the empirical evidence of links between variables within the selected sample size. In other words, quantitative method could simulate attitudinal and behavioural loyalty of customers using practical findings-based evidence.

Additionally, considering the limitations of quantitative approach (as discussed in Chapter 2), 'without backup by preliminary qualitative research' can cause issues and gaps in quality of data acquired via the questionnaire-based survey. Therefore, it is thoughtfully that one add-ins step should be supplemented into the process to deal with that limitation. The involvement of preliminary interviews and focus groups is not with the purpose of verifying the findings of the whole research. It means the results in this stage do not affect the ending conclusion which is directed by the quantitative method in analysis. The use of preliminary reviews and focus groups is to verify the knowledge of customer loyalty and its determinants in the empirical setting of this study through the process of transferring the theoretical knowledge (achieved from the results of systematic literature review in Chapter 2) into the practical context of the e-commerce retailing in the Vietnam market. This is the step to ensure the validity and robustness of questions being composed in the questionnaire, which is very important in using the quantitative method to measure human behaviour topics as aforementioned. The combination of theoretical findings (chapter 2) and results of preliminary interviews (chapter 3) can balance the theoretical and practical meanings of questions measuring variables in the conceptual research model. Moreover, the results of this preliminary interview enrich the practical understanding of the researcher about the real happening of customer loyalty phenomenon within the scope of this study. Another usefulness of this step is related to the deeper analysis of quantitative findings for enhancing the quality and applicability of research recommendations.

3.1 Overview

Interview, a research instrument popular in qualitative studies, is defined as a form of human-to-human communication that serves a designated purpose, which is often associated with a subject matter (Anderson, 1990). In academic research, interviews are used to gather information from a targeted group of an audience, in which the information should be relevant to the subject of the research and helps contribute to solving research questions or explore new matters (Cohen & Manion, 2007). Compared to other forms of methodological choices such as questionnaires, experiments, or observations, interviews provide rich, in-depth information of the human feelings thus enabling more precise judgment regarding the psychological aspect in social research. As Wisker (2001, cited in Dilshad & Latif, 2013) suggested, interviews are preferable in exploring people's emotions, attitudes, perceptions, insider experiences, and sensitive issues.

Thus, a preliminary interview was included in this research for the stated purpose. A preliminary interview enabled the researcher to discuss the subject matter with the targeted audience without being bound by a framework. The decision to include a preliminary interview was also inspired by the possibility that using quantitative methods alone may distort the research findings due to its lack of competence in displaying emotions and attitudes. It was also thought to be useful in confirming the factors that had been mentioned in the literature with a pool of real audience. The researcher believes that the inclusion of preliminary research is necessary to cope with a population that contains such dynamics and unpredictability that past research in its regard might quickly become outdated, let alone the fact that such academic evidence is also hard to find.

The preliminary interview is linked to focus group activity, which means grouping individuals of certain characteristics and having them discuss a given subject (Anderson, 1990). As suggested by Denscombe (2007), the ideal size of a focus group is between six and nine members, in which the members are selected by a moderator, preferably trained in their field. Focus group interviews enable researchers to have high quality, in-depth conversation (Patton, 2002) with a relatively homogenous group to explore their viewpoints as well as the viewpoints of the groups that they represent. The literature has pointed out a few opinions supporting the view that a focus group interview is necessary in the context of this research. As Stewart and Shamdasani (1990) explained, focus group interviews are the most valuable when the subject of research is relatively novel to the researcher. The focus group method also allows the researcher to find out about the reasons behind people's thought patterns (Kitzinger, 1995). In Morgan's (1997), the author recommended that the focus group method only be applied when the participants feel motivated to actively contribute to the topic of discussion.

3.2 Selection of the focus groups

As regards the characteristics of the participants, generally it is believed that participants may share some common characteristics so that interaction may reach an optimum level and situations may be avoided where individuals dominate or withdraw. However, there is division of opinion among the experts on whether homogeneous or heterogeneous groups best serve the purpose of the focus group interview. Some authors (e.g. Morgan, 1997) argue that if the subjects belong to the same societal and cultural background e.g., age, sex, religion, socioeconomic background, occupation, educational background, ethnicity etc., it will ensure free flowing, open and sincere discussion among the participants. On the other hand, some authors (e.g. Anderson, 1990) are of the view that heterogeneous composition of the group works in a more favourable way.

With little variation, many authors (Anderson, 1990; Denscombe, 2007; Morgan, 1997; Patton, 2002; Stewart & Shamdasani, 1990) suggest that the size of the focus group should range from six (6) to twelve (12) participants. It is argued that if number is less than six, it is difficult to provide the synergy required. The information gained may not be rich and sufficiently adequate, and one or two people may attempt to control the conversation. On the other hand, a group with more than twelve participants are practically difficult to manage. In this research, six members were included for two (2) separate focus group interviews, one of which consisted of casual online shoppers, the other consisted of online shopping enthusiasts. In both focus group interviews, genders (M/F), age, income groups and the level of internet proficiency were mixed.

Like other qualitative techniques, the members of the focus group are not selected randomly. Rather a purposive sampling method is normally used (Morgan, 1997; Patton; 2002). The individuals who suit the subject under study are selected by the researcher. It is believed that the purposive sampling helps the researcher find the information-rich cases, which may best produce the required data.

The members are focused on the following questions: (1) Describe your most recent purchase experience with an e-commerce website, (2) How was your level of satisfaction, (3) To what extent are you willing to share your shopping experience and recommend the website to your social circle? and (4) To what extent are you driven to make another purchase from the same website?

3.3 Findings

Gen	Age	Marital status	Income per month	Internet literacy	Purchase experience	Satisfaction	Intention to spread WOM	Intention to repurchase
F	26	Unmarried	$500	High	"I don't often shop on e-commerce websites because I don't really know the sellers. I prefer buying from *daigous*, who are often my friends. I only buy books on Tiki because I don't see that fake books can harm us, and I trust that Tiki offers high-quality books."	"I am **satisfied** with my purchases from Tiki mostly because there is probably nothing to complain about books. Clothes may come in the wrong size, but you can't get books wrong. So, I'm not impressed, but I'm satisfied."	"Yes, I am **willing to recommend** Tiki to book buyers. Their **prices are competitive** thanks to bulk trading; their **packaging is reliable**; and Tiki always comes with many **discount promotions**. I guess it is simply the best place to buy books in Hanoi."	"Certainly. I have been buying books from Tiki for years and I will continue. Personally, I feel sorry for smaller book dealers but it's just natural that customers would go for the **cheaper options**."
F	31	Married without children	$600	Moderate	"I remember always being satisfied when I shop with Tiki. That's probably because I had terrible	"Tiki has quite a good selection of products and their service is reliable. Most importantly, the	"I don't exactly recommend Tiki to my family and friends, but I'll tell upon asked. **I don't**	"I intend to purchase from Tiki again because I don't find a reason not to. I'm satisfied with the **quality**

					experience with Shopee. The quality standard in Shopee is too low to be tolerated. I never had any bad purchase with Tiki, on the other hand."	products showed up precisely how I had imagined them to be, unlike Shopee. I still resent Shopee so much."	**really spread negative comment** about Shopee, either, even though I had very bad experience with them. I have a **high self-esteem and sense of privacy**; I don't let people know about my feelings easily."	of the **website**, and they seem to have a **good standing**. The **options are more diverse** than supermarkets and **prices are competitive**. Nevertheless, I don't think it can replace traditional supermarket even in the far future.
M	24	Unmarried	$300	Moderate	"I bought a pair of shoes from Sendo. I wasn't exactly satisfied. No, I wouldn't say that but I probably should blame my unreasonably high expectations."	"My shoes came less shiny than I had imagined, but I guess that's how online shopping feels like. I don't blame the website for making the product look attractive."	"I had a somewhat **negative** experience but I don't feel that I had to make a fuss about it. I **don't really use social media** so I didn't share it openly and I don't intend to even if I were more active on social media."	"I still intend to purchase again with Sendo. I think they have relatively **good prices** compared to Tiki, while their **service is clearly more tolerable** than Shopee. Clothing can be a little misleading by the photos, but I don't think I can go wrong with

								home appliances or stationeries."
M	31	Unmarried	$1,200	Moderate	"I was nowhere near satisfied with the rug I bought from Sendo. It came in a unique style that I could not find anywhere near Hanoi. I was thinking of buying from *daigous* when I suddenly came across Sendo's display ad. However, the real product was just disappointing especially for its price."	"I think e-commerce companies need better quality control. Sendo has quite a great website, which I know well from my marketing-expert perspective, but they might have problems monitoring their vendors."	"I surely **left a review** on the platform to inform other Sendo users. However, I still recommend Sendo to those who look for **economical choices of products and don't mind shopping without a physical store**. Yes, that's right. I had a bad experience but I still recommend the platform though."	"I am quite attached to Sendo because of the **redemption points**. I don't see much difference between Tiki and Sendo in terms of **product assortment and quality**, so I choose to stick to Sendo. I'm **not a big shopper myself**, so I'm not really picky about where to shop for daily goods."
F	39	Married with children	$1,500	Low	"I mostly buy from *daigous* because I know about the sellers via their online identities. I purchased once from Tiki,	"I was satisfied as I knew the **(vendor) brand** quite well and Tiki **prices** were better than direct	"I **would share if asked**, but I don't feel attached enough to recommend the platform to my family and friends. My purchase	"I have no problem with purchasing with Tiki again, but only when it is giving **promotions**, or an **ad** catches my eye, *or* my

					though. It was a set of tumblers and kitchenware of a renowned brand to which Tiki was an authorised reseller. The set came with a good discount and that's it."	purchases' prices. The **shipping** was on time."	experience has only been limited."	favourite brand is giving promotions again. I am not particularly attached to online shopping, either."
F	32	Married with children	$2,000	Moderate	"I am a *daigou* seller. I have a store set up on Shopee to take advantage of its free-shipping policy. As a customer, I have never bought from Shopee, though."	"I purchased some house appliances from Tiki and I was **satisfied**. I only buy goods that I cannot buy on my own from my *daigou* channels."	"I **recommend** Shopee to my customers"	

Table 4 Focus group 1 - Casual online shoppers

It can be seen that casual online shoppers mention various reasons for their level of satisfaction, intention to spread WOM and intention to repurchase. All six respondents mention price competitiveness as a driver for purchase decisions, satisfaction and loyalty regardless of income level. As expected, the respondents in Focus group 1 mentioned the factors included in the model as drivers of satisfaction and behavioural loyalty. On the other hand, there is no indicator of attitudinal loyal behaviour among these casual shoppers, which can be linked to their lack of experience and casual attitude towards e-commerce shopping overall. Regarding the intention to spread WOM, such motivation not only varies among gender, age, internet proficiency, income level, and level of satisfaction but also can be linked to personality and pattern of social media use. In short, determining the factors affecting customers' willingness to spread WOM might be complicated.

The casual shoppers demonstrate a juggling shopping pattern between e-commerce websites and *'daigou'*. *Daigou* is a controversial business model originated from China, which refers to the flux of individuals buying goods overseas to resell in China using their duty-free allowance. *Daigou* literally translates to 'buying on behalf'. Due to the lack of regulations, both Chinese and Vietnamese daigous have had a convenient time making gains from this questionable business activity. Their main distribution is social media platforms such as Weibo and WeChat in China, and Facebook and Instagram in Vietnam. Many Vietnamese *daigous* have established a sub-selling channel via Shopee to take advantage of Shopee's favourable seller policy. However, the pattern among casual shoppers still suggests that the buyers tend to compare between e-commerce websites and *daigous*.

It is clear that loyal behaviour among casual shoppers of e-commerce is a complicated matter. The focus group customers demonstrate high flexibility and low attachment to a single shopping paradigm, and consider prices and product characteristics carefully before making purchase decisions. Despite not being mentioned, traditional shopping in physical supermarkets and stores may also contribute to their daily shopping portfolio. However, both traditional and online forms of shopping should not be viewed as separate channels. As learnt from the interviews, many *daigous* distribute their goods on e-commerce websites, especially Shopee. Some reputable brands, on the other hand, prefer to cooperate with Tiki and Lazada compared to Sendo or Shopee. However, the interview might suggest that loyalty to the *daigous*, or the pre-known brands, does not always transfer to loyal behaviour towards the e-commerce platforms. Continuous purchases of a pre-known brand on an e-commerce platform seems to only last if the e-commerce provider continues to offer price discounts or other monetary benefits. Also, there is no signal indicating the buyer is likely to continue to explore the platform following their purchase of the pre-known product.

> *"I purchased once from Tiki, though. It was a set of tumblers and kitchenware of a renowned brand to which Tiki was an authorised reseller. The set came with a good discount and that's it."*

However, some patterns of loyalty are suggested in particular lines of goods. For example, some buyers express both attitudinal and behavioural loyalty towards book buying on Tiki, as well as several other goods that are deemed to be "not able to go wrong" such as kitchenware, home décor or work stationery. Together with the competing forces of *daigous* and traditional shopping, this is expected to complicate the research.

There also appears to be a significant pattern related to the diversity of competition, which agrees to studies by Patterson and Smith (2003), Rust and Kannan (2003). The fact that Shopee pursues a stronger price competitiveness approach compared to Sendo, Tiki and Lazada suggests that a dichotomy might exist among customers. In other words, price-oriented customers tend to be more loyal to Shopee, while quality-oriented customers tend to be more loyal to Tiki and Lazada. However, it is uncertain from the interview whether the existence of an “unbearable quality” competitor (i.e. Shopee) benefits the high-tier brands including Tiki and Lazada or the mid-tier brand such as Sendo, or either. It is evident from the interview that the customer chooses the option in the middle (i.e. Sendo), which is cheaper than the high-quality brand and better than the cheap brand. However, such behaviour suggests that the customer does not always rule out the *price* factor when making purchase decisions, and the loyal behaviour towards Sendo, in this case, proves to be fragile.

Gen	Age	Marital status	Income per month	Internet literacy	Purchase experience	Satisfaction	Intention to spread WOM	Intention to repurchase
M	35	Married without children	$3,000	High	Buying from eCommerce websites is always cheaper, so I don't find any reason not to. I buy most of my necessities online and I often buy in bulks. Every now and then, my wife and I browse Tiki and buy everything we need for the week, all at once.	I find buying from Tiki very convenient. I have Tiki app on my iPhone, which runs fine. The app comes with abundant discounts and promotion programs which connect to the card providers and so on.	I **have recommended** Tiki to my parents and my brother's family. I find my shopping habit suitable with 9-to-5 workers' daily routine, so I also tend to talk about it with my friends and colleagues.	This is not a question. I have **established** that this is how my family shop; and we don't put much thought to it any more.
F	22	Unmarried	$500	High	I browse the products I need from Shopee and buy them.	I'd rather not say I am satisfied with Shopee or not. I have other focuses in my life rather than being picky about daily	I recommend Shopee with my friends so we can **bulk-buy** together and share the benefits. So far, my roommates and I have	You can phrase it as my **loyalty** towards Shopee, but I highly **doubt** I will be staying with Shopee once my income increases

						necessities. Shopee is not the best, but I'd say it's better than people's belief.	been shopping on Shopee mostly.	and I move on with my own family in the future.
M	24	Unmarried	$1,200	High	I work in digital marketing and I am very high-tech myself. My job is quite demanding and exhausting; it spares me no time to shop for groceries. With all that combined, online shopping is a perfect choice for me.	I am overall satisfied with Lazada. It has the best **diversity** and some good **corporation with well-known brands** especially in-home appliances and kitchenware.	I **talk** about Lazada to my family and friends, but mostly because I work in digital marketing. I am more on the extroverted side and I share my opinions often on Facebook.	It's foreseeable that I will continue buying from Lazada due to my busy schedule. I also don't have any intention of switching to Tiki or Sendo. I always buy from some certain 'shops' on Lazada; it needs time to build **trust**.
F	49	Married with children	$1,000	Moderate	I don't often buy from eCommerce websites. Instead, I am a patron of Vinmart online supermarket. I'm a casual buyer from Tiki when they have promotions. My daughter processes all the	Sometimes my daughter criticises me for buying from unknown dealers (i.e. Tiki dealers). From my personal point of view, however, I never had bad experience with Tiki. They look reliable, quality-wise.	I am **not that attached** to Tiki to spread WOM about it.	There is one thing I know for sure: I will continue buying from Vinmart online. I am only a casual buyer from Tiki, not to mention I was first drawn to it by a mobile game **ad**. Honestly, I don't think I

					payment for me so it's not a problem.			can decide my own future behaviour.
M	34	Married with children	$3,000	Low	"My family choose to shop online for snacks, dried foods, books, stationeries for my kids, electronic products, kitchenware and simple house décor. Both my wife and I are quite busy at work so we go for Tiki and Lazada. We have no attachment to either of these websites. When we have needs, we search for the products in both and consider the options in hand."	"I am satisfied with both Tiki and Lazada, which explains why I continue to be loyal to online shopping. They're quite **popular** shopping platforms; and their on-site **reviews seem reliable**. Their **services are apparently professional**. Email marketing is neat, and **customer support seems well-trained**. Overall, I'm satisfied."	"I am willing to recommend Tiki and Lazada to my family and friends. I genuinely have **good experience** shopping with them."	"I still compare prices between vendors while making purchase decisions. I don't think having a good earning means we can shop regardless of prices. I consider that reckless buying behaviour plain unwise. No matter how petty the product is, I only buy it if it is **worth the price**."

Table 5 Focus group 2 - Online shopping enthusiasts

Compared to the casual shoppers, the high-concentration groups express stronger loyalty towards e-commerce shopping (see Table 5), in which some of the interviewees express undeniable loyalty to a single website. However, the latter pattern does not always hold. Since many intense online shoppers tend to be frequent and proficient internet users, thus comfortable using the internet for shopping purposes, it is safe to say they are more informed of the available options and likely to find switching brands less burdensome. Many display loyal behaviour out of ‘habit’ and ‘convenience’, which is often referred to in the literature as *inertia* or *spurious loyalty*. Inertia loyalty describes a weak form of loyalty that is triggered by convenience rather than ‘true’ attachment to the product or brand. One of the interviewees posits that:

> *“You can phrase it as my loyalty towards Shopee, but I highly doubt I will be staying with Shopee once my income increases and I move on with my own family in the future.”*

It can be seen that his attachment towards Shopee can be easily broken once other websites succeed in taking away Shopee’s price competitive advantage.

The tendency to share their experience and recommend the platform to others appears to be higher compared to their casual shopper counterparts. They seem to have firm beliefs about their choice of shopping, or hardly invest resources into choosing where to shop, hence the loyalty. There is also some evidence about the relationship between personality and tendency to share information. Respondents that identify themselves as ‘extroverted’ are more likely to be vocal about their shopping experience regardless of it being good or bad. Also, people who are professionally related to online businesses seem to be more supportive of e-commerce shopping.

There is also a lack of hints at the correlation between age, gender and income towards behavioural loyalty. The literature has provided certain evidence supporting older customers’ tendency to be less experimental (Wood, 2004; Patterson, 2007), resist change and stay with their first choices especially when it comes to online shopping (Yoon & Cole, 2008; Patterson, 2007). Older people are assumed to be less proficient in using the internet, let alone the fact that they are less motivated to improve their proficiency (Im et al., 2003). However, these studies are only relevant to this study to a certain extent. First, the age range of the targeted population in this study is 18-49, in which 49 does not always indicate lack of dynamic behaviour. Also, there is evidence that older people in the focus group interviews appear to be more concerned about prices and choices of products than younger people. Therefore, it is still open to question which characteristics are dominant among the many characteristics that constitute a single buyer. For example, when age dominates price sensitivity, older customers are seen to be more lethargic in terms of switching brands. However, when prices, price discounts and loyalty programs are perceived as more important, age matters less to loyal behaviour.

In both groups, WOM intention also proves to be a complicated subject. Most of them express their willingness to make positive comments about the platform passively, but do not demonstrate an intention to share their experience at their own initiative.

However, it seems that factors determining loyal behaviour have been well captured in the literature. The research model and hypotheses are explained in the next chapter.

4. RESEARCH MODEL AND HYPOTHESES

Based on the arguments in the literature and information in the focus group interviews, the author arrives at the conceptual model as in Figure 20. In this research, the composite concept of customer loyalty is built upon both attitudinal and behavioural loyalty in line with the classic theories of Day (1969) and Jacoby & Chestnut (1978), and many other empirical works on the subject. Attitudinal loyalty denotes customers' positive affection towards the service provider, which includes the feeling of special attachment, intention to spread positive WOM (Kumari & Patyal, 2017; Wang et al., 2018) while behavioural loyalty refers to their intention to make a repurchase from the website (Wang et al., 2018), or in other words, contribute to the revenue stream of the e-vendor again. According to many authors, both attitudinal and behavioural loyalty are important to conclude on loyal behaviour of consumers.

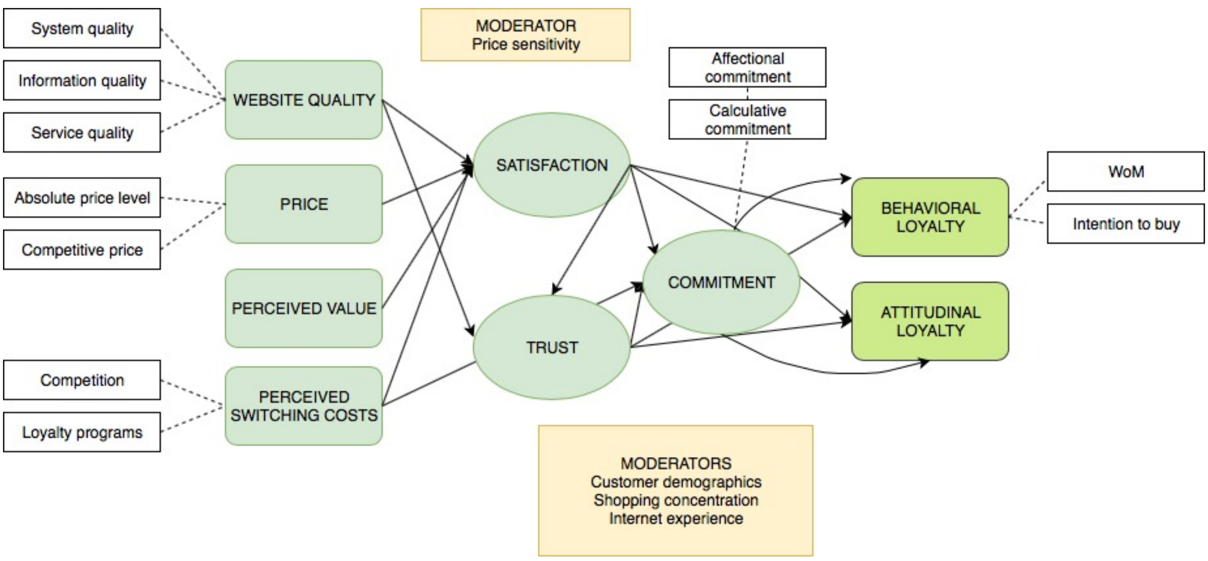


Figure 19 Research model

The antecedents of customer loyalty identified in this research are customer satisfaction, customer trust and customer commitment. The research model reflects the interactive relationships between these three variables, in line with work by Shin et al. (2013), Li et al.

(2006) and several other authors. To be specific, satisfaction is believed to motivate trust and commitment (Shin et al., 2013), while trust is also proven to be a driving force of customer commitment (Gounaris, 2005; Eastlick et al., 2006; Shin et al., 2013). Similar to the theoretical framework set forth by Shin et al. (2013), commitment is considered the highest level of customer engagement, and a direct antecedent of customers' attitudinal and behavioural loyalty (Cater & Zabkar, 2008; Dagger et al., 2011). However, the research also considers the direct impact of customer satisfaction and trust on customer loyalty. Therefore, the research introduces the following hypotheses:

Customer satisfaction:

H1a: Customer satisfaction has a positive effect on customer trust

H1b: Customer satisfaction has a positive effect on customer commitment

H1c: Customer satisfaction has a positive effect on customer loyalty

Customer trust:

H2a: Customer trust has a positive effect on customer commitment

H2b: Customer trust has a positive effect on customer loyalty

Customer commitment:

H3a: Customer commitment has a positive effect on customer loyalty

The determinants of customer loyalty identified via the review of literature above are website quality, perceived price value (or perceived value), and perceived switching costs. Website characteristics are evidenced to have important implications to customer satisfaction, customer trust and customer loyalty. Website quality in this research is evaluated with DeLone &

McLean's ISS model (1992, 2004) via three sub-dimensions: information quality, system quality, and service quality. The DeLone & McLean model captures most utilitarian and hedonic values of an e-commerce website including considerations for convenience, product offering, informational effectiveness, security and service recovery as discussed in the literature review. In the empirical domain, the ISS model by DeLone & McLean remains one of the most popular frameworks. Several works that employ the ISS include Homsud & Chaveesuk (2014) and Hsu et al. (2014). Thus, the research gives rise to the following hypotheses:

H4a: Website quality has a positive effect on customer satisfaction

H4b: Website quality has a positive effect on customer trust

H4c: Website quality has a positive effect on customer loyalty

Price and perceived value are both determinants of customer loyalty, although the former did not receive unanimous recognition from empirical researchers (Jiang & Rosenbloom, 2005; Valvi & West, 2013). Price level, or relative price perception is named as a determinant of customer loyalty (Swaid & Wigand, 2009; Chiang & Dholakia, 2003; Chiou et al., 2010). Despite weak linkage, low price is added to the research model as it is mentioned by practitioners as one of the main motives for Vietnamese people to adopt e-commerce. In evaluating the impact of price on customer loyalty, price sensitivity is taken as an important moderator, as the impacts of low price and perceived price value are more remarkable for highly price-sensitive populations (Graciola et al., 2018). Perceived price value, on the contrary, is widely recognised as an important determinant of customer loyalty (Lewis & Soureli, 2006; Chen & Cheng, 2012; Picon-Berjoyo et al., 2016). The research hence comes up with the following hypotheses:

Price:

H5a: Price has a positive effect on customer satisfaction

H5b: Price has a positive effect on customer loyalty

Perceived value:

H6a: Perceived value has a positive effect on customer satisfaction

H6b: Perceived value has a positive effect on customer loyalty

Finally, perceived switching cost is a recently recognised subject in e-loyalty literature (Lam et al., 2004; Yang & Peterson, 2004; Wang, 2010), although the findings suggest contradictory results (Jones et al., 2000; Burnham et al., 2003; Patterson & Smith, 2003). The lack of consensus in PSC literature in relation to e-loyalty is down to the variation in choice of proxies. In this research, PSC concentrates on the two proxies that are widely viewed as having significant impact on customer loyalty which are attractiveness of competitors and loyalty programs. The attractiveness of parallel brands negatively affects customer loyalty (Hirschman, 1970; Ping, 1993; Rusbult et al., 1982), or increases the probability of switching (Bendapudi & Berry, 1997; Jones et al., 2000; Sharma & Patterson, 2000). The hypotheses are as below:

H7a: Perceived switching cost has a positive effect on customer satisfaction.

H7b: Perceived switching cost has a positive effect on customer commitment.

H7d: Perceived switching cost has a positive effect on customer loyalty.

Mediated effects:

H8a: The relationship between website quality and customer loyalty is mediated by customer satisfaction.

H8b: The relationship between website quality and customer loyalty is mediated by customer trust.

H8c: The relationship between price and customer loyalty is mediated by customer satisfaction.

H8d: The relationship between price and customer loyalty is mediated by customer trust.

H8e: The relationship between perceived price value and customer loyalty is mediated by customer satisfaction.

H8f: The relationship between perceived price value and customer loyalty is mediated by customer trust.

H8g: The relationship between perceived switching costs and customer loyalty is mediated by customer satisfaction.

H8h: The relationship between perceived switching costs and customer loyalty is mediated by customer trust.

In order to re-define constructs in the research model and establish their measurements, it is necessary to review the empirical findings for the preliminary interview. There are critical inputs to build up the construct and measurements of variables in the conceptual framework. It is noted that those inputs do not aim to change the research model, but to verify and plan the suitable measurements of each variable to match with the perception of local people. Firstly, like consumption behaviours in other contexts, Vietnamese people also declare the complicatedness of behavioural expression in online purchasing; but price competitiveness is confirmed as the drive of purchase decision, satisfaction, and loyalty. This reflects the nature of Vietnamese people's affordability and implies the impact of household incomes in the spending decision and people's judgments toward service quality and shopping experience. Lower price compared platforms (toward pre-branded products) such as discounts, free delivery coupon, absolute price reduction, etc. are significant factors for the continuous purchases of products, including pre-branded or unbranded ones. Secondly, consumption behaviours of causal e-commerce shoppers are more complex than ones of e-commerce enthusiasts. Causal shoppers show lack indicators of attitudinal loyalty and preference of comparing e-commerce website and daigou. However, it is the point that some daigou retailers also open their e-commerce stores on popular platforms such as Shopee or Tiki in Vietnam. Thirdly, loyalty is different from lines of goods. For example, Tiki is the only platform that has trust from customers by their demands of buying books. Such, it is the point that regardless of types of e-shoppers, customer loyalty may be directed to specific products lines, or particular online shoppers in the ecommerce page rather than toward the e-commerce platforms. Interesting, there would be the inference that price-oriented customers may prefer Shopee whilst quality-oriented ones might show a strong sense of loyalty toward Tiki and Lazada. This suggests the frailness of behavioural expressions of Vietnamese e-commerce customers. Fourthly, intention to spread WOM and intention to repurchase are also diverse among two groups of causal online shoppers and e-commerce enthusiasts. While some are willing to leave comments in platforms, others are not comfortable to do so. Most of them will share their experience only with families or friends, or when they are truly satisfied with some purchases. The rate of intention to spread WOM is higher among e-commerce enthusiasts than causal ones. Further, the repurchase intention at a specific platform is declared by both groups provided that they have positive shopping experience with the platform. An interesting finding is that, some show their loyalty to the nature of 'shopping online' and among available platforms in the market, they have to select one that best adapt their demands for shopping. In short, there are two distinct groups of key drivers in deciding which e-commerce platforms to use: price and quality. If price and price competitiveness could be generally explained their impacts, the question of which levels of quality or kinds of quality they prefer is unanswered thoroughly be the empirical findings.

Coupling the above understandings into the list of the constructs in the research model, the measurements are defined by the mixture of guidance from the theoretical background and practical intentions of the focus groups.

Loyalty is defined by attitudinal and behaviour loyalty. The former focuses on psychological reflections of positive or negative feelings and judgments toward the shopping experience, and the latter is illustrated by particular actions in the post-consumption phase. Since the attitudinal loyalty is embedded by abstract reflections of individual feelings, there is not a quantitative measurement to it, except the general comment on the positive feelings by customers when shopping with a particular platform. Such, the measurement of this construct follows what has been defined by Bilton (2016). Meanwhile, there are two groups of quantitative measurements of behavioural loyalty that are confirmed theoretically and empirically: intention to spread WOM and intention to repurchase.

Measurements		**Verification**
Intention to spread WOM	Say positive things within the circle of acquaintances as families or friends	Theoretical guidance and empirical finding
	Give reviews/ recommendations on e-commerce platforms	Theoretical guidance, confirmed by empirical findings

Intention to repurchase	Intention to revisit the platform	Theoretical guidance confirmed by empirical findings. Price competitiveness takes a role affecting preferences of people, especially causal e-commerce shoppers.
	Intention to make other purchases with the platform	
	Prefer to shop with current websites, even similar products are available in other platforms	
	Voluntary decision to shop with the platform, without influences of drivers or incentives	

Satisfaction is, theoretically, the antecedents of loyalty. In fact, since the questions of the interview focuses on the expression of satisfaction from the angle of personal feelings. It means there is not involved technical features of website quality or matters in relevance. Such, the measurement of satisfaction comes directly to the question of whether they are satisfied with or without the e-commerce platforms they are shopping: self-assessing if they have made the right choice (Chiou & Droge, 2006), and judging the service quality (Chinomona and Sandara, 2013). The intention is to use quantitative research to validate the links of explanatory variables and satisfaction in a scientifically statistical reflection.

Trust, similar to satisfaction, is the antecedent of loyalty. Indeed, there are not much feelings or insights to be shown in the preliminary interview, except the determination of people in continuing to shop with their current shopping platforms. Thus, the measurement of trust copies the discussion of Oliveira, et al. (2017). The similar argument in measuring customer commitment is perceived with affective commitment and calculative commitment by Jones, et al. (2007).

Apart from the above, there are not significant adjustments on measurements of explanatory variables since this content is not covered in the interview. It is the intentional choice as the main purpose of interview is to explore the psychological thinking of shoppers rather than verifying what have been found in the theoretical part. Accordingly, the measurement of this group follows discussions of Alba & Hutchinson (1997); Blake & Neuendorf (2003); Bruner & Kumar (2000); DeLone & McLean (1992; 2004); Gefen (2002); Goldsmith and Litvin (1999); Graciola, et al. (2018); Hirschman (1970); Ping (1993); Rusbult, et al. (1982); and Steyn, et al. (2010).

5. METHODOLOGY

5.1 Introduction

From Chapter 2, we learn about the theories and empirical models used to evaluate customer loyalty, as well as the various methodological approaches employed by scholars to come close to answering the question of what influences customers' tendency to exert emotional attachment and loyal behaviour towards a particular brand or product. At the end of the chapter, 24 hypotheses were introduced, all related to the research questions presented earlier at Chapter 1. This chapter, in turn, will describe the researcher's philosophy, leading to choice of research design, methodological choices, as well as data collection and analysis methods.

5.2 Research paradigm

The meaning of research paradigm has been discussed by a number of scholars in various fields of study. In *'The Structure of Scientific Revolutions'* by Kuhn (1962, cited in Kivunja & Kuyini, 2017), the term *paradigm* was first used to indicate a 'philosophical way of thinking'. In Hussey and Hussey (1977) or MacKenzie and Knipe (2006), research paradigm refers to the researcher's perspective, school of thought or set of beliefs based on which his or her approach to research work and interpretations of data are formed. From then on, the meaning of research paradigm has been widely discussed, (e.g. by Lather, 1986; Guba & Lincoln, 1994 or Denzin & Lincoln, 2000), and the concept itself has garnered attention among scholars across many fields. As Zikmund (2000) argues, since the researcher's philosophical view of the world affects his or her choice of research approach and research design to a large extent, it is often basic that the research paradigm, or philosophy, be first determined, made clear and rationalised.

But it is also important to note that researcher's philosophy, or research paradigm, has a wide hand of influence not only on research design and methodological choices but also the overall theoretical approach and his or her philosophy of data collection, data analysis and data interpretation (Hussey & Hussey, 1997). In short, research paradigm guides the path to the overall approach to the research issue.

Over the years, researchers have settled on a few main research paradigms, namely constructivism, critical theorism, realism and positivism. However, it is noteworthy that it is an unusual for a researcher to be a complete constructivist, or positivist, theorist, or realist. To put it more realistically, a researcher normally demonstrates a tendency to lean towards one philosophy more than the others and hence for him to be classed as one of those types. Given the available research methods used, the researcher would define this work as belonging to the positivist philosophy. The research is not relying on the description and interpretation of observed phenomenon. As such the use of a paradigm involving theory building is not required, excluding constructivism, critical theory and the realist paradigm (Perry et al., 1999).

To put in the practice of the current research, the concern is to understand or capture how customer loyalty is created or influenced in the e-commerce landscape of Vietnam. No matter how much data the one e-commerce operator could collect, the analysis will show the outside-in viewpoint or measure the result of having or not having a sense of loyalty to a specific brand. It would be a situation that even the customers cannot explain why they make that kind of decision at some or other moments. When a problem is recognized and a need is defined, there is a complex matrix of multi-dimensional impacts from different constraints, drivers, motivators, painful creators, and so on. Such, as always confirm, studying human behaviour-related topics faces researches to a huge challenge of acquiring valid data to gut out insights, collecting adequate evidence to produce objective interpretations of findings, achieving rationalization in designing the research method and related methodological perspectives to ensure the consistency of how viewpoints are explained and described. Alleging that the researcher is one of the representatives of the research population, i.e. Vietnam customers who are gradually familiar with e-commerce shopping and increasing the rate of shopping online, it is only possible for the research to contribute a voice into a wide spectrum of attitudinal and behavioural reflections on e-loyalty by the role of a customer. Further, with the knowledge and understanding from reading several related studies and theories, at the ending stage of data analysis, the research could dig deeper into implications and findings from scientific results. However, it must be confirmed that there is no possibility for generalizing an intensive conclusion on determinants of customer e-loyalty from what being analysed from the lens of the researcher. Or in other words, it is critically to have the empirical evidence from ideas of mass population as the main input for comparing with perceptions in the conceptual framework (results of the systematic literature review) and implying meanings of how to manage loyalty determinants to gain a higher rate of e-loyalty or compose a better-suit plan to do so. Using the quality of words through the lens and single viewpoint of the researcher to explain this social phenomenon is absolutely not the wise choice. An interesting point to be considered is related to the choice of positivism or post-positivism, i.e. combining some parts of interpretivist. Coupling with the research objectives and literature gaps of e-commerce in the Vietnam market, it is recognized that the e-commerce picture in Vietnam has not yet completed. Therefore, it requires to re-correct the right understanding on what are truly happening in the market before thinking about further and deeper investigations on behavioural implications. Such, the utilization of a largescale survey to uncover the current social trend of shopping online should be stressed. As the conceptual framework, there are overlapped and connected associations between defined variables. The hypotheses assume their causal links; and that needs practical data from customers' insightful opinions to verify rather than exploring through the underlying meaning of 'words' themselves. Hence, the objectiveness has the high importance in describing the real landscape of e-commerce operations in Vietnam recently. This requirement matches perfectly with the core notion of positivism when its scientific approach means to the objective reflections of social realities (Ryan, 2018).

When reviewing the scientific-technical side of adopting the positivism philosophy, the suitability in choice of this philosophy to pursue in this research is even more rational. Advocates of positivism believe that the world revolves around a series of cause-and-effect relationships, and social phenomena can be explained from a scientific approach just in the same way as, for example, bond price volatility or GDP movements are forecast (Craswell, 2003). In the history of the positivist school of thought, scholars have reached as far as using a statistical approach to explain social phenomena, some of them being quite bizarre, or marginal subject that is often deemed unimportant as a subject of research. One such author is Steven Levitt with his attempt at explaining a drop-in crime in various US cities in the early 1990s, where his hypothetical link between the phenomenon and the legalization of abortion about two decades earlier stirred heated controversy among economists, statisticians and social researchers. Although the positivist approach to social research is no longer novel at this point in time, Levitt's work is a manifestation of out-of-the-box thinking, and attention to detail.

The philosophy behind positivism is the incorporation of an objective procedure that ensures the data interpretation be free from subjectivity or psychological biases (Deshpande, 1983). This can be achieved via a process of forming observation and measurement in order to predict or control the determining forces, then developing hypotheses and have them tested via an objective statistical process. In positivist research, analysis is based on interpretation of usually quantified data (Neuman, 2005), and conclusions are derived from logic and concrete data rather than mere observations, feelings or hunches (Hussey & Hussey, 1997). Neuman (2005) adds that the positivist approach is highly reliable due to the involvement of quantitative data, large-scale surveys and statistics that provide high levels of precision and objectivity.

5.3 Research approach

Positivism guides a researcher in attaining various academic objectives such as modelling a social phenomenon, measuring the correlation between variables, and determining the causal relationships between them (Guba & Lincoln, 1994). Guba and Lincoln (1994) names it a ‘discernible reality’, due to its keen commitment to non-interventional analysis and objectivity. Therefore, there is no surprise that concrete methodological approach using quantitative methods is highly favoured by positivists. Rather than an inductive approach, positivism is also generally associated with a deductive approach, which involves a process of *deducting* hypotheses from a pool of proven theories and principles. In positivist research, the personal influence or emotional intervention of the researcher is minimised (Hussey & Hussey, 1997).

Besides the matching regulation of positivism philosophy with the deduction approach, there are the practical reasons for that choice. Firstly, if viewing the formulated correlations between measuring variables of loyalty determinants and antecedents, it should figure out that the volume of associations may be adjusted by embedding the practical data reflecting the real thoughts of Vietnamese people. Since the conceptual framework is the collective version of related literatures, i.e. it covers all the possible root causes of how people construct their attitudinal and behavioural loyalty with e-commerce platforms. Reminding the ‘freshness’ of the Vietnam e-commerce industry, it should be the case that customers, even them, do not whether they have a sense of loyalty toward the e-commerce platform or toward the habits of shopping online? Thus, before thinking of advancing the topic to another level of depth in exploring human behaviour, it should focus on the confirmation of what are happening by their nature. It is the phase of uncovering the social trend and verifying them with inherent variables in description. Secondly, for the purpose of answering the research gaps, more than describing the social phenomenon, measuring the concept quantitatively enhances the research value. This step figures out the influence level of all the concept and to verify if it is valid in the conceptual framework to address customer e-loyalty. For instance, when customers in developed market confirm the critical interventions of commitment for them to build up the loyalty, the similar conclusion in emerging markets should need further investigating. This verification process is also effective when causal links are measured quantitatively by a large enough sample size. Thirdly, along with the purpose of confirming the meaning of causal links in the conceptual framework, it is to generalize the findings to re-correct the understanding about the Vietnam e-commerce industry at the moment. Deduction is explained as "reasoning from the general to particular" which means that by understanding behaviour of many customers toward the topic, the causal links being confirmed could be adopted for a single case of customer or a group of customers. On other words, this generalization ability provides e-commerce businesses the market intelligence or the knowledge about whom they are serving for. On overall, throughout the process of data analysis, finding conclusion, and implication interpretation, deduction approach highlights the objectiveness of knowledge. This is the fundamental requirement for research values of this study.

In short, the positivist tendency and deductive approach of the research has clearly been shown in the previous chapter, but it is more concretely defined from hereon. The hypothetical-deductive, or simply deductive approach, introduces hypotheses developed from a review of existing literature and empirically verifies them with a view to gaining insights to a service provider-customer relationship from a scientific perspective. An in-depth literature review in the previous chapter has rationalised the development an e-loyalty model with 23 hypotheses based on previous studies. This chapter is responsible for discussing in detail the merits of the quantitative methods, and rationalizing the methodological choices, data collection methods and analysis process.

5.4 Research design

Research design is to show the purpose of the research and the mechanisms that lead to the answering of the research questions (Saunders et al., 2009). The research design chosen will decide the types of findings the empirical data may generate, and what conclusions can be drawn from such findings (Bryman & Bell, 2007). There are generally three main types of research design: explorative, descriptive and explanatory, according to Neuman (2005) and Saunders et al. (2009). Explorative research design refers to the situation when a researcher needs to gain insights into a problem on which he/she has yet to be enlightened. This design is employed when the subject in focus is not a familiar one, which requires the researcher to discover, develop and set groundwork in this new area (Neuman, 2005). Explorative researchers, according to Newman, are often creative, open-minded individuals who are eager for new insights, as well as persistent and dedicated enough to rummage through various sources of information that might be helpful. Descriptive research design, on the contrary, does not involve a new phenomenon (Saunders et al. 2009). This research design is often associated with studies whose purpose is to develop a precise and thorough understanding of a theory, an issue or a problem. In descriptive research, data collection is more systematic and often plays an essential role. Explanatory research design, on the other hand, deals with reasoning and rational attempts to explain a phenomenon. While the former two are more concerned with a final answer, the main essence of explanatory research is revealing why it is what it is.

This study will be most similar to a combination of descriptive and explanatory design. The descriptive design supports the researching intention in observing and measuring the social phenomenon of mass population's using e-commerce shopping as the current social trend. The observation of this social reality is achieved by the description of practical data showing consumption behaviour and habits of customers. More than that, one of the most outstanding features in this research is to examine if different demographic groups show different expressions on e-satisfaction and e-loyalty. Description design could support this aim in identifying related characteristics and categories that may affect the formulation of e-loyalty. For example, whether there is the difference between female and male customers in selecting e-commerce platforms to purchase with; or whether married people with children put the prominence in good bargain when deciding where to purchase. Description design will provide the exact picture of what are happening in the market through the objective lens of customers. It means that the findings are without the manipulation of the researcher. Combining to the explanatory design, it enhances the chance for the topic to be efficiently understood by critical connections and rooted links between variables in the conceptual framework. Although the explanatory does not provide added conclusions that are besides the scope of research hypotheses, it ensures the understanding to be on the right reflection of what have been implied by the data collected. For example, information quality is the predictor of website quality, and this relation will be explained empirically by the data findings rather than by subjective conjectures. It is important to verify and validate causal links in the conceptual framework, in this research by conclusive evidence. The more valid evidence the stronger verification of causal links is confirmed. The challenge in using the descriptive-explanatory design is the threat of theoretical causal links being rejected by practical findings. In this case, the research value could not be achieved, and research objective cannot be answered in the meaningful way. However, this design highlights the reality of the social reality. It means the research addresses a more mature purpose of drawing the understanding about the e-commerce market of Vietnam by its inherent characteristics.

In short, although the research deals with a relatively untouched and dynamic market, explorative research design is out of the question. Compared to explorative design, the said two designs fit better with the aim of the research which is to transpose existing theories and academic findings into a new field. Following a descriptive research design, this paper will, in large part, deal with describing the findings extractable from a set of data, with further explanations about how such findings would *make sense* in the Vietnamese market, and what forms of predictions could be drawn from such findings.

5.5 Research methods

There are two fundamental research methods: *quantitative and qualitative*, both of which are widely employed in consumer behaviour studies and both of which are equally recognised (Neuman, 2005). Qualitative research puts extra weight on quality and social practices and takes into consideration unquantifiable psychological influences such as emotions and attitudes, which according to Bryman (1984) is more flexible and volatile compared to quantitative research. A qualitative approach is more often incorporated in research that aims at discovering new aspects of an existing issue, or unanticipated findings that cannot be fully explained by data. Due to the inclusion of subjective judgment by the research conductor, qualitative methods act mainly as tools for the researcher, or '*actor',* to demonstrate their point of view, hence resulting in biases and subjectivity (Bryman, 1984). Therefore, it requires that the actor be closely engaged in the subject of the research in order for the intended behaviour to be measured.

This does not, however, suggest the total absence of data in qualitative methodology. In this type of research method, data come in the form of explanations, arguments or analysis rather than data and statistics. Rather than providing a description of the status quo, qualitative studies aim at answering the questions of 'Why' and 'How' and examining the mechanism or underlying reasons behind the actual happening of things. The most common research design in qualitative social studies is case study, but other designs can be fitted for different purposes, including interview, grounded theory, storytelling, ethnography, observation or action research (Neuman, 2005).

Contrary to qualitative methodology, quantitative research deals with numbers and figures. It studies the relationships between a set of independent variables and dependent variables within a targeted population using analysis of quantified data. Quantitative research methods are highly associated with a hypothetical-deductive research approach, which involves hypothesis development and empirical testing of data. In quantitative research, a sample of participants from the given population, large enough to provide statistically significant results, is selected. Data is collected through implementing one of a number of survey method options designed to assert minimum influence over the respondent (Neuman, 2005), and conclusions are derived based on statistical analysis of the given data (Zikmund, 1997; Neuman, 2005).

The adoption of quantitative research methods in this study is a manifestation of the researcher's belief in positivist theories and the attachment to objective data analysis procedures in deducing conclusions about the research issue. A positivist would refrain from embedding personal judgment, avoid deducing conclusions that might not be completely free from bias and, in this case, where the researcher happens to have humble exposure to marketing research, this is deemed the more appropriate approach compared to the qualitative methodology. With modest experience in both theoretical and applied consumer behaviour and marketing, the researcher looks to utilise the strength of objective and concrete data in rationalizing his stance and contributing to the literature, through which he hopes to produce more reliable and weighted insights in a most briefed and effective way. Via the massive reliance on quantifiable data, the researcher expects that his findings could be serving a variety of purposes and be of interest to different parties. A concise, objective presentation of data analysis may be more useful to strategists and marketing practitioners from e-commerce businesses, who have little time to dwell on reasons, or a tendency to reject impractical theories and sub-par academic opinions. On the other hand, the construction of the mathematical model, the statistical tools used to break it down, and the associated analysis and reasoning are open to academic discussion. This is to say that by employing quantitative methods, the researcher does not necessarily pursue the simplified and practical pathway over sophisticated reasoning and conceptualization. The construction of a conceptual model, the choice of proxies, the development of questionnaire items, or many other ad-hoc processes in the way, in itself, requires a massive amount of reasoning and critical thought.

Moreover, as the research purpose of descriptive-explanatory design, the breadth of the topic is the goal of examination rather than finding the depth of this social phenomenon. In this stage of the market happening, it is not much meaningful to explore the 'Why' and the 'How' before knowing the 'What". Without the clarification of the attitudinal and behavioural trend of mass population toward their e-loyalty, it is not possible for acquire the right understanding on what are truly happening in the market. Any further considerations should be built on the real reflection of practical picture rather than using a series of assumptions or reference to best practices without re-validation. By focusing on actual data, findings could be inferred and used as the fundamental reference for further discussions. It means the result reflects by the nature the e-commerce context and customer behaviours which could be considered as the 'stable and reliable' expressions of the market during the specific of researching time and beyond. Additionally, it should be clear that the conceptual framework is formulated within the reviewing ability of the research. Such that, probably, there are other studies with critical discussions on relationships between loyalty and its antecedents that are not listed into this research. Therefore, the use of quantitative method supports the focus on determinants, causal links and facts being described in the conceptual framework of this research only. During the analysis process, the research could comprehend the meaning behind customers' behavioural expressions that are acquired through practical data. It is easier to discover which causal links are valid and which are not as well as explaining specific preferences of relationships between variables. The question is if using only quantitative method, how about the firmness or robustness of references from the findings? Definitely, the research objectives do not address the case of drilling the underlying meaning behind this social trend, for instance why people have this kind of motives to shop online rather than coming to the traditional market? or what are the real drivers switching them to use this e-commerce platform rather than the other one? It has the sole purpose of reflecting and verifying behavioural expression of customers under the theme of customers' e-loyalty; such, it is not essential to dig out the underlying meaning of the social reality. The firmness and robustness of findings are assured by the proper design of sampling method, sampling site, sampling size, data collection method, and the art of composing questions in the survey. Moreover, in past work, mixed methodology, i.e. the combination of qualitative and quantitative tools, was employed only when one is used to develop the instrumentation for the other. For example, a few works involve preliminary interview sessions with experts, or consumer verification to determine the measurement constructs of the questionnaire. In many other studies, however, the questionnaire items are assembled solely based on the author's existing knowledge of the literature. While it is undeniable that the literature of marketing has provided wonders, the literature on Vietnamese consumer behaviour remains sparse and lacking in depth.

Finally, there is a need to emphasise that the researcher's belief in quantitative research does not point to any degradation of alternative research methods. Qualitative research methods only deal with different types of data and often feature in research that look for a quality-based analysis of social phenomena, or those that aim to unveil new discoveries (Bryman, 1984) rather than verifying existing theories in practical contexts. In this research, therefore, quantitative methods are deemed the best-fit choice.

5.6 Research strategy

5.6.1 Data sources

Data sources can be secondary or primary (Bryman & Bell, 2007; Saunders et al., 2009), depending on the requirement of the research, availability of data and preference of the researcher. In some research similar to this, secondary data has been employed, where customer satisfaction is measured by data drawn from a Customer Satisfaction Index database that is publicly accessed (Fornell et al., 1996). The major benefit of using secondary data is that it is generally less costly and more convenient than collecting first-hand data (Bryman & Bell, 2007). However, it can be seen that in consumer research, customer data are not always available, and often out-dated. In emerging markets like Vietnam, there is less likelihood that data availability can mirror that in (for example) the U.S, which requires that customer satisfaction be collected as self-reports by the targeted audience, and at the time frame set by the researcher. Furthermore, available data, since they are not customised by the particular purposes of each research subject, do not always satisfy researchers' precise demands. In short, primary data remains the main source of customer behaviour research due to its many advantages, which makes its cost disadvantage and inconvenience less of a problem.

The strategy that has been used in this study is primary data and it is data that has been collected for the first time and tailored for the specific study. Hair et al. (2006) add that primary data is useful when it comes to the need to gain insights in a specific area. This primary data can be collected through interviews, questionnaires and observations (Saunders et al., 2009). The reason the researcher collected new data for this study was since it was essential to get new knowledge regarding e-loyalty in a specific market (i.e. Vietnam). Also, this industry has not been investigated before regarding this area by previous researchers and therefore primary data was the most suitable choice.

5.6.2 Methodological choices

Methodological choice refers to the data collection method used to administer the statistical testing in empirical research. According to Bryman and Bell (2007), empirical data can be gathered via one or a combination of more than one main method: observation, experiment and survey. Among these methods, survey delivers the most unbiased data on a large scale. Compared to observation, survey involves less subjectivity produced by the researcher's cognitive bias; and compared to experiment, survey provides the ability to assemble a large amount of data in a more timely and cost-effective manner. The survey used in this research is self-administered and questionnaire-based. Questionnaire survey is a traditional method in hypothetical-deductive research, and is best known for its efficiency, as well as validity and reliability (Jackson & Furnham, 2000) with a properly selected sample. The questionnaire method can be conducted via written or oral means, which means it can be distributed or led by an interviewer (Kumar, 2005). The involvement of an interviewer helps minimise misunderstanding, hence increasing the accuracy of the returned information, but conducting surveys on a one-to-one basis can be time-consuming, which would make me question my choice of survey in the first place. In fact, there are a number of reasons questionnaire survey is the most suitable method for this research. Apart from the consensus that it is a generally convenient, cost-effective, fast, accurate and objective tool to collect data (Zikmund, 2000), questionnaire is less demanding in terms of respondent input, which means that more people would be willing to participate and provide their most unbiased opinions (Malhotra et al., 1996; Zikmund, 2000). Thus, this method helps the researcher to gather sufficient data in the least amount of time, to meet minimal sample size targets. As discussed above, the larger the sample, the more trusted the statistics. However, it is also noteworthy that using questionnaire survey as the sole methodological choice means that the questionnaire should bear such quality that it will be able to effectively represent the variables, while worded in a way that respondents can comprehend and translate as intended. Thus, a significant part of this chapter is dedicated to designing the measurements and organizing pilot tests in order to maximise the outcome of the method.

5.6.3 Reliability and validity

Reliability and validity are major concerns when it comes to social science research and measurement of human psychology (Rosenthal & Rosnow, 1991). It is important to design a test instrument, here a questionnaire, that is valid and reliable to make sure that it would return accurate and meaningful findings. Having an invalid and unreliable questionnaire is no better than measuring weights with a malfunctioning scale. The success of this research is highly influenced by how the questionnaire is designed and conducted.

Reliable research means that the test used can consistently deliver fair results over a course of time and can effectively sort out the objects based on the criteria pre-given by the test builder. In other words, a reliable test refers to one in which the measurements are consistent and repeatable regardless of the occasions when it is taken, the persons who monitor it, the persons who perform it, or the environmental conditions that might distort its results (Drost, n.d.). While reliability is concerned with the consistency of the test instrument, validity deals with the extent to which the construct is accurately measured (Drost, n.d.; Blumberg et al., 2005). An error that leads to invalidity is a situation where a question included as a proxy for, for example, website quality, does not actually indicate an attribute of website quality, or is an unimportant construct of website quality.

According to Mohajan (2017), validity is composed of internal validity (credibility) and external validity (transferability), in which the former refers to the extent to which data collection methods and sampling techniques affect the results of the study, and the latter deals with the possibility that the research can be transferred to other groups of interest (Last, 2001, cited in Mohajan, 2017). According to Willis (2007, cited in Mohajan, 2017), a research is acknowledged as valid when the researcher manages to articulate their choice of methodology, in which the research strategies are appropriate. External validity, on the other hand, can be enhanced via adopting sampling techniques that effectively represent the population (e.g. random sampling), approaching heterogeneous groups that demonstrate diverse demographic and psychographic characteristics, or describing the methodology in details so that future researchers can transfer the techniques to their own studies targeting different interest groups.

Many scholars agree that validity needs to be achieved first before consideration of reliability (Shekharan & Bougie, 2010; Kimberlin & Winterstein, 2008), as reliable tests can be invalid, but a valid test has to be reliable. Mohajan (2017) compares a reliable yet invalid test with a scale that constantly returns the same weight for a person within a short period of time but was wrongly pre-set in the first place. There are various points that need to be checked to ensure that the research conducts and testing instruments are valid. According to Mohajan (2017), the data must be collected within a pre-defined time frame to avoid changes in environmental conditions that affect prospects' mentality. Also, the methodology of the research must be appropriate and suitable with the nature of the study. In this study, the methodology is based on scientific beliefs and past studies that are acknowledged as *valid*. Therefore, it is expected that the same methodology would remain valid as the researcher strictly follows the scientific research procedure and carefully considers the possibilities exclusive to the targeted population. Other ways to increase research validity and reliability are to optimise the design of the questionnaire, to conduct the interview or questionnaire in the most objective, pressure-free manner, or to compare the measures with similar research. The next sections will demonstrate the researcher's choice of sampling techniques, size of sample, and questionnaire design and how such approaches can help achieve high reliability and validity.

5.6.4 Sampling method

A sample is defined as a subset used to represent a targeted population (Sekaran, 2000) when the latter is too large for research scope, which is often the case (Etikan et al., 2016). In statistical research, a sample, if big enough, is considered as a valid microcosm and a reliable basis to induce inferences about the population (Hussey & Hussey, 1997). The larger the sample size, the more it is qualified to represent the population; but as stated above, usually it only needs to be sufficiently big.

There are a few varieties of sampling methods, usually categorised as probability and non-probability methods (Malhotra & Mukherjee, 2003). According to Malhotra and Mukherjee (2003), probability technique requires that each unit of the population has an equal chance of being selected for the sample (e.g. random sampling and stratified sampling). The criteria for non-probability sampling techniques, on the other hand, are not concerned about the randomness of the chosen respondents. Convenience sampling and quota sampling are typical examples of non-probability sampling. Given the context of this research, the population is Vietnamese users of e-commerce of various geographical proximity, Internet habits and accessibility, the researcher decides to employ convenience sampling method to single out 650 survey responses. Prospective respondents are sourced via different online media including the author's personal social media circles, online communities, survey sites (e.g. surveymonkey.com) as well as physical contacts.

Convenience sampling helps shorten the data collection phase and minimises the cost of the project (Etikan et al., 2016). It is also necessary to describe the subjects who might be excluded during the selection process or the subjects who are overrepresented in the sample. The main objective of convenience sampling is to collect information from participants who are easily accessible to the researcher like recruiting providers attending a staff meeting for study participation. Although commonly used, it is neither purposeful nor strategic (Palinkas et al., 2013). The main assumption associated with convenience sampling is that the members of the target population are homogeneous. That is, that there would be no difference in the research results obtained from a random sample, a nearby sample, a co-operative sample, or a sample gathered in some inaccessible part of the population.

5.6.5 Sampling site

The next step is to select a sampling technique and the one that the researcher considers best fits this study is cluster sampling. According to Saunders et al. (2009) cluster sampling is when we make a cluster around some geographical sub-areas that belong to the population, when the population is too large and diverse to be accounted for in one research. In this case it is a cluster of only Ho Chi Minh City (HCMC) and Hanoi-based online shoppers aged 18 to 49. According to a market report by Asia Plus in 2016, men and women between 18-49 years of age are the most frequent online shoppers in Vietnam. Therefore, the population for this research is men and women aged between 18 and 49 years old, residing in HCMC or Hanoi, and have experience using either of the four most popular e-commerce websites: Lazada, Tiki, Shopee, and Sendo. The former three are FDI projects in Vietnam that have risen to power over the past decade, while the latter is a locally developed platform by FPT Group.

5.6.6 Sampling size

The whole population consists of 1.7 million men and women, between 18 and 49 years old (GSO.org, 2018). To determine the minimum sample size, the researcher performed a calculation inspired by Dahmstrom (2011, cited in Hansen & Jonsson, 2013). The researcher calculates it with a 1.96 confidence interval and a margin of error 0.05. The result shows that a sample frame should be 650 respondents.

5.6.7 Data collection method

Measuring customers' behaviour is challenging, especially when the behaviour concerns the psychology of the human brain that is hard to describe, not to mention quantify. The central constructs of the research that are customer loyal behaviour, satisfaction, trust and commitment are named by social scientists as 'latent variables', which means they cannot be observed or directly inferred, but measurable via a set of proxy indicators (Schumacher & Lomax, 1996). An alternative way to refer to said variables, as termed widely in previous empirical studies, is to consider them as a perception rather than a direct, scientific measurement of the behaviour. For example, rather than measuring absolute 'commitment', the researcher would prefer to examine the respondent's perceived commitment towards a website via a process called self-reporting (De Vaus, 2002). In this manner, respondents provide their level of perceived commitment that they *believe* they themselves have developed towards the brand. According to De Vaus (2002), self-reporting remains the most universal method for collecting abstract data as such, although it can be seen that the given scores are only reflections of how the respondents want to believe (e.g. they might be less committed to the brand than they have thought).

In line with the self-reporting technique, questionnaire survey is widely used to fulfil this purpose. Survey distribution channels are diverse and usually more than one channel employed. Several common methods of surveying include online survey, e-mail, telephone, face-to-face; in which online methods are becoming overwhelmingly popular due to its convenience. Online surveys are especially suitable for e-commerce research, where respondents would be measured by their online behaviour, and where it is assumed that the targeted population spends a certain amount of time on the internet. The author decided to choose online survey (including e-mail) as the main data collection mechanism due to its convenience, speed, ease of use and cost-effectiveness. Besides, printed questionnaires will be handed out on face-to-face meetings when chances arise. In online questionnaires, the answers will be recorded by the platform and returned to the researcher in spreadsheets or database form.

Due to the absence of human contacts in online surveys, it is important that the questionnaire be designed, worded and styled in a way that is comprehensible to all types of audience (Kumar, 2005). The researcher has to be aware that several respondents can be less enthusiastic or patient than others, and poorly phrased questionnaires can lead to misleading data, careless answers, incomplete questionnaires and hence low return rate (Zikmund, 2000). In filling an online questionnaire, respondents are not pressured by a time limit and can have the convenience to leisurely review the question on their personal device. On the other hand, there is little likelihood that an online respondent would seek explanation on confusing questions; or to be more precise, it is impossible to do so. In some cases, illiteracy may also be a problem (Zikmund, 2000), but the researcher believes that it is not the case for shoppers that already have experience of e-commerce.

Telephone and face-to-face surveys are not preferred methods in this research due to convenience and cost obstacles, but are *not strictly cancelled out*, in case return rate from questionnaire distribution fails to meet sample size targets. In any method of survey, the respondent's identity remains anonymous, and their personal details are kept confidential if revealed (Zikmund, 2000). Compared to telephone and direct interviews, online questionnaires ensure minimal interpersonal contact, thus reducing the chances of bias caused by interviewer's interference or time pressure. However, compared to online methods, telephone and face-to-face surveys can boost return rates. While administering the surveys in either approach, the researcher ensures that respondents are approached professionally and objectively, and that no emotions are allowed to interfere with their thinking during the course of the survey.

To combat the *low response rate of survey*, as suggested by Neuman (2005) a number of methods to increase return rate were adopted. These included addressing the questionnaire to a specific respondent, making the questionnaire visually attractive, keeping it short and simple, or clarifying the purpose of the questionnaire clearly from the outset. In some cases, the respondents would be pre-informed or pre-invited for the questionnaire, which Fox et al. (1988) believes has a positive impact on return rate. Consequently, when a regular consumer newsletter was sent to all of the consumers a month before the surveys were delivered, the opportunity was taken to include an article letting consumers know in advance that they may be receiving a questionnaire.

5.6.8 Ethical considerations

Ethics is a critical issue in research, and in this case, the conducting of a questionnaire survey. In carrying out research that involves human participation and the disclosure of information, researchers are required to adhere to critical standards usually given by the organization under which they are monitored. Examples of such ethical considerations are voluntary participation by respondents, or the presence of informed consent, where respondents only participate in the survey programmes upon being fully informed of the research purpose, benefits as well as risks associated with surrendering their personal identity and opinions. The common practice in survey research is to include a cover letter or a statement of introduction at the beginning of the survey in place of an informed consent, where prospects have the right to refuse to participate at their own will. The information at the head of the survey, preferably, should cover the purpose of the survey, sponsoring organizations, flow of data, and confidentiality of information (Blair et al., 2013). In all cases, the prospective respondent must be mentally capable of making a decision, and they should be under no pressure to make their decision heard.

Another important part of ethical standards in survey research is the confidentiality and anonymity of the subjects. This is the primary ethical issue in survey research, especially if the survey contains sensitive questions. In this research, the sensitive part is the risk of customer identity being revealed to the website when they are over-critical or harsh towards the brand. Thus, throughout the procedure, the researcher ensured that information was not exchanged between participants, or not disclosed to any third party. The survey respondents are asked for personal information in case of follow-up research, for which the information is strictly stored in a safe way.

5.7 Questionnaire design

The questionnaire is designed and structured to ensure reliable and valid responses (Neuman, 2005). The questionnaire contains a set number of questions in a written format. Respondents read the questions and provide their responses, also in a written format (Kumar, 2005). The objective for the researcher is to design a questionnaire that is both clear and easy to understand. If this is achieved, the response rate is likely to be high (Kumar, 2005). Kumar (2005) also suggests that questions should be short, and easy to read and understand, which according to Mohajan (2017) will increase the chance of respondents returning valid answers. It is also important to maintain a neutral language by avoiding the use of jargon and ambiguity (Neuman, 2005). However, the most important feature of an effective questionnaire is, according to Zikmund (2000), its adherence to the research objectives and research questions. It needs to reflect loyalty to the research model constructed in Chapter 2, and demonstrate close attachment to the groundwork and historical findings. In other words, the items in the questionnaire are strictly based on the relevant literature, where items suggested by previous researchers are brought to statistical testing in the Vietnamese market. The following section will elaborate on how the final questionnaire was planned and developed.

The questionnaire contains three sections: (1) Section A consists of questions concerning demographics, shopping habits and internet experience. (2) Section B contained 49 questions about the different items specified in the research models. (3) Section C provides free space for the respondents to fill in their additional feelings and/or opinions about related subjects.

Most importantly, the items included in the questionnaire are wholly based on their appearance in previous academic research. The choice of measurement items can therefore be seen to be based on valid research.

5.7.1 Types of questions

The questionnaire features both open-ended and closed questions. Open-ended questions refer to the type of questions that allow respondents to provide their opinions in text without restricted options. In closed questions, on the other hand, respondents are asked to choose from the pre-provided options (Saunders et al., 2009). In this research, most questions are close-ended multiple choices, including questions about respondents' demographic details, e.g. age, education background, household income, etc. To be specific, in questions that are related to personal background, respondents would find themselves in pre-divided groups (e.g. 21-30 years of age, US$500 to US$1,000 per month, married without children versus married with children). In questions relating to self-reported behaviour, respondents are expected to answer questions on a 7-point Likert scale. The reasons why a 7-point Likert scale was chosen to evaluate customer behaviour are presented in the next section. Open-ended questions are placed at the end of the questionnaire, where respondents are allowed free space to express their additional thoughts. These questions are expected to provide more insights that can be useful for further research.

5.7.2 Likert scale

Likert scale is a popular measurement tool in data-driven consumer behaviour research (e.g. Gefen, 2002; Hansen & Jonsson, 2013). Likert scales quantify respondents' opinions towards a specific service attribute by asking them to choose the level of '*agreement*' with the provided statement (Kumar, 2005). Since the Likert scale was made popular, the work of quantitative researchers has become relatively eased. Notably, there is no fixed number of points in a Likert scale. It depends on the extent to which the researcher wishes to precisely evaluate respondents' attitudes (Zikmund, 2000; Kumar, 2005). Many researchers use a 10-point scale (e.g. Vavra, 1997) for a finer measure. However, many other researchers came to realise that embedding a 10-point measurement scale is unnecessary not to mention its likelihood to cause confusion. According to Miller (1956), it is uncommon to feature more than a 7-point scale because the human brain usually finds it difficult to distinguish between more than 7 options about a subject. Therefore, nowadays most researchers settle with a 5-point or 7-point Likert scale (Johnson & Grayson, 2005; Kumar et al., 1995; Veloutsou et al., 2004) to both minimise confusion and refine the measuring scale. It provides an appropriate number of alternatives for the respondent while also providing a distribution of acceptable skewness. The 7-point Likert scale has also been found to be reliable and valid in previous consumer behaviour research.

Of course, it is obvious scholars have not reached a consensus about the size of scales used in social science research related to human behaviour. The fact that many researchers have reverted to the 5-point scale, or in some cases 4 and 6-point scales, points out that the 7-point scale performs quite poorly in some domains. Empirically, several studies have also reported higher reliability with 5-point scales (e.g. Jenkins & Taber, 1977; Lissitz & Green, 1975; McKelvie, 1978; Remmers & Ewart, 1941, cited in Chang, 1994)), mostly due to higher response rates and higher response quality. Consistent with the argument against a scale larger than 7 points, advocates of 5-point Likert scales argue that respondents react in a friendlier fashion to a short and simple questionnaire (Chang, 1994). It explains why the 5-point Likert scale remains popular in social science research.

However, the researcher finds the argument about low response rate and high frustration level that is associated with 7-point Likert scale not entirely convincing. There are methods researchers use to increase response rate and completion rate, regardless of the number of points in the measurement scale. One such method is to carry out the interview or hand out the questionnaire in person, or to read out the descriptors of the scale instead of marking it with a number (Dawes, 2008). In the end, the researcher chose the 7-point scale to increase test reliability and validity while finding alternative channels to reach out to prospective respondents to achieve higher response rate.

5.7.3 Measurement

a) Measuring loyalty

As indicated in literature review, loyal behaviours will be measured by both attitudinal loyalty and behavioural loyalty (Zeithaml et al., 1996; Baumann et al., 2011; Raza et al., 2012, etc.). Attitudinal loyalty indicates loyal attitudes that occur in people's minds, which can be an emotion or a feeling that has not been transferred into action. Behavioural loyalty, on the other hand, is expressed via an action, or an intention to make a move in favour of a brand. In the previous chapter, we have learnt that behavioural loyalty demonstrated through the customer's willingness to recommend the website to other people, or to spread positive comments on the website of social communities, or to show their intention to continue shopping with the website despite finding similar services provided by other brands. The items used to measure customer loyalty are presented in Table 6 below.

Variables	#	Statement	Source
Attitudinal loyalty	ATL	I consider myself to be a loyal customer with the current e-commerce website I have been shopping with	Bilton (2016), etc.
Behavioural loyalty	WOM1	I say positive things about the website to my family, friends and acquaintances	Bilton (2016)
	WOM2	I recommend the website to people who are looking for a good e-commerce website	
	INT1	I intend to return to the website in the future	
	INT2	I intend to make purchases with the website again in the future	
	INT3	If other websites offer similar products/services, I still prefer shopping with the current website.	
	INT4	I choose to shop again with the website because I voluntarily do so, not because I am forced to.	

Table 6 Measurements of e-loyalty

b) Measuring satisfaction

There is some evidence in the relationship marketing research literature that a single item satisfaction measure is acceptable (Al-Eisa & Alhemoud, 2009). However, satisfaction with a service provider is generally regarded as a combination of emotional and evaluative responses (Oliver, 1997). Consequently, reliable measures generally contain both dimensions within a multi item selection (Chinomona & Sandada, 2013). As discussed above, Olsen and Johnson (2003) posited there are two forms of satisfaction, labelled transaction specific and cumulative satisfaction. Transactional satisfaction refers to the satisfaction following any given service experience, while cumulative satisfaction refers to the summation of all previous experiences. Cumulative satisfaction is also referred to as overall satisfaction (Deng et al., 2010). For the purpose of this research, I measure cumulative dimension of satisfaction, which reflects the overall evaluation of the respondents upon their chosen e-commerce website. Transactional satisfaction is not measured, as respondents may have made multiple transactions with the website, and the purpose of the research does not focus on any particular transaction but a whole course of their buyer-seller relationship.

For this research there were three items chosen to measure consumer satisfaction each associated with a 7-point Likert scale. The use of three items allow for the possibility of increasing construct reliability by removing a low reliability coefficient score. The first two items are adapted from Chiou and Droge (2006) while the last item is adapted from Chinomona & Sandada (2013).

See Table 7.

	Statement	**Source**
SAT1	Overall, I am satisfied with the current website	Chiou and Droge (2006)
SAT2	I believe I made the right decision to shop with the website	
SAT3	I am very satisfied with the service provided by the website	Chinomona and Sandara (2013)

Table 7 Measurement of e-satisfaction

c) Measuring trust

Many empirical studies have attempted to measure trust such as Aurier and N'Goala (2010), Moorman et al. (1993), Garbarino and Johnson (1999), Sirdeshmukh et al. (2002), Morgan and

Hunt (1994), Johnson & Grayson (2005), Kantsperger and Kunz (2010) and Oliveira et al. (2017). The items in this research are developed based on the Oliveira et al. (2017) model of e-trust. It is noted that e-trust consists both of trust in the brand itself and trust in the business model, here e-commerce. Measuring trust should accommodate questions about both forms of trust, especially in new markets where e-commerce is only currently breaking ground such as Vietnam (see Table 8).

	Statement	Source
TRU1	I do not feel any risk shopping online.	Based on e-trust framework by Oliveira et al. (2017)
TRU2	I trust e-commerce in websites in general.	
TRU3	I think my website has quite a good reputation.	
TRU4	I trust that my personal information will be secured when shopping with my current website.	

Table 8 Measurement of e-trust

a) Measuring commitment

With its roots in organizational psychology a multi-dimensional model of commitment has been applied to the marketing field (Allen & Meyer, 1990; Bansal et al., 2004; Gruen et al., 2000; Kumar et al., 1995; Shin et al., 2013; Jones et al., 2007). In much research, commitment is measured by affective commitment, calculative commitment and normative commitment respectively. Affective commitment relates to the liking of, or identification with a source. It is a psychological force, manifested in the consumer as a sense of desire towards a provider

(Allen & Meyer, 1990). Calculative commitment refers to people's evaluation of the cost of leaving the brand. Normative commitment relates to the attachment as a result of obligations experienced. It is the degree to which a consumer is bonded to the service provider as a consequence of their sense of obligation to that provider (Gruen et al., 2000; Bansal et al., 2004). In this research, normative commitment will not be measured, since there is little obligation or responsibility that the buyer should feel towards their e-commerce website (see Table 9).

Variables		Statement	Source
Affective commitment	ACO1	My website has a great deal of personal meaning for me	Jones et al. (2007)
	ACO2	I genuinely enjoy the continued shopping with the current website	
	ACO3	I would like to join membership.	
	ACO4	I feel a strong sense of identification with the brand.	
Calculative commitment	CCO1	It would be very hard for me to switch to another website even if I wanted to	
	CCO2	I feel I and my website have a relationship that other websites cannot provide to me if I switch	
	CCO3	It's most convenient to stay shopping with the same website for me now.	

Table 9 Measurement of e-commitment

a) Explanatory variables

Website quality

The measurement of website quality will follow the Information Success System model by DeLone & McLean (1992; 2004). In much research about e-commerce and online shopping in general such as (ref), the DeLone & McLean model is used as the main theoretical framework and the measurement items are generally agreed as per the following table.

Variables		Statement	Source
System quality	SQL1	The products are in good availability.	DeLone & McLean (1992; 2004); Halonen, et al. (n.d.)
	SQL2	The website is stable.	
	SQL3	The website has attractive design	
	SQL4	The design of the website is user-friendly.	
Information quality	IQL1	The information provided in the website is sufficient.	
	IQL2	The information provided in the website is useful.	
	IQL3	The information provided in the website reflects the real products.	
	IQL4	The information provided in the website is up-to-date.	
Service quality	SEQ1	Customer support is always available at my need.	
	SEQ2	Customer support is responsive.	
	SEQ3	Customer support can solve my problem(s).	

Table 10 Measurement of website quality based on DeLone & McLean (1992; 2004)

Price & Perceived price value

Variables		Statement	Source
Price sensitivity (moderator)	PRI1	I am generally sensitive to price increase (i.e. if a retailer increases its price level, I will immediately reconsider my purchase intention)	Graciola et al. (2018)
Price level	PRI2	The products sold in the website are affordable	
Price fairness	PRI3	Prices are competitive compared to other e-commerce websites.	
Perceived price value	PVL1	The product(s) I purchased is (are) worth its (their) prices	
	PVL2	I am satisfied with its (their) price value	

Table 11 Measurement of price and price value

Perceived switching costs

Variables		Statement	Source
Competition	SWI1	I am aware that there are many other e-commerce websites that offer similar services to this website.	Hirschman, (1970); Ping, (1993); Rusbult et al., (1982)
Efforts on switching	SWI2	Switching brand is a nuisance to me because I have to learn to use the new website all over again.	Gefen (2002)
	SWI3	Switching brand is a nuisance to me because I have to search for information about that website again.	
Loyalty programs	PRO1	There are many loyalty schemes offered by the current website.	Steyn et al. (2010)

	PRO2	I prefer this programme rather than other programmes offered by other websites.	
	PRO3	I highly acknowledge the benefits of the loyalty scheme(s)	
	PRO4	The opportunity costs from losing such benefits cause me to stay with the current website.	

Table 12 Measurement of perceived switching costs (Researcher's work, 2018)

a) Demographic and psychographic characteristics

The research emphasises the moderating effects of customers' demographic and psychographic characteristics. The measurement of these factors follows three main bodies: demographics, shopping concentration and Internet experience, as presented in the research model. These factors will become the control variables in this research. According to Rubin and Babbie (2010) control variables are variables that make it possible to divide the respondents into sub categories. The control variables for this study are age, gender, income and location, habit and experience. Those different control variables make it possible for the researchers to compare the data with different groups and feed interesting information into the area.

Category	Characteristic
Gender	Male
	Female
Age	18-25
	26-34
	35-42
	43-49
Marital status	Single
	Married (without children)
	Married with children

Income	Under 357 USD
	358 - 714 USD
	715 - 1,071 USD
	1,072 - 2,000 USD
	More than 2,000 USD

Category	Characteristic	Reference
Shopping concentration	Monthly shopping budget	Goldsmith and Litvin (1999); Alba and Hutchinson (1997)
	Frequency of shopping	
Internet experience	Total time using the internet	Blake and Neuendorf (2003); Bruner and Kumar (2000);
	Familiarity with internet services	

Table 13 Demographic characteristics

5.7.4 Design

As discussed above, *'clear wording of question using terms that are likely to be familiar to, and understood by respondents can improve the validity of the questionnaire*' (Saunders et al., 2009). This means that it is important to carefully build the questionnaire so the respondents correctly understand the questions, since in the majority of cases respondents complete the questionnaire independently without researcher's guidance. This leads to the findings the researchers want to measure and not measure something not supposed to be measured. The design has a strong impact on the response rate, therefore every detail is important when designing the questionnaire. When designing the questionnaire for this study, many steps needed to careful be motivated. Apart from wording, the questionnaire is designed in a way that is pleasant and harmonious to the eyes, exuding a professional and academic style.

Another important task in questionnaire design is to translate it from English to Vietnamese, since the targeted audience supposedly speak the latter more than English. When translating questions, it is important to translate carefully so it has the same significance in both languages (Saunders et al., 2009). The topic of translation is also discussed in Saunders et al. (2009) as one of the delicate factors that can distort the findings of the project without the researcher's full awareness. In the book, the authors present four different translation techniques: direct translation, back translation, parallel translation and mixed translation. The technique that has been used in this study is parallel translation, which denotes a process of comparing translation possibilities to find the best word choice and/or styles. This was done to ensure that the translation of the questions, from English to Vietnamese became as close and as similar as possible to the original questions.

As suggested by Neuman (2005), a letter of introduction and a participant information sheet was attached to the front of the questionnaire. The letter of introduction detailed the researcher, the research and institution, the voluntary and anonymous nature of the questionnaire, the likely time taken to complete the questionnaire, contact details of the supervisor and researcher and how to make a formal complaint. It also informed respondents how to obtain a copy of the final report if they so desire. The participant information sheet contained detailed information on the purpose, participant selection methodology, process, confidentiality, timeframes and complaint contact details.

5.7.5 Pilot test

Pilot testing is the formal testing of a questionnaire on a sample of respondents in order to assess the efficacy of the questions and ensure respondents clearly understand each question

(Neuman, 2005; Sekaran, 2000; Zikmund, 2003). The questionnaire was designed to follow recommendations by Kerlinger (1967). He proposed that measuring instruments should be written without ambiguity and that instructions should be clear and standardised.

To ensure that the questionnaire was good enough, the researcher had performed a pre-test before the final questionnaire was sent out. This is according to Bryman and Bell (2007) positively to ensure that the questions would be good and the whole process with the questionnaire worked out. To do a pre-test before sending out the final version is a way to improve reliability (Neuman, 2005). First, the pre-test was discussed with the course Professor. Second, the pre-test was distributed to a group of sub-samples, which consisted of interviewees in the focus group interviews described in Chapter 3. A sub-sample of 5 to 10 respondents is sufficient in a pre-test, according to Christiansen et al. (2001, cited in Hansen & Jonsson, 2013). The respondents participating in the pre-test were expected to give the authors feedback and suggestions of improvements to grammar and the questions themselves, which the researcher took well into consideration.

An important step of the pilot testing phase is to pre-test the reliability of the constructs to rule out less reliable items. The content of the questionnaire was adjusted based on the reliability test and only the final version is brought to distribution.

Results of the pilot test for reliability and validity proved that some of the questions failed to qualify for the 0.7 Cronbach's Alpha, and hence they were removed.

5.8 Data analysis

5.8.1 Reliability and validity measures

a) Reliability

There are a number of measures that can be used to test reliability such as internal item consistency, split halve method, test-retest and equivalent form method (Manning & Munro, 2007). The most commonly accepted method of testing reliability is the internal consistency method, which is widely regarded as the most effective and the most commonly associated with quantitative research. (Manning & Munro, 2007). As such it was chosen as an appropriate method for measuring construct reliability in this research. The chosen method, internal consistency, is a measure of the degree of inter-correlations between items that constitute a scale. This is measured by the use of the reliability coefficient, Cronbach's alpha, which is also the best reliability test in behavioural science research (Drost, n.d.). While there is some variance associated with the interpretation of Cronbach's alpha results, the guidelines suggested by Hayes (1998) are widely accepted. The thresholds of reliability are as follows:

- A reliability coefficient above about 0.90 can be considered excellent
- A reliability coefficient between about 0.80 and 0.90 can be considered good
- A reliability coefficient between about 0.60 and 0.80 can be considered acceptable
- A reliability coefficient below 0.50 can be considered unreliable

In the social sciences, acceptable ranges of alpha value estimates from 0.7 to 0.8 (Nunnally & Bernstein, 1994) but in practice, 0.63 can be considered acceptable (DeVellis, 1991).

The measuring of reliability in the pilot testing phase helps single out less reliable items from the measurement of the latent variables (Manning & Munro, 2007). Reliability is tested again on the complete dataset, in which unreliable items are also ruled out. This process suggests that it is always preferable to use more than one item to measure a single variable, and often researchers use more than three (Hair et al., 2006). Using two items is less preferable, but it induces the risk of problems in model identification in the later phases (Hair et al., 2006).

a) Face validity

As discussed above, constructing a 'valid' model is a basic goal in structural equation modelling. A wide variety of validity measures are thus introduced to evaluate the content of the test, as well as the statistical validity of the concept model. First, it is noteworthy that the validity measure that is the centre of this section refers to *face validity*, which deals with the quality of the *'scale'*. There are two more types of validity measures: convergent validity and discriminant validity (Hair et al., 2006), which are featured in the measurement model. Face validity is the validity of the questionnaire that needs to be measured and adjusted during the pilot testing phase of the empirical research. In this stage, the researcher needs to ensure that the content of the survey adheres to the research questions and the items included are valid proxies of the latent variables. As discussed above, the researcher has employed a wide range of optimization techniques to increase the validity of the questionnaire, including improving wording and style, minimizing the number of questions, avoiding using jargon or slang (Zikmund, 2000). While regarded, quite rightly, as the weakest method of demonstrating construct validity, it is also accepted that researchers rely on subjective judgements, so it does have value.

There is a high likelihood that measures of the latent variables in this research are valid, because they have appeared in previous studies, where they were acknowledged as valid. In studies that did not focus on the e-commerce industry, the statements are kept and adjusted for wording, which means there is some negligible element of subjectivity. The measures have been brought to pilot test via exploratory factor analysis (EFA) test. Also, the human feedback from the pre-test group also contributes to the high validity of the questionnaire. Convergent validity and discriminant validity will be tested on the final data together with other measurement model testing procedures as presented below.

5.8.2 Structural Equation Modelling

The main statistical technique employed by the researcher is Structural Equation Modelling (SEM), which is seen as a hybrid between factor analysis and path analysis (Weston & Gore Jr., 2006; Hair et al., 2006). SEM is a statistical tool that allows for the testing of multivariate models, which in the past was considered beyond the boundary of statistical research. The main contribution of SEM is that it has the composite strengths of both factor analysis (i.e. ability to examine the interrelationships between variables) and path analysis (ability to test hypothesised relationships between variables) (Kahn, 2006). Such advantages have brought SEM to the scene of psychological and behavioural research and made it one of the most popular techniques in these realms (Tracey, 2002; Wei et al., 2004).

Note that just like multiple regression, ANOVA or correlation, SEM is, first, another quantitative method. Similar to the mentioned techniques, SEM deals with linear models, contains data assumptions and most importantly, does not imply causal relationships. For example, research might confirm a correlation between trust and loyalty, but does not guarantee trust causes loyalty although the relationship might actually exist. Causality simply does not belong to the scope of SEM, which is a common misunderstanding among SEM users in the past (Weston & Gore Jr., 2006). The most notable difference that sets SEM apart from other quantitative methods is its ability to *estimate* and *test* the relationships about constructs. Unlike its preceding techniques, SEM allows for a construct to be constituted by *more than one* measure, and measurement error is fully accounted for. This allows construct validity to be evaluated, as it is based on the assumption that measurement of variables *contains errors*, and that pretending statistical model functions without measurement errors, or failing to account for these errors, would only result in biased estimates. Of course, advancement is often accompanied by complexity. Modelling with SEM requires complicated procedures and accessing the model requires going through a good number of test statistics and fit indices. However, SEM is believed to be the right statistical choice for this research due to its ability to analyse the research problems and answer the research questions (i.e. testing hypothesised models with empirical data, *not* studying a causal relationship) in the most comprehensive, detailed and thorough way.

Behind the primary reason, there are other motives that lead to SEM being chosen as the statistical method for this research. First, while other multivariate procedures are descriptive in nature, SEM treats the pattern of relationships between variables as a priori, lending itself well to analysis of data for inferential purposes. Last but not least, SEM procedures can incorporate observed and unobserved (latent) variables, whereas other statistical techniques are solely based on observed measurements. The latent constructs in this research (i.e. customer loyalty, satisfaction, trust and commitment) are not observable measures, but can be measured through related observed measures via self-reporting as demonstrated in previous sections. This advantage of SEM again confirms that it is the ideal technique to be used for this research.

Besides technical advantages by adopting SEM to explore the structural relationships between customer loyalty and its latent constructs, the use of SEM in this study is further justified by its benefits in visually displaying the interpretation of behind meanings from data in a readable and understandable presentation format. This, together with the SEM's capacity of confirming relationships in the most comprehensive, detailed and thorough way, facilitates the understanding of insightful behavioural expressions of people toward the sense of loyalty in the e-commerce shopping. To bear in mind that, this research topic is rather complex since it relates to multi-dimensional reflections of human behaviours between the line of traditional shopping and e-commerce one in the emerging e-commerce market like Vietnam. Such, it is not only to deal with the complicatedness of the consumption behaviour but also to cope with the not-yet-stable attitudes and behaviours toward online shopping by Vietnamese people. Therefore, the research requires the valid confirmation of both structural and measurement relationships of variables on the basis of research hypotheses to avoid biases in conclusions due to unintentional omissions of any constructs. Recalling the conceptual framework in this research, each antecedent of customer loyalty covers a wide range of behavioural reflections. And as the ripple effect, they may be the input, with other variables, for further behavioural reflection. For example, only when customers have the good comment on service quality that they receive do they follow the path of formulating the satisfaction. In this path, service quality is one of the factors, along with their pre-expectations, levels of customer service quality, service recovery, and so on. Hence, modelling with SEM enhances the chance of covering all essential and necessary parts of constructs that may affect the final results of findings.

As mentioned, SEM is the perfect tool to perform with multi-variate and linear models with a batch of data assumptions. The quality of analysis results is only recorded to be valid when the quality of inputs, i.e. collected data is guaranteed. With the use of quantitative method in a human behavioural research, for the highest research value, it is not allowed remarkable mistakes during the process of collecting and dealing with data. However, by manipulating data collection and self-composing questions to acquire data, it is unavoidable that errors occur. The combination of factor and path analysis can be the solution to resolve this matter. It is possible to estimate and remove errors associated to latent variables in the SEM analysis; and that helps to intensify the findings. Moreover, it is supposed that there are different groups by demographic features within the total sample of the research. Such, the use of SEM could create the interaction effects between them which ensures the generalization of findings. Apart from that, as the constraint of time and resources, it is not possible to acquire a large sample size of data collection. The anxiety is that with such a limited number of participants, whether the validity of data is confirmed? SEM can be helped to deal with such this issue (Karimi & Meyer, 2014).

Another justification is related to the research purpose of this study. Following the combination of descriptive and explanatory design, the use of SEM is suitable since it is inherent to the confirmatory rather than exploratory in nature. Modelling with SEM answers directly to conceptualized concerns about associations among independent and dependent variables in the research model. Providing that observed relations between determinants of customer loyalty and loyalty have the causal links (as the results of the systematic literature review in Chapter 2), SEM tests those relations using experimental designs. In addition, the choice of SEM is declared to be proper since the topic involves the attitudinal and behavioural issues with complex inter-relationships between variables. Thus, the priority is to adopt cross-sectional statistical modelling techniques. In the nutshell of SEM method, key findings towards customer loyalty and its determinants in the context of e-commerce in the Vietnam market (which are supposed the literature gaps in this research) are endorsed robustly and validly by both observational and experimental designs.

The question is whether there is an alternative method to adopt in this research rather than SEM. Indeed, there are some remarkable options as: Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Factor Analysis Structural Equation Modelling (FASEM), Multiple-Indicators Multiple-Causes Model (MIMIC), Partial Least Square (PLS), Covariate-based SEM (CB-SEM), and so on (Bentler, 1986; Goldberger, 1971; Joreskog, 1973; Karimi & Meyer, 2014; Matsueda, 2012; Rabe-Hesketh, Skrondal & Pickles, 2004; Sewall, 1920; and so on). Among them, theoretically, PLS (Partial Least Square) is an alternative method of SEM, sharing the similar disciplines and principles in testing; and also, facilities the analysis with a small sample size (Karimi & Meyer, 2014). PLS supports statistical analysis which without sufficient data for conforming assumptions of the modelling techniques. To this stage, it could be inferred that PLS may be the good option for adopting in this study since it probably reduces the demand of having conformed assumptions to analyse data. However, it should be noted that, due to this nature, the estimation of structural models is slightly less consistent than one by SEM (Dijkstra, 1983). Since PLS does not solve issues related to data optimization and parameter estimation, the goodness of fit in statistical results is challenging (Hwang & Takane, 2004; Fornell & Bookstein, 1982; Wold, 1982). It means that the comparison of models is not possible. Apart from that, by the traditional definition of PLS, it supports the estimation of complex models with underdeveloped theoretical background (Wold, 1979). However, since it is shortage of essential restrictions and requirements of data quality, for instance the sample size, normally distributed data, etc., its results of analysis are quite soft and more inclined to the 'predictive' meanings (PLS is also called the soft modelling) (Barclay, Higgins & Thompson, 1995; Karimi & Meyer, 2014). This challenges the validity and confirmatory features of findings.

5.8.3 The measurement and structural model

Due to its hybrid nature, SEM carries double components of factor analysis and path analysis: the measurement model and the structural model. While *the measurement model* measures the relationship between the observed constructs (i.e. explained variables) with (a set of) constructs that are hypothesised as their measures (i.e. explanatory variables), *the structural model* describes the interrelationships between the constructs. The advanced characteristic of SEM is that it manages to combine both models to form a complete structural model (Weston & Gore Jr., 2006).

a) The measurement models

In the measurement model, the researcher uses exploratory factor analysis (EFA) to evaluate *convergent validity* or the overall fit of the measurement model (similar to e.g. Shin et al., 2013; etc.). The method is commonly used in assessing random and systematic errors of the model (Podsakoff et al, 2003). In testing structural equation models, researchers often use a combination of multiple tests rather than a single test (Marsh, 1994) because it is still open to discussion which test produces the highest level of accuracy. The fit indices that are employed in the testing procedures will be presented in another section below. Importantly, the statistical procedures in this stage are performed on the pre-condition that the constructs specified in the models are *reliable*. By this stage, we have made sure that the reliability coefficient of each conduct exceeds the accepted level of 0.7, indicating that the items chosen for each construct are highly reliable as its proxy (Hair et al., 2006). In EFA analysis, we accept the model if all confirmatory factor loadings are above the accepted level of 0.5 (Anderson & Gerbing, 1988) with significant alpha values.

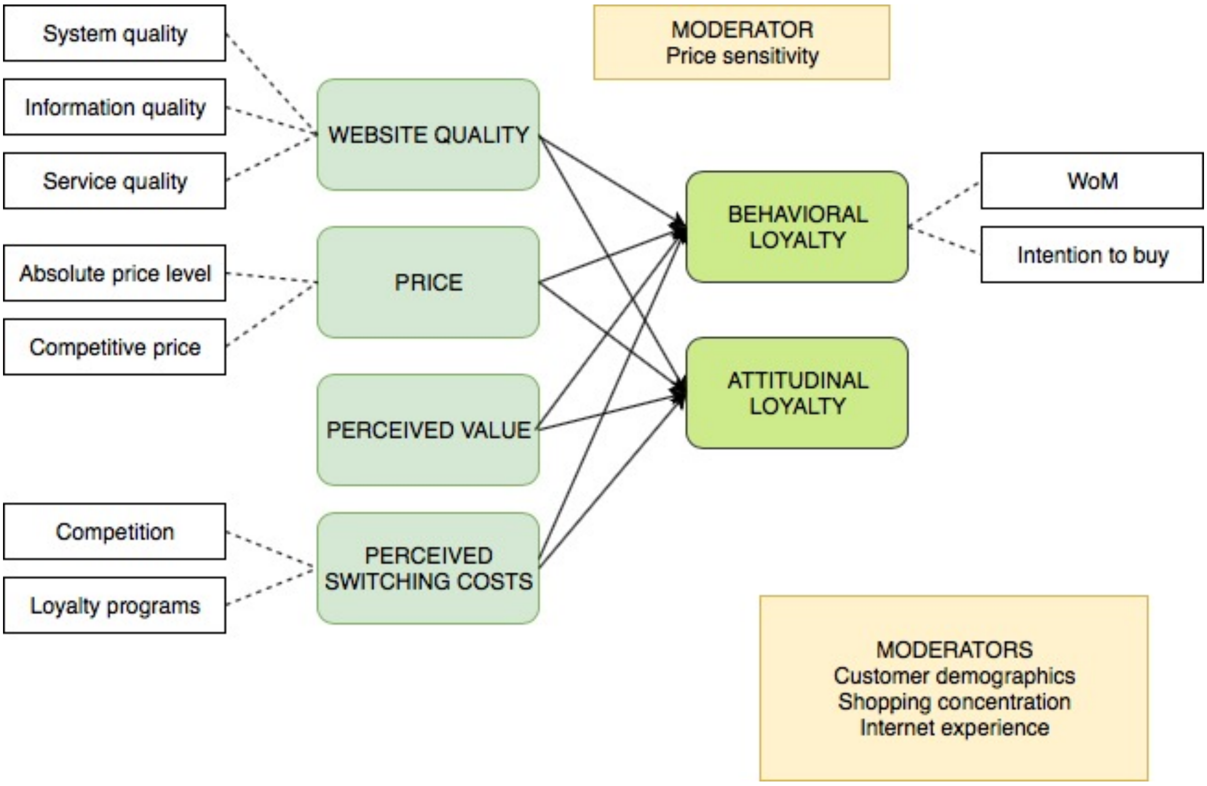


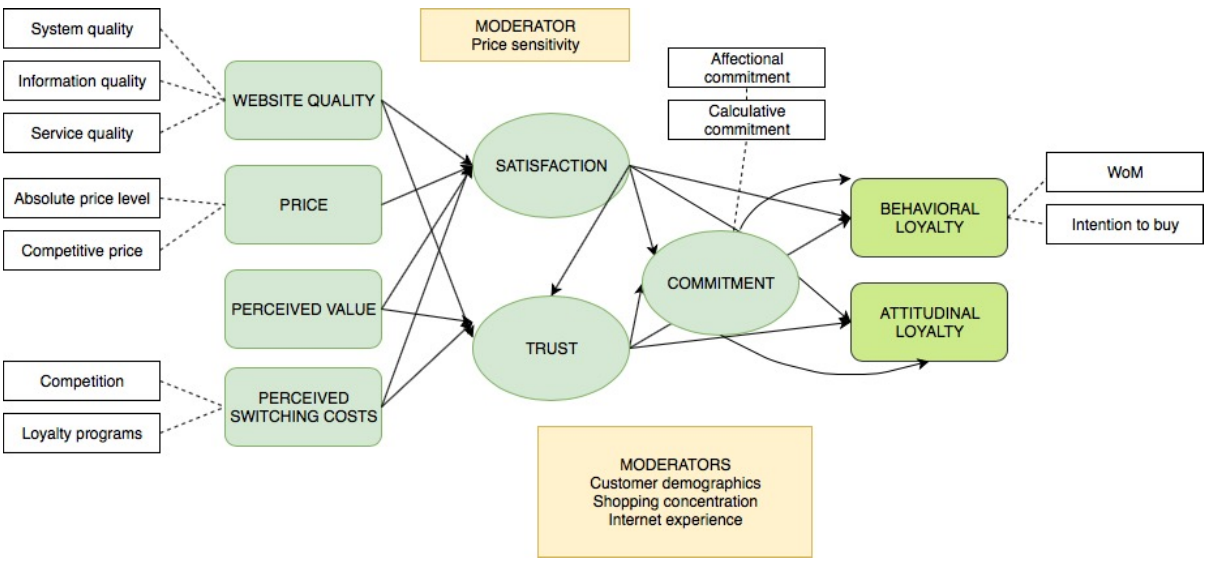
Figure 20 The measurement model

The measurement model is then tested for *discriminant validity*, which is accepted by a low correlation between items measuring each variable.

b) The structural model

The structural model specifies the hypothesised relationship between the latent variables (Weston & Gore Jr., 2006). These relationships can be covariance, direct or mediating (which will be presented in the next section). A covariance is equivalent to a correlation as it represents a non-directional relationship between latent variables. Direct effects are relationships between latent and measured variables or latent and latent variables. As said above, SEM does not function as a causal model, which is confusing as a few authors in the past used the terms 'causal relationships' to refer to the structural model in SEM (e.g. Shin et al., 2013). The said relationships are measured by a coefficient and should be interpreted in a similar manner to that of a regression weight.

The structural model deals with all the hypotheses except for H8, which will be tested with method specified in the next section. A path analysis is performed using the data from the theoretical model initially, followed by the same analysis using the competing model (Byrne, 2013). The model fit, as described in the measurement model, is produced for each structural model. To enable a comparison of models, the standardised coefficients and associated p-values for each of the hypothesised relationships between variables, for the models are tabled.



5.8.4 Measuring mediating effects

A mediator, or mediating variable is the path by which an effect occurs between an explanatory variable and an explained variable (Cheung & Lau, 2008). If we consider the mechanism by which the explained variable is influenced by the explanatory variable as total effect, it is sometimes affected by a mediating variable in the middle. In some cases, the explained variable loses its influence but many a time it does retain parts of its impact. For example, in this study, website quality is projected to influence customer loyalty, but it also affects customer loyalty with customer satisfaction playing a mediating role. The mediating role is explained this way:

A website with premium quality would have a great impact on customer satisfaction, and in turn a satisfied customer is more likely to continue a relationship with the brand. It means that website quality might not directly stimulate a sense of loyalty; it only triggers happy, satisfying emotions that increase the chance of re-visit. In this research, Hypothesis 8s requires the testing of the mediating effect of different antecedents of e-loyalty (customer satisfaction and trust) in the relationship between latent variables and e-loyalty.

The purpose of testing a mediating effect is to measure if the mediating variable partly or completely determines the relationship between the explanatory variables and outcome variables, and how important a role it plays. In this test, if the relationship between the explanatory and explained variables becomes weaker when the mediator is introduced, it can be concluded that the mediating variable partly affects the original relationship. A relationship that disappears completely indicates a full mediation (Baron & Kenny, 1986; Cheung & Lau, 2008).

Various approaches have been introduced in the literature of mediation analysis. For example, Ha and Jang (2014) employed a framework by Baron and Kenny (1986), in which a mediating effect is verified if four conditions are satisfied. The method is literally based on the definition of mediation analysis introduced above. The four conditions are:

- The explanatory variable delivers a significant impact on the explained variable.
- The explanatory variable delivers a significant impact on the mediating variable.
- The mediating variable delivers a significant impact on the explained variable.
- The parameter estimates between the explanatory variable and explained variable in the mediating model is insignificant (full mediator), or if it is less than the parameter estimates in the constrained model (partial mediator).

Sobel (1982, cited in Graciola et al., 2018) test is used to measure the significance level of intermediate effects. This Sobel test compares the direct effect of the independent variable and the dependent variable with the indirect effect between the independent variable and the dependent variable including intermediate variables. However, the Sobel test requires a standard distribution assumption, but this assumption is not suitable for the non-parametric PLS-SEM method. Moreover, the parameter assumption of Sobel test does not control this problem: the indirect effect p1* p2 may not have a normal distribution. Because multiplying two variables with a normal distribution will create a variable without a normal distribution. Moreover, the Sobel test requires a non-standardised regression coefficient as input and a lack of statistical power, especially when the sample size is small. For these reasons, researchers do not use the Sobel test to analyse intermediate variables anymore, especially those using PLS-SEM (Klarner et al., 2013; Sattler et al., 2010).

An alternative test for mediating effect is bootstrapping, which contains many advantages and is commonly used in mediation analysis. Bootstrapping is used to create a sampling distribution in order to obtain estimated standard errors and confidence intervals (Efron, 1982; Shrout & Bolger, 2002). It is a non-parametric method using a resampling with replacement for up to 5,000 times in this case 1000 bootstrap samples are used along with a 95% bias corrected confidence level. A mediating effect is calculated from each of the samples and an empirically generated sample distribution is derived (Efron, 1982; Shrout & Bolger, 2002).

5.8.5 Model fit interpretation

As discussed above, models are often evaluated by multiple fit indices rather than on a single test (Marsh, 1994; Schermelleh-Engel et al., 2003), the next section will present the fit indices used in this research. For each test, the researcher decides whether the tested model fits the sampled data by considering a wide range of fit indices, which include Chi-square test, goodness of fit indices, normed fit index, Tucker Lewis index, comparative fit index and root mean squared error of approximation.

a) Chi-square test

The Chi-square ($\chi 2$) test has been explained above in testing the aggregate validity of the measurement model. It is also one of the most popular statistics in model fitting (Pirc, 2008). The Chi-square test is based on comparing the differences between Chi-square fit statistics of two models to select one that better fits the sampled data (Anderson & Gerbing, 1988; Brady et al., 2005). The difference, which is extracted from taking the subtraction of two Chi-square statistics, is assessed based on a corresponding difference in the degrees of freedom. The model fits are acknowledged to be significantly different when the Chi-square statistic is significant. In Schermelleh-Engel et al. (2003)'s, the equation for $\chi 2$ is written as follows:

$\chi 2\ (m) = (N\text{-}1)$ or $\chi 2\ (m) = (N\text{-}1)\ (\mathrm{S} - \Sigma k)$, where:

m = degrees of freedom

t is the total number of parameters to be estimated

S is the observed sample covariance matrix

N is the overall sample size

Ek is the estimated covariance matrix

A high $\chi 2$ value with a corresponding degree of freedom implies a significant difference between the population covariance matrix and the model implied covariance matrix (Hair et al., 2006). A $\chi 2$ value with not too low p-value (i.e. not lower than .001) signals that the data are consistent and that the model is considered correct (Schermelleh-Engel et al., 2003). A good model fit would provide an insignificant result at a 0.05 threshold (Barrett, 2007), thus the Chi-Square statistic is often referred to as either a ‘badness of fit’ or a ‘lack of fit’ (Hooper et al., 2008) measure.

In Jöreskog and Sörbom (1993, cited in Hooper et al., 2008), the authors argue that $\chi 2$ when considered as a goodness-of-fit test instead of an independence test statistic should be approached by taking account of both $\chi 2$ and its degree of freedom under one single indicator. The indicator is produced from taking the division value of $\chi 2$ over degree of freedom. In a number of empirical research studies, the $\chi 2/m$ ratio is acknowledged as fit if it is lower than 3, in which one that is lower than 2 suggests a ‘good’ fit (Schermelleh-Engel et al., 2003). Jöreskog and Sörbom’s solution is generally accepted in statistical model fitting (Bilton, 2016) and hence utilised in this research.

Several issues with the $\chi 2$ statistic include its requirement for a large sample (Hair et al., 2006) and possible bias in interpretation of the statistic. First, $\chi 2$ is a better indicator of goodness when the sample size is large enough, according to Hair et al. (2006). On bigger data, the $\chi 2$, which also tends to be higher, is more likely to distort the non-significant probability level; hence it might bias the interpretation of model fit such as inducing a rejection of model fit when the model is actually fit. When more parameters are added to the model, $\chi 2$ value tends to decrease, suggesting a good fit. This implies that complicated models generally have lower $\chi 2$ than simple, fewer-parameter models (Miller, 1996); hence more complex models are likely to demonstrate better goodness-of-fit. Of course, there is a disadvantage to adding more variables to the model. For example, a low $\chi 2$ statistic resulting from adding more parameters can be misinterpreted as fit, while it can simply be a distorting effect from having too many parameters in a model.

Because the Chi-Square statistic is in essence a statistical significance tests it is sensitive to sample size which means that the Chi-Square statistic nearly always rejects the model when large samples are used (Jöreskog & Sörbom, 1993, cited in Hooper et al., 2008). On the other hand, where small samples are used, the Chi-Square statistic lacks power and because of this may not discriminate between good fitting models and poor fitting models. Due to the restrictiveness of the Model Chi-Square, researchers have sought alternative indices to assess model fit. One example of a statistic that minimises the impact of sample size on the Model Chi-Square is Wheaton et al's (1977) relative/normed chi-square ($\chi 2$/df). Although there is no consensus regarding an acceptable ratio for this statistic, recommendations range from as high as 5.0 (Wheaton et al, 1977) to as low as 2.0 (Tabachnick & Fidell, 2007).

b) Goodness-of-Fit Index

The Goodness-of-Fit Index (GFI) measures the extent to which the focused model fits the sampled data in relation to a null model with parameters pre-set at zero (Schermelleh-Engel et al., 2003). If the model has a GFI that exceeds a threshold of .95, it is considered as 'good'; if larger than .90, it is considered as 'acceptable' (Hair et al., 2006). The Adjusted Goodness of Fit Index (AGFI) developed by Jöreskog and Sörbom (1993) is sometimes used in favour of the GFI due to its ability to reduce bias caused by sample size. For AGFI, a result higher than .90 suggests a 'good' fit while one that is higher than .85 indicates that the model fit is 'acceptable'.

c) Normed Fit Index

The Normed Fit Index (NFI) is a test where the examined model is compared to the fit of a usually highly restrictive baseline model. The NFI value is an assessment of whether the tested model is an improvement, relative to the baseline model. The NFI values range from 0 to 1. It is generally accepted that values of .95 are regarded as a 'good' fit while values of .90 are regarded as an 'acceptable' fit (Hair et al., 2006).

d) Tucker Lewis index

While regarded as a useful measure, the NFI is affected by sample size. To compensate for this disadvantage, Bentler and Bonnett (1980) developed the Non-Normed Fit Index (NNFI), also known as the Tucker-Lewis index (TLI). TLI takes into consideration the degrees of freedom of both the tested model and the independence model. This means that more complex models are penalised by a downward adjustment, while the more restrictive model is rewarded by an upward adjustment. It is generally accepted that values of .97 are indicative of a 'good' fit while values of .95 are indicative of an 'acceptable' fit (Hair et al., 2006).

e) Comparative fit index

The Comparative Fit Index (CFI) is comparable to the NNFI in that it is largely not affected by sample size. Also similar to NNFI, it is generally accepted that CFI values of .97 are indicative of a 'good' fit while values of .95 are indicative of an 'acceptable' fit. However, CFI values have an upper limit of 1.00 whereas NNFI can go above this value (Hu & Bentler, 1999).

f) Root mean square error of approximation

Sometimes interpreted as a measure of exact fit, the Root Mean Square Error of Approximation (RMSEA) is actually a measure of approximate fit in the population, not the population sample. This is achieved by expressing model fit per degree of freedom. At the lowest value, RMSEA is bounded by zero. A value above .1 is widely regarded as not acceptable. While there have been a range of values indicating a 'good' fit, Hair et al. (2006) suggest that values less than .06 indicate a 'good' fit while values between .06 and .08 indicate an 'acceptable' fit.

5.8.6 Presentation of the structural model

Once the measurement model has been evaluated and found to have an acceptable level of fit to the data, a structural model is established. The hypothesised structural model is represented graphically. Ovals represent the latent constructs or factors and rectangles represent the observed or manifest variables. A single arrow-head line represents a directional relationship between latent variables. Where no line connects two latent variables, no hypothesised direct effect has been predicted. As a structural model seeks to explain relationships between multiple variables, the structure of the relationship between variables is defined and causal relationships between constructs measured (Bilton, 2016).

5.9 Research limitations

Despite the contribution of this research to the body of knowledge, there are a number of limitations that have been identified in the course of this research. The limitations are categorised around the sampling technique, the generalization of the research, the measurement instrument and the cross-sectional nature of the research.

In much behavioural research in the past such as work by Sheppard et al. (1988) and Soderlund and Öhman (2005), customer satisfaction is measured as a difference between expectations and actual experience. Advocates of this measure believe that expectations have a large role in predicting customers' future intentions, and comparing the predicted intentions with actual behaviour would produce interesting results. The boundary of this study is, however, limited to measuring an absolute value of not only satisfaction but also all other behaviour. It also only manages to construct a forecast model of customer intentions without verifying the results by their actual behaviour. Such a test would complete the findings of the research and makes the model even more reliable and valid. Of course, conducting such an experiment is challenging, as it requires an extra turn of data collection from the exact same respondents, within a time frame that is reasonable enough so that the memory from past purchase still remains in the customer's memory while at the same time, not too short so as not to miss any observation. All in all, the researcher believes that the methodology as presented fulfils the answering of the research questions effectively, which makes the research still live up to its basic requirements.

The *aimed* sample size in this study is 650, which is a decent size for a sample. The large sample size, as discussed below, suggests that the researcher should be cautious in interpreting the Chi-square test. However, a large sample size is advantageous in a sense that it would be able to better represent the population. The sampled data, unfortunately, are not selected on a random basis, as the demographic characteristics of the sample might not precisely match that of the population, making the model less valid as a predictor. Convenient sampling also drives the researcher to a geographically based sampling site of only two cities. However, given the reliability and validity of the models, similar testing procedures can be repeated in different cities of Vietnam especially major cities such as Da Nang, Can Tho, Hai Phong and Nha Trang, as well as rural areas.

Although convenient sampling has proven a flawed technique compared to random sampling, the latter is hard to achieve given the unavailability of consumer data and the challenges in accessing various strata of customers. The number of prospects giving response to the survey is limited. Furthermore, the quality of the questionnaires that are returned valid may not be the best, but this is unavoidable in a questionnaire-based survey without human supervision. The fact that the respondent and the researcher do not exchange interaction implies that misunderstandings can occur. The pilot testing manages to minimise the adverse effect of a non-direct questionnaire, but this weakness is still to be acknowledged.

The use of self-reporting to measure human behaviour is a common method among psychological research nowadays, but we have to admit that popularity does not always build up from quality but more from convenience. As discussed above, letting the respondents speculate their own behaviour may be biased, because that would reflect their views on the constructs instead of their actual behaviour. We have discussed above that adding a variable measuring the *actual action* will increase the reliability and validity of the research, and that would help with this limitation as well. However, the same problem exists about bringing customers' actual decisions for measurement, which still presents a huge challenge to the science of psychological research to date.

The research includes measurement of spurious loyalty in order to determine the extent to which e-loyalty can be estimated using this model or in other words, the usefulness of using a statistical model to predict customer behaviour in the Vietnam setting. If the observation of spurious loyalty is too high, it means that the research contributes less to the knowledge of e-loyalty in Vietnam and in such case, further research is required to take account of the relationship between loyalty and firm profitability (i.e. how having loyal customers *actually* benefits the company or we only *assume* so based on the literature). More details on spurious loyalty against true loyalty will be discussed in Chapter 7.

6. FINDINGS

6.1 Overview

The researcher used STATA for data analysis and statistical tests described in the previous chapter. The reported significance of test results is based on p the probability level of $0.05>p>0.01$ significant, $0.01>p>0.001$ highly significant and $0.001>p$ very highly significant (Manning & Munro 2007). The raw data were processed on Microsoft Excel then transferred to STATA for statistical analysis.

491 questionnaires were returned from mixed distribution methods. Online respondents were required to fill up the questionnaires in order to submit the results. On the other hand, face-to-face and other offline respondents were not, hence a few incomplete questionnaires. All returned questionnaires were examined for missing data before they were finalized for the model. Among the 491 returned questionnaires, 15 were incomplete, all of which were distributed offline. Of the 15 incomplete questionnaires, most were due to the respondents skipping a few questions. None of the questionnaires contained missing pages, which was helped by the fact that a helper was present to guide the respondents. The helper was also responsible for reviewing the results to detect missing values, but unfortunately, he was not able to finish his job 15 times.

Usually, the missing data can be ignored, deleted or substituted. However, it is important that missing data is dealt with in a manner that accounts for any underlying cause or impact of the missing values. This is particularly relevant when missing data appears in a non-random pattern. According to Hair et al. (2006), the proportion of missing data against the total number of samples cannot be too high. According to his rule of thumb, when the number of missing values does not exceed 10% of the sample size, the missing values can be deleted from the sample. In this survey, the number of failed questionnaires amount to 15, which is small enough to be ruled out.

Potential missing data replacement solutions suggested by Hair et al. (2006) and Manning and Munro (2007), include data application solutions such as Listwise and Pairwise data deletion or means substitutions. Finally, though, it is the judgment of the researcher that determines the best course of action for the missing data. In the case of this research, recommendations by Manning and Munro (2007) have been adopted. In the survey, the missing items appeared to be randomly spread throughout the questionnaire, which suggests that the questionnaire contains no systematic errors. Consequently, it was decided to exclude the incomplete questionnaires from the database.

6.2 Respondents' profile

Male respondents account for 47% of total respondents. Age groups 18-25, 26-34, 35-42 and 42-49 contribute to 27%, 37%, 28% and 8% respectively to the sample. 43% of the respondents are unmarried, while 28% are married without children and 29% are married with children. Note that in this survey, other marital status including separation is counted as single, as both cases refer to people who are likely to make purchase decisions for themselves and by themselves. Married people are often influenced by their partners; also, couples with children are likely to make decisions in favour of their children's benefits.

17% of the total sample report monthly earning of 10,000,000 VND or under. Meanwhile, 27% were revealed to earn between 10 and 17 million. Nearly a half of the 476 respondents earn between 18 and 30 million a month, while only 8% earn up to 50 million, and 3% report earning more than 50 million a month. It can be seen from the income profile that the research has not tapped into the affluent groups of customers, who are more likely to demonstrate spendthrift shopping behaviour. Such underrepresentation of these groups may be the result of the convenient sampling method, as the affluent might be not interested in either participating in an online survey or shopping with e-commerce websites for their needs. However, this is not counted as a limitation of this research, due to the fact that impulsive buying, or spendthrift behaviour, has always been considered a separate discipline and viewed differently from the popular consumer behaviour. Also, super-rich groups of consumers are not the major target of the e-commerce websites included in this survey (i.e. Tiki, Lazada, Shopee and Sendo).

The respondents' gender, age, family status and income profile are demonstrated in Figure 21, 22, 23 and 24 below.

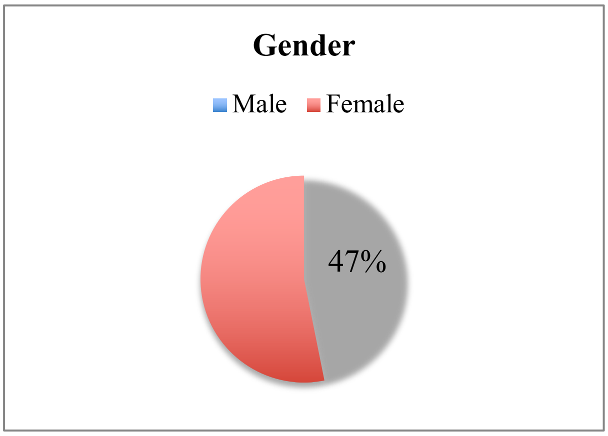


Figure 21 Respondents' profile – Gender

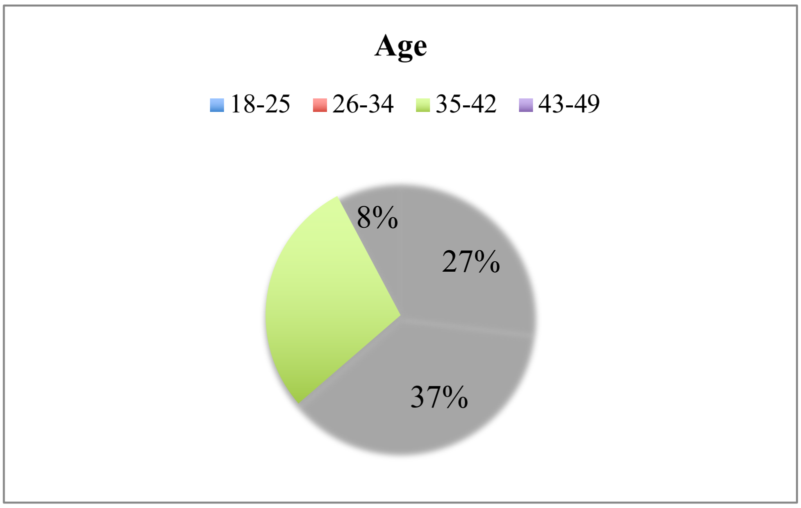


Figure 22 Respondents' profile - Age

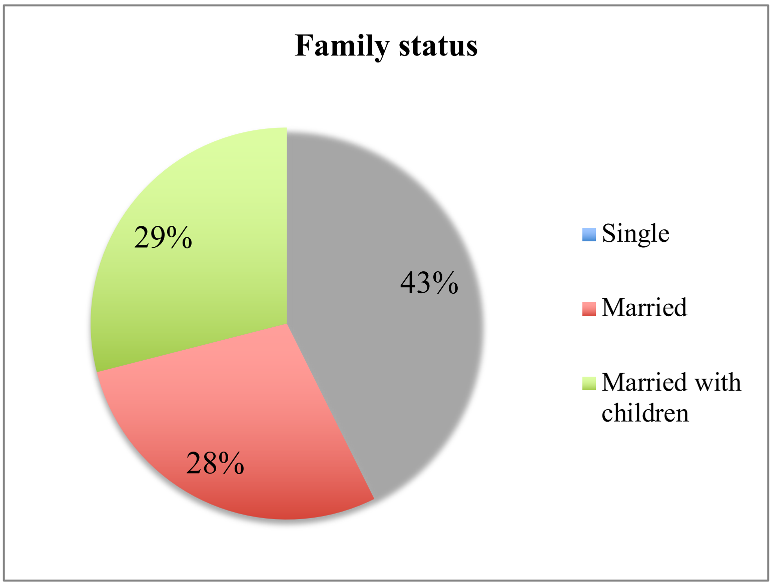


Figure 23 Respondents' profile - Family status

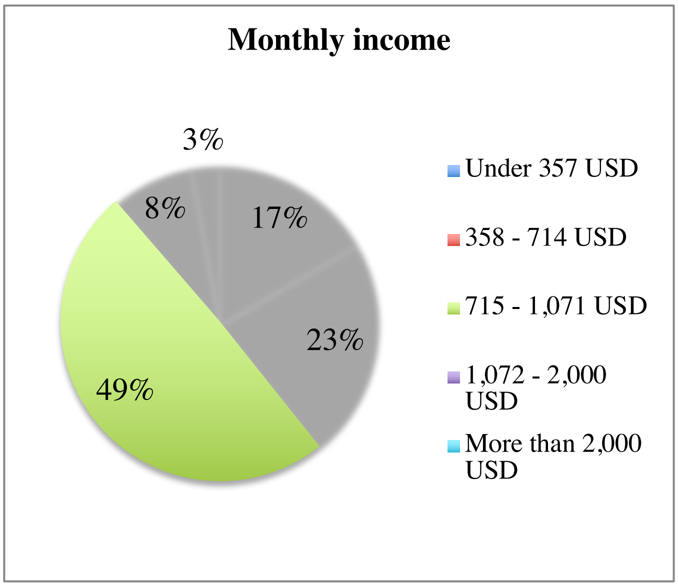


Figure 24 Respondents' profile - Income status

The descriptive statistics are described in Table 14 below.

Variable	Measurement	Mean	Std. dev	Min	Max
SQL1	The products are in good availability.	4.109244	1.379794	1	7
SQL2	The website is stable.	3.936975	1.294612	1	7
SQL3	The website is easy to use.	3.920168	1.317866	1	7
SQL4	The design of the website is user-friendly.	4.056723	1.261134	1	7
IQL1	The information provided in the website matches the product.	4.027311	1.286893	1	7
IQL2	The information provided in the website is useful.	3.989496	1.296917	1	7
IQL3	The information provided in the website is clearly written.	4.006303	1.285532	1	7
IQL4	The information provided in the website is up-to-date.	4.05042	1.344611	1	7
SEQ1	Customer support is contactable.	3.852941	1.25799	1	7
SEQ2	Customer support is responsive.	3.934874	1.305036	1	7

SEQ3	Customer support can solve my problem(s).	4.271008	1.321912	1	7
PRI1	The products sold in the website are of great prices	4.115546	1.378516	1	7
PRI2	Prices are competitive compared to other e-commerce websites.	3.934874	1.216536	1	7
PRI3	I am satisfied with the prices of my website	4.054622	1.217919	1	7
PVL1	The product(s) I purchased is (are) worth its (their) prices	3.890756	1.31575	1	7
PVL2	I am satisfied with its (their) price value.	3.960084	1.411413	1	7
SWI1	It is hard to switch brands because there are not many websites that provide similar products in Vietnam.	3.964286	1.468542	1	7
SWI2	Switching brand is a nuisance to me because I have to learn to use the new website all over again.	3.848739	1.395564	1	7
SWI3	Switching brand is a nuisance to me because I have to search for information about that website again.	3.762605	1.279946	1	7
PRO1	There are many loyalty schemes offered by the current website.	3.779412	1.337585	1	7
PRO2	I prefer this program than other programs offered by other websites.	3.794118	1.418542	1	7
PRO3	I highly acknowledge the benefits of the loyalty scheme(s)	3.934874	1.375715	1	7
PRO4	The opportunity costs from losing such benefits have me stay with the current website.	3.861345	1.480291	1	7
SAT1	Overall, I am satisfied with the current website.	4.07563	1.292307	1	7
SAT2	I believe I made the right decision to shop with the website.	3.89916	1.432818	1	7

SAT3	I am very satisfied with the service provided by the website.	3.970588	1.380761	1	7
TRU1	I do not feel any risk shopping online.	4.079832	1.287156	1	7
TRU2	I trust e-commerce in websites in general.	3.976891	1.31769	1	7
TRU3	I think my website has quite a good reputation.	3.966387	1.334137	1	7
TRU4	I trust that my information be secured when shopping with my current website.	3.92437	1.369808	1	7
ACO1	My website shares some important values with me.	3.735294	1.314412	1	7
ACO2	I genuinely enjoy the continued shopping with the current website	3.831933	1.307915	1	7
ACO3	I stay shopping with the current website because I feel comfortable doing so	3.739496	1.316852	1	7
ACO4	I feel a strong sense of identification with the brand.	3.655462	1.476479	1	7
CCO1	It would be very hard for me to switch to another website even if I wanted to	3.621849	1.482482	1	7
CCO2	I feel I and my website have a relationship that other websites cannot provide to me if I switch	3.609244	1.480625	1	7
CCO3	It's most convenient to stay shopping with the same website for me now.	3.560924	1.519857	1	7
ATL	I consider myself to be a loyal customer with the current e-commerce website I have been shopping with.	3.82563	1.477215	1	7
WOM1	I say positive things about the website to my family, friends and acquaintances.	3.943277	1.379144	1	7
WOM2	I recommend the website to people who are looking for a good e-commerce website.	4.042017	1.385002	1	7
INT1	I intend to return to the website in the future.	4.027311	1.464417	1	7

INT2	I intend to make purchase with the website again in the future.	3.964286	1.404049	1	7
INT3	If other websites offer similar products/services, I still prefer shopping with the current website.	3.771008	1.371929	1	7
INT4	I choose to shop again with the website because I voluntarily do so, not because I am forced to.	4.170168	1.403167	1	7

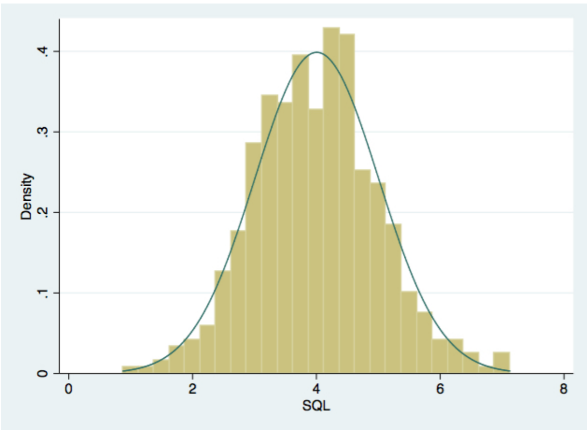
Table 14 Descriptive Statistics

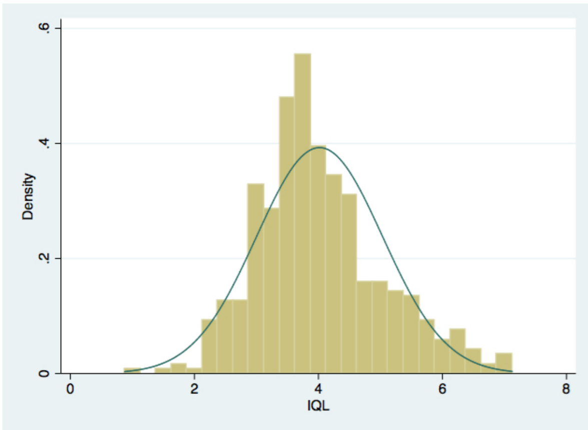
Most measurements come with a mean score around 4, showing that the respondents are, on an average, fairly neutral about the e-commerce websites they last visited. Compared to website quality, price and price perceived value, respondents appear to have lower perception of brand switching and loyalty programs. In SWI1, a large number of respondents believe that they have not received enough loyalty benefits such as membership perks or redemption points. Nor have they felt that the impact of such programs was sufficient to keep them loyal to the website. The level of satisfaction and trust seem neutral, but level of commitment, both affective and calculative, seem lower than average.

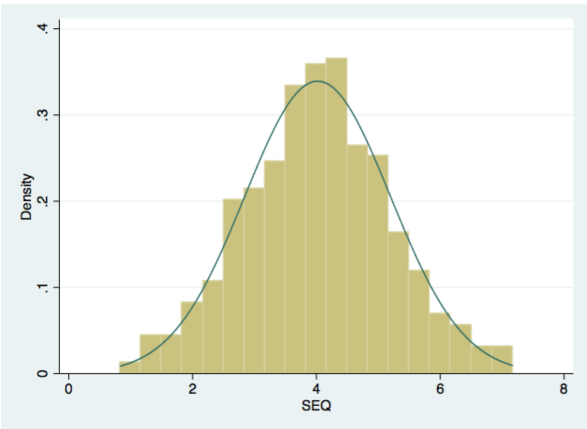
6.3 Outliers

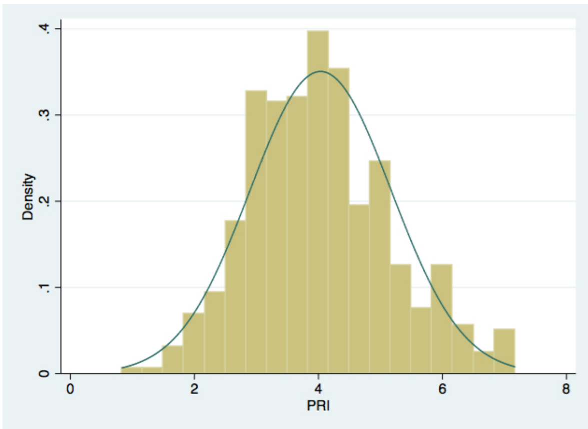
Hair et al. (2006) consider an outlier as an extreme score or a unique combination of values that stand out from other values. To assist the research, identify potential outliers in a dataset, there are a selection of methods available. For the purposes of this research, univariate diagnosis methods were selected to examine the collected data for outliers. Hair et al. (2006) recommends the decision to retain, delete or transform an outlier should be based on the frequency a potential outlier appears in the range of diagnosis methods selected. The process described by Hair et al. (2006) was followed when potential outliers were identified.

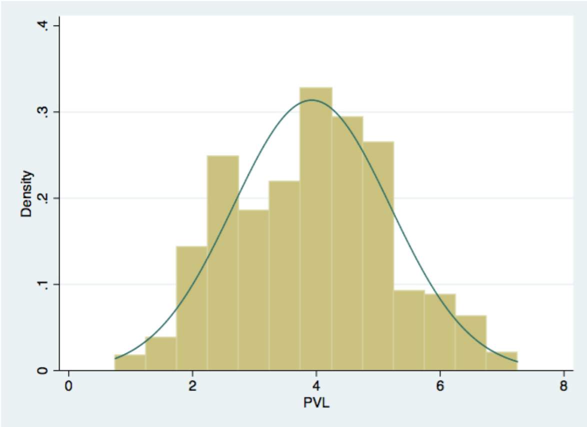
The first univariate evaluation test performed was the production of histograms for each variable, or case. Overlaid on the histogram is a normal distribution curve to give the researcher a visual indication of the data distribution. If there are individual scores well below or above the other scores, the researcher may consider whether they represent outliers not belonging to the same population as the others. The figures below represent the histograms for different variables: system quality, informational quality, service quality price, perceived price value, switching cost, loyalty program, satisfaction, trust, effective commitment, calculative commitment, attitudinal loyalty and behavioural loyalty. The histograms identified no potential outliers.







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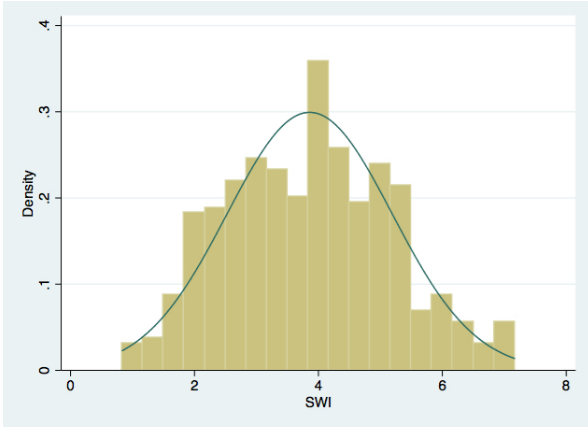
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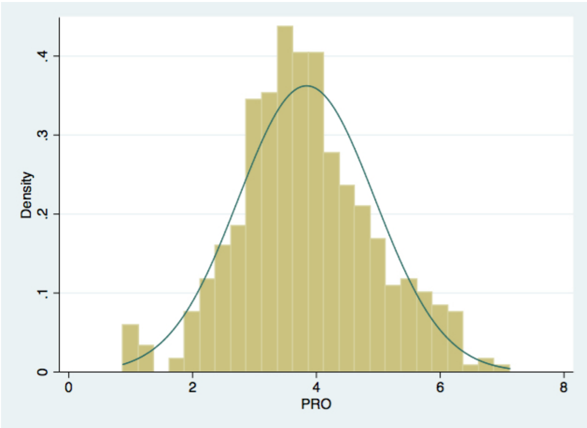
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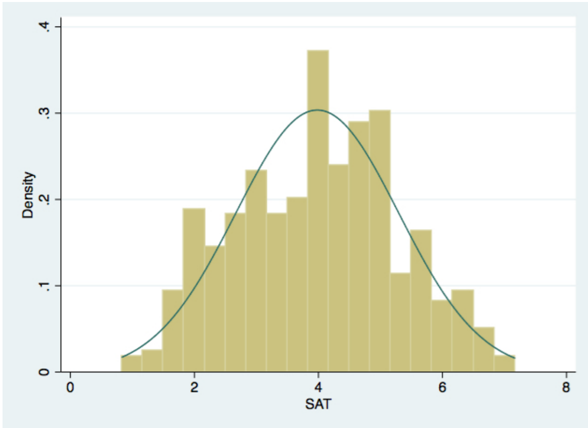
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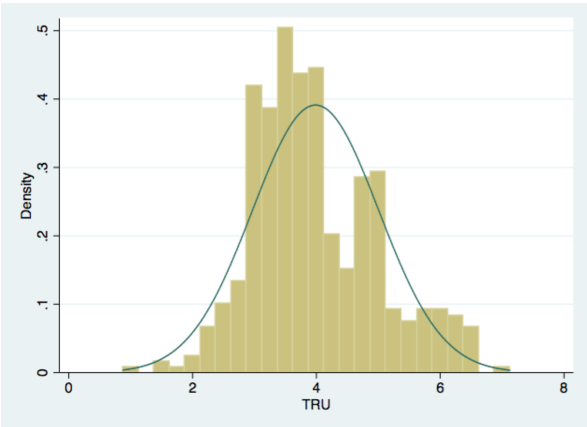
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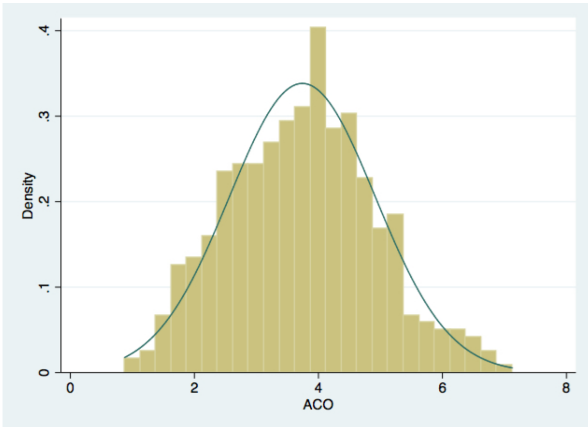
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ACO

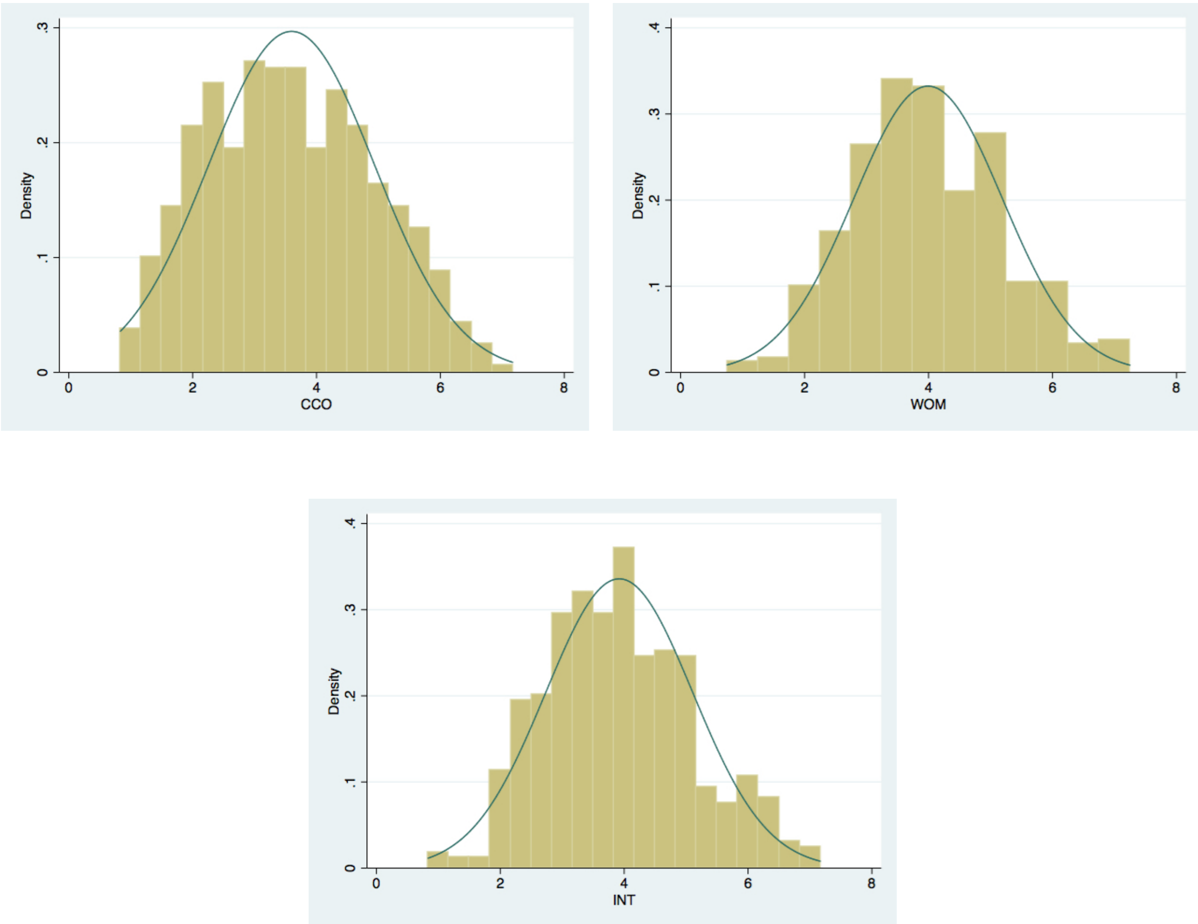

Figure 25 Histograms

6.4 Normality assumption

In order for a statistical procedure to be performed, first it needs to meet several assumptions (Mordkoff, 2000). The assumption that the sampling distribution of the mean is normal is among them. Usually there is a very strong connection between the size of a sample N and the extent to which a sampling distribution approaches the normal form. Many sampling distributions based on large N can be approximated by the normal distribution even though the population distribution itself is definitely not normal (Mordkoff, 2000). This research supplies a sample size as large as 476, hence it can be assumed that the data are normally distributed. However, the researcher still performed normality tests to confirm the normality assumption.

For many statistical tests, including structural equation modelling used in this analysis, it is assumed there is a normality of distribution of data when plotted as a histogram (Manning & Munro, 2007). If the histogram shows a bell curve shape, it indicates that the plotted data are normally distributed. In the histograms presented in Section 6.3, the data appear to be normally distributed.

Numerically, in order to test whether the distributions skew was significantly deviated from a normal distribution, the researcher used the Skewness/Kurtosis tests for Normality from STATA. Skewness is a measure of the asymmetry of the probability distribution of a random variable about its mean. It represents the amount and the direction of skew. On the other hand, Kurtosis represents the height and sharpness of the central peak relative to that of a standard bell curve. The table below shows the results obtained after performing Skewness and Kurtosis test for normality in STATA.

Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
476	0.8959	0.4278	0.65	0.7224

Table 15 Skewness/Kurtosis test

'sktest' shows the number of observations = 476 and the probability of skewness which is 0.8959, implying that skewness is asymptotically normally distributed (p-value of skewness > 0.05). Similarly, Pr(Kurtosis) = 0.4278 indicates that kurtosis is also asymptotically distributed (p-value of kurtosis > 0.05). Finally, chi(2) is 0.7224 which is greater than 0.05 implying its significance at 5% level. Therefore, the null hypothesis can be rejected, which means that according to Skewness/Kurtosis test for normality, residuals show *normal distribution*.

6.5 Reliability and validity

Before testing scientific theory, it is necessary to assess the reliability and validity of the scale. Cronbach's Alpha method is used to assess the reliability of the scale. The Exploratory Factor Analysis (EFA) method helps to evaluate two important types of values of the scale: convergent and discriminant values.

6.5.1 Cronbach's Alpha

Cronbach's Alpha test is a test to analyse and evaluate the reliability of the scale (Manning & Munro 2007). Cronbach's Alpha measures the degree of inter-correlations between the items constituting each scale. The total variable correlation coefficient is the coefficient for the level variable that links between one observed variable in the factor and the other. It reflects the contribution to the conceptual value of the factor of a particular observed variable. Nunnally and Bernstein (1994) chose one of two important periods, important and interested (aggregated) (correlated total item accuracy) ≥ 0.30 scale with Cronbach's Alpha ≥ 0.60. As discussed, DeVellis (1990) suggested that Cronbach's Alpha needed to be higher than 0.7 for the scale to be considered reliable, while in practice a Cronbach's Alpha higher or equal to 0.63 is acceptable. Table 16 below presents Cronbach's Alpha of all measurement items.

It can be seen that reliability coefficients for loyalty (α = 9159, commitment (α = 0.9514), satisfaction (α = 0.9567), website quality (α = 0.9236), switching costs (α = 0.9612) were found to be excellent (>0.9). Cronbach's Alphas for price (α = 0.8744) and perceived price value (0.8487) were found to be great (>0.8). The Cronbach's Alphas for trust (α = 0.7688) and loyalty programmes (α = 0.7913) were found to be quite acceptable. The overall scale reliability coefficient for all independent variables is measured at 0.9236, which indicates *excellent reliability*. On the other hand, two measurement items were ruled out due to low reliability coefficients, which were PRI3 and TRU4. The unreliable items are highlighted in Table 16 below.

#	Var.	Construct	Measurement items	alpha (item)	alpha
1	SQL1	System quality	The products are in good availability.	0.9158	0.9236
2	SQL2		The website is stable.	0.9179	
3	SQL3		The website is easy to use.	0.9189	
4	SQL4		The design of the website is user-friendly.	0.9198	
5	IQL1	Information quality	The information provided in the website is sufficient.	0.9184	
6	IQL2		The information provided in the website is useful.	0.9167	
7	IQL3		The information provided in the website is clearly written.	0.9171	
8	IQL4		The information provided in the website is up-to-date.	0.9174	
9	SEQ1	Service quality	Customer support is always available at my need.	0.9122	
10	SEQ2		Customer support is responsive.	0.9106	
11	SEQ3		Customer support can solve my problem(s).	0.9176	
12	PRI1	Price	The products sold in the website are affordable	0.886	0.8744
13	PRI2		Prices are competitive compared to other e-commerce websites.	0.8897	
14	PRI3		I am satisfied with the prices of my website	0.6767	
15	PVL1	Perceived price value	The product(s) I purchased is (are) worth its (their) prices		0.8487

16	PVL2		I am satisfied with its (their) price value.		
17	SWI1	Switching cost	I am aware that there are many other e-commerce websites that offer similar services to this website.	0.9767	0.9612
18	SWI2		Switching brand is a nuisance to me because I have to learn to use the new website all over again.	0.9201	
19	SWI3		Switching brand is a nuisance to me because I have to search for information about that website again.	0.9331	
20	PRO1	Loyalty program	There are many loyalty schemes offered by the current website.	0.7817	0.7913
21	PRO2		I prefer this programme than other programmes offered by other websites.	0.7114	
22	PRO3		I highly acknowledge the benefits of the loyalty scheme(s)	0.7308	
23	PRO4		The opportunity costs from losing such benefits have me stay with the current website.	0.7297	
24	SAT1	Satisfaction	Overall, I am satisfied with the current website.	0.9234	0.9567
25	SAT2		I believe I made the right decision to shop with the website.	0.9536	
26	SAT3		I am very satisfied with the service provided by the website.	0.9333	
27	TRU1	Trust	I do not feel any risk shopping online.	0.7242	0.7685
28	TRU2		I trust e-commerce in websites in general.	0.7194	

29	TRU3		I think my website has quite a good reputation.	0.7153	
30	TRU4		I trust that my information be secured when shopping with my current website.	0.6933	
31	ACO1	Affective commitment	My website shares some important values with me.	0.9414	0.9514
32	ACO2		I genuinely enjoy the continued shopping with the current website	0.946	
33	ACO3		I stay shopping with the current website because I feel comfortable doing so	0.9499	
34	ACO4		I feel a strong sense of identification with the brand.	0.9421	
35	CCO1	Calculative commitment	It would be very hard for me to switch to another website even if I wanted to	0.9428	
36	CCO2		I feel I and my website have a relationship that other websites cannot provide to me if I switch	0.9419	
37	CCO3		It's most convenient to stay shopping with the same website for me now.	0.9418	
38	ATL	Attitudinal loyalty	I consider myself to be a loyal customer with the current e-commerce website I have been shopping with.	0.8805	0.9159
39	WOM 1	Behavioural royalty	I say positive things about the website to my family, friends and acquaintances.	0.9045	
40	WOM 2		I recommend the website to people who are looking for a good e-commerce website.	0.9049	

41	INT1		I intend to return to the website in the future.	0.9016	
42	INT2		I intend to make purchase with the website again in the future.	0.9017	
43	INT3		If other websites offer similar products/services, I still prefer shopping with the current website.	0.9157	
44	IN4		I choose to shop again with the website because I voluntarily do so, not because I am forced to.	0.9108	

Table 16 Cronbach's Alpha

6.5.2 Exploratory Factor Analysis (EFA)

For each respondent the mean across questions relevant to each construct was calculated to form a composite variable representing constructs website quality, price, perceived price value, switching costs, trust, satisfaction, commitment and loyalty. As demonstrated in Chapter 3, the degree to which a measure actually measures what it is intended to measure is its validity (Manning & Munro, 2007). The construct validity of this research is the degree to which each composite variable actually measures the construct it is defined as measuring. If it is determined that the composite variable represents a single underlying concept then the component items are regarded as internally consistent or homogenous.

4.5.2.1. Convergent validity

Convergent validity measures derived from confirmatory factor analysis include composite reliability (CR) and average variance extracted (AVE). Composite reliability is calculated from the squared sum of each construct factor loadings and the sum of the error variance terms. The average variance extracted is a summary indicator of convergence and is calculated as the mean variance extracted for items loading on a construct.

According to Hair et al. (2006) convergent validity is usually measured through item-to-total correlations exceeding $r = .50$ and inter-item correlations exceeding $r = .30$. Item to total and inter-item correlations were calculated for each composite variable by performing a bivariate analysis. All questions were examined as determined in the criteria presented by Hair et al. (2006). It can be seen that the items are correlated but the correlations are often between 0.3 and 0.5, which indicates absence of multicollinearity. The correlations table is attached at the end of the research paper as an Appendix.

	ATL	WOM1	WOM2	INT1	INT2	INT3	INT4	SAT1	SAT2	SAT3	TRU1	TRU2	TRU3	TRU4	ACO1	ACO2
------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	--------	----------	--------
ATL	1															
WOM1	0.7567	1														
WOM2	0.7445	0.5093	1													
INT1	0.7593	0.5918	0.6098	1												
INT2	0.7755	0.5871	0.5735	0.8001	1											
INT3	0.7085	0.5739	0.5535	0.4212	0.4471	1										
INT4	0.7334	0.574	0.5824	0.5264	0.5107	0.3954	1									
SAT1	0.769	0.5245	0.9733	0.6831	0.6292	0.5406	0.5966	1								
SAT2	0.682	0.4765	0.8742	0.5863	0.5476	0.4852	0.5468	0.8796	1							
SAT3	0.6983	0.4867	0.8946	0.6043	0.5511	0.4943	0.5339	0.9133	0.8583	1						
TRU1	0.3406	0.2658	0.3311	0.3618	0.3511	0.2929	0.2186	0.3381	0.2738	0.3034	1					
TRU2	0.4771	0.3642	0.4135	0.4367	0.4377	0.393	0.4246	0.4288	0.3656	0.3861	0.4119	1				
TRU3	0.4019	0.3067	0.3551	0.3765	0.3545	0.35	0.3191	0.3593	0.289	0.3035	0.4331	0.4438	1			
TRU4	0.4325	0.3242	0.3956	0.3977	0.3938	0.328	0.3868	0.3993	0.3361	0.3728	0.4739	0.4807	0.4755	1		
ACO1	0.8891	0.6932	0.7173	0.7355	0.7204	0.6621	0.7048	0.7443	0.6397	0.6615	0.3784	0.4887	0.4127	0.4589	1	
ACO2	0.8369	0.6623	0.6489	0.6641	0.6754	0.6297	0.6408	0.6801	0.6346	0.6349	0.3194	0.4155	0.3478	0.3666	0.7003	1
ACO3	0.7969	0.6306	0.6074	0.6303	0.644	0.5391	0.6006	0.6351	0.5551	0.5782	0.2744	0.4115	0.3377	0.3602	0.6448	0.6297
ACO4	0.8788	0.681	0.6814	0.721	0.7232	0.6511	0.6625	0.7077	0.6175	0.6322	0.3734	0.4677	0.4366	0.4451	0.7828	0.6808
CCO1	0.8687	0.7031	0.6732	0.7078	0.7217	0.626	0.6838	0.7062	0.6312	0.6415	0.3501	0.4686	0.3959	0.413	0.8096	0.7576
CCO2	0.8774	0.6727	0.6794	0.7137	0.7082	0.6471	0.6593	0.7075	0.6284	0.6709	0.3345	0.4831	0.425	0.4297	0.8132	0.7694
CCO3	0.8829	0.6891	0.7129	0.7139	0.7178	0.6443	0.6679	0.734	0.6418	0.6479	0.3634	0.4396	0.381	0.429	0.8122	0.7603
SQL1	0.6374	0.4889	0.5275	0.5539	0.5486	0.4359	0.4645	0.5514	0.5071	0.5454	0.2914	0.3823	0.3314	0.3619	0.6103	0.5293
SQL2	0.6272	0.5003	0.5064	0.4962	0.5153	0.4778	0.4869	0.5125	0.4437	0.4595	0.3024	0.3805	0.334	0.325	0.5902	0.5197
SQL3	0.6384	0.5211	0.5324	0.5084	0.4991	0.4428	0.4901	0.5561	0.5008	0.5205	0.2756	0.3263	0.2655	0.3057	0.5833	0.5663
SQL4	0.5817	0.4146	0.5266	0.4677	0.4708	0.4224	0.4918	0.5451	0.4983	0.5184	0.2021	0.3403	0.2714	0.2938	0.5272	0.4742
IQL1	0.5872	0.4493	0.4636	0.4744	0.4771	0.4495	0.4848	0.4747	0.4148	0.4507	0.2986	0.3716	0.2948	0.3571	0.5668	0.4943
IQL2	0.61	0.4858	0.496	0.5245	0.5108	0.4494	0.466	0.5205	0.4707	0.4865	0.2918	0.3386	0.2857	0.3148	0.5776	0.5053

IQL3	0.6635	0.4823	0.5828	0.5266	0.5402	0.5093	0.5269	0.5902	0.5421	0.5398	0.3178	0.3617	0.3279	0.4068	0.6227	0.544
IQL4	0.634	0.4647	0.5709	0.5521	0.5161	0.473	0.5165	0.5903	0.5293	0.5451	0.3358	0.3892	0.3413	0.337	0.602	0.5507
SEQ1	0.701	0.5218	0.5799	0.5633	0.5429	0.4916	0.5795	0.587	0.5255	0.5647	0.2959	0.412	0.3244	0.3429	0.6601	0.5825
SEQ2	0.7094	0.543	0.5909	0.566	0.5652	0.5079	0.5694	0.6046	0.538	0.5819	0.3202	0.4227	0.3687	0.3894	0.6625	0.6103
SEQ3	0.5881	0.4519	0.4376	0.4703	0.4794	0.4487	0.4745	0.46	0.4002	0.4242	0.1939	0.3771	0.226	0.2578	0.5696	0.4964
PRI1	0.35	0.2725	0.3327	0.3374	0.3176	0.3368	0.3076	0.3449	0.298	0.3203	0.435	0.3851	0.3902	0.377	0.405	0.3261
PRI2	0.611	0.516	0.5227	0.6096	0.589	0.4527	0.5319	0.5482	0.4745	0.5102	0.4053	0.4364	0.3956	0.4367	0.6133	0.5528
PRI3	0.5155	0.4368	0.4766	0.515	0.4985	0.4409	0.4565	0.5016	0.4544	0.4817	0.4552	0.4494	0.4119	0.4391	0.568	0.4842
PVL1	0.3964	0.2797	0.3479	0.3567	0.3945	0.3278	0.3339	0.3652	0.3012	0.3378	0.4216	0.3932	0.3361	0.4767	0.4227	0.3734
PVL2	0.4874	0.3547	0.3993	0.4497	0.4582	0.3638	0.3893	0.4103	0.3488	0.3656	0.4444	0.4546	0.3928	0.4678	0.463	0.4548
SWI1	0.3581	0.3535	0.4437	0.4713	0.4303	0.3679	0.3646	0.4762	0.4185	0.4397	0.3757	0.3804	0.3551	0.4005	0.4608	0.4474
SWI2	0.4304	0.4167	0.5021	0.5387	0.499	0.425	0.4346	0.5363	0.4672	0.4762	0.4251	0.4366	0.4055	0.4367	0.5393	0.5074
SWI3	0.4335	0.4277	0.5032	0.5359	0.4967	0.4066	0.4492	0.5353	0.4645	0.4856	0.4217	0.4374	0.4096	0.4448	0.5432	0.5005
PRO1	0.5505	0.4326	0.3721	0.5372	0.4902	0.39	0.4564	0.4043	0.3772	0.351	0.2145	0.2384	0.1952	0.2103	0.4948	0.5227
PRO2	0.6349	0.4793	0.4684	0.5763	0.5893	0.4485	0.5105	0.4851	0.4175	0.4483	0.2592	0.3725	0.2933	0.3224	0.5962	0.5362
PRO3	0.6097	0.4641	0.4975	0.5735	0.5775	0.4304	0.4976	0.5167	0.4281	0.4745	0.2181	0.3952	0.2339	0.3359	0.5516	0.5391
PRO4	0.6494	0.4808	0.4875	0.5874	0.6155	0.4788	0.4898	0.5073	0.4391	0.4594	0.3097	0.375	0.3334	0.326	0.6141	0.5458
	ACO3	**ACO4**	**CCO1**	**CCO2**	**CCO3**	**SQL1**	**SQL2**	**SQL3**	**SQL4**	**IQL1**	**IQL2**	**IQL3**	**IQL4**	**SEQ1**	**SEQ2**	**SEQ3**
------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	--------	----------	--------
ACO3	1															
ACO4	0.6229	1														
CCO1	0.7183	0.7925	1													
CCO2	0.7121	0.806	0.7085	1												
CCO3	0.7306	0.8124	0.7035	0.7272	1											
SQL1	0.5383	0.5869	0.5647	0.5846	0.6052	1										
SQL2	0.5214	0.59	0.6007	0.5659	0.5669	0.5059	1									
SQL3	0.5533	0.5604	0.5772	0.5774	0.591	0.4505	0.403	1								
SQL4	0.4995	0.5577	0.5261	0.57	0.5205	0.4453	0.4148	0.4157	1							

IQL1	0.4937	0.549	0.5506	0.5404	0.5163	0.5401	0.4926	0.4842	0.4388	1						
IQL2	0.5359	0.5632	0.5772	0.5636	0.5637	0.6006	0.5413	0.5304	0.5075	0.4795	1					
IQL3	0.522	0.6201	0.59	0.5864	0.6221	0.5836	0.548	0.5433	0.527	0.5038	0.4912	1				
IQL4	0.5627	0.5772	0.5873	0.5725	0.6022	0.5349	0.5231	0.544	0.4962	0.4749	0.4482	0.4639	1			
SEQ1	0.5843	0.6493	0.6215	0.6427	0.6521	0.5975	0.523	0.5161	0.5122	0.5409	0.581	0.5174	0.567	1		
SEQ2	0.6063	0.6668	0.6303	0.6667	0.6755	0.6037	0.5608	0.5441	0.5612	0.5476	0.5805	0.5248	0.5933	0.9174	1	
SEQ3	0.4615	0.5527	0.5326	0.5522	0.5351	0.4997	0.5365	0.4668	0.4391	0.4597	0.4597	0.4574	0.4874	0.633	0.6644	1
PRI1	0.281	0.4044	0.3995	0.3357	0.3629	0.3088	0.3167	0.2635	0.2469	0.283	0.2915	0.3073	0.2717	0.2648	0.278	0.2161
PRI2	0.5216	0.5923	0.5957	0.5726	0.6039	0.4721	0.4572	0.4419	0.41	0.4046	0.4479	0.4647	0.4718	0.4449	0.476	0.3906
PRI3	0.4211	0.5385	0.5478	0.5057	0.5259	0.4399	0.4254	0.387	0.3667	0.3577	0.4375	0.4193	0.4071	0.412	0.4221	0.3308
PVL1	0.331	0.3859	0.3954	0.3876	0.3908	0.2756	0.2876	0.3677	0.2956	0.3487	0.3078	0.3228	0.328	0.2943	0.3269	0.287
PVL2	0.4373	0.452	0.4284	0.4791	0.4953	0.3406	0.3731	0.3978	0.3407	0.3622	0.3632	0.3459	0.4049	0.382	0.402	0.3308
SWI1	0.398	0.4176	0.4463	0.467	0.441	0.3656	0.3487	0.3249	0.3114	0.3135	0.3756	0.3068	0.3837	0.3949	0.4426	0.3206
SWI2	0.4757	0.5254	0.5248	0.5429	0.5254	0.4164	0.3909	0.386	0.3673	0.4044	0.4202	0.3807	0.445	0.443	0.4939	0.3738
SWI3	0.4841	0.5237	0.5218	0.5497	0.522	0.4117	0.3861	0.3806	0.3631	0.4219	0.4094	0.3822	0.4302	0.4529	0.4974	0.3604
PRO1	0.4263	0.4827	0.4897	0.4709	0.5084	0.3336	0.3664	0.316	0.2783	0.3056	0.279	0.3767	0.4089	0.3735	0.3729	0.3863
PRO2	0.5314	0.5601	0.5706	0.573	0.579	0.445	0.3861	0.4315	0.3372	0.4102	0.3913	0.4417	0.4503	0.4537	0.4385	0.3857
PRO3	0.4996	0.5642	0.5453	0.5394	0.5783	0.4197	0.3677	0.407	0.3771	0.3744	0.3878	0.4264	0.4081	0.4531	0.4491	0.3825
PRO4	0.5203	0.5965	0.5766	0.5765	0.5886	0.4506	0.3832	0.4443	0.3865	0.4319	0.4181	0.4496	0.4689	0.4932	0.4683	0.385
	PRI1	**PRI2**	**PRI3**	**PVL1**	**PVL2**	**SWI1**	**SWI2**	**SWI3**	**PRO1**	**PRO2**	**PRO3**	**PRO4**				
------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	--------				
PRI1	1															
PRI2	0.5154	1														
PRI3	0.8075	0.7953	1													
PVL1	0.3923	0.3651	0.4018	1												
PVL2	0.4222	0.4362	0.4422	0.7391	1											
SWI1	0.3577	0.4512	0.5449	0.3673	0.3772	1										
SWI2	0.4337	0.5249	0.5635	0.414	0.433	0.8756	1									

SWI3	0.4427	0.5444	0.5796	0.4133	0.4376	0.8601	0.9581	1								
PRO1	0.2159	0.3832	0.3318	0.2339	0.2841	0.2361	0.281	0.2854	1							
PRO2	0.2652	0.5021	0.4221	0.2654	0.3797	0.2926	0.3586	0.3568	0.4476	1						
PRO3	0.2915	0.4792	0.4193	0.2833	0.4009	0.3156	0.3545	0.369	0.396	0.5735	1					
PRO4	0.2555	0.4591	0.3919	0.3338	0.4034	0.2824	0.3689	0.347	0.4343	0.5418	0.5207	1				

Table 17 Correlations table - Measurements

	ATL	WOM	INT	SAT	TRU	ACO	CCO	SQL	IQL	SEQ	PRI	PVL	SWI	PRO
ATL	1													
WOM	0.864	1												
INT	0.931	0.8364	1											
SAT	0.7445	0.8441	0.7374	1										
TRU	0.5383	0.5168	0.5936	0.4684	1									
ACO	0.9773	0.8798	0.9533	0.7679	0.5902	1								
CCO	0.9745	0.8813	0.9523	0.7716	0.5931	0.9899	1							
SQL	0.8162	0.7596	0.7988	0.7009	0.5344	0.8316	0.834	1						
IQL	0.8003	0.7379	0.8027	0.6846	0.5611	0.8194	0.8173	0.8894	1					
SEQ	0.7328	0.6595	0.718	0.595	0.4693	0.7488	0.7489	0.7669	0.7434	1				
PRI	0.5429	0.5412	0.621	0.5015	0.606	0.6046	0.6072	0.5492	0.5394	0.4361	1			
PVL	0.4755	0.4278	0.5172	0.3958	0.592	0.5126	0.5138	0.4726	0.4799	0.3994	0.4917	1		
SWI	0.4205	0.5247	0.5849	0.5132	0.5527	0.5754	0.5795	0.5043	0.5165	0.4776	0.5654	0.4515	1	
PRO	0.7804	0.6766	0.8246	0.5869	0.4832	0.787	0.7807	0.6442	0.6596	0.5903	0.5179	0.4453	0.4228	1

Table 18 Correlations table - Variables

The correlations between measurements in Table 18 show that most measurements are inter-correlated by 0.3-0.5, which show no signs of multicollinearity. Table 19 for regression variables also indicate that only a few pairs of variables are too strongly correlated (>0.8). Multicollinearity will be investigated further next using factor loading.

Besides, Meyers et al. (2006) mentioned that in factor analysis, Principal Components Analysis extraction method with Varimax rotation is the most commonly used method. According to Hair et al. (2006), factor loading (factor load or factor weight) is an indicator to ensure the practical significance of EFA:

- Factor loading> 0.3 is considered to be a minimum.
- Factor loading> 0.4 is considered important.
- Factor loading> 0.5 is considered practical.

In this analysis, the condition for analysing the exploratory factor must satisfy the following requirements: Factor loading factor > 0.5.

Factor	Variance	Difference	Proportion	Cumulative
Factor1	5.97808	3.06049	0.2599	0.2599
Factor2	2.91758	0.05983	0.1269	0.3868
Factor3	2.85775	0.52133	0.1243	0.511
Factor4	2.33643	0.50697	0.1016	0.6126
Factor5	1.82946	.	0.0795	0.6921

Table 19 Factor loading, independent variables

As seen in Table 19 5 factors were found with variance > 1. The measurement items are factorized as Table 20 below.

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
SQL1	0.6971					0.3882
SQL2	0.6607					0.4518
SQL3	0.5864					0.4827
SQL4	0.6469					0.5104
IQL1	0.638					0.4826
IQL2	0.7061					0.4066
IQL3	0.6435					0.4325
IQL4	0.5953					0.4476
SEQ1	0.7896					0.2577
SEQ2	0.8085					0.2152
SEQ3	0.6958					0.432
PRI1				0.8436		0.18
PRI2				0.6251		0.2664
PRI3				0.8269		0.0754
PVL1					0.87	0.1265
PVL2					0.8072	0.1601
SWI1		0.886				0.1037
SWI2		0.8758				0.0529
SWI3		0.8679				0.0602
PRO1			0.6821			0.4627
PRO2			0.7416			0.3162
PRO3			0.683			0.3872
PRO4			0.6558			0.3822

Table 20 Rotated factor loading, independent variables

Table 21 presents factor loading for each measurement items, where it is shown that no measurement items demonstrate low factor loading (< 0.5). It suggests that all items are valid measure of their intended constructs. As expected, the constructs load in five distinct factors, each containing the measurement items intended for corresponding variables. Factor 1 contains 11 measurement items for website quality; Factor 2 contains 3 items indented for switching cost; Factor 3 4 items for loyalty programs; Factor 4 consists of 3 items for price; and Factor 5 comprises 2 items for perceived price value.

Factor	**Variance**	**Difference**	**Proportion**	**Cumulative**
Factor1	9.58392	6.77531	0.4564	0.4564
Factor2	2.80861	0.02422	0.1337	0.5901
Factor3	2.78439	.	0.1326	0.7227

Table 21 Factor loading, dependent variables

Variable	**Factor1**	**Factor2**	**Factor3**	**Uniqueness**
WOM1	0.7885			0.3609
WOM2	0.7426			0.3826
INT1	0.7656			0.3367
INT2	0.7717			0.3353
INT3	0.6822			0.4846
INT4	0.7421			0.42
ATL	0.956			0.0408
SAT1			0.968	0.0599
SAT2			0.9489	0.0981

SAT3			0.9613	0.075
TRU1		0.7593		0.39
TRU2		0.6399		0.4539
TRU3		0.7216		0.4128
TRU4		0.74		0.3713
ACO1	0.8586			0.1761
ACO2	0.8352			0.268
ACO3	0.7931			0.3432
ACO4	0.8432			0.2026
CCO1	0.8547			0.2098
CCO2	0.8506			0.2061
CCO3	0.8655			0.1952

Table 22 Rotated factor loading, dependent variables

Similarly, the process is repeated for the dependent variables, whose results are shown on Table 23 and Table 24. It can be seen that all the measurement items are loaded on three distinct factors. Factor 1 contains all measurement items for loyalty and commitment. Factor 2 contains 4 measurement items for trust, while the rest load on satisfaction. The coexistence of loyalty and commitment constructs under Factor 1 indicates that there might be similarities in the questions intended for the two constructs in the questionnaire. However, the questionnaire items are based on the existing literature hence they are considered valid. Such results can have a meaning that the constructs of loyalty and commitment are relatively close to each other, even though they do not always point to the same meaning.

4.5.2.2. Kaiser-Meyer-Olkin coefficient

The KMO coefficient (Kaiser-Meyer-Olkin) is the index used to consider the suitability of factor analysis. A large KMO value means that factor analysis is appropriate. The rule of thumb is $0.5 \leq KMO \leq 1$. Bartlett test is statistically significant (Sig. <0.05): This is a statistical quantity used to consider the hypothesis that the variables have no correlation in the whole. If this test is statistically significant (Sig. <0.05), the observed variables are correlated with each other in the population. The Kaiser-Meyer-Olkin (KMO) coefficient for the dataset KMO = 0.9404, indicating *excellent validity*.

4.5.2.3. Discriminant validity

Discriminant validity of the constructs is indicated when the square root of the AVE for each construct is larger than the correlation of the construct with any of the other constructs (Bertea & Zait, 2011). This must be tested for each underlying construct before discriminant validity can be achieved. AVE is decided to follow the formula advised by Hair et al. (2006), which is to calculate the sum of the squared standardised factor loadings and divide by the number of item loadings for each of the latent constructs.

6.6 Model

6.6.1 The measurement models

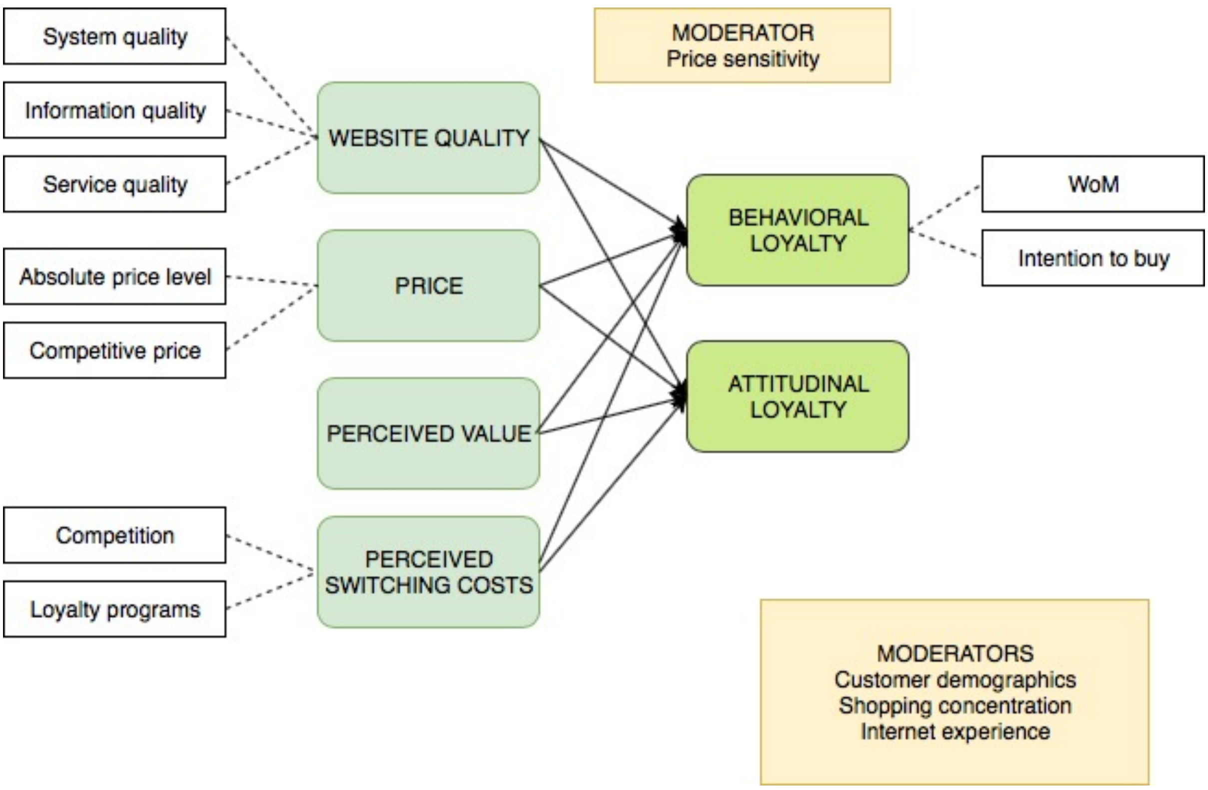

Figure 26 The measurement model

The measurement model aims to test the relationship between the latent variables and the explained variables. In the measurement model below, the researcher brings to test the determinants of customer e-loyalty, which has been deemed to consist of two constructs: behavioural loyalty and attitudinal loyalty. Behavioural loyalty in turn comprises two sub-constructs: intention to spread Word-of-Mouth and intention to repurchase. The measurement model is illustrated in Figure 27. Descriptive statistics for regression variables are presented in Table 23.

Variable	Obs	Mean	Std. Dev.	Min	Max
SQL	476	4.005777	1.000444	1	7

IQL	476	4.018382	1.015953	1	7
SEQ	476	4.019608	1.175814	1	7
PRI	476	4.115546	1.378516	1	7
PVL	476	3.92542	1.271636	1	7
SWI	476	3.858543	1.332831	1	7
PRO	476	3.842437	1.101012	1	7
SAT	476	3.981793	1.314123	1	7
TRU	476	3.98687	1.019784	1	7
ACO	476	3.740546	1.179279	1	7
CCO	476	3.597339	1.343854	1	7
ATL	476	3.82563	1.477215	1	7
WOM	476	3.992647	1.200635	1	7
INT	476	3.920868	1.188067	1	7
BHL	476	3.986345	1.108864	1	7
LOY	476	3.963385	1.151671	1	7

Table 23 Descriptive statistics – Regression analyses

The descriptive statistics show that the mean score generally skew towards below 4, indicating neutral level of satisfaction on each construct.

(1) Intention to spread Word-of-Mouth

WOM = a1 SQL + a2 IQL + a3 SEQ + a4 PRI + a5 PVL + a6 SWI + a7 PRO + e

With an acceptable level of fit to the data, the squared multiple correlations of the dependent variables were examined to determine the percentage of the variable explained by the predictor variables. The (1) Intention to spread WOM model produces an R-squared of 65.99%, adjusted

R-squared 65.49%, which indicates that the explanatory variables explain roughly 65.49% of the variances of the explained variable. R-squared is quite low, indicating that there is a part of the variances that cannot be explained by the model constructs. The influence of demographic factors and other moderating variables including price sensitivity and shopping concentration will be studied in Section 4.6.4. Mediating variables.

The model also indicates that SQL, IQL, SEQ, SWI and PRO are positively correlated with WOM and statistically significant at different confidence levels. SQL, SWI and PRO are significant at 99% confidence level, which suggests that we can be 99% sure that system quality, switching cost and loyalty programmes have significant effect on customers' willingness to spread Word-of-Mouth. Besides, it is also indicated that we can be 95% sure that informational quality affects willingness to spread WOM in a positive direction, while the confidence level for service quality is 90%. Other variables including PRI and PVL demonstrate no significant statistics.

WOM	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf.**	**Interval]**
SQL***	0.4228376	0.0762076	5.55	0	0.2730862	0.5725891
IQL**	0.147637	0.0737692	2	0.046	0.0026771	0.292597
SEQ*	0.0799561	0.0447896	1.79	0.075	-0.0080576	0.1679697
PRI	-0.0200812	0.028648	-0.7	0.484	-0.0763758	0.0362135
PVL	-0.0107458	0.0306471	-0.35	0.726	-0.0709687	0.0494771
SWI***	0.1233369	0.0298588	4.13	0	0.0646629	0.1820109
PRO***	0.2941865	0.0408477	7.2	0	0.2139189	0.3744542
_cons	-0.0988846	0.178922	-0.55	0.581	-0.4504746	0.2527054

Table 24 Coefficient table - Model WOM

(2) Intention to repurchase

INT = a1 SQL + a2 IQL + a3 SEQ + a4 PRI + a5 PVL + a6 SWI + a7 PRO + e

The (2) Intention to repurchase model produces an R-squared of 78.93%, adjusted R-squared 78.57%, which indicates that the explanatory variables explain roughly 78.57% the variances of the explained variable. The R-squared is higher than that of model (1). It indicates that the included variables are capable of explaining 78.57% the total variances of the INT construct.

INT	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf.**	**Interval]**
SQL***	0.2328515	0.0612906	3.8	0	0.1124127	0.3532904
IQL***	0.1707251	0.0593295	2.88	0.004	0.0541399	0.2873103
SEQ*	0.0518134	0.0360224	1.44	0.151	-0.0189723	0.1225991
PRI	0.0070349	0.0230404	0.31	0.76	-0.0382405	0.0523103
PVL	0.0392547	0.0246481	1.59	0.112	-0.0091801	0.0876894
SWI***	0.1419885	0.0240142	5.91	0	0.0947995	0.1891775
PRO***	0.4957345	0.0328521	15.09	0	0.4311786	0.5602904
_cons***	-0.5413658	0.1438995	-3.76	0	-0.8241348	-0.2585967

Table 25 Coefficient table - Model INT

Coefficient table suggests that SQL, IQL, SWI and PRO are significant at the highest confidence level.

(3) Attitudinal loyalty

ATL = a1 SQL + a2 IQL + a3 SEQ + a4 PRI + a5 PVL + a6 SWI + a7 PRO + e

R-squared 79.81%, adjusted R-squared 79.51%. Prob > F 0.0000, Root MSE = 0.66866 F (7, 468) = 264.33.

ATL	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf.**	**Interval]**

SQL***	0.4694305	0.0722419	6.5	0	0.3274718	0.6113892
IQL***	0.2398297	0.0699304	3.43	0.001	0.1024131	0.3772462
SEQ***	0.2030061	0.0424589	4.78	0	0.1195725	0.2864397
PRI	-0.0262929	0.0271572	-0.97	0.333	-0.079658	0.0270723
PVL*	0.056569	0.0290522	1.95	0.052	-0.00052	0.113658
SWI***	-0.0971887	0.028305	-3.43	0.001	-0.1528094	-0.041568
PRO***	0.5213397	0.0387221	13.46	0	0.445249	0.5974304
_cons	-1.578709	0.1696113	-9.31	0	-1.912003	-1.245415

Table 26 Coefficient table - Model ATL

6.6.2 Modified measurement model

The existence of unreliable items suggests that the model be modified to produce better fit. The removal of PRI3 as an unreliable item results in the PRI (price) construct only being measured with two items. This has failed to fit with the requirements of minimum three items per measure, detailed by Hair et al. (2006). In the instance of only two indicators being utilised, unless the sample size is large, there may be problematic concerns (Anderson & Gerbing, 1988). However, Anderson and Gerbing (1988) suggested that a sample size exceeding 400 suffices to minimise the problematic issues. The current research has a final sample size of 476, which is more than a large enough sample size, hence the problem concerning few items can be overlooked.

The removal of items requires that statistical procedures be performed all over again in order to produce the most reliable and valid model. Removing the lowest loading item on any measure changes the discriminant validity and results in a potentially better model fit. The exclusion of a measurement item must result in appropriate statistical measures already described in this chapter. For example, discriminant validity, factor loading and model requirements must all be met. Although the number of items measured decreases, the number of measurement items per variable remains consistent with the literature research in all cases.

Variable	**Factor 1**	**Factor 2**	**Factor 3**	**Factor 4**	**Uniqueness**
SQL1	0.6847				0.4101
SQL2	0.6473				0.4766
SQL3	0.592				0.488
SQL4	0.6446				0.5129
IQL1	0.6344				0.485
IQL2	0.6976				0.4251
IQL3	0.6271				0.4507
IQL4	0.602				0.4548
SEQ1	0.8031				0.2561
SEQ2	0.8213				0.2153
SEQ3	0.7074				0.4339
PRI1				0.5292	0.5365
PRI2					0.4141
PVL1				0.8592	0.1832
PVL2				0.8102	0.2029
SWI1		0.8883			0.1208
SWI2		0.8879			0.0576
SWI3		0.8851			0.0615
PRO1			0.6753		0.4763
PRO2			0.7527		0.3167

PRO3			0.6944		0.3872
PRO4			0.6442		0.4044

Table 27 Rotated factor loading, sorted with unreliable items excluded

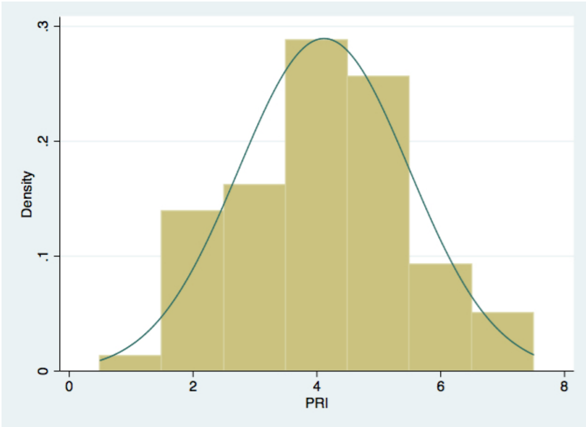

Figure 27 Histogram of variable PRI for modified measurement model

The factor loading table and histogram above confirm that the presumptions for regressions are met.

(1-M) Intention to spread Word-of-Mouth

The (1-M) Intention to spread WOM model produces an R-squared of 66.2%, adjusted R-squared 65.70%, which indicates that the explanatory variables explain roughly 65.70% of the variances of the explained variable. The R-squared did not increase significantly compared to the original model, where PRI3 was included.

WOM	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SQL***	0.4079066	0.0764785	5.33	0	0.2576229	0.5581904
IQL*	0.1415397	0.0734978	1.93	0.055	-0.0028867	0.2859662
SEQ*	0.0849977	0.0447261	1.9	0.058	-0.0028912	0.1728866
PRI*	0.0709532	0.0385507	1.84	0.066	-0.0048007	0.1467071

PVL	-0.0229365	0.0313062	-0.73	0.464	-0.0844547	0.0385817
SWI***	0.1065891	0.0311702	3.42	0.001	0.0453383	0.16784
PRO***	0.2791453	0.0414175	6.74	0	0.197758	0.3605327
_cons	-0.2311977	0.1487276	-1.55	0.121	-0.5234543	0.0610589

Table 28 Coefficient table - Model WOM modified

In the modified model, PRI becomes statistically significant at 90% confidence level. SQL, SWI and PRO are significant at the highest confidence level 99%, while IQL and SEQ remain to be statistically significant. There is no evidence supporting the relationship between PVL and WOM. Besides, it also can be seen that apart from SQL, the coefficients for the rest are small. The 0.4079066 coefficient for SQL can be interpreted that if SQL manages to increase by 1 unit of measurement, we are 99% confident that customers' intention to spread WOM may increase by 0.4079066. For other variables, the impact is not as clear.

(2-M) Intention to repurchase

INT	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SQL***	0.1982196	0.0492925	4.02	0	0.1013576	0.2950817
IQL***	0.1810857	0.0473714	3.82	0	0.0879988	0.2741726
SEQ***	0.0937416	0.0288272	3.25	0.001	0.0370947	0.1503884
PRI***	0.0893784	0.024847	3.6	0	0.0405529	0.1382039
PVL	0.019427	0.0201777	0.96	0.336	-0.0202231	0.0590772
SWI***	0.1027589	0.0200901	5.11	0	0.063281	0.1422368
PRO***	0.4500844	0.0266948	16.86	0	0.397628	0.5025408
_cons	-0.4772527	0.0958591	-4.98	0	-0.6656202	-0.2888852

Table 29 Coefficient table - Model INT modified

Similarly, in the modified INT model, PRI becomes significant at 99% confidence level, making PVL the only non-significant variable. Thus, it can be concluded from this model that we are 99% confident website quality, price level and switching costs have significant impact on customers' intention to make a return purchase to an e-commerce website. Meanwhile, there is not enough evidence supporting the relationship between perceived price level and intention to repurchase. Quite differently than WOM's modified model, variable PRO has the highest beta coefficient (0.4500844). The coefficient means that if customers' acknowledgement of the benefits of loyalty programs increases by 1 unit of measurement, we are 99% confident that their intention to repurchase may increase by 0.4500844. This result suggests that practitioners might find it advisable to focus on loyalty programs in order to improve customer retention rates.

(3-M) Attitudinal loyalty

ATL	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
SQL***	0.4511328	0.0723487	6.24	0	0.3089643	0.5933014
IQL***	0.2321191	0.0695289	3.34	0.001	0.0954916	0.3687467
SEQ***	0.2091019	0.0423109	4.94	0	0.125959	0.2922449
PRI**	0.0877914	0.036469	2.41	0.016	0.0161282	0.1594547
PVL	0.0415158	0.0296157	1.4	0.162	-0.0166804	0.099712
SWI***	-0.1178901	0.029487	-4	0	-0.1758335	-0.0599468
PRO***	0.5026626	0.039181	12.83	0	0.4256701	0.5796551
_cons	-1.74767	0.1406964	-12.42	0	-2.024145	-1.471195

Table 30 Coefficient table - Model ATL modified

The same outcome occurs to the modified ATL model, where PRI becomes significant at 95% confidence level. However, PVL becomes insignificant at acceptable statistical levels (at least 90% confidence). SQL and PRO have the highest magnitude of correlation. It suggests that SQL and PRO, among the included variables, have the most impact on customers' attitudinal loyalty.

6.6.3 The structural model

The structural model is built after ruling out measurement PRI3 to ensure multicollinearity does not occur in the dataset.

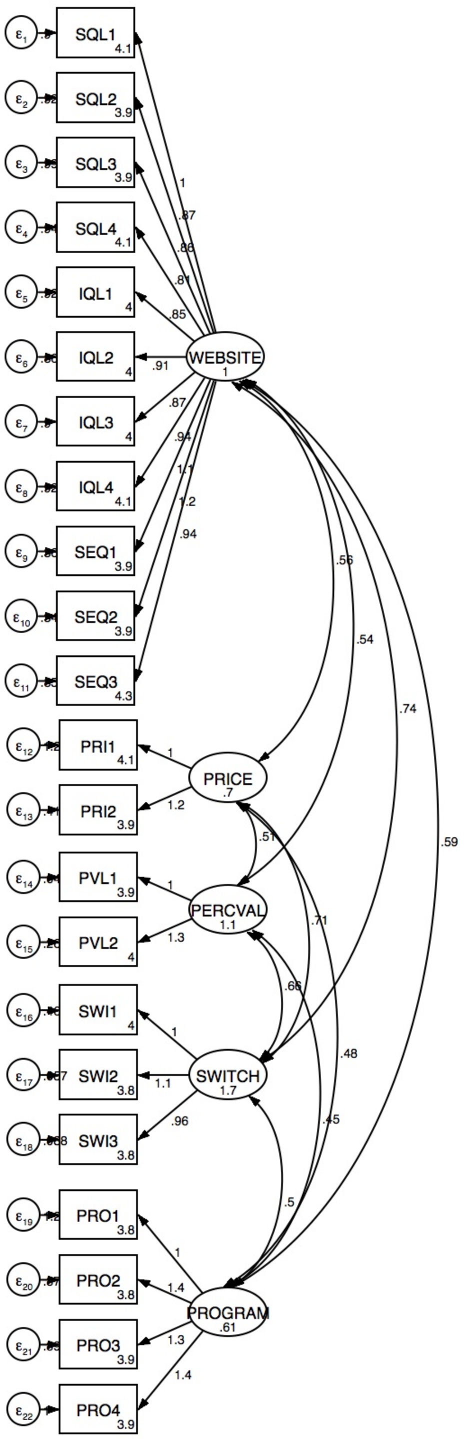

Figure 28 The structural model

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(199)	746.039	model vs. saturated
p > chi2	0.000	
chi2_bs(231)	7494.538	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.076	Root mean squared error of approximation
90% CI, lower bound	0.070	
upper bound	0.082	
pclose	0.000	Probability RMSEA <= 0.05
Information criteria		
AIC	29168.347	Akaike's information criterion
BIC	29484.919	Bayesian information criterion
Baseline comparison		
CFI	0.925	Comparative fit index
TLI	0.913	Tucker-Lewis index
Size of residuals		
SRMR	0.040	Standardised root mean squared residual
CD	1.000	Coefficient of determination

Table 31 Structural model - Fit statistics

CFI = 0.925, TLI = 0.913, RMSEA = 0.076 indicate satisfactory fit.

6.6.4 Mediating variables

Chapter 2 addresses 8 hypotheses related to the mediating effects of satisfaction and trust as follows.

H8a: The relationship between website quality and customer loyalty is mediated by customer satisfaction.

H8b: The relationship between website quality and customer loyalty is mediated by customer trust.

H8c: The relationship between price and customer loyalty is mediated by customer satisfaction.

H8d: The relationship between price and customer loyalty is mediated by customer trust.

H8e: The relationship between perceived price value and customer loyalty is mediated by customer satisfaction.

H8f: The relationship between perceived price value and customer loyalty is mediated by customer trust.

H8g: The relationship between perceived switching costs and customer loyalty is mediated by customer satisfaction.

H8h: The relationship between perceived switching costs and customer loyalty is mediated by customer trust.

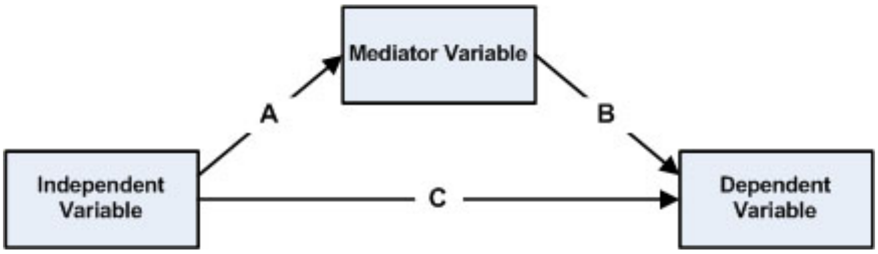

Figure 29 Mediating effect

Hypotheses H8 (a-h) address the mediating effects of satisfaction (a, c, e, g) and trust (b, d, f, h) between various factors and customer loyalty. The mediating effect is determined by comparing the direct effect with the indirect effect. First, the researcher calculates the standardised regression coefficient of the direct relationship equation (C, see Figure 29), then that of the indirect relationship equation, then compares each pair. The indirect effect of the independent variable upon the dependent variable via the mediating variable is derived by taking the product of coefficients A and B (see Figure 27). Table 32 summarises the standardised regression weight and significance levels of each direct relationship, with and without the mediating variable, for each hypothesised relationship.

H	Relationship	Direct effect (C)	Indirect effect (AxB)	Mediating effect
H8a	QUAL -> SAT -> LOY	0.9966059 (0.000)	0.68113941 (0.000)	Partial
H8b	QUAL -> TRU -> LOY	0.9966059 (0.000)	0.38513187 (0.000)	Partial
H8c	PRI -> SAT -> LOY	0.6148217 (0.000)	0.39907803 (0.000)	Partial
H8d	PRI -> TRU -> LOY	0.6148217 (0.000)	0.36233044 (0.000)	Partial
H8e	PVL -> SAT -> LOY	0.45658 (0.000)	0.2870217 (0.000)	Partial
H8f	PVL -> TRU -> LOY	0.45658 (0.000)	0.31360581 (0.000)	Partial
H8g	SWI -> SAT -> LOY	0.928886 (0.000)	0.59535549 (0.000)	Partial

H8h	SWI -> TRU -> LOY	0.928886 (0.000)	0.40689291 (0.000)	Partial

Table 32 Summary of direct effects and mediating effects

Table 32 presents the direct relationship and indirect relationship for each hypothesis from H8a to H8h. In all cases, the intervention of the mediating variable reduces the direct effect, with p-values remaining at significant levels (0.000***). According to Baron and Kenny (1986), these signs indicate partial mediating effects.

To confirm if mediation is occurring, the indirect effect is determined through a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. An upper and lower bound of the two-sided bias corrected bootstrapping confidence interval for the standardised indirect (or mediated) effect of each hypothesis is determined. Additionally, the significance level that the indirect effect is different from zero is also calculated.

6.6.5 Hypothesis testing

Following the squared multiple correlations being determined the path coefficients were examined to determine whether there is statistically significant evidence to support or reject the stated hypotheses. The estimates are the standardised regression weights, indicating the amount of change in the dependent variable given a standard deviation unit change in the independent variable. It is a representation of the relative contribution an independent variable has on a dependent variable. The standard errors relate to the estimates, while the critical ratio is the estimate divided by the standard error. The p-value represents the probability, defining the strength of the evidence in favour of the alternative hypothesis and against the null hypothesis.

Hypotheses with commitment variables

Although this construct is confirmed to have influences on loyalty in other contexts, unfortunately, the statistical testing does not support its meaning due to the multicollinearity issue. From the multicollinearity analysis with factor loading results (see Table 22), it was seen that there might be multicollinearity occurring between loyalty variables and commitment variables. Therefore, all hypotheses with commitment variables (H1b, H2a, H3a, H7b) were not tested for in this study. The fact is that in the preliminary interview session, there are no outstanding indicators to explain the existence of commitment in this inter-correlation web. There would be some reasons, for instance, there is lack long-term relationships between one customer and their e-commerce platform. It is excusable by the point that the booming of e-commerce buying in Vietnam is just around the couple of years; and that, there are not many incentives for people to establish this kind of behaviours. Such the failure in confirming the valuable existence of commitment in the research model at both qualitative interpretation (through the interview) and quantitative findings (through the survey) makes no choice for eliminating the testing of this construct. Consequently, customer loyalty has two antecedents – satisfaction and trust. This remains as one of the weaknesses of this study, which will be discussed later in Chapter 7. Whereas hypotheses relating to loyalty were tested.

Customer loyalty

The coefficient analysis of regression models of WOM, INT and ATL show the hypotheses testing results for H4c, H5b, H6b and H7c. It is seen that all variables except for perceived price value have significant relationships with WOM, INT and ATL, with p-value falling in the safe zone $0.000<p\text{-value}<0.1$. Although a few variables are not statistically significant at the highest confidence level, which include website quality->WOM, PRI->WOM and PRI-ATL, we still accept the alternative hypotheses that website quality, price and perceived switching costs have significant impact on customers' intention to spread WOM, intention to repurchase and attitudinal loyalty. In other words, H4c, H5b, H6b and H7c are accepted.

The quantitative finding which validates the behavioural loyalty, but without indicators of attitudinal one, except the slight notice on the impact of exploratory variables on it. Although the result is out of the expectation of the researcher, it matches with the underlying meaning of findings in the preliminary interview from the angle of that there are shortage of qualified evidence to ask and find the answer for this concern. People may show the positive feelings about specific purchases, but in cumulative, they direct those feelings to the meaning of satisfaction or not with what they have been received. Viewing the direct explanatory influences on positive recommendations or intention to repurchase of online shoppers, as what have been discovered in the preliminary interview, price and related expressions are having the significance. This finding suggests two ways of explanation – (1) it is the evitable reflection of the current economic power of Vietnamese people and the Vietnam as a low to medium income country, and (2) it is the confirmation of using Price as the threshold for joining and sustaining the presence in the competition as marketing 4P rather than using it as the competitive edge in the rivalry. The underlying inference also explains the necessity of having intensive policies on price-related competition to avoid the monopoly stance of prices from one platform or the unfair competition among players. Matching with the current happening in the online selling market, it is recognized that there would be several signals of playing with prices to attract customers regardless of quality of products, especially from daigou retailers. It is hard for e-commerce platforms to assure quality of their retailer clients as the ways of supermarkets are doing since (1) the nature of e-commerce platform is the open source for trading by some specific requirements of registration; (2) the non-presence of merchandising does not allow e-commerce operators to have practical checks; (3) the large assortments and the freedom of client retailers in posting, introducing and commenting their products and dealing with customers via the separate chat box; and so on. Explicitly, there is the long journey ahead for stabilizing and regulating the operations of e-commerce industry on the base of protecting rights and benefits of all participants.

Customer satisfaction

Table 33 below shows that SQL are significantly correlated with satisfaction with Coef.= 0.4293194, Std.Err.=0.0960064 and p-value = 0.000. The statistic is significant at 99% level, showing that it is confidently safe to conclude that system quality affects customer satisfaction. Meanwhile, IQL is only significant at 95% confidence level with p-value = 0.033. Contrary to loyalty models, there is no evidence supporting the suggestion that system quality affects customers' level of satisfaction. Similarly, PRI is found to have no relationship with satisfaction. Meanwhile, SWI and PRO are significant at p-value 0.000, with magnitude of correlations being 0.1592004 and 0.1979579 respectively. From the statistics, we accept the alternative hypotheses that perceived switching costs (H7a) have a positive relationship with customer satisfaction. Meanwhile, we only partially accept the alternative hypotheses that website quality (H4a) affects customer satisfaction. There is no statistical evidence supporting that price (H5a) and perceived value (H6a) have a significant relationship with satisfaction among young e-commerce users in Vietnam.

SAT	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SQL***	0.4293194	0.0960064	4.47	0	0.2406625	0.6179764
IQL*	0.1974507	0.0922646	2.14	0.033	0.0161466	0.3787547
SEQ	0.0478371	0.0561464	0.85	0.395	-0.0624932	0.1581673
PRI	0.0576123	0.0483942	1.19	0.234	-0.0374845	0.152709
PVL	-0.0211525	0.0392999	-0.54	0.591	-0.0983786	0.0560735
SWI***	0.1592004	0.0391291	4.07	0	0.0823099	0.236091

PRO***	0.1979579	0.051993	3.81	0	0.0957893	0.3001266
_cons	-0.2474754	0.1867035	-1.33	0.186	-0.6143562	0.1194055

Table 33 Coefficient table - Model SAT

While people confirm the connection of having satisfaction toward the purchase with further actions of repurchasing or establishing positive feelings of recommending to others (in the preliminary interview), the quantitative findings have shown the more intensive influences of explanatory variables: service quality, information quality, perceived switching costs, website quality (partially), but not system quality, price and perceived value. Price, once again, confirms its complexity in influencing consumption behaviours of customers. to be mentioned, price is not the strategic tool to enhance shopping experience or reinforce the perceived service quality standard of e-commerce platforms. In other words, the design of marketing 4P with Price has the boundary within the selling objectives, at least in the current state of the Vietnam e-commerce industry. Since customers found limited switching cost (absolute price) in changing the shopping site from one platform to another, especially when client retailers or daigou are diversifying their online presences in either their own Facebook pages, Zalo Shop, Facebook Marketplace, or e-commerce online shops. In fact, everything is the same regardless of which platforms you shop with, even the delivery options. Another point is related to the website quality which was not discussed in the preliminary interview. People highlights the service quality, i.e. being supported for the great shopping experience and the quality of information i.e. being provided with sufficient, accurate, and right information at the right moment, without any disruptions in service rather than investing whether the web has the high aesthetic features or not. With the boundary of internet experience, user-friendly is more important. Furthermore, the current e-commerce platforms in Vietnam are quite similar in displaying products and presenting layouts.

Trust

The results from regressing variable TRU against SQL, IQL and SEQ in Table 34 below show that only IQL are significantly correlated with TRU with Coef. = 0.3863781, Std. Err. = 0.0849842 and p-value = 0.000. Thus, we only partially accept the hypothesis that website quality has significant influence on customer trust, since there is a lack of statistical evidence supporting the belief that system quality and service quality also have an impact on trust.

TRU	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SQL	0.127715	0.0899465	1.42	0.156	-0.0490301	0.3044601
IQL***	0.3863781	0.0849842	4.55	0	0.219384	0.5533723
SEQ	0.0754893	0.0523108	1.44	0.15	-0.0273016	0.1782802
_cons	1.619219	0.1633557	9.91	0	1.298225	1.940214

Table 34 Coefficient table - Model TRU

Despite being mentioned, trust has not yet been discussed by its nature in the preliminary interview. It was found by having the predicting relationship on people's intention of what to do next, but not how it is built or impacted. Quantitative findings only have sufficient evidence to confirm the role of information quality on trust and also, slightly indicates the steady influence of website quality on this construct. To bear in mind that the nature of e-commerce retailing is the non-presence of human factors, but the sincere empathy and reliability of services are all implied via the quality of information, or as the 8C model of Srinivasan, et al. (2002) trust could be built from the high performance of customization, cultivation, contact interactivity, and care. All these antecedents are controlled by the quality of information produced and provided to customers in the ways that their shopping experience and convenience are enhanced. Customers will appreciate the empathy if their demands are customized with good suggestion of products and related ones that matches with their searching, with recommendation of great deals and new products that pinpoint hidden demands, with alerts of offerings that serve better the higher living standard, and so on. From the inside out perspective, it is the challenge for e-commerce platforms in enhancing their data analysis capabilities (with big data) and enlarging the capacity of collecting a data lake to improve the quality of extracting accurately key insights of customers.

Antecedents of loyalty

The regression analysis for WOM, INT and ATL against SAT and TRU return statistically significant results. It can be seen that with all the p-values at 0.000, we can confidently say that SAT and TRU have significant relationships with customer loyalty. Hence, hypotheses H1c and H2b are accepted. Besides, the coefficient tables below suggest that the impacts of satisfaction level on the intention to spread WOM and attitudinal loyalty are stronger than that on the intention to repurchase. Meanwhile, the impacts of trust on intention to repurchase and attitudinal loyalty are stronger than that on intention to spread WOM. In other words, the magnitudes of coefficients suggest that satisfied customers are more likely to share positive words about the website with their circle of acquaintances, while they are not *that* ready to make another purchase from the same website. On the other hand, a customer bearing high level of trust either towards the e-commerce form of shopping or the website per se might feel more emotionally attached to the website, and is more driven to make repetitive purchases from such a website.

WOM	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SAT	0.7046021	0.0246417	28.59	0	0.6561813	0.7530228
TRU	0.1832292	0.031754	5.77	0	0.1208329	0.2456256
_cons	0.4565566	0.1218024	3.75	0	0.2172159	0.6958972
INT	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	

SAT	0.5052421	0.0274466	18.41	0	0.4513099	0.5591744
TRU	0.3518894	0.0353684	9.95	0	0.2823907	0.4213881
_cons	0.5684866	0.1356666	4.19	0	0.3019028	0.8350704
ATL	**Coef.**	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
SAT	0.7090338	0.036984	19.17	0	0.6363605	0.7817072
TRU	0.3517782	0.0476587	7.38	0	0.2581292	0.4454271
_cons	-0.4000892	0.1828098	-2.19	0.029	-0.759309	-0.0408695

Table 35 Coefficient tables - Antecedents of loyalty

It is not surprising that satisfaction and trust are the strong predictors of loyalty, either reflecting directly or through the lens of loyalty antecedents – intention to spread WOM, intention to repurchase and attitudinal loyalty. The quantitative findings on this point shares the similar thoughts which the results from preliminary interview, except attitudinal loyalty. Advance the perception, there would be a conflict in finding to the extent of psychological expression of people. If attitudinal loyalty is captured as having positive feelings by cumulative shopping experience, whether there is the misunderstanding between positive judgment of service quality that brings up the functional feeling for constructing satisfaction and positive feeling in the post-phase of consumption when enjoying the good service, good product and high values (emotional and hedonic)? Therefore, it suggests that there should be no remarkable conclusion on attitudinal loyalty in this case until the perception of 'positive feelings' is clarified. Focusing in the explanation of WOM and repurchase against satisfaction and trust, both quantitative and qualitative findings highlight this as the social trend among e-commerce shoppers. However, interview answers reveal the important angle of when and how people are willing to share their experience to others, besides the active repurchase from them without the influence of incentives from e-commerce platforms. Only when being asked, people will happily share their WOM to acquaintances, but not actively commenting in the public (in the ‘leave the comment’ box) unless there are complaints. It is often seen in many reviews across e-commerce platforms recently that people judge 4 to 5 starts with the short caption ‘to receive gifts or to accumulate points’. This directs the thought of e-commerce marketers in finding other channels for people’s activeness in showing their interactions, for example, using social media. The interesting finding that having satisfaction is the stronger motivation for people to repurchase or spread WOM than having trust. To share own experience, satisfaction is seven times more important than trust; and to repurchase at one platform, satisfaction is about 1.5 times more influential than trust. Once again, the measurement of trust and satisfaction should be reviewed to identify whether the distance is due to the nature of measurement. Satisfaction is measured within he boundary of having the right choice and satisfied with the service quality; meanwhile, trust relates to the perceive risk when shopping, reputation of e-commerce platform, and the security of personal information. Rationally, the measurement of trust does not aim to kick of a high sale or incentivizes the sharing, but to enhance the personal reliability within the specific relationship between one customer to a platform through single purchases. In the trust, perceived risk is the remarkable concept that should be explained deeper to see if it impacts the shopping experience (without disruption in service) leading to the higher satisfaction. meanwhile, the measurement of satisfaction is rather straightforward for customers since everyone when shopping all have certain judgments toward the service through the scale of five starts. Such, it is more visual and figurative for understanding.

Moderating effects

As shown in a previous section, the moderating effects of satisfaction and trust are accepted partially. In other words, although the independent variables are significantly related to satisfaction and trust, and the latter two are significantly related to loyalty variables, there is no evidence that satisfaction and trust interfere with the relationship between the independent variables and loyalty variables in the original model.

The finding of moderating effects of satisfaction and trust toward influences of web quality, price, perceived price value, and perceived switching costs on customer loyalty shows the interesting explanation. While customer satisfaction and trust have the direct influence on the formation of customer loyalty, and also independent variables have impacts on customer loyalty, the moderating or interfering relationship of satisfaction and trust is shown. This reflects the unique behaviours of Vietnamese customers when they have a clear distinguish between influences of satisfaction, influences of trust, and influences of loyalty. The finding opens a new view on the inter-correlation of those constructs. When the common perception shows the thinking of a ripple effect of independent variables on satisfaction/ trust leading to loyalty (indirect influences of independent variables) and satisfaction/ trust on loyalty (direct influences of predictors); the practical finding only advocates the latter. It suggests that, in Vietnam market, there should be a separate research on satisfaction and its predictors, trust and its predictors, and loyalty and its predictors rather than using the power of ripple effects for anticipations of construct relations.

A summary of hypotheses H1 to H8 is found in Table 38.

H	Hypothesis	Result
H1a	Customer satisfaction has a positive effect on customer trust	Accepted
H1b	Customer satisfaction has a positive effect on customer commitment	Not tested
H1c	Customer satisfaction has a positive effect on customer loyalty	Accepted
H2a	Customer trust has a positive effect on customer commitment	Not tested
H2b	Customer trust has a positive effect on customer loyalty	Accepted

H3a	Customer commitment has a positive effect on customer loyalty	Not tested
H4a	Website quality has a positive effect on customer satisfaction	Partially accepted
H4b	Website quality has a positive effect on customer trust	Partially accepted
H4c	Website quality has a positive effect on customer loyalty	Accepted
H5a	Price has a positive effect on customer satisfaction	Not accepted
H5b	Price has a positive effect on customer loyalty	Accepted
H6a	Perceived value has a positive effect on customer satisfaction	Not accepted
H6b	Perceived value has a positive effect on customer loyalty	Not accepted
H7a	Perceived switching cost has a positive effect on customer satisfaction.	Accepted
H7b	Perceived switching cost has a positive effect on customer commitment.	Not tested
H7c	Perceived switching cost has a positive effect on customer loyalty.	Accepted
H8a	The relationship between website quality and customer loyalty is mediated by customer satisfaction	Partially accepted
H8b	The relationship between website quality and customer loyalty is mediated by customer trust.	Partially accepted
H8c	The relationship between price and customer loyalty is mediated by customer satisfaction.	Partially accepted
H8d	The relationship between price and customer loyalty is mediated by customer trust.	Partially accepted
H8e	The relationship between perceived price value and customer loyalty is mediated by customer satisfaction	Partially accepted
H8f	The relationship between perceived price value and customer loyalty is mediated by customer trust	Partially accepted
H8g	The relationship between perceived switching costs and customer loyalty is mediated by customer satisfaction	Partially accepted

H8h	The relationship between perceived switching costs and customer loyalty is mediated by customer trust	Partially accepted

Table 36 Hypothesis testing

6.6.6 Customer demographics

Hypotheses H9 are concerned with the difference between different demographic groups regarding their loyal behaviour towards an e-commerce website. In this research, four demographic characteristics are taken into account: gender, age, marital status and income.

Gender

As there are only two categorical variables, an independent samples t-test was conducted. The variable that was brought to test is GEN, which had been set up as a dummy variable containing value 0 or 1 representing Female and Male. The dependent variables that were brought to test include intention to spread WOM (WOM), intention to repurchase (INT) and attitudinal loyalty (ATL). All were analysed using histograms and two-sample using groups mean-comparison test (t-test). The histograms of WOM, INT and ATL by gender are seen in Figure 31, with 0 representing Female and 1 representing Male. In all three diagrams, female respondents are seen to have more positive opinions compared to their male counterparts.

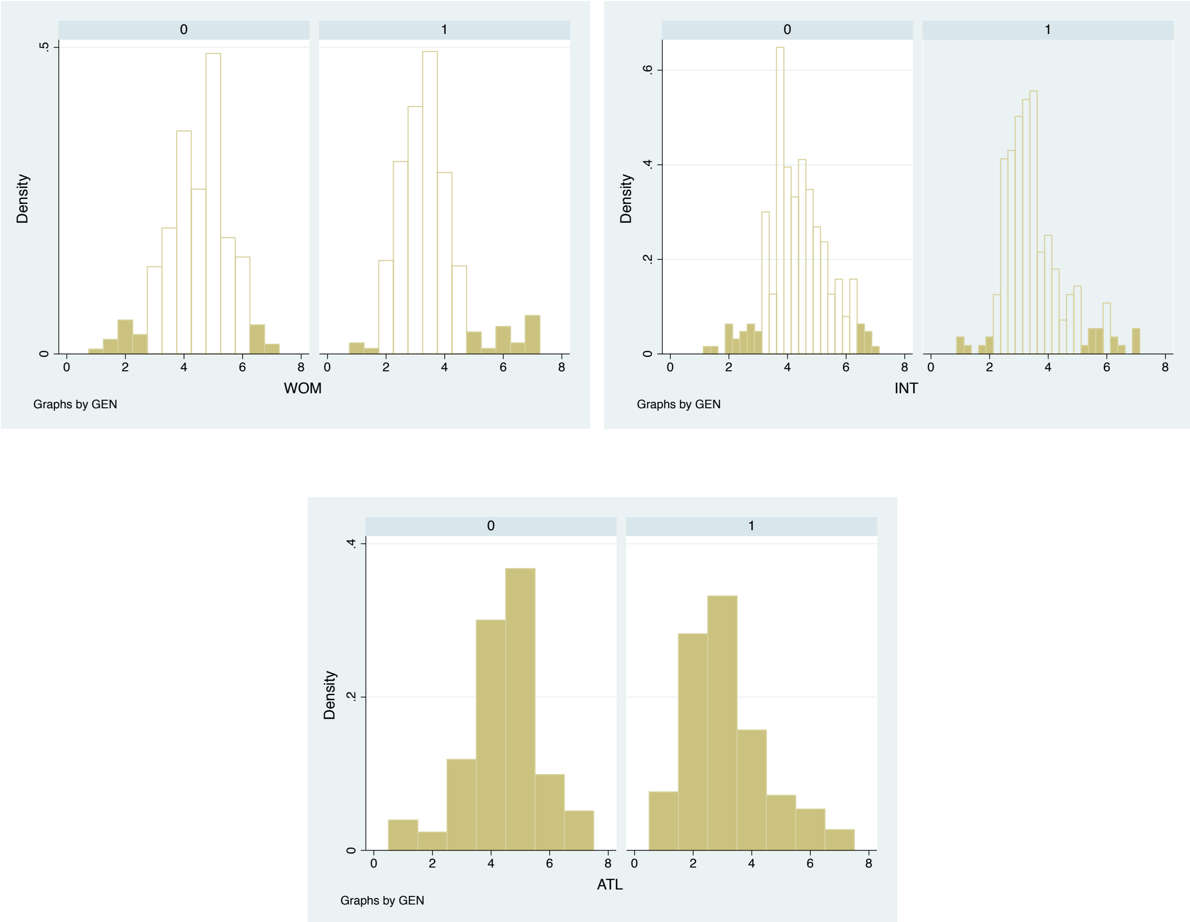

Figure 30 Histogram WOM, INT and ATL by gender

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Female	253	4.452569	0.0683018	1.086407	4.318054	4.587084
Male	223	3.470852	0.0742678	1.109055	3.324492	3.617212
combined	476	3.992647	0.055031	1.200635	3.884513	4.100781
diff		0.9817172	0.1009002		0.7834392	1.179995
Ha: diff < 0		Ha: diff != 0			Ha: diff > 0	
Pr(T < t) = 1.0000		Pr(|T| > |t|) = 0.0000***			Pr(T > t) = 0.0000***	

Table 37 t-test results for variable WOM by GEN

The t-test results for WOM show that the statistic supporting the mean difference in WOM between Female and Male is significant at the highest level of confidence with p-value =

0.0000. It means we are 99% confident female customers have a stronger tendency to distribute WOM compared to their male counterparts, and the difference equals 0.9817172 unit of measurement on the Likert scale.

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**	**[95% Conf. Interval]**	
Female	253	4.379447	0.0647527	1.029954	4.251921	4.506972
Male	223	3.533632	0.0714344	1.066743	3.392856	3.674409
combined	476	3.983193	0.0517171	1.128334	3.881571	4.084816
diff		0.8458144	0.0962012		0.6567807	1.034848
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 1.0000		Pr(|T| > |t|) = 0.0000***		Pr(T > t) = 0.0000***		

Table 38 t-test results for variable INT by GEN

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**	**[95% Conf. Interval]**	
Female	253	4.434783	0.079817	1.269567	4.277589	4.591976
Male	223	3.134529	0.0931938	1.391681	2.950871	3.318187
combined	476	3.82563	0.067708	1.477215	3.692586	3.958675
diff		1.300253	0.1219946		1.060536	1.539971
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 1.0000		Pr(|T| > |t|) = 0.0000***		Pr(T > t) = 0.0000***		

Table 39 t-test results for variable ATL by GEN

Similarly, the t-test results for INT and ATL show that the statistic supporting the mean differences in the respective variables between Female and Male is significant at the highest level of confidence with p-value = 0.0000. It means we are 99% confident female customers have a stronger tendency to repurchase compared to their male counterparts, and the difference equals 0.8458144 unit of measurement on the Likert scale. The mean difference comes with larger magnitude at 1.300253, showing significantly strong attitudinal differences between genders when it comes to e-loyalty.

Age

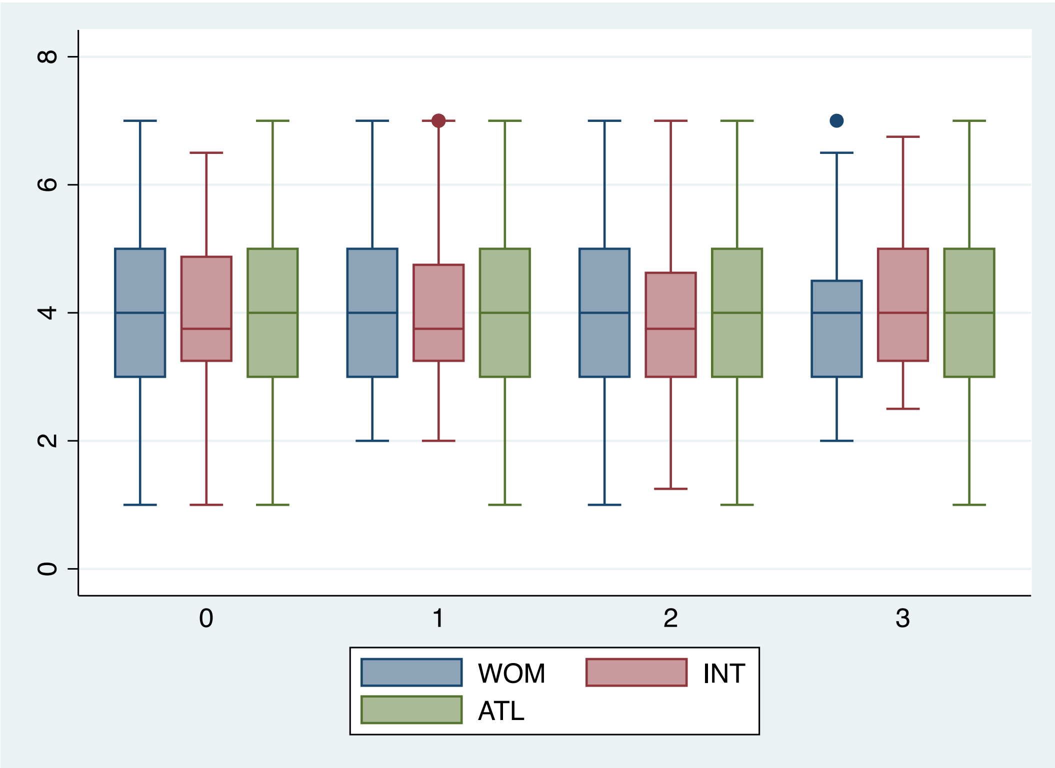

Figure 31 Box plot of variables WOM and INT by AGE

ATL	SS	df	MS	F	Prob > F
Between groups	1.18685745	3	0.395619151	0.27	0.8447
Within groups	683.537407	472	1.44817247		
Total	684.724265	475	1.44152477		
INT	**SS**	**df**	**MS**	**F**	**Prob > F**
Between groups	2.29824033	3	0.766080111	0.6	0.6151
Within groups	602.442306	472	1.27636082		

Total	604.740546	475	1.27313799		
ATL	**SS**	**df**	**MS**	**F**	**Prob > F**
Between groups	2.73053231	3	0.910177436	0.42	0.7419
Within groups	1033.79678	472	2.19024741		
Total	1036.52731	475	2.18216276		

Table 40 ANOVA test results for variables WOM, INT and ATL by AGE

Due to high Prob(F) in all three ANOVA tests, it can be concluded that there is not enough statistical evidence supporting the existence of mean differences between age groups in both behavioural and attitudinal loyalty.

Marital status

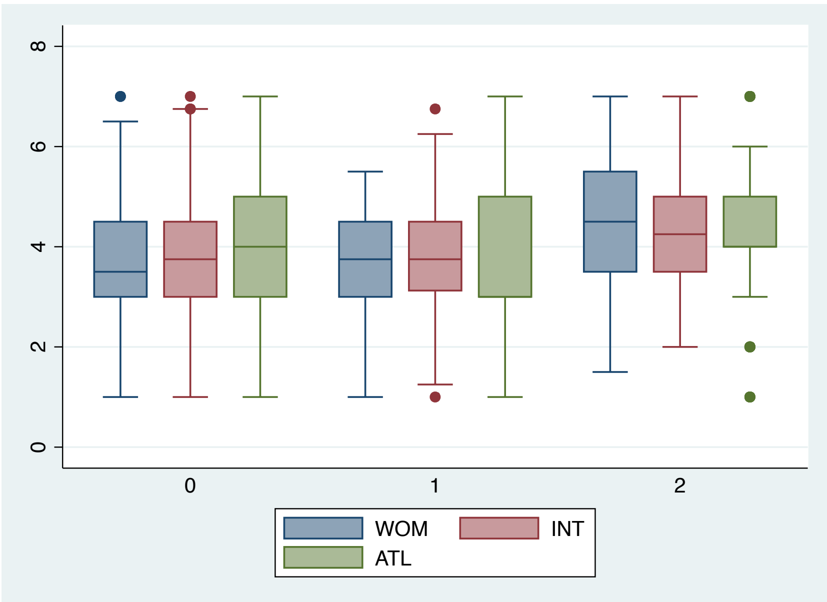

Figure 32 Groups by marital status and their WOM, INT and ATL tendency

WOM	**SS**	**df**	**MS**	**F**	**Prob > F**
Between groups	43.3721404	2	21.6860702	15.99	0
Within groups	641.352124	473	1.35592415		

Total	684.724265	475	1.44152477		
INT	**SS**	**df**	**MS**	**F**	**Prob > F**
Between groups	30.309164	2	15.154582	12.48	0
Within groups	574.431382	473	1.21444267		
Total	604.740546	475	1.27313799		
ATL	**SS**	**df**	**MS**	**F**	**Prob > F**
Between groups	44.8099924	2	22.4049962	10.69	0
Within groups	991.717319	473	2.09665395		
Total	1036.52731	475	2.18216276		

Table 41 ANOVA test results for variable WOM, INT and ATL by marital status

The box plots suggest that respondents that are married with children demonstrate stronger behavioural loyalty, while their attitudinal loyal tendency seems unclear. Two-way ANOVA tests for each variable returns Prob(F) = 0.000, hence we reject the null hypothesis and accept the alternative hypothesis that the means between the groups are different. In other words, there is enough statistical evidence supporting the suggestion that there are differences in the means between customer groups categorised by marital status.

Income and Internet proficiency and shopping concentration

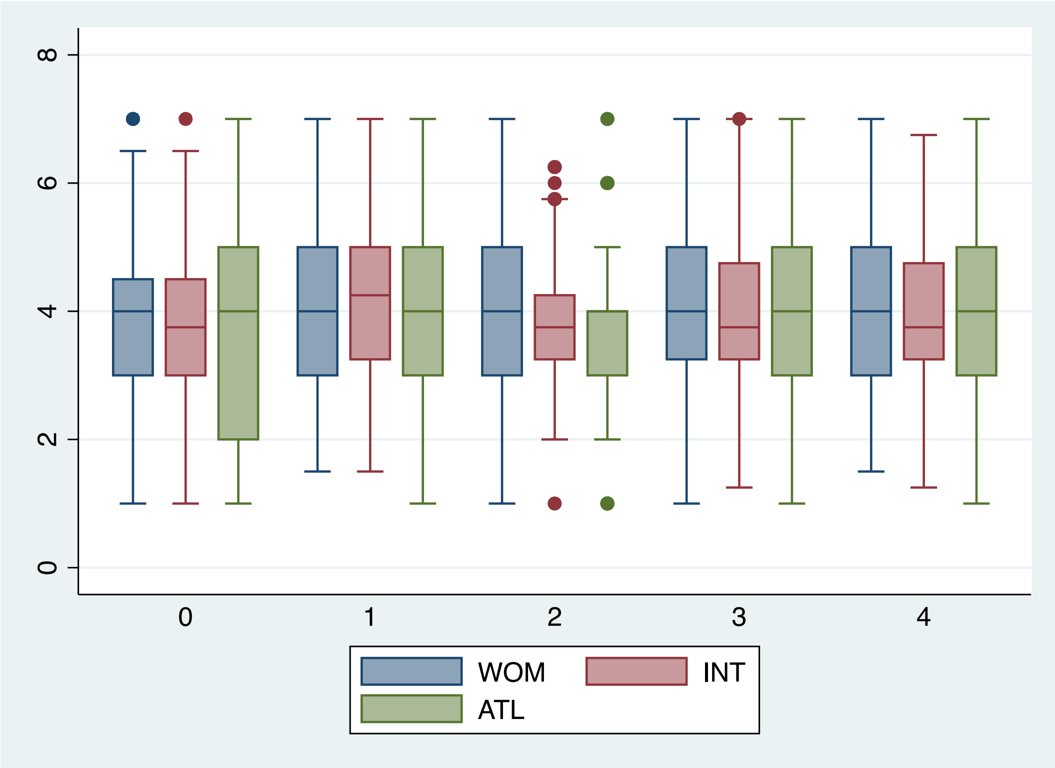

Figure 33 Groups by Income and their tendency of WOM, INT and ATL

Similarly, based on the histogram and t-test results, there are no important differences between income groups regarding WOM, INT and ATL. Similar results were found on internet proficiency and shopping concentration.

6.7 Discussion of results

6.7.1 Research question 1

(1) Intention to spread WOM

Research question 1 aims at finding out the determinants of customer loyalty using data from the survey. Model (1-M) from Section 6.6.1, which considers the modified regression model after ruling out the invalid measurement, suggests that the data fit only moderately well with the regression line; in other words, the model explains only moderately well the variability of the data around the mean (with R-squared 65.70%). Coefficient analysis suggests that system quality, informational quality, service quality, price, switching costs and promotional programs may affect customers' intention to spread word-of-mouth about the e-commerce websites. On the other hand, there is not enough statistical evidence to conclude that Vietnamese customers' tendency to spread WOM is affected by their perception about the value of their purchases.

The results are consistent with most prior empirical studies about website quality (refer to Chapter 2). It also agrees with Nguyen (n.d.), Nguyen and Tran (2018), and Hsu and Ngo (2019)'s findings about the effects of website quality and service quality on repurchase intentions. Compared to the empirical study by Hsu and Ngo (2019), this research emphasises the role of information quality on behavioural quality, and also provides statistical evidence proving the relationship between the three aspects of website quality and intention to distribute WOM. The findings about website quality also confirms Delone & McLean (1992; 2004)'s ISS model in the Vietnamese e-commerce market. It shows that the behaviour of the average Vietnamese customer regarding website quality might not be subject to the impact of unexplained factors such as cultural differences, personality, impulsive buying, or the factor of chance. However, since we are only 90% certain about informational quality (IQL) and service quality (SEQ), further research is needed to confirm this finding.

The low R-squared of the model suggests there are other factors affecting people's intention to spread WOM. This is consistent with the findings from Chapter 3 – Preliminary Interviews about customers' willingness to share their shopping experience with their circles of acquaintances. The focus group interviews show that such willingness is only modest; more importantly, it rather depends on the respondent's personality, behaviour on social media, use of social media, sense of community, so on. The interviews also suggest that the act of sharing information may be passive ("I would share if asked."). However, the moderately high coefficient of SQL suggests that focusing on website quality improvement might be a good approach to WOM marketing.

(2) Intention to repurchase

The coefficient table suggests that all included variables except perceived price value are significant at the highest confidence level. In other words, we are 99% confident that website quality, price, and switching costs have significant impact on customers' intention to repurchase from a Vietnamese e-commerce website. These findings are consistent with a large number of relevant studies as pointed out in Chapter 2. However, it can be seen that the magnitude of impact is only modest. The variable having the strongest correlation with intention to repurchase is PRO (i.e. loyalty programs). It indicates that attractive membership programs may encourage buyers to stay with a website.

On another note, significant statistics related to price level and price competitiveness in both models (1-M) and (2-M) prove that the factor of price may contribute to customers' loyal behaviour in Vietnam. The findings are not consistent with Lager (2006), who set out the belief that sample activities that e-commerce companies can use to promote loyalty are rewards for purchase, strong online content, purchase incentives and coupons, cutting-edge technology, package tracking, updated appearance, new content, periodic newsletters, and reminders to bookmark the site. Practices that do not build customer loyalty and retention include differential pricing, pricing based on elasticity, free services, annoying pop-ups, and banner advertising (Lager, 2006). However, such findings stay in line with other studies supporting the significance of prices in customer loyalty.

Literature has provided empirical evidence that price perception affects customer return rates, although the relationship is weak (Jiang & Rosenbloom, 2005; Swaid & Wigand, 2009; Valvi & West, 2013). The findings in this research support the conclusion that the relationship between price and customer loyalty exists among Vietnamese e-customers. However, it is important to note that such a relationship only exists in a weak form. It requires further research in the form of interviews to confirm whether this price-loyalty link is stable. Given the lack of competition and the potential dynamics of this market, plus the lack of theoretical backup, it is too early to tell whether economical pricing is the sustainable approach to e-commerce websites.

As learnt from the focus group interviews and survey data analysis, Shopee is gaining advantages among certain groups of customers thanks to its low-price model. By promoting a low-price strategy, Shopee has managed to link its brand to low price-related key words, thus establishing a good standing among low-price-oriented consumer groups. Note that attitude towards low prices does not always link to income. As seen from the interviews, wealthier groups of consumers might be equally attracted to cheaper options, especially when it comes to shopping for necessities. Back to Shopee, this case has proven that price competitiveness can be an effective model (see Figure 31), especially in an emerging market composed of highly diverse customers. However, when other websites, including Tiki, Lazada, Sendo and newcomers, succeed in improving their cost structure and passing the benefits on to customers, the price advantage no longer sustains as a selling point to Shopee.

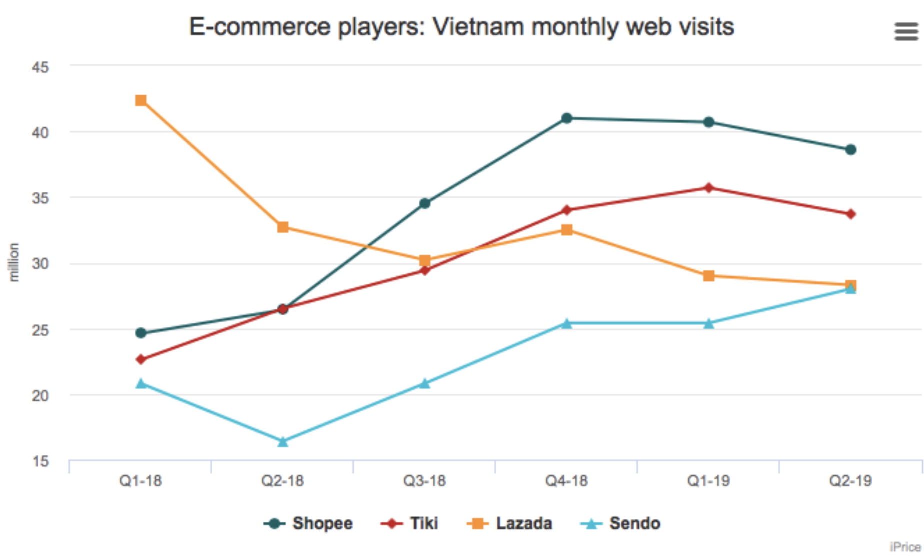

Figure 34 E-commerce players: Vietnam monthly web visits (VNExpress, 2019)

Furthermore, the magnitude of beta coefficients suggest that perception of website quality might have stronger impact on customer loyalty compared to perception of price fairness and price competitiveness. This result reconfirms that the price-loyalty link only exists in the weak form, which might be eradicated once perception of website quality reaches a certain point where it can offset the impact of prices. It suggests that in a market deemed underdeveloped or emerging, the relevance of quality still pertains despite strong awareness of prices. This statistic agrees with the certain information provided in the focus group interviews, in which some respondents did not hesitate to switch brands due to low quality. The empirical tests in Chapter 6 confirm the assumption statistically, thus generalizes the results across the population of the research.

The empirical results also signify the importance of loyalty programs upon customer loyalty. In a study aimed at loyalty programs by Steyn et al. (2012), the behaviour towards loyalty programs varies in each country. Malaysians tend to find more information about promotions and deals, 56% of Malaysian look for promotion while 50% of Vietnamese and 37% of Thai do so. On the other hand, the Vietnamese tend to find information about price and availability of the product, 66% of Vietnamese look for information about price while 65% of Malaysian and 51% of Thai show that behaviour (Steyn et al., 2012). Although it is not within the scope of this study to investigate further on Vietnamese customers' perception of each loyalty scheme, it is still important to know that enriching loyalty programs need more attention.

(3) Attitudinal loyalty

Results from Model (3-M) also supports the relationship between website quality, price and switching costs and attitudinal loyalty.

6.7.2 Research question 2 & 3

Research question 2 asks the question what role satisfaction plays in the relationship between the determining variables and customer loyalty. The hypotheses associated with this question are H8a, c, e, and g. The positive effect consumer satisfaction has on true loyalty is in line with the literature (Anderson & Mittal, 2000). As the results demonstrate, an increase in satisfaction gives rise to an increase in customers' intention to spread WOM, intention to repurchase and attitudinal loyalty. This may indicate the presence of other factors determining whether a consumer has spurious or true loyalty towards an organisation and that satisfaction may be a hygiene factor rather than a loyalty-determining factor.

The research shows weak moderating effects of both satisfaction and trust in the relationship between the independent variables and customer loyalty.

6.7.3 Research question 4

The findings about demographical differences in loyal behaviour provide interesting insights. There was evidence found in support of the relationship between gender and loyalty, as well as marital status and loyalty. Among the few papers that discussed the role of gender in consumer behaviour, conclusions have been mixed. For example, Choi et al. (2015) evidenced that gender or age did not play a significant role in evaluating customers' perception of service quality. However, this study presents strong evidence suggesting the gender differences in both behavioural and attitudinal loyalty. Vietnamese women in this study are found to have a clearer tendency to share words about their experience, or recommend the service to their family/friend circle, compared to men. They also display stronger loyal behaviour overall, as shown in higher willingness to repurchase and stronger emotional attachment to the brand.

Furthermore, married respondents with children are proven to potentially become more loyal customers. There is enough statistical evidence to conclude that such relationships pertain among Vietnamese Millennial e-commerce users. This finding reveals an aspect of cultural influence as a moderator of consumers' loyal behaviour that had barely ever been discussed in depth. Most empirical studies taking into account marital status, either as a main focus or a control variable, have looked at marital status in its literal meaning. This variable was omitted by many authors, including Nguyen and Tran (2018). In Vietnam, however, the mind-set where parents should act in the best interests of their children makes the presence of a child in the family significant in determining the parents' shopping behaviour. In this study, it was found that parents with children, as compared to married couples without children and single people (within which being single or divorced was not separately identified), demonstrated stronger readiness to share WOM. They also seem to have stronger loyal behaviour overall.

The findings about gender and marital status raise an assumption that married women with children might express some strong tendency to share the words and settle down with a brand. Little can this be explained given the literature and the primary data collected in the course of this study. It might have been their own habit of searching for product reviews and carefully evaluating products before purchase that encourage them to share shopping experiences themselves. Besides, married women with children are believed to have reached a certain point of life when they feel more driven to enrich quality relationships and gain some social prestige among their community. Many *daigou* sellers, despite being confirmed by no formal sources, belong to this demographic group; proving that some of them *benefit* directly from the information endorsements. All these factors combined suggest that married women that are raising a family tend to be more vocal and serious about sharing information. On top of that, it is possible that they spend a considerable amount of time researching the products, hence are more confident about their purchases and develop stronger attachment towards their brand of choice.

In terms of age and income, there was a lack of evidence supporting their relationship with customers' loyal behaviour. As discussed earlier in Chapter 2, age seems to play a strong role in loyalty, especially e-loyalty. Yoon and Cole (2008) or Patterson (2007) pointed out that older customers are less proficient in technology, less motivated to explore novelties and tend to settle with their lack of knowledge for technology. Wood (2004) added that older customers are believed to be less willing to experiment when it comes to daily routines, shopping habits to be specific. Furthermore, they had a stronger sense of enjoying 'quality relationships' and which could entail stronger loyal behaviour. The conflicting results in this study, however, do not necessarily negate the literature. Note that measurement of age in empirical studies usually involves the use of age blocks, in which the age blocks are often defined by the authors alone. Furthermore, the overall relationship between age and behaviour is not always linear. While it is easier to agree to the belief that older people resist change and exude stronger signs of loyalty, it is yet ambiguous to say that people in their 30s are more *settling down* than those in their 20s.

The age range taken into consideration in this study consists of e-commerce users between 18 and 40 years old, with age groups 18 to 35 making up more than 90% of the sample. Within this narrow focus, the older respondents to the sample might not carry the same behaviour as 'older customers' in Yoon and Cole (2008), Patterson (2007) or Wood (2004)'s studies. There is insufficient evidence supporting the assumption that customers in their early 30s are slower adapters or resist change. Thus, it is safe to say that the age effect is non-existent when it comes to loyal behaviour among *young* Vietnamese e-commerce shoppers.

Unfortunately, this study also fails to provide any evidence supporting the difference in loyal behaviour between income groups.

6.7.4 Key findings related to concepts

Referring the conceptual framework, there are three main behavioural concepts in discussions – satisfaction, trust, and loyalty, along with three antecedents of loyalty. Since the original measurements of these concepts are relied on the findings from previous studies by scholars which have been built and examined from other market contexts rather than Vietnam, the understanding of them may not reflect accurately the real happening in the Vietnam market by individual thoughts of Vietnamese customers. While the preliminary interview is to embed the real breath of local perceptions on the theoretical background (which is important to compose qualified questions in the questionnaire as aforementioned), the quantitative findings provide the practical reflections on how those perceptions are perceived in the most accurate means of reflections in the Vietnamese market.

Customer loyalty is the complex behaviour of customers and being influenced by several factors rather than just predictors. It means once a customer has satisfaction toward specific consumptions, without the positive judgments of website quality, information quality or service quality on the base of good prices, there is limited chance that he could build up his either attitudinal loyalty or behavioural one. More specially, there are many considerations related to prices in the case of Vietnamese customers. If, theoretically, price is supposed to contributed largely to the satisfaction in purchase for single cases, Vietnamese people list out price and price competitiveness as the motivator of their intention of purchase and then a sense of loyalty to the purchase with that platform. This is similar with the case of supermarket shopping when the concept of ‘everyday low price’ by Big C wins the loyalty of shoppers and that makes them switch the shopping place from CoopMart to Big C. The landscape of e-commerce platform is, to some certain extent, similar with the low and lower price (by promotions) offered by Tiki or Shopee. In fact, there are slight differences between shopping in either places when the same product has similar price. When Shopee is famous from its price-oriented model, Tiki is more inclined to quality-oriented format but using prices to compete with Shopee. The similar stance is for Lazada with quality-oriented and Sendo with price-oriented. Such, the updated concept of customer loyalty by practical findings defined the loyalty as their positive judgments of service quality and good prices of products that make them feel satisfied and want to repurchase. By feeling positive emotional benefits from the purchase, they will have the intention of purchasing with the platform in long term.

Satisfaction is the direct results of having positive feelings about the service quality by the means that people’s pre-determined expectations are meet or exceed by the certain consumption experience. From this base, the empirical findings add in the three factors – the ability of e-commerce platform to provide customized information that cultivate positive shopping experience and enhance the great perceived values with high convenience when shopping with the platform. In fact, with the empirical finding, the line between satisfaction and loyalty is not rather distinct. They share the same page of a set of determinants and more importantly, there is still the concern whether Vietnamese customers do have right knowledge or feelings on their satisfaction or loyalty or not? The evidence is that, the interview question does not show much affirmative statements of customers who are deemed to loyal customers or e-commerce enthusiasts on their intentions of spreading WOM. Instead, they tend show their experience when being asked within the circle of acquaintances, friends or families. Therefore, the adjustment of satisfaction in the context of Vietnamese customers in the e-commerce industry is as 'positive emotional feelings when enjoying the perceived great values from the product consumed, and that meets or exceeds personal expectations within the boundary of price affordable and accepted levels of quality'.

Trust is declared as the valuable asset of companies in bringing in their competitive advantage in the market. Theoretically, trust is the decisive factor of people to involve monetary transaction and exchange of personal information in the e-commerce platform. Interestingly, since the most popular payment method in Vietnam is cash=on-delivery (COD), it means the challenge of providing personal information related to bank account or ID is not involved for the mass population. Moreover, trust is defined in two stages – pre and post purchase; however, the scope of this research does not involve this angle of thoughts in the explanation. Meanwhile, the empirical result of the study only confirms the influence of information quality in building trust. This shows the huge gaps in perception of Vietnamese people with their counterparts in other contexts. Theoretically, information quality affects the hedonistic and utilitarian values of shopping, which in turn influence consumers' judgment about satisfaction levels (Gefen et al., 2003) as well as trust (Lee & Chung, 2009; Gefen et al., 2003; Kassim et al., 2012) and intention to repurchase. Thus, the finding matches with information quality-related findings from other studies. The revised perception of trust by the scope of this research is that trust is essential for people to reach the platform and spend time to search for customized information and products from that page without remarkable perceived risks of monetary transactions of personal information disclosure.

Intention of spreading WOM, as the notion being found in this research, is slightly different from the common perception. It does not mention the 'intention' but the adjustment in the concept of 'spreading WOM'. When people are satisfied with a certain purchase, they do not tend to leave comments in the public comment box in e-commerce platforms; but they are willing to share their experience with their friends, families and acquaintances when being asked. Since this study does not examine the social media as the effective open platform of WOM, it could not be concluded the willingness of people in spreading personal thoughts in this channel. Such, the revised intention of spreading WOM is about the willingness of people in recommending the platforms, the products along with the sharing of their consumption experience within the circle of their familiar relationships.

In summary, there are four groups of causal links to be examined. This is the deletion of customer commitment in the research model since practical findings do not advocate its interventions in affecting customer behaviours in the e-commerce industry. The main reason is due to its threat of exposing multi-collinearity that may create chaos in revealing the real expression of attitudinal and behavioural loyalty. Firstly, examining the relationship of satisfaction and trust leading customer loyalty, practical findings confirm the causal links; however, there are lack indicators confirming the formulation of attitudinal loyalty. Secondly, to measuring the root causes of how satisfaction and trust are built up, the finding shows the influences of certain explanatory variables on these two constructs. Service quality perceived switching costs, information quality and website quality have influences on satisfaction; meanwhile only information quality has impacts on trust. Thirdly, intention to spread WOM and intention to repurchase are confirmed as the two main antecedents of customer loyalty. Although there are certain concerns on the scope of spreading WOM, objects to receive the WOM and platforms what WOM could be found, the general conclusion shows the positive links of loyalty and further intentions. And fourthly, there are no moderating effects of satisfaction and trust interfering the influences of independent variables on customer loyalty. Especially, it is found that there are certain differences between demographic groups regarding their loyalty expression in the e-commerce industry. antecedents of loyalty are different from gender and marital status; but there are no significant distinguishes between groups of ages, incomes, internet proficiency and shopping concentration toward attitudinal and behavioural loyalty.

7. CONCLUSION

7.1 Contribution to the literature

Summary of the contribution

Previous studies on the Vietnamese e-commerce market have focused on customer knowledge, sellers' reputation and perceived value (Nguyen & Nguyen, 2017), and website quality (Nguyen & Tran, 2018). Besides the lack of available research on the constructs of customer loyalty, most previous research attempts remain lacking in depth. Furthermore, no authors have appeared to explore loyalty beyond the intention to repurchase. Other aspects of behavioural loyalty including intention to spread WOM, attitudinal loyalty and spurious loyalty have barely been mentioned. In a collectivist society like Vietnam, WOM contributes a great deal to the success of marketing strategies. Thus, this study's first significant contribution to literature is its attempt to account for intention to spread WOM and attitudinal loyalty.

Empirically, the research had developed an empirical model for e-loyalty in Vietnam based on existing knowledge of consumer behaviour and relationship marketing, which was then brought to test using primary data from Vietnamese e-commerce customers. The loyalty model, which comprises website quality, price, perceived value and switching costs, produces satisfactory results with CFI = 0.925, TLI = 0.913, RMSEA = 0.076, indicating a good fit. Regression analysis reveals that the exploratory variables explain up to nearly 80% of the total variances of intention to spread WOM, intention to repurchase and attitudinal loyalty. This research contributes to the body of literature by adding new insights into the existing knowledge of e-loyalty, in an emerging and unexplored market. Apart from that, the research confirms many theoretical models regarding e-loyalty, notably the ISS model by DeLone and McLean (1992; 2004). For example, every e-commerce development team must be able to see new potential that can increase the success of e-commerce, so that the system can continue to grow, and user levels will increase. This research also contributes to explaining the mediating effect of satisfaction in the construction of customer loyalty. The literature widely accepts a positive relationship between consumer satisfaction and true loyalty. As satisfaction increases, the likelihood of a consumer moving to a competing service provider reduces. This result may shed some light on the satisfaction trap phenomenon and raises a number of implications for managers and marketers. The next area of contribution to the body of knowledge concerns the effect the dimensions of trust have on the loyalty model. Although the mediating effects of satisfaction and trust exist only in a weak form, it confirms the significant effects that satisfaction and trust have on true loyalty.

Finally, this study becomes the first to account for the demographic characteristics in an e-loyalty study aimed at the Vietnamese market. This study concludes that female customers as well as customers that are married with children tend to have stronger intentions to spread WOM, intentions to repurchase and attitudinal loyalty. Meanwhile, no evidence has been found to support any significant differences between age or income groups in explaining loyal behaviour.

Discussions on theoretical contributions from the research findings

Reviewing the research gaps (Chapter 2), mainly the gaps in literature reviews are due to the application of e-loyalty-related discussions and theories into the new market of e-commerce development as Vietnam. The shortage of studies in this market fails to provide the sufficient data to reflect the whole picture and behavioural expressions of Vietnamese people. Since the available literature describing this specific context is not abundant, the best route to conduct this study is to utilize the current findings from other markets to produce the conceptualization. By using suitable research method with positivism philosophy, deduction approach, descriptive-explanatory design, and quantitative method, it is the chance for this research to draw out the real picture of this social trend (the growth of e-commerce shopping in the Vietnam market) by objective observation and measurements of loyalty and its antecedents and determinants. This means that, having not yet counted the research findings of empirical links, the general contribution of this research into the literature is to supplement a specific expression of e-loyalty in a particular market. Its rationale shows by three layers – (1) to the practitioner world, another knowledge on customer e-loyalty to enhance the diversity of perspectives and social realities; (2) to Vietnam, a chance to assess the current status of e-commerce industry and foresee the upcoming plans to stabilize the competition and market regulations; and (3) to e-commerce platform operators, an empirical market research with both practical findings from customers' opinions and professional compliments from various models in the world. It is the effort to fulfil the meaning and diverse examination of e-loyalty theories. Since the research digs into the literature gaps by the geographic location of Vietnam, it is embedded with the critical gap of using the national context as the main researching background. For example, by this way, people accept that the level of professionalism in the e-commerce market of Vietnam is still low; such, the competition by prices is probably still strongly valid as the most effective selling strategy. Therefore, price or perceived fairness of price does not come as the determinant of satisfaction or trust or loyalty. The increase in price may destroy the habit of online shopping by mass population. While contributing a real case of e-loyalty (in Vietnam context) to the academic world, the research suggests the idea of supplementing or paving the national context into the conceptual framework to develop the conceptualization.

Another literature gap is related to the accounting for customer demographics as the moderating factors of people in their forming of e-loyalty. Indeed, there are studies involving this angle of consideration, yet existing conflict results. Making clear that, the basic concept of e-commerce shopping is to serve for mass population by their shopping demands; the constraint of using technology devices and absence of human assistance has narrowed the scope of real buyers. Such, millennials are main segments; evidently, the sample of this research has the age range of 18 to 49 years old. To this point, the research contributes a firm statement that: since people share the similar motivation in online shopping, for instance enjoying the customized service, shopping convenience, good prices, etc. there are not outstanding differences between groups of ages in formulating attitudinal and behavioural loyalty. In fact, this is not the surprising finding; but it explains the nature of shopping preferences that are not connected with ages. Such, the focus of e-commerce platform should be toward psychographic information rather the age. however, the research is not managed to explain the inter-correlation between age, purchase decision, satisfaction, etc. It means there is the missing beat of viewing the moderating impact of ages on loyalty antecedents. Another related point is the perception toward 'heterogeneity' of customers that has been valid through years in relevant academic researches. It becomes clear that, as the research findings, different demographic groups have different routes and reflections toward determinants of customer loyalty; such they share no similar way to construct their sense of loyalty toward e-commerce shopping and platforms. With this finding the strong theoretical contribution of this research is to involve customer demographics into the conceptual framework as the inherent moderating factor of the e-loyalty model. It makes sense for investigating due to the psychological differences between groups of customers. When cultural inclusion into human behaviour research becomes popular, it should be acknowledged that the cultural inclusion gives the general boundary of social values and norms that influence the overall perception of people; yet, practical purchase decisions are hardly by personal factors or individuals' surrounding situations and influences. With this meaning, demographics is not simply the controlling variables to accept differences, but they could take the decisive meaning in designing separate tactics for attracting their attentions and serving for their satisfaction and loyalty.

Extracting the main ideas of answers to research questions, theoretical contributions are presented by three main angles. Firstly, intention to spread WOM may not be related to customer loyalty or even the overall satisfaction. There also lacks practical data to confirm the ability of Vietnamese people to widespread WOM unless there are certain incentives, supposedly. However, it is the fact that they will read through reviews when searching, especially toward similar products in one e-commerce platform to reduce risks in the evaluation process. Probably, WOM on e-commerce sites is significant within the boundary of single purchase rather than creating the chain effect to customers' mind. The finding shows the different feature of Vietnamese people with other countries' customers such as Japanese or Western ones. However, Vietnamese people love to give feedbacks or recommendations within the circle of their acquaintances. To this point, the theoretical contribution is related to which is the best platform for people to freely share their ideas – directly in the e-commerce site or via social media pages? The finding also raises up the concern on improving website quality for displaying WOM as the mean of increasing marketing effect or as solution of selling?

Secondly, intention to repurchase via e-commerce page is significantly decided by website quality, price, and switching costs, along with the powerful motivation of loyalty programs. In fact, the finding in this point is similar with existing results; except the underlying meaning of price and price competitiveness in directing consumption behaviours of Vietnamese people. It is usually to hear a kind of statement 'visiting Tiki or Shopee to see if the price is lower'. This perception etches the hard-hit influence of the national situation: Vietnam is the lower-medium income; thus, price is the critical factor for their actual actions. Although this is the belief that people would seek good bargains to save costs of consumption, price is like the threshold of the rest of the story. The theoretical contribution of this point is regarding to the role of price from and by customers' perceptions. Not always price is used as the incentive of increasing sales volumes; sometimes it could not be listed as the competitive factor but the fundamental one to join the market. Noticeably, price has the relationship with customer loyalty among Vietnamese customers. Although it exists weakly, the correlation proves the necessity of involving the external context and cultural features into the conceptual framework when investigating human behaviour-related topics.

Thirdly, by confirming the causal links between satisfaction, trust and loyalty, the research contributes a part to confirm this intact correlation as being found by many other studies. It also implies that although the influences of cultural context and personal factors may change the results of behavioural reflections in one or many areas, the world population shares the similar route of establishing satisfaction and loyalty through their customer journeys. However, deeper thinking toward influencing levels, and within the moderating relationships between three constructs, the impact of contexts and individual uniqueness has raised its voice. This confirms the necessity of including external figures into the model, especially when the commitment has been eliminated from the testing process at the beginning due to its probability of having multi-collinearity fashion.

Stakeholder analysis addressing the contribution of this research

Extending the discussion on contributions, speaking the voice of Vietnamese consumers in the e-commerce industry, the empirical findings share the similar fashion of how customer satisfaction and trust affecting the formulation of customer loyalty in this online environment with what have been reviewed in the systematic literature review. Not only this research, previous ones in the Vietnam context have confirmed the involvement of customer knowledge, seller’s reputations, perceived values, website quality that having significant impacts on consumption behaviours in the e-commerce world. Moreover, extending the literature gaps (as aforementioned), this research lists out the significance of other factors including price, perceived switching costs, product satisfaction; and further, explaining the behavioural expression in the post-purchase phase, including intention to spread WOM, intention to repurchase, and attitudinal loyalty. By these insights, it suggests that there should be the convergence of impacts by different stakeholders in the picture of e-commerce in Vietnam. To bear in mind that the Vietnamese e-commerce industry has not yet developed by intensive rules and disciplines. The market is participated by four main players (Lazada, Shopee, Tiki and Sendo) along with several online shopping pages of retailers. It is rather to say that Vietnamese people are shopping online, rather than are e-commerce consumers. Confirmatory, customer is always the most important stakeholder in any stakeholder analyses across industries, contexts and topics; and that, the concern is how e-commerce sellers could comprehend behaviours of this stakeholder group to create the right balance of resource allocation both internal and external to sustain the competitive power.

Once empirically understanding critical links of how customers have built up their loyalty when shopping via e-commerce pages (as results of the primary data analysis), it is the good idea to apply the stakeholder analysis to explore the inter-relationships of e-commerce sellers and customers with the ending purpose of supporting e-commerce retailers to retain better their customers. Such, the contribution of this research is not limited within the confirmatory knowledge on the social phenomenon of customer behaviours, but, additionally, seeing how the knowledge could be adopted into business management practices by e-commerce companies. It is believed that this is the critical step to advance the quality of practical implications.

Let’s review the core concept of the stakeholder analysis theory. It is declared that any businesses are operating in the environment in which there are many stakeholders giving influences on the quality and nature of their offerings. Depending on the mapping of whom being the most influential and powerful stakeholders, companies will adjust their designs of processes and modelling activities to meet their demands. Adjusting the original concept of stakeholder analysis toward the core objective of corporation in making profits, solely (Friedman, 1970), in the social environment, for years, the normative adoption of this analysis has involved the corporate social performance and responsibility (Pouloudi, 1999). Such, the enthronement of e-commerce activities which is declared as the inevitable development of the retailing nature by the intervention of technological advancements is considered as one of the social phenomena contributing to the enhanced quality of human life. It implies that the purpose of knowing rooted determinants of customer loyalty does not only bring in the sole mean of finding ways to creating and retaining profits of e-commerce retailers, but also filling the retailing structure for the smoothness of the national value chains and further commodity consumption development base of all population. Therefore, it is suggested that the contribution of this research should have a large extent of implications to the part of how e-commerce policies are enacted with fairness and transparency for social benefits.

Practical implications will direct to five important aspects of website quality management, price, loyalty programs, antecedents of loyalty, and e-commerce policy. It becomes that this batch of implication indicates the roles of three main stakeholders: (1) e-commerce companies with (a) management team of e-commerce companies in designing operations and marketing strategies, (b) internal teams with functional activities of teams, for instance website development (technical), purchasing, marketing, customer services, etc.; (2) customers whose consumption habits are steadily familiar with e-commerce shopping fashion besides the traditional one; and (3) policy makers who have the critical role in creating a favourable condition for e-commerce development at the national scale and further. If group 1 is the internal stakeholder, group 2 and group 3 are the external ones with distinct impacts on service delivery and business performance of e-commerce retailers. They must go out of their ways to satisfy group 2 by several tactics of selling and marketing; meanwhile, they have to comply with policies enacted by group 3 and also co-create with them for a fair, transparent and favourable e-commerce landscape in Vietnam. Although there are other important stakeholder groups such as suppliers, individual retailers registering online stores on the platform, delivery partners, competitors, and so on that should be listed out in the stakeholder analysis, it does not necessary for the scope of this research to involve them. It is accepted that suppliers have high interests and lesser power in cooperating with e-commerce platforms; and that, their relationships with e-commerce companies address mutual benefits for both. Also, it is acknowledged that competitors always challenge the life of e-commerce companies in the market; so, the tough rivalry is unavoidable. The concern is how to diminish the impact of customers' switching their choices to shop from competitors' pages. Fortunately, the empirical finding in this study does confirm that the higher perceived switching cost may refrain customers from having the sense of loyalty in the online shopping environment. It indicates that the loyalty attraction is not the story of fighting with others, but the incentivized combination of service offerings in the way that intensifies satisfaction and trust by customers. However, it must be clear that in order to win satisfaction from customers, the competition is rather tough in the phase of leading the generations and persuading them for trials and real purchases.

With three groups of stakeholders as defined to be meaningful for further implications, it is no doubt that customer is the most important group with the highest influence on the internal operations. However, on the other hand, they are influenced by the value propositions and quality of products/ services offered by e-commerce platforms. There are many cases that customers have to wait for product delivery service or find hard to control flows of their orders. Therefore, to the large extent of customers who bring in the profits for corporate (as the original objective of analysing stakeholders in the commercial landscape), customers are the one to be best served. Apart from that, to the view of serving customers as the corporate responsibility to contribute to the social benefit, customers are the partner of e-commerce retailers, sharing mutual value propositions to enhance the quality of life. Such, the stakeholder analysis of customers is separated by (1) the highest influences on company's sales performance and (2) the sharing benefits with e-commerce companies to improve the quality of life. In spite of which extent of thoughts, as the customer-centric business model, which is especially true in the retailing landscape, customer is the most important external group whom e-commerce retailers has to serve and satisfy. This analysis matches with the conceptualized discussions and empirical contribution of this research in the angle of that sustaining customer relationships is the long story by a great deal of efforts to gain achievements in each touchpoint within the customer journey to acquire their high level of satisfaction and trust leading to a strong sense of loyalty. Loyal customers are the asset of companies to accomplish their business goals and bottom-line results. As such, putting customers in the top right position of the high influence-high power quadrant of the stakeholder analysis deems to be strategically fit with the current operations landscape of e-commerce industry. Moreover, the fact that having loyalty from customers at the moment of the Vietnam e-commerce situation would bring up huge advantages for companies in occupying the leading position in the market of over 96 million population. In the other hand, the empirical finding also affirms the role of having satisfaction as the predictor or trigger of further attitudinal loyalty leading to behavioural one. The battle to win customer satisfaction faces several challenges from changes in consumption behaviours by external influences, and, in fact, those changes are somehow not under the control of e-commerce retailers. The single path for companies in this case is to produce and provide suitable value propositions that meet or exceed interests and expectations of customers. As the conceptual framework, it suggests designing the right offering to right customer demographic groups through key pillars for concentration: quality of e-commerce platforms, quality of perceived price and price fairness, perceived value, loyalty programs, service quality, and so on. One of the complex points for e-commerce retailers with this stakeholder group is the wide range of targeted segments. If counting the consumption demand, it should be the whole population; and if considering the internet experience, segments are comprised of millennials. At this point, cumulatively, e-commerce retailers serve a wide spectrum of demands with different consumption habits and behavioural reflections toward a great number of various products. To top it all off, dealing with customers never seems to be the easy task for any businesses in any industries and at any moments.

Another external group to mention is the policy makers. Although this group does not have large interests from the operations of e-commerce retailers, their responsibility in ensuring the regulated environment with fairness for all participants, including sellers and buyers has the strong impact on how customers are served. For example, policies protect customers from unfaithful deals, false advertising information, or cheats; and regulate the transparent and fair competition for all companies. Within the scope of this reach, the empirical findings do not mean to directly provide recommendations for composing or adjusting policies. But it is the ripple effect in implications that when there is the mingle of commercial and social objectives in doing business, policy makers must take deeper consideration on how to ensure the open but clearly defined commercial disciplines for encouraging mutual benefits for all market participants. Policies are to serve the double-shaded purposes: establishing and developing valid regulations for a sustained growth of the e-commerce industry which is still fresh in Vietnam.

7.2 Practical implications

Managing customer loyalty has been proven to have significant positive financial impacts on e-commerce firms' performance. Customer acquisition has been proven to be the more expensive approach from the start, let alone the fact that it is only getting costlier as customers become more demanding and competition winds firms up in pricey advertising wars (Angelina et al., 2019). Managing loyalty helps e-commerce firms understand the behaviour of customers, and to tailor strategies to nurture customers' intentions to repurchase or spread the word. Nevertheless, most e-commerce companies have spent fortunes on customer acquisition, while customer retention has by far been only a secondary focus. Thus, reallocating resources might be necessary. Placing into the current context of the Vietnam e-commerce industry, it is acknowledged that if one e-commerce platform has a large batch of loyalty customer, that platform could gain the market leading position and has the power to regulate the play game. There are some outstanding cases of failures in the e-commerce market of Vietnam, for instance LeFlair, Robbins, Zalora, etc. However, those platforms are trading with specific categories of products and without sufficient senses of customer understandings to appeal and sustain a batch of loyal customers. Or local platforms as ADayRoi were to be closed after time of being unable to gain frequent purchases from people. The current market is the horse-by-horse race with two local and two international e-commerce retailers (Tiki and Sendo vs. Lazada and Shopee). Tiki is the sample of brand intension from an online bookstore to an online one-stop-shopping store. Lazada is the case of having initial success with the high buying rate from customers. However, Lazada is too confident either on their existing success and investment from Alibaba that it is current passing out by Shopee. It has not yet counted the presence of small online retailers (operating both by their own Facebook pages, websites, and retailing stores in e-commerce places). This generalization suggests the unstable preference of customers toward any platforms. Following are practical implications on how to better improve the quality of service delivery to appeal and retain customers' business shares and enhance performance of touchpoints to increase the rate of customer satisfaction, trust and loyalty.

7.2.1 Website quality management

Various different e-commerce customer satisfaction indices are being developed all over the world due to dissimilarities among consumers in different countries. The analysis of the scientific literature leads to the conclusion that most of the determinants of e-commerce satisfaction defined in different indices correspond to each other and can be connected. Moreover, many of the e-commerce satisfaction indices may be considered as website quality-based e-commerce customer satisfaction indices, where website quality is implied in a broad sense including technical as well as service quality.

Understanding the relationship between the antecedents of customer loyalty, as well as their determinants, helps firms gain insight into their customers' behaviour. The results of the research indicate that system quality, information quality and service quality have significant impacts on customer satisfaction, trust, customers' intention to spread WOM and intention to repurchase. In other words, customers' perception of the website quality can be a reliable forecast of customers' loyal behaviour. With that in mind, managers of e-commerce websites should assign greater importance to the power of maintaining good standards in system, information and service quality.

System quality

As discussed, system quality deals with a wide range of website specifications including not only user interface, style, navigation, layout and physical appearance but also hard elements, which deal with speed and the ease of use of the website (Kim & Lee, 2002; Gefen, 2000). In their research, Guo et al. (2012) emphasised that perception of website elements is especially important to first-time users. Thus, it is important that the website exude such reliable and captivating impressions that it is trusted by those without prior attachment. Dickinger and Stangl (2013) advised that website aesthetics, which include but are not limited to colours, font, text, and media, should be optimised to engage customers' attention. As such, photo quality could be improved by employing professional photographers, and design elements could also be enhanced. User-experience-wise, websites should pay focus to user-friendliness with attention to detail, such as adding visible search bars, optimizing navigation, and enriching filtering options; also speed of loading is a critical factor (Xu, 2017). Furthermore, since availability is mentioned in this research, it is recommended that website operators have the website designed in such a way as to create such an impression.

Since it is suggested in the literature, as well as the preliminary interview, that demographic characteristics have strong influences on customer perception, it is highly emphasised that website specifications should be tailored to individual needs (Gefen, 2002). Well-designed websites allow customers to navigate between pages and maximise the utility of the search function. An efficient website helps minimize the time spent on information gathering and research and the possibilities of mismatch (Luo et al., 2012). In recent decades, such processes have been highly facilitated by the assistance of customer relationship management software and artificial intelligence. Product display tailored to search history, website specifications adjusted to match individual preferences, etc. are among the techniques that have been optimised. Also, UI/UX design such as placement of the navigation bar, placement of promotion banners, etc. can also be personalized.

Information quality

Besides system quality, information quality plays a critical role in customers' decision-making processes (Ghasemaghaei & Hassanein, 2013, cited in Rasli et al., 2018). It guides them through the process due to the absence of physical interaction with the product in the online environment. Online business gives customers a wider range of product selection, competitive prices and most importantly, easy access to information (Khristianto et al., 2012). Information quality refers to consumers' overall judgment and evaluation of the quality of information, assessed by the degree of accuracy, in-formativeness, timeliness, and relevancy of information provided by the website (Lin, 2013). Information quality is likely to help customers compare products, make informed purchases, and enhance transaction security (Liu & Arnett, 201). This study expects that improved information quality (i.e. in-formativeness and security) would lead to higher levels of customer satisfaction. In addition, sufficient information on a website will encourage customers to shop online.

In a survey by Zendesk (Nguyen, n.d.), it is revealed that more than 80% of shoppers cited product quality as the main driver for repurchase intentions. In an e-commerce context, however, customers are not allowed to see and feel the physical products before buying; they are thus relying more heavily on product information provided by the vendor. Many vendors, as a result, have spent considerable amounts on making product photos and content writing to appeal to potential buyers. The overdoing of product presentation, however, has a downside that is labelled by Kotler (2000) as the management of expectation. In his work (2000), Kotler opined that customer satisfaction was decided by the gap between expectation and actual experience, which means that unrealistic photos of products can generate initial sales but reduces satisfaction in the end, thus reducing the possibility of repurchases. Zendesk's survey also provided that more than 40% of respondents felt more engaged with stores that displayed real photos of their products.

To help customers manage their expectations, e-commerce websites are recommended to employ a variety of tools and programs to assists buyers in making purchase decisions. For example, to promote reviews, customers should be granted incentives in return for 100-word plus reviews with photos of the real products. To gain consumer trust, they should provide products with certified origins and control fake goods on their platforms. A programme that traces product origin is one recommendation, which can also be a means to promote the brand in a transparent manner. E-commerce players should also develop their own infrastructure to adapt to new challenges, ranging from order processing systems and warehouse capacity, to the speed of transport. Some fashion e-commerce websites even implement online fitting tools with size instructions for clothing products.

As to e-commerce websites that provide both B2C and marketplace services, effective third-party *vendor management* is crucial to maintaining quality standards and upholding brand reputation. Vendor management proves to have a pivotal role in e-commerce management in Vietnam due to the reasons stated above. The prevalence of fake goods being sold online without certified origins reduces customer trust in online shopping, while the anonymity of many sellers on e-commerce platforms worsens the notion. E-commerce businesses face a compromise between coverage and quality assurance, which despite not always coming at the expense of the other are quite challenging to manage. Signing on with more third-party sales vendors expands the product portfolio, thus increasing assortment and availability, yet such a horizontal approach requires greater resources to be assigned in order to deal with quality control. According to the results of this research, product availability, quality and trust all have fundamental impacts on customer loyalty; thus, e-commerce firms are advised to leverage the vendor situation properly and efficiently.

Third-party vendors can be valuable assets to an e-commerce website provided they are managed appropriately. Among the brands included in this research, Shopee has outstanding policies in favour of marketplace sellers to attract cooperation from *daigou* niches (Focus group interview, 2019). Having a solid collection of *daigou* sellers on its platform has helped Shopee gain a remarkably strong user base. Affiliation with well-known brands (for example, Tiki with Lock & Lock) also helps draw initial visits.

Last but not least, e-commerce operators are recommended to take into account the cultural differences between South-east Asian countries. Among the four websites included in the study, Lazada, Tiki and Shopee have strong SEA presence, all of which started out in Singapore then spread to Malaysia, Indonesia and Thailand before infiltrating Vietnam. It is reasonable, therefore, for such companies to have their existing strategies horizontally transferred to Vietnam. However, probably the thought of Vietnam merely as a part of South-east Asia has led many e-commerce companies to commit fatal mistakes. Zalora's withdrawal from the market in 2016 has brought to the table a new epiphany. The South-east Asian countries, much as they are correctly grouped geographically and politically, contain multiple markets that are fundamentally different to each other. Marketers, research and intensive learning about the market differences are highly advised.

Customer relationship management (CRM)

The CRM concept has become widely used within a short period of time and now it is regularly used in the field of e-commerce. To put it simply, the CRM system is based on the central storage (database) where all gathered data that point to the behaviour of a client are stored. CRM is much more than customer service; it is a business strategy that includes selection and management of a relationship with clients for the purpose of adjusting their long-term value for the company, and a philosophy focused on a client (Muller & Srića, 2005, cited in Dukic et al., n.d.). CRM is therefore a strategy used to find out more about the needs and behaviour of consumers, aimed at developing stronger relationships with them, because good relationships are of key importance for business success.

Much has been discussed about the role of technology in assisting e-commerce firms reach out to customers' individual needs. One remarkable concern in this regard involves their consideration between customization and standardization. Customization, in particular, has become increasingly more popular than standardization because customization allows consumers to specify the products that are suited to their desires (Jin et al., 2012). However, it is still suggested that a certain amount of standardization be used where possible.

As the conceptual framework, the measurement variables of website quality is system, information and service quality, implying both technical and service quality. The empirical findings of this study show the consensus with theoretical conclusions: perceptions of customers toward website quality can be used as the base for anticipating their levels of satisfaction and further a sense of loyalty. However, it should be acknowledged that the assessment of website quality is largely depended on the technical ability and internet using experience of people. Therefore, indicators that are defined in this study to have significant impacts on the customers' perception toward website quality may become the technical standard and basic functional requirements for any e-commerce retailers to build up their own e-commerce pages. Implicitly, website quality is not the competitive edge but a must to comply with, or else it may become the dissatisfaction or hygiene factors destroying the positive judgment of customers toward a specific purchase. This implication is true for both system quality and information quality perceived by customers. From the side of e-commerce companies, besides comprehending the basic standard of designing website quality, it is the chance to collect customers' real data to establish the big data which is related to the market research and customer relationship management. This is the iterative process of (1) acquiring a large amount of real data from using behaviours of customers, for example how many clicks, which products are clicked, how long they are browsing, how many related products they are, etc., (2) data analysis to understand the market trend and consumption preference; (3) applying the findings as the critical inputs for operations and marketing plans; (4) improving the current service quality and related service processes; and further. Website quality relates the perceived use of ease by customers and is equivalent to the deletion of initial barriers regarding to people's technical ability in switching the shopping from traditional format to the e-commerce one. consider too, it provides the chance for e-commerce platforms to extend their customer segments to the older who are not familiar with this new shopping type and kinds of low ability of using apps. In short, website quality management does not simply mean to the management of the destination to select products, but by initiatives in designing and using it, e-commerce companies could gain tremendous sources of information that can bring in differentiations for them.

7.2.2 Price

The research found evidence supporting the relationship between price and loyalty, which confirms that price has a strong influence over e-commerce marketing in the Vietnamese market. The research indicates that increased price satisfaction might have some modest impact on customer loyalty. Meanwhile, it does not translate to any correlation between lower prices and satisfaction or loyalty. The discussion in Chapter 6 has pointed out that price satisfaction seems an unsustainable advantage with the market becoming more competitive and customers growing more demanding. In Vietnam, despite having no supporting evidence in this study, price competitiveness might still remain a crucial point of consideration among the less wealthy, rural-based groups of customers.

The literature review suggests the correlation of price and satisfaction by people's evaluation on absolute price level and competitive price. However, the empirical finding does not show the same line of thoughts. It does mean to the solution of using lower prices to increase satisfaction or loyalty although it is the clear evidence that lowering prices could gain the boost in sales volumes in a specific time period. The big concern with this finding is that if e-commerce retailers do not reduce their prices, how come they could gain the attention and foster sales volume when other retailers are doing so? If lowering price is one of the normal activities that is applied by most of e-commerce retailers, what about the formats or fashions of lowering prices that could attract customers? For example, during the last two years when the world is facing the hard impact of the COVID-19 pandemic that declines significantly people's household income every month, in Vietnam, Shopee has run and succeeded themselves with the campaign "Flash Sales by specific hours" or "Great Deals Monthly on the day that has the same date and month". Since then, Shopee has forced Lazada; and also pushed other players (Lazada, Tiki, Sendo) into the battle of monthly price reduction. Such, although price is not confirmed as the determinant of satisfaction and loyalty, it could be used as the selling tactic to gain short-term volumes and acquire a larger basket of customer data. To bear mind that, Vietnam is the low to medium income country; and such, price sensitivity could be found the common phenomenon among the mass population. People love to have good bargain and prefer to buy from where having good offers. In fact, not only do emerging markets have this kind of behavioural reactions but also customers in developed markets are similar. However, the level and expression of sensitivity are different. The indication is that price should not be considered as the tactic to encourage satisfaction and loyalty, but an incentive for people to consider and decide the purchase. They may be attracted by good promotions and complimentary coupons/ gifts and that will click on the advertised products to explore more details. At this point, price, probably, is placed in the threshold pavement of further actions, or in the initial list of considerations, i.e. the pre-consideration spot of the step 1 in the customer journey. To top it all off, the use of price incentive is likely to activate inactive accounts or potential customers, rather asking frequent ones to buy from.

Further thoughts, which price is more important – absolute price or competitive price? The topic of price is more complicated than the amount of money paid. It may include the non-monetary costs and insightful delight of having good bargains. Except there is a large distinguish of service quality or features from one platform to another, competitive price coupled with specific coupons could win a customer. For instance, with the same product, if buying from Shopee, one customer has (1) discount by 10%, (2) gift from retailer (0.5$), and (3) free delivery coupon; and if buying from Tiki, she enjoys a more favourable gift, she may select to buy from Tiki. Or else, if two platforms offer the same promotion, the absolute price and previous experience with the site will take the significant role. Therefore, depending on internal decisions and goals of each e-commerce retailer, the use of price will uphold different benefits for them.

7.2.3 Loyalty programs

The findings about loyalty programs in this research have a number of implications for marketers. The impact of loyalty schemes on true loyalty measurements including intention to spread WOM, intention to repurchase and attitudinal loyalty, is proven to be significant among Millennial Vietnamese shoppers. Steyn et al. (2010) studied a wide array of countries and concluded that shoppers in different countries have different behaviour, loyalty attitudes, and other consumer attitudes and values. While Malaysia and Singapore shoppers make a clear distinction between information-related benefits and financial-related benefits, Hong Kong-ese, Taiwanese, and Thai shoppers make no such distinction. Cultural influences may partly explain the variation in these differences that can have strong impact on the successful implementation of loyalty schemes. The possession of loyalty membership in predicting store loyalty and behaviour loyalty varies by country. Although the specific types of loyalty programs are not a focus in this study, it can be seen that e-commerce shoppers in Vietnam need more of such loyalty programs, and the level of satisfaction towards existing programs seems positive.

Steyn et al. (2010)'s study once again emphasises that marketers should consider whether the measurement instrument employed to measure the constructs under study in cross-national or cross-cultural research is relevant. Measurement instruments and research results across countries should be validated carefully to differentiate between true differences and systematic bias due to the way people from different cultures respond to scale items. Should they lack evidence supporting a measure's invariance, the interpretation of the results could be erroneous.

There is an opportunity for marketers to create brand communities with the loyalty-card members as they do recommend these cards to others. This indicates that there is some sort of social aspect to card membership. More specifically, retailers should focus on the benefits and feelings items, which are the best at predicting the selected predictors of loyalty. Furthermore, the path from benefits to loyalty is through feelings. Benefits have a stronger effect on feelings than directly on loyalty, which means that feelings act as a mediating variable by translating the perceived benefits into loyalty behaviour. Finally, of the three indicators of loyalty, recommending the loyalty scheme is a much stronger indicator of loyalty than use frequency or carry frequency, which underscores the importance of measuring recommendations to measure membership loyalty (Steyn et al., 2010).

Loyalty program is considered as the measuring variable of perceived switching cost and having directly influences on satisfaction and trust as the conceptual framework. Whilst majority of related studies including this one remarks the influences of loyalty programs on attitudinal loyalty, and such people should a stronger intention of purchasing and spreading out information, i.e. behavioural loyalty. Although the study does not mention the detailed types of loyalty programs and see the differences from them on affecting the behavioural expression of customers, the general adoption of this tactical option would gain the benefit of enlarging the customer basket through user-generated contents. Interestingly while the statistical finding of loyalty programs shows it as the useful tactic to increase customer retention (by 45%), through the bridge of perceived switching cost having positive effects on customers' attitudinal loyalty, loyalty programs could take the important role in encouraging positive feelings and delights from customers, but not directly affecting the purchase. It should be cleared that there is the certain distance between intention to repurchase and the actual purchase. Probably, customers will list out e-commerce platforms with good loyalty programs or with which they have the membership relation in the initial consideration set in the first phase of their journey. However, there is not sufficient evidence to confirm the ability of loyalty programs in generating actual buyers. Compared to controversial arguments from researchers as Jones and colleagues (2000) who advocated the link of perceived switching cost and satisfaction and loyalty, or Lee, et al. (2011) who reject that connection, or Lam, et al (2004) who disregard the relationship, the finding of this study opens the new perspective on the role of perceived switching costs, and thus, affecting the real contribution of loyalty programs. Despite the name of the program, it is inclined to the tactic of retaining the purchase. It becomes clear that retention does not mean having a sense of loyalty. Customers could re-purchase on product from one platform by many reasons, for instance they could not find that product in other sites, they buy to gain more points for receiving more coupons, they purchase to enjoy the good deals, and so on. Therefore, e-commerce companies should revise their views on the role and application of loyalty programs in order to (1) design the suitable contents and incentives for people to actively participate into the program, (2) sustain the attractive points of the program to keep up with changes in customer behaviours, (3) gain more sales and through that, combining with other tactics achieve a large amount of UGC and extend the customer scope, (4) continuously provide existing customers with a reason to buy. Experientially, in the long run, the benefit of loyalty programs will be upheld through the retention. High retention rate seduces customers to etch a specific e-commerce image into their mind and more importantly, formulating the consumption habit of shopping via that platform. This is the important predictor for further development of attitudinal and behavioural preference.

7.2.4 Antecedents of loyalty

On a basic level, e-commerce companies can build customer loyalty through sound business activities and strategies. As discussed, quality, price satisfaction and perceived switching costs contribute a great deal to the success of such activities and strategies. To be specific, these activities include monitoring performance by measuring product delivery, product performance, past-purchase behaviour, service, and support. In addition, trust, despite not being a main focus of this study, has been proven to be strongly correlated to quality. Thus, e-commerce companies should address customer service issues such as safeguarding against credit card fraud and protecting against security concerns. In addition, customer relationships can be enhanced via data mining, e-mail, and surveys. Gathering data helps track customer activity that can be the basis for loyalty programs and locking in your best customers. For example, vendors can offer rewards instead of waiting for customers to claim them, and vendors can reach out to inactive customers, keeping the relationship alive (Lager, 2006). To build loyalty and that unique experience, communications and PR efforts can be developed from scratch on a case-by-case basis. In addition, dealing with legal issues or online security can be used to reinforce customer loyalty and trust (Gordon, 2004).

Viewing the conceptual framework, antecedents of customer loyalty could be separated by two groups of (1) measuring variables with website quality, price, perceived value and perceived switching costs with several influencing items; and (2) conceptual variables with satisfaction, trust, and commitment. Unfortunately, the practical data does not support the statistical analysis toward customer commitment within the conceptual relationship (the threat of having multi-collinearity between commitment and loyalty). Thus, the structural antecedents of loyalty only name satisfaction and trust. The relationships between them is also complicated, for instance satisfaction positively influencing trust, at the same time satisfaction also positively associating to loyalty and trust giving positive effect on loyalty. In fact, to the real happening, it is hard for e-commerce companies to distinguish these abstract concepts of measurements through single purchase actions of customers. While the kind of understanding is important for knowing customers, the fact indicates the need of having the sufficient data collection or customers' information. That relates to the functional activity of information management department and marketing one in utilizing the large size of data showing purchase history and website using habits of customers. Reviewing the conceptual framework, customer trust is comprised by satisfaction and website quality. This point adds another note for the website quality management. If website aesthetic features should appeal the eyes of customers, the website function, navigation, information quality and important website-related service quality are crucial in reducing perceived risks from customers during the selection, ordering, payment and waiting to be served. The lower perceived risks the higher chance that trust is created and enriched. Of course, only when people satisfy with what they have received is this perfect relation recorded.

Bouncing between these abstract concepts, the question related to which concepts to be focused at which stages of operations raises. For instance, in the current immature e-commerce picture, and the unstable consumption preference of Vietnamese customers, whether it is worth investing into customer loyalty or seeking for solutions to enhance their satisfaction. Recalling the corporate objective in making profits by the stakeholder analysis theory, now that satisfaction is also the predictor of higher sales and good repurchase rate. As the preliminary interview, some people declared that they often shopped with Shopee or others with Tiki. However, there is not clear that they have the loyalty with those platforms or just their shopping habits by familiarity. More than that, one retailer can have similar retailing stores in all platforms. To this point, there raises another concern: whether customers satisfy with the retailer (who they buy from) or the e-commerce platform? In fact, there are no clear answers that could be adopted for all the cases; however, the strong implication is that e-commerce companies must take a deep consideration on the current development level of the e-commerce industry and conduct adequate market researches to define which of customer behavioural expressions to be achieved: satisfaction or loyalty. If said that this implication is suitable for the short-term goal, and loyalty is the key for long-term performance, a further implication is toward the design of proper timelines to ensure the accomplishment of on-spot, short-term, medium-term, and long-term objectives.

7.2.5 E-commerce policy

In the international business context, firm performance is subject to e-commerce policies in all countries involved. The differences in legal requirements and regulatory mechanisms between markets suggest that e-commerce should be legally prepared as they become more engaged in cross-border activities. Recently, India's new e-commerce policy to mandate importers to declare the origin of goods with a view to rebalancing the trade account with China [3] benefits domestic sellers while at the same time hits merchants highly dependent on Chinese imports. Furthermore, the country's new rule regarding data storage and enhanced government scrutiny [4] implies huge hits on foreign players including household names Amazon and Google. China's most recent changes in e-commerce law targeting counterfeits and infringement of copyright [5]

[3] Suneja, K. (2020). A new e-commerce policy to curb Chinese imports. The Economic Times. Retrieved from: https://economictimes.indiatimes.com/news/economy/policy/ecomm-products-to-wear-their-origin-on-their-sleeve/articleshow/76452927.cms

[4] Rai, S. (2020). India New E-commerce Policy: Amazon, Google Face Tough Government E-Commerce Rules: Report. NDTV. Retrieved from: https://www.ndtv.com/india-news/amazon-google-face-tough-government-e-commerce-rules-report-2257678

[5] Clark, E. (2019). China's new e-commerce law: A step in the right direction. China.org.cn. Retrieved from: http://www.china.org.cn/opinion/2019-01/09/content_74355741.htm

suggest that platform operators are now bound to share responsibility in detecting fraud and misconduct in e-commerce. Although the legal landscape in Vietnam remains vague with lack of execution and monitoring, it can be expected that it will take a convergent path to a certain extent. From an e-commerce company's perspective, it is ideal that it remains well prepared for future changes in laws via, for example, product origin diversification, data transparency, and so on.

It can also be noted that the lack of relevant laws and regulations in Vietnam imply that platform operators, Lazada, Shopee, Tiki and Sendo included, should put extra efforts in gaining customers' trust [6]. Compared to mainstream eCommerce, *daigou* activities on social media are equally if not much more under-regulated, which puts the former at a disadvantage as it costs more for them to gain price advantage, and establish personal connection with the buyers. E-commerce operators, therefore, are recommended to take proactive measures to turn the lack of laws into their own competitive advantages. For example, in response to Vietnam's lateness in setting up government administered authority to govern and certify e-commerce transactions, equivalent to TrustSg in Singapore, (Chesterman, 2014) or TradeSafe in Japan, platform operators can employ privacy-enhanced technologies, such as providing an option for two-factor authentication, platform for privacy preferences (P3P), encryption (Boritz & No, 2011), and so on. As firms are taking proactive measures to gain consumers' trust, this is no longer a matter of legal compliance but one of gaining competitiveness.

Last but not least, data management should be handled with care, as countries are all navigating towards enhancing consumer rights with data protection rights leading the agenda. Vietnam, again, has been missing out on laws relating to the ethical handling of customer data, which on

[6] TheGioiLuat. (n.d.). Pháp luật về thương mại điện tử, một số bất cập và kiến nghị hoàn thiện. TheGioiLuat. Retrieved from: https://thegioiluat.vn/bai-viet-hoc-thuat/Phap-luat-ve-thuong-mai-dien-tu-mot-so-bat-cap-va-kien-nghi-hoan-thien-6467/

the one hand provides opportunities for e-commerce platforms to mine data for more profits, but on the other hand puts them at risk of data mistreatment. For example, disclosure of customers' data to a third party may lead to deterioration of customer trust. This is consistent with Martin et al.'s arguments (2017), where they said firms benefited hugely from analysing customer data, but at the same time were puzzled with how to effectively manage the data, and how to prevent negative effects. It proves that it is not only e-commerce firms in embryonic markets like Vietnam which are struggling with data management issues. However, it is true that companies in developing markets should especially educate themselves regarding this matter, when laws and necessary guidance are almost absent.

Coupling with critical variables and empirical findings, seeing through the conceptual framework and the stakeholder analysis as aforementioned, policy makers may have significant influences on the ways platform operators design and perform measuring items, including information quality, service quality standard, price, competition and price-related promotions. Players as Tiki, Lazada, Shopee or Sendo have to comply with the regulations related to information transparency, accurateness, and completeness as policy makers will protect the fairness in competition and benefits of customers. To this point, e-commerce platforms must ensure two angles of information quality – persuasive and sufficient quality to attract customers' purchases and regulation-complied quality to play the game with rules. For instance, every product being adverted is to be provided with detailed description, instruction of use, expired date, precaution when using, transparent origin, etc. as the legal requirement. Additionally, that product is also provided with information of packaging, delivery options, return & policies, applied promotion, reviews from others, images, videos, and so on. Apart from that, price is the sensitive topic which requires the profound consideration and intensive policies to ensure, mainly (1) openness and freedom in the market, (2) competitive edge for e-commerce operators, (3) the fairness in the market competition between players, and (4) consumption benefits for customers. In fact, there are confusions about price and authentic information of products across Vietnam e-commerce platforms. Since there are no specific regulations on loaded images, many cases that sellers use the same photos, but quality and price are much different. Acknowledging that price competition is one of the inherent characteristics of the Vietnam e-commerce industry, to protect customers' rights and benefits, acuter policies should be enacted to avoid 'unintentional confusion' from customers. The point is that if price is controlled by suitable policies, quality and origin of products must be controlled, too. Said that, the nature of the competition will be influenced, consequently. We could examine the lesson from the supermarket format in Vietnam. Since it first appeared, price at supermarket was rather higher than the average rate compared to wet markets. Through years, with enation and adjustment from retailing policies, and the participation of international names by the concept of 'every cheap price' or 'best price as possible' or 'retailing by wholesaling price', the game of price now has been stabilized. From the side of e-commerce platforms, they have to prepare themselves with a high flexibility in dealing with external changes, especially upcoming policies to better adapt the internal operations. It relates to their agility in adjusting business processes and re-arranging resources in a more efficient way to control internal costs and maximize values offered. To top it all off, it is suggested that e-commerce platforms do not consider changes in policies as the constraint of their operations, but how to make use of regulations to verify quality of offerings and embed into the interrelations of loyalty and its antecedents.

Implications for the choice of Vietnam for the generalisability of findings

The findings of this research are dedicated to the case of Vietnam; and practically, they reflect new understandings on differences in consumption behaviours of people across markets and contexts. If developed market shows the closely-knit connection between satisfaction, trust, and commitment leading to loyalty, the reflection in Vietnam is slightly different with the causal links of satisfaction and trust and loyalty only. Moreover, the connection is slight weak when adding the moderating effect of both satisfaction and trust in the relationship between the independent variables and customer loyalty. The question is whether with this finding, the generalisability of this behavioural expression is valid, or it is just an indigenous manifestation of consumption behaviour? The first to confirm that by observing and measuring the customer e-loyalty from the authentic data acquired by customers' opinions, it is definitely the indigenous version of behavioural findings of Vietnamese people in the e-commerce setting. The second to make clear that the e-commerce landscape of Vietnam has not yet been completed in terms of regulations, participations, and consumption behaviours. Or in other words, Vietnam ecommerce is in the beginning stage of the development phase; so, it is unavoidable that this social trend is unstable. The third to say that the rationale in selecting Vietnam as the researching context is by its potential of e-commerce development through market evidence of internet development, high rate of population having smart devices and using internet, large coverage of e-commerce platform in recent years, and the booming of sporadic online selling activities (daigou). It becomes clear that there are the distance and differences between mature and immature e-commerce landscapes; and such, the ability of generalizing the findings of this study is inclined to the picture of immature markets. Before, the analysis of Vietnam ecommerce is often attached or apart of the Southeast Asian market. Since that, the picture of Southeast Asian may be missed out critical pieces of single national pictures. If Singapore, Indonesia or Thailand have achieved a fairly good setting of e-commerce activities, or at least their markets are well-organized by e-commerce platform operators and single retailers, Vietnam is still a blur picture. Moreover, if viewing the rapid growth of the modern supermarket format in the country, the estimation is that the similar prospect with e-commerce development is perceived. It would be not the point of whether

Vietnam-based results are general enough to be generalized; but rather it relates to the matter of which level and landscape in which the findings are generalized. The generalisability is visible by four levels – (1) type of the market; (2) development level of that market; (3) players of that market; and (4) customer of that market. It is the format of (1) an emerging market with an impressive rate of GDP growth and market openness, with (2) the immature state of e-commerce development and competition by (3) similar e-commerce platform players and several uncontrolled daigou, and (4) customers in the process of being familiar with e-commerce shopping.

Actually, using Vietnam as the researching context is not the unintentional action by the sincere choice by considering a series of necessary and sufficient conditions to conduct the research. As mentioned, the research value is largely depended on the quality of data collection since all the findings are to describe and explain the real picture of Vietnamese customers in the e-commerce industry of Vietnam. Such, it must be contemplated in terms of how to achieve the target of data collection when the researcher locates in Vietnam. More than that, as a Vietnamese people, the researcher could best describe the understandings of a local people to absorb knowledge from other studies and transfer them into the collective frame and then conceptualize them into survey questions. Besides, when considering the ability of generalizing the findings, it is recognized that Vietnam could become the reflective picture of an emerging market in the first phase of e-commerce development. Purchasing demand is visible, the willingness of switching to buy online is also observed, the market potential is also impressive by a large population and high rate of using internet and smartphones, and so on.

Practical implications for practicing managers

Whilst the theoretical contributions have been confirmed as providing a new piece into the whole picture of the world's e-commerce development, by the practical findings of Vietnamese customers, the most meaningful implication is probably to direct the adoption of findings by practicing managers to improve their performance across touchpoints or the level of customers' e-loyalty. The understanding of customer behaviours and the general picture of Vietnam e-commerce industry, although do not provide specific options for practicing management to apply on the spot, is important in suggesting practical hints and directions for further in-depth investigations and adoption into the process of planning programs to attract more customers and foster the routes of customers relating with the platforms. As aforementioned in the previous chapter, since the e-commerce market in Vietnam is in the beginning phase of development, e-commerce operators are in the position of playing by ears and coping with external challenges with predictions of changes. Such, similar studies as this research become the valuable source for e-commerce platforms to visualize the understanding and shape the industry landscape to serve better customers and contribute a part into the smooth flows of consumption value chains for an increased living standard. Although the bottom-line goals of e-commerce companies are to gain profits, the extension of social meaning in doing business in today context highlights the corporate social responsibility as well. In the scope of this consideration, it assists to economic benefits for all people. Moreover, it is accepted that customer e-loyalty is the abstract concept with tremendous influences by several factors from diverse sources – social influences, external condition, personal demands, organizational offerings, supporting activities, product availability, etc. alongside complicated psychological happenings. Practicing managers should acknowledge that besides controllable determinants of e-loyalty, they have to deal with a large basket of uncontrolled interventions which are rapidly changing. Such, it requires the internal capability of e-commerce platforms in quickly predicting and responding to changes to keep up with the good customer relationship. By the empirical findings, implications for the practicing managers are draw out by three areas as following: internal capability of operations, marketing practices, and social responsibility.

Firstly, internal capability of operations directs to the capabilities of e-commerce platforms in planning and executing suitable business strategies, determining proper operations decision management, and arranging appropriate business processes to produce value propositions to match market demands. It relates to the ability of practicing managers in improving performance of website quality, price, and perceived values that produce positive judgments from customers and satisfy their expectations. The better the performance of these variables, the higher customer satisfaction is achieved, and leading to the greater chance of customers to retain the purchase and have a stronger sense of loyalty with the operator. The final result of this process is to gain the competitive advantage by the large pond of loyal customers – one of the most powerful and sustained advantage that ensures the long-term growth. Referring the 8C's model in enhancing customer e-loyalty, the strong implication for practicing managers is the proper investment into the technological capacity and technical infrastructure. Either customization, cultivation, customer interactivity or care is all related the presence of information in the way that supports the smooth flows of shopping and deletes disruptions in service. More than the navigation or aesthetic appearance of the website, customers may seek values that they are truly received when shopping with the platform, namely shopping convenience with high values. It comes to the need for managers that investing the great technical base is the continuous process since the rapid change of both customers' demands and technological advancement, and quick actions from competitors. Such, they should accept that technology will retain them in the competition but should not the key for sustaining their competitiveness, except through the utilization of technology, they could offer positive perceived service quality by high responsiveness, great supports and assistances. The judgment of service quality is by customers which cannot be controlled, but possibly measured and improved by (1) organic improvements of offerings and added services by the platform; and (2) service recovery with sincere response to customers complaints.

There are some remarkable points regarding price that needs saying. Different from developed markets (as findings from other studies), Vietnamese customers are quite price sensitivity and using low price is one of the methods for e-commerce platforms to win customers' attentions in specific campaigns or in a short term. The implication for practicing managers is toward their perceptions and usages of price to attract the attention. Better in case, price, at this moment, should be used as a means to win satisfaction or loyalty. Moreover, when using low price as the fish rod to attract customers, they also need to observe the external changes and predict signals of e-commerce development that may affect the original power of 'low price'. For example, when mass population has the common perception of e-commerce selling cheaper price (but not lower quality or they accept the lower quality for lower price), price-based competition is the selling tactic. Yet, when e-commerce is more mature and population start thinking about the convenience and good deals of purchase, price-based competition could lead to further benefits in enhancing satisfaction or else. Besides the absolute price, the point to mention is the reduced price by fashions of promotion, discounted percentage, coupon, promotion code, etc. Although they are the powerful incentive of sales volumes, e-commerce practicing managers should be cautious in using this motivation to avoid the perception of people in waiting for discounts to buy. In a longer run, it would lead the platform into the unvoiced bottleneck of continuously discounting to gain sales. This reduces the profit margin and weakens the internal capability. In addition, many considerations regarding price and price-based perceived values are there for being discussed, the ability of offering good prices while sustaining the profits and high quality of services is the real challenge for internal operations, though. Do not mention detailed solutions, the implication for practicing managers is toward the design of suitable business model that highlights the flexibility of all functions and employees to self-control their works to deal with the avalanche of activities by thousands of working relationships with partners, suppliers, customers; and various incidents at a high speed of changing and responding. Failure in capturing changes may cost a great deal of money or plummet the sales volumes and reputation. The ability of offering good prices is hardly relied on the quality control of input – processing – output costs, and quality of client retailer relationship (as the open commerce place, small retailers opening online stores in e-commerce platforms are called 'clients'). Such, the topic of price is much more complicated in the real practice for practicing managers than what have been discussed in the research.

Secondly, from the marketing perspective, the research findings indicate several implications for practicing managers in (1) understanding the real nature of e-commerce in Vietnam at the current moment by itself and by comparing with the best practices in other markets (referring the systematic literature review); (2) defining the current shape of their platforms and identifying the upcoming progresses and directions upon the awareness of future changes; and (3) refining the best route of growing satisfaction levels and addressing the increase of loyalty. Experts confirm the potential of the Vietnam e-commerce market by its large market size and good consumption power. This is the favourable condition for further development. And in practice, the market also attracts big names such as Shopee or Lazada. However, in other to transfer the potential into the real chance for stable growth and sustained development, the government and e-commerce players should go out of their ways to form the complete setting of e-commerce activities. The strong implication for practicing managers is regarding the frequent market researches to capture changes and predict potential events that may shape the e-commerce industry. The parallel existence of daigou in social networking sites, for instance Facebook and Instagram, and in e-commerce platforms (as the client retailer of e-commerce pages) may distort the nature of rivalry. Internally, the reference to best practices in other countries could provide initiatives for preparing themselves to deal with uncertainties in the market. For instance, in upcoming months, the Government requests all client retailers whose sales volume is larger than VND 100 million to pay income tax, and the responsibility of tracking belongs to e-commerce operators. This, in a black-and-white page, creates the new workload for the accounting team and probably more labour costs; but in a figurative sense, there should be certain changes in business processes to ensure the transparency and fairness for client retailers.

Another implication in this category relates to the understanding of where they are standing and how they are doing in this type of current market. Referring the conceptual framework and by self-judging their performance through the data analysis, an estimation of satisfaction and loyalty levels opens the mind of practicing managers. It is similar to the performance assessment via the objective feedback of customers' purchasing history, or the brand health check to verify performances of all marketing and branding activities. The intensive meaning of having customers' e-loyalty is to sustain their repurchasing without much additional costs of acquisition and relationship management. Considering the 8C model, it is recognized the role of community in affecting behaviours of customers. At this point, there should be the combination in view: virtual community affecting e-loyalty and empirically, intention to spread WOM, to repurchase being predictors of customers' sense of loyalty. Therefore, the marketing communication should include the eWOM practices into their set and finding ways to motivate customers' spreading positive comments. The challenge is, as vastly mentioned, Vietnamese people do have the intention of give positive comments in the large circles of non-acquaintances; but complaints are often found across platforms. This suggests two directions – (a) making use of social media to narrow down the circle of audiences by which people will feel more comfortable to send out their thoughts; and (b) creating the procedure to deal with complaint and seeing it as the chance to conduct service recovery – a real chance to re-earn trust and strengthen loyal behaviours (Holloway & Beatty, 2003; Schoefer & Ennew, 2005). Considering the a), social media marketing has different purposes including the introduction of new products and encouragement of a fandom. Having a fan relationship is to the large extent of thoughts, similar with the expectation of acquiring and enlarging a group of loyal customers. Viewing the b), although complaints are not the thing to be expected, it should be approached by the positive thinking. To prepare for this unavoidable situation, one of the optimal model to think about is the agility. Depending on the nature of operations, business goals, financial and technological ability, the level of agility and functions to be transformed will be decided properly.

The last implication in this group is directly to the marketing and customer relationship management profession. The empirical confirms determinants of customer loyalty, and from that, practicing managers should use this information as the practical inputs to define the current status and the desired one. Objectives should be dedicated by three terms – short, medium, and long in order to create the ease and flexibility in composing and adjusting marketing messages and processes. There is no recommendation on which antecedents to be focused right now but enhancing satisfaction does not mean that the e-commerce operator could retain the sales volume in the existing context. In fact, there is almost no difference between shopping via this or that platform; even to the large extent of cases, whether the satisfaction is toward the platform or toward a specific online shop in that platform. Such, it is not the wise option for concreting a whole process of every time one customer conducts the shopping; but it is necessary to standardize and improve quality of touchpoints with the platform across customers' journey. Once again, this requires the collaboration of marketing and internal operations, or the cross-functional performance to achieve the goal.

Thirdly, there is the critical implication related to the social responsibility. Grab Mart has just done well with their contribution into the social benefit by advocating Bac Giang people to save their life. Grab Mart promotes Bac Giang lychee and askes for the support of mass population to rescue the produce which cannot be exported due to the COVID-19. This is the expression of cause marketing while enhancing the positive image of Grab in the eyes of customers. This is the lesson learned for practicing managers in embedding corporate social responsibility into their operations. They have suitable conditions to perform this by supporting the commodity value chain in the ways that ensuring the stable source and quality of products for the mass consumption. Moreover, their compliance with regulations and idea contributions into the e-commerce policy making are all meaningful to develop a well-organized and transparent trading environment for e-commerce operators.

Research limitations

The study still contains a number of limitations, which provides s room for improvement. The limitations are categorised around the sample population, the generalisability of the research, the measurement instrument and the cross-sectional nature of the research.

Generalisability

First, the questionnaires did not distinguish between urban and rural-based audiences. Based on the methods of distribution, it can be inferred that the sample comprised mostly metropolitan citizens of Vietnam, who are presumed to have higher brand awareness and easier access to information. The report of the e-commerce Index for many consecutive years showed that most e-commerce activities took place in the two largest cities of the country, Hanoi and Ho Chi Minh City. Ho Chi Minh City and some adjacent dynamic provinces such as Bac Ninh, Vinh Phuc, Dong Nai, Binh Duong and major cities directly under the Central are Hai Phong, Da Nang and Can Tho. Online businesses in most other provinces are weak and at risk of falling further behind the two leading cities. Ho Chi Minh accounted for 70% of e-commerce transactions (VECOM, 2019). The scale of e-commerce in other localities, especially in rural areas remains modest. Meanwhile, about 70% of the population lives in the countryside. Rural areas have great consumption potential, and are also a place to provide diverse products suitable for online sales.

Furthermore, future research is recommended to not only take into account more diverse samples across the country but also separate the respondents by regions accordingly. There is a vast contrast in the frequency of internet usage and online shopping between metropolitan city dwellers and people living in rural areas. In this research, such differences were not a focus.

As such the sample was expected to be representative of all millennial e-commerce shoppers in Vietnam. However, less can be said about the gender, age, marital status and income profiles of the respondents. Although the respondents are quite balanced between genders, there is no trusted resource to confirm that the age (e.g. the sample is heavily skewed towards people under 35), marital status and income profiles of the sample match that of the full population of the study. This exists as a limitation of the study.

Also, since the e-commerce market in Vietnam has not reached a full-commoditized stage, the findings of this study can barely be transferred to other industries.

Methodology

From a data collection perspective, the methodology chosen was partly due to the availability of consumer data. The use of online questionnaires was chosen as the best method of data collection given the survey sample personal contact information available to the researcher. However, there are inherent drawbacks with this data collection method. As the respondents are not able to interact with the researcher, the possibility of ambiguities and misunderstandings exist. The impact is minimised through pilot testing of the measurement tool but a face-to-face or telephone survey would provide an increased assurance against this potential issue.

The questionnaire was structured to provide responses to between three and seven measurement items for each construct. However, the measurement items for each construct were reduced due to reliability and convergent and discriminant validity concerns with the measurement model. In the end, attitudinal loyalty measurements (ATL) were reduced to only one question. As detailed in Chapter 5, a pilot test had been conducted before the questionnaire was delivered to the actual audience. During the course of the pilot test, a few questions were removed due to low reliability. The factor loading for each item resulted in all constructs measured having scale reliability greater than 0.7.

Furthermore, in empirical studies using questionnaire data, the methodology should always be questioned because of possible distortion or sidedness (Klein & Myers, 1999). The positive responses may arouse questions as if the right questions were asked at all. The questions seemed to be relevant at the time but they might need modifications to be used in the further research.

Further identified limitations are related to the cross sectional and self-reporting nature of the research. This research is cross-sectional, revealing information at a particular point in time. As a questionnaire completed by participants' views on predetermined constructs, it also possesses self-reporting intentions and not reporting actual actions. As the research is not longitudinal in nature, it is predictive in nature and cannot determine if the participants' actual loyalty or retention correlates with the self-perceived loyalty rating. Both of these aspects may have an impact on an important concept of the research. The long span of the study also caused distortion to the precision of the findings. Several more studies had been published during the course of finalizing this study, some of which reduced some gaps identified in Chapter 2. A few more studies on the Vietnamese e-commerce market were introduced, although none of them offered such details and complexity.

Inertia

The literature points out that there is another form of loyalty which denotes the form of unintended loyal behaviour that result from habits or lack of choices (Day, 1969). According to Day and many recent authors, spurious loyalty is not counted as loyal behaviour. This research has failed to account for the effect of spurious loyalty (i.e. if spurious loyalty is more prominent that genuine loyalty, this might tell us that the targeted customers tend to not alter their shopping habit, or that the e-commerce market is yet underdeveloped). The factor of spurious loyalty, or inertia, might have explained for the remaining variances that are unaccounted for in the models.

If spurious loyalty were included in the research, more interesting results might have been revealed. Even if satisfaction leads to spurious or true loyalty, satisfied consumers still may switch providers, a phenomenon referred to as the satisfaction trap. To date researchers have found no satisfactory explanation as to why satisfied consumers switch providers (Reichheld, 1996). Researchers' have struggled to identify the cause of the satisfaction trap (Reichheld, 1996; Oliver, 1999). Unlike a true loyal consumer, a spuriously loyal consumer will potentially switch to an alternative provider in exchange for a minimal incentive, despite being satisfied.

7.3 Suggestion for future research

This research raises a number of implications that could be addressed in future research. Future studies may look at expanding the model and overcoming the limitations identified in this study.

Further research relating to the generalisability of the research findings is highly recommended.

The study sample was skewed towards certain age groups and sample size was not as large as expected. Future studies may look at a larger and more representative sample size.

Further research should investigate different types of product categories, for example, tangible versus intangible and, low versus high, involvement products. As figured out in Chapter 3, some products might guarantee more loyalty than others (e.g. books). Future studies should consider separating groups of products and comparing consumer behaviour across different product categories. In addition, comparisons between local brands versus international brands, as well as Asian versus Western international brands (Chao et al., 2003), especially about the role of country-of-origin in brand loyalty, are other directions for future research. Finally, several concepts describing the strength of a brand have been introduced in the literature, such as brand relationship quality and brand impressions. Therefore, future research should compare and contrast those constructs to capture a more comprehensive picture of a strong brand.

The study did not get into the realms of customer values, buying behaviour, prevailing purchasing culture and pre- and post-purchase support. Future studies may investigate these areas to study their impact on satisfaction, trust and loyalty. A longitudinal study differentiating profitability values between true and spuriously loyal consumers would provide e-commerce companies with relative consumer profitability to determine where operational and marketing funds should be focussed.

Last but not least, reliability of a couple of factors was found to be marginally lower than the reliability acceptance level. Further research may look at revisiting the scale for these factors for increasing their reliability measures.

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