

**THE MODEL OF OMNI BUSINESS SUSTAINABILITY:
CONSUMER PERSPECTIVE**

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ABSTRACT

OMNI Business Sustainability is the most essential business revolution currently when digitalization, social media, and big data are transforming the business models. A variety of channels of business operations are connected as business networks as also known as the OMNI-channel that combines all purchasing channels to create a great shopping experience and increases convenience during the customer's journey. This research aims to develop the strategy model of OMNI business sustainability in consumer perspective and to expand the sustainable consumption of academic practice in OMNI business. The research tools are the questionnaire verified and checked by IOC experts, confirms the instrument reliability by Cronbach's alpha, and completes the questionnaire by using the back-translation tools with the bilingual test. The data collection is for this research only. There are efforts to prevent participants from harming and respect their dignity in all areas and must receive full consent from all respondents before asking questions in the survey. The sampling size was used 772 participants by separating data collection of fast-moving consumer goods (FMCG) 389 participants and large appliance 383 participants in Thailand and abroad. This study's analytical strategy does the statistical analysis by using the confirmatory factor analysis (CFA) and the structural equation model (SEM) with The AMOS program. The research results of both categories found that the strategy model of OMNI business sustainability is the same, and online loyalty is the essential factor to lead to business sustainability.

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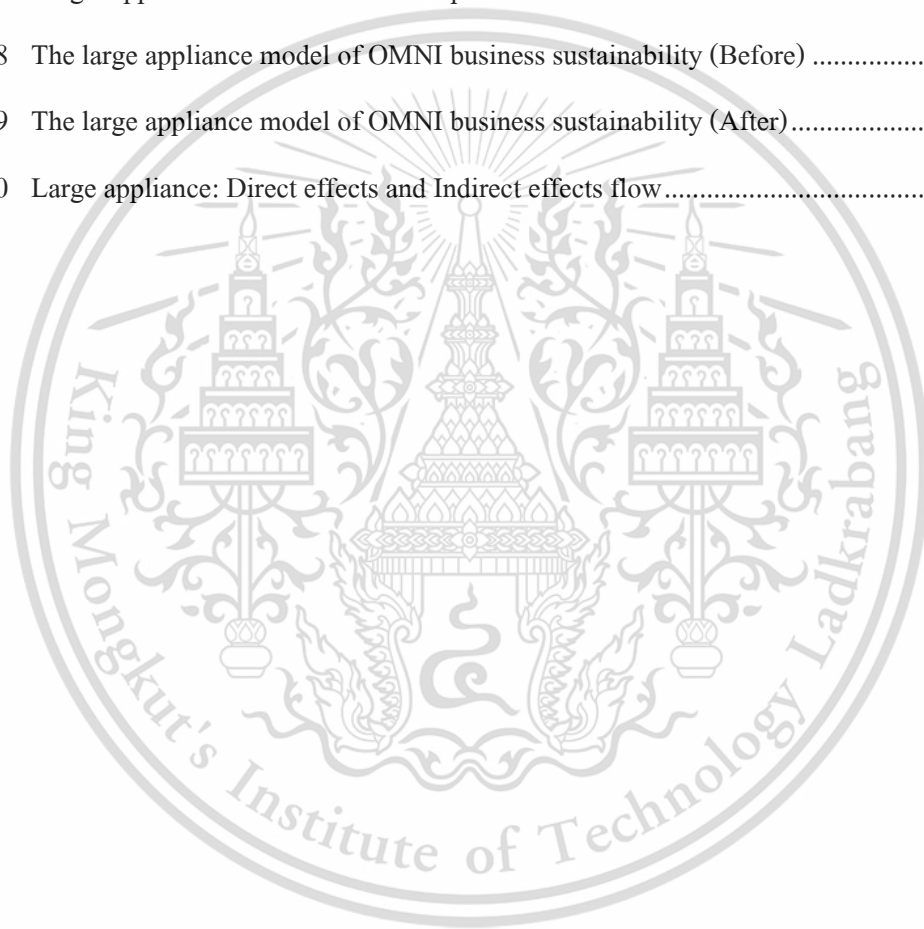
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CHAPTER 1

INTRODUCTION

1.1 Background and Significance of the Research

In the past, the business had only one sales channel, which was through the in-store shop. Later, with the development of technology and communication, seeing a wider variety of trade channels by combining both online and offline together, such as website, call center, telephone, or social media, etc. but each platform of sales is still separately.

The growth of the industry is increasingly significant to today's society, caused by economic and social expansion. Resulting in daily life more hastily combined with the changing customer behavior and the need to save time and facilities are not very expensive. These things are the source of doing retail business in various forms, whether department stores, supermarkets, convenience stores, or convenience stores, etc. Due to the liberalization of trade under the World Trade Organization rules, each country must open its domestic market. For other countries, foreign investors causing capital flows to flow from developed countries. Entering developing countries combined with the occurrence of the crisis.

The economy has encountered various business problems, resulting in increased capital demand. In modern times, consumer behavior has changed to shop online or buy directly from the manufacturer, including having a convenient logistics system to deliver goods. Therefore, they do not need to travel to the store as before, causing the retail business to intensify competition.

The development of each brand's opportunities takes place in many ways to provide options for consumers. The evolution by combining retail with entertainment activities and the lifestyle of consumers is another way that is becoming popular as see it happening to many retail businesses in Thailand where recruit various concepts and activities to supplement the selling point for themselves BuilderNews (2016).

All activities in retailers that are directly related to the sale of a product to the final consumer. In which consumers will buy products for personal, non-business use (Stanton, Etzel & Walker, 1994)

Nowadays, the digital world opens many business opportunities and possibilities. Various products are allowed to access through the online channel, but that may not always be the answer to creating a good experience for customers because most consumers still value the offline channel. Therefore, combining the strengths of both online and offline worlds into one to create a seamless experience for customers is a new one, more enjoyable way to impress, build a customer loyal base until resulting in word-of-mouth recommendations from customers (Word of mouth) for driving sales growth including creating a competitive advantage over the competitors through the collection of information from all channels for creating a superior experience for customers.

Thai Retailers Association (2020) revealed that the overall retail business in the year 2019, the purchasing power of consumers has grown lower than it should be and expected that the growth in 2020 will not be much different from the year 2019 which the growth from now on will be the growth from the retail sector primarily while the large central retail chains are stable or may be reduced slightly.

Overview of the retail business in the year 2019, there are signs of contraction in all categories which is in line with the national GDP throughout the year 2019, is expected to grow by only 2.6% from data collection. The Thai Retailers Association expects the retail industry in 2019 to grow at only 2.8%, down from 3.2% last year.

Table 1.1 The retail index 2019

Segment	2016	2017	2018	2019
GDP	3.2%	3.9%	4.2%	2.6%
Retail Consumption	3.4%	3.8%	4.0%	3.2%
Thai Retailers Association	2.9%	3.0%	3.2%	2.8%
Food Sector				
Hypermarket/Supercenter	2.9%	3.2%	3.0%	2.7%
Convenience Store	3.0%	3.3%	3.4%	2.9%
Supermarket	7.5%	5.0%	6.5%	4.0%
Non-Food Sector				
Department Store	3.5%	4.0%	4.5%	3.5%
Home Furniture and Material	2.3%	1.9%	2.8%	2.0%

Table 1.1 (Continue)

Electronics and Appliance	-1.6%	1.0%	2.5%	2.6%
Health and Beauty	6.5%	7.0%	7.5%	6.0%

Source: Thai Retailers Association (2019)

The reason why retail consumption is weakening all the time because the primary purchasing power is for consumers with middle to lower incomes that rely on revenue from agricultural products, which still less purchasing power and waiting for economic stimulation from the government through various measures, including household debt that is not likely to decrease and reflect the purchasing power of non-durable goods category such as beverages, food which has reduced significantly.

Meanwhile, middle-income consumers with regular incomes begin to show weaker purchasing power. Resulting in the growth of consumption of semi-durable goods growing at a declining rate (Semi-durable goods such as clothing, cosmetics, leather, shoes, and watches, which have had an average growth of 8-12% in the last ten years), only growing by 3.2% as shown in table 1.1.

While the durable goods sector grew slightly from the previous year, especially in the product category, electronics such as cameras and smartphones, which account for over 40% of the durable goods category has grown. As for the electrical appliance category in the house, it is just flat due to the fluctuating season. The summer is quite short, and the rainy season began earlier than usual. Meanwhile, the construction materials category has not yet recovered since the real estate and construction sectors contracted.

The segment of the supermarket category is growing, which targets the middle consumer group, which has high purchasing power and in the province that is the tourism target of foreign tourists.

Another growing segment is Health & Beauty, which has more fragmented fragments into Beauty Store, Drug Store, and Health & Personal Store. New players increase in the Beauty category. The growth is due to lifestyle changes from the raised middle-class population structure.

Department Store is still affected by the unusual shopping atmosphere and prices that are unfavorable for shopping for tourists because the import duty on luxury brands is still high compared to the countries in which they have a shopping destination policy to attract tourists.

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The Home Improvement, Home Appliance, and Electronic categories have not yet grown due to the sluggishness in the construction and real estate industry, but for Home Improvement, with the goal of homeowners still rising from the expansion of high-end luxury homes and condos.

The food Sector (Hypermart, Convenience) segment that targets middle to lower-level customers still faces growth problems as purchasing power in the middle to the bottom area is still weak. Measures to push the government spending budget through the welfare card to the poor into the grassroots, measures are useful only for a short period of time, and most of the consequence will be at the provincial retail stores which has caused the regional retail stores to grow significantly in all regions.

Projecting Thai retail for the next three years, Thai Retailers Association (2020) also anticipates the retail situation from 2021-2023 or over the next three years by looking at the big picture that occurred and will result in the following businesses.

Investments in the infrastructure of over 2.4 trillion baht expected to affect the retail industry in the second half of 2021, which the investment in infrastructure consists of the development of rail transport, road networks development such as motorway construction, port development, airport development including the driving of the Eastern Economic Corridor (EEC) and the Special Economic Development Zones (SEZ) are expected to take seriously in the first quarter of 2021 which the investment is a long-term project. The cycle from employment investment to consumption is between 8-18 months. It is expected that the retail industry is likely to be around the second half of 2021, which is a sign that the recovery of the region is clearly retailing around 2022. The structure of the retail and wholesale industry in current and future situations, be divided into three rows such as the first row is the Modern Chain Store group, which has a management center, mainly in Bangkok. It has sales of approximately 32% of the value of retail and wholesale consumption. The second row will be a retail, wholesale, provincial developing country. Most of them are retailers and wholesalers in the province themselves. It accounts for about 20% of the value of retail and wholesale consumption. The third row will be around 450,000 retail, small, medium, and small wholesale and retail, with a total proportion of 53% -55%.

Currently, the retail consumption market in Thailand is expected to be worth around 8 trillion baht in 2019. Growth from now on in the Thai retail industry will come from retail stores in the second row that will double the growth of the country's GDP and will expand beyond the area

outside the province. As for the large-scale retail chains will aim to expand to more local and foreign regions. Retail growth in the country will gradually slow and finally balance.

The new digital business model is undergoing construction in 2-3 years. The large retail sector has started to invest in Digital Technology, and to create a new business model known as e-business that is O2O or Omni Channel, which connects the offline stores with the online technology world perfectly, will begin to give concrete results, seamless offline connection online, no later than 2022.

Soon, Retail will need to use "Data & Asset" to generate revenue. But Forrester Consulting's research in Thailand said only 5% of retailers with data available while the data and asset availability in the retail world with 15% Revenue Generation. Therefore, the modern shopping revolution will make the merchant sell the traditional shop, small and medium-sized independent retailers may have an impact on the abolition of the business. At the same time will be the birth of a new generation of entrepreneurs that see threats in technology combined with behavior. It is an opportunity to create a new type of business by developing into a new competitor that does not want the storefront location, does not need to have stock, reaches customers everywhere, and is not interested in distance and business size.

Big Data, if not starting today, maybe too late, but the Thai retail industry still lacks knowledge and know-how. 91% of Thai consumer goods retailers lack the ability, technology, personnel, and processes. Needed to use customer insights and to create new revenue and a good experience for customers.

Electronic Payments will grow rapidly. Financial transactions through electronic channels will increase dramatically. In the last two years of using Prompt Pay, more than 5 million PromptPay users, which have more than 1.1 billion transactions with a total transaction value of 5.8 trillion baht.

The world of e-commerce only is trading primarily through online channels but while talking about Omni channel, it means every possible channel both brands and customers can connect, whether they are offline or online.

The observe trends in the recent past; the brands were strong in their retail stores, were ruined by changing customer behavior. Due to being unable to adapt to online commerce, many businesses are starting to trade online-only, or call e-commerce, is the brand launch, product launch vastly and easily because no matter who can have a brand and open an online store within minutes.

It makes it even easier to open an online store but also means having an enormous number of competitors.

On the other hand, Central Food Retail Co., Ltd. has to redesign the store by launching the mini supermarket "Tops Daily", Singha Complex, the first flagship store of Tops Daily, uses technology to be in line with the consumer habits that are familiar with online shopping and many consumers no longer carry cash, focus on transactions via a single smartphone with plans to apply this model to new branches that will open in the future. By launching the "Tops Box" application for customers to shop through the app in figure 1.1, with electronic shelf labels, electronic product price tags throughout the store, including scan wall, QR code scanning, be able to order products that are not placed on display. Shop design looks modern, organize a new shop zone, support office worker, focus on freshly prepared meals "Food to Go".



Figure 1.1 The Tops Box Concept

Source: Tops (2020)

This branch also has a beauty corner, using the concept of shop-in-shop by selling various brands of drugstore zones where the indispensable part is the co-working space 30 seats in figure 1.2, including free Wi-Fi, plugs, and Mobile charger. It is another strategic move that wants to change the "Tops Daily" strategy to suit urban targets, employees, students, and the public, which is transforming into shopping to a cashless society.



Figure 1.2 Co-working space

Source: Tops (2020)

Another example, Tesco Lotus launched a new service in figure 1.3, “Click & Collect” to meet the needs of customers who are worried about not receiving the products or have to be at home, waiting to receive the products. Customers can specify and choose the date and time of receiving products by themselves at the participating Tesco Lotus branches near the home. Ordering is easy and receives products only at Tesco Lotus Shop online to increase convenience, speed, and delivery.



Figure 1.3 Tesco Lotus Click and Collect

Source: Tesco Lotus (2020)

The primary purpose of using all combinations of channels is to create a good customer experience, which is very important because when the customer is impressed with the brand. They

will build brand loyalty and are persistent customers in the long term. Therefore, the things that need to study the behavior of customers that have changed are as follows.

1. Customers search for product information via smartphones and the internet but instead traveled to buy and pick up the products at the store.
2. Customers order products via e-commerce websites using a smartphone but want to deliver the goods to the home or the shop that has the nearest branch to the customer.
3. Customers choose to view products at the store but went back to order through the website.

Omni-Channel is necessary to survive with timely adjustment. Otherwise, the business has been around for a long time, may fall and die eventually. Therefore, adapting your business to an updating era is essential to create sustainability.

All the above can be seen in the interested of the OMNI business but from the study of the product group, it can be seen that there are two groups of products that are of particular interest and very different in product characteristics, as below.

1. Fast-moving consumer goods (FMCG) are consumer products used in daily life in figure 1.4. It has general characteristics, easy to sell, fast to sell, low-cost products. It is often produced in bulk to take advantage of the economies of scale. It is a product that can easily be manufactured and a lot of substitution. Products in this group such as soaps, shampoos, detergents, and beverages, etc. This group of products is relatively low-priced and almost no different. As a result, the profit per unit is relatively low. Therefore, selling to be profitable must sell large quantities and result in products in this group having fierce price competition at the same time. If looking at the retail index from table 1.1 The retail index 2019 by Thai Retailers Association, it found that this product group is the most needed product, but the growth rate is down. This study is to truly understand the behavior of this type of product.

2. Large Appliance is a convenience product group. It often has a high price and large size, which will continuously improve the quality and technology of the product. It is an innovative selling product. The product may not be replaced entirely that depends on customer satisfaction. The market competition is not high. Products in this group such as furniture, TVs, refrigerators, electronic devices, etc. If looking at the retail index from table 1.1 The retail index 2019 by Thai Retailers Association, it found that this group of products is products that may not be necessary for

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Figure 1.5 Large Appliance: Home decoration

Source: Asia Home Furniture (2020)

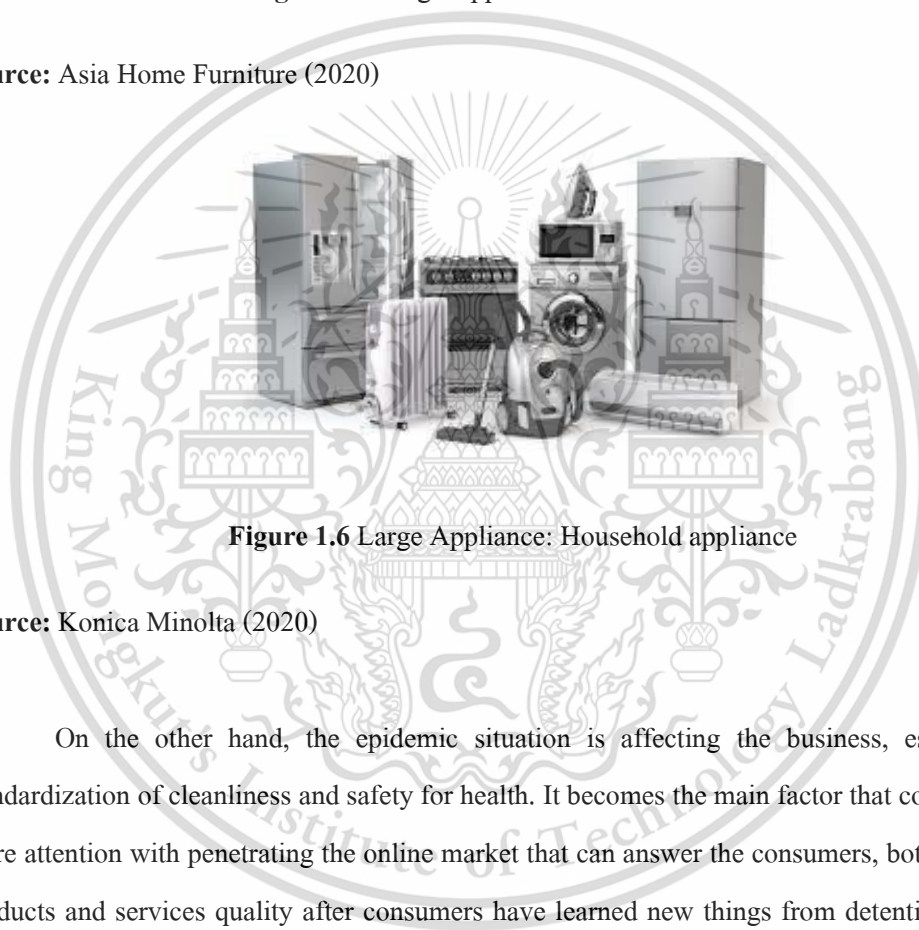


Figure 1.6 Large Appliance: Household appliance

Source: Konica Minolta (2020)

On the other hand, the epidemic situation is affecting the business, especially the standardization of cleanliness and safety for health. It becomes the main factor that consumers pay more attention with penetrating the online market that can answer the consumers, both in terms of products and services quality after consumers have learned new things from detention and work from home, and also becoming to new consumer behaviours that are used to be a new normal, which affects the overall growth of the retail business in 2020 is expected to shrink by 5-8 percent when compared to 2019 especially retail businesses where customers reduce the purchase of unnecessary and luxury goods Kasikorn Research Center (2020). Resulting in some products such as electrical appliances, construction material, furniture, and home decorations had been severely affected and resumed slower than the retailer that focused on consumer goods, including the modern trade online platform, product manufacturer, and Social Commerce.

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1.2 Research Problems

According to the introduction above, this research problems are summarized by

1. Economic: The large central retail chains are stable or reduced slightly in 2020 is to shrink by 10-12 percent when compared to 2019, especially retail businesses.
2. Customer behaviour: Behaviour and mindset of customers have changed, such as searching and ordering the product via e-commerce, buying, picking up, and deliver the products at the home or the shop that has the nearest branch. On the opposite side, viewing products at the store but order through the website.
3. Customer Lifestyle: Due to technological development, social change and epidemic situations which affect customer lifestyle as a new normal and to the business especially the standardization of cleanliness and safety for health.

1.3 Research Questions

- RQ1: What do factors impact customers' swop decisions in an OMNI business?
- RQ2: What do impact among with direct, indirect, and combined influence of variables on OMNI business sustainability.
- RQ3: How does the model of OMNI business sustainability in consumer perspective look like.

1.4 Research Objectives

1. To expand the sustainable consumption of academic practice in OMNI business.
2. To investigate the direct, indirect, and combined influence of variables on OMNI business sustainability from the perspective of consumers.
3. To develop the strategy model of OMNI business sustainability from the consumer perspective.

1.5 Research Scope

1. The strategy model of OMNI business sustainability from the consumer perspective with the majority of the research scope theories used the IS success model, Loyalty model, and Sustainable consumption.
2. The number of shoppers is the sampling population consisting of shoppers who experienced with purchasing both online and offline platforms in the category of Fast-moving consumer goods (FMCG) and large appliance, which collects data in the Year 2020.
3. The timeline of this research is during August 2019 – June 2021

1.6 Research Contributions

1. To get the consistency of the strategy model of OMNI, business sustainability from a consumer perspective is developed with empirical data.
2. To get the sustainable consumption of academic practice in OMNI business from a consumer's point of view.
3. To prove the factors that have direct influence, indirect influence, and the combined influence of variables on OMNI business sustainability from the consumer perspective.
4. To get the benefit of entrepreneurs, customers, and government in establishing the vision, mission, policy, and strategic planning for the sustainability of OMNI business in the view of consumers.
5. To improve and develop the OMNI business sustainability model from a consumer's point of view for further academic and professional development.

1.7 Definitions

This research study defined the important terminology (for this study) as follows.

1.6.1 OMNI channel

It referred to unite the online and offline channels into a single service and focus on creating good experience continuously for customers through the integration of all channels and managing as one.

1.6.2 Fast-moving consumer goods (FMCG)

It referred to the product are used very often, sometimes every day, and moves quite fast. (Consumed at least once a month) at the end of the retailer can be classified as FMCG, for example, soap, toothpaste, batteries, beverages, and cigarettes etc.

1.6.3 Large Appliance

It referred to is slow-moving consumer products (SMCG) which are related to ration and cognitive behavior, high participation, and more complex decision-making because almost products are expensive and non-daily product such as washing machines, laundry dryers, refrigerators, freezers, furniture, laptop, desktop computers, and printers etc.

1.6.4 Product

It is combined with system assurance, quality, information, referred to the effective products and quality services with the right information for building positive customer experience and for increasing trust, satisfaction, and sale opportunity.

1.6.5 System assurance

It referred to the customer confidence of system experience that combines with user-friendly quality, speed, security, and privacy to build a positive customer experience for increasing trust, satisfaction, and sale opportunity.

1.6.6 Quality

It referred to the effective products and quality services will affect customer extension and sustainable service quality.

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1.6.7 Information

It referred to comparing product information is general customer activities to gain some information before purchasing; thus, the right information is a crucial factor when customers would like to buy something.

1.6.8 Satisfaction

It is combined with brand attachment, offline image, customer experience, and brand experience referred to the customer relationship with good experience through great brand are the tendency of good words and loyalty increases, causing from customer satisfaction.

1.6.9 Brand attachment

It referred to the brand attachment as the customer-brand relationship with powerful brand experiences to engage the varieties of behaviors and synergies multichannel and single retailer.

1.6.10 Offline image

It referred to physical store image as the first touch of the customer satisfaction levels when they favor the good products that will impact sale performance.

1.6.11 Customer experience

It referred to fast, convenient, and seamless customer experience are success factors in purchasing cycle such as product search engine to last-mile delivery in any mode, lead time, return and refund as smooth.

1.6.12 Brand experience

It referred to brand experiences create emotional connections through engaging with customer perceptions about the brand image via brand composition, look and feel packaging, and environment.

1.6.13 Online Trust

It referred to the online trust that positively maintains the continuous relationship and building customer loyalty and also influences recommendation, purchase intentions, and repurchase in multichannel retailers.

1.6.14 Online Brand trust

It referred to positive brand experiences and encourages loyalty cause to the brand trust, especially in the multichannel retail environment, when customers gain satisfaction and have a good experience in multichannel retailers.

1.6.15 Offline Trust

It referred to a strong potential of offline trust was initiated from an offline shop where is a physical shop that customer can contact easily and have a potential to lead behavior of customer to the online channel because as the same retailer.

1.6.16 Offline Brand trust

It referred to great customer experience with a brand that is highly strong and feels confident in a brand activates to deliver customer promises.

1.6.17 Online loyalty

It referred to recommend to other consumers, and repurchase intention is a significant consequence of e-loyalty because of positive experience and excellent satisfaction.

1.6.18 Online Brand loyalty

It referred to Unique e-tail brand will create and develop the brand experience to customers and hard influences brand loyalty in the retail of product.

1.6.19 Offline Loyalty

It referred to a strong customer commitment as the important key to be the potential of re-purchase a product consistently even though the cost of the product will be higher price or any condition change.

1.6.20 Offline Brand loyalty

It referred to brand relationship and experience in the physical shop are the main important factor to repeat customer visits and to be brand loyalty.

1.6.21 Sustainable Consumption

It is combined with the environment, social, and economic referred to consumers value sustainability as a product attribute are often willing to pay more for it with service quality is the

capacity to provide uninterrupted services with exceptional sustainable quality over a long period of time.

1.6.22 Environment

It referred to environment sustainability focused on environmental issues by participating in recycling, reuse, repackaging with environmentally friendly activities, and push the effort with organizations and ethical responsibility in energy, water, air pollution, etc.

1.6.23 Social

It referred to positive contributions are the significant potential of business social sustainability to serve social goals without profitable and expected to exhibit ethical behavior, corporate social responsibility, and moral management.

1.6.24 Economic

It referred to economic sustainability requires executive commitment and stakeholder loyalty and the firm's reputation in getting balance financial results among environmental and social aspects.

1.6.25 Quality of life

It referred to resource management based on the happiness and the satisfaction in life which is also able to live more successfully and happily within the environment.

CHAPTER 2

LITERATURE REVIEW

The research subject is the model of OMNI business sustainability from consumer perspective, in which of research documents, is reviewed and collected the data of concepts, theories, literature, and related research and also reviewed the literature to determine and to initiate a conceptual framework of the researcher to be used as guidelines for this research as following details

- 2.1 OMNI business Overview
- 2.2 FMCG and Large Appliance
- 2.3 Theories and concepts of IS Success Model
- 2.4 Theories and concepts of Loyalty Model
- 2.5 Theories and concepts of Sustainable Consumption
- 2.6 Variables relationship analysis
- 2.7 Conceptual framework
- 2.8 Research hypothesis

2.1 OMNI business Overview

2.1.1 OMNI channel

In an age of technology has become an essential factor in everyday life. Consumers expect a real-time service through various channels, both online and offline. Therefore, Omni-channel is to unite the online and offline channels into a single service and focus on creating a good experience continuously for customers through the integration of all channels and managing as one. Allowing customers to easily switch between different channels when the developing time of information technology is more completed, makes it possible to bring information across all channels and all parties that are scattered, combined, and processed together.

The customers of OMNI channel use several existing sales channels as the same time during the purchasing process, while many customers use different sales channels in parallel (Lazaris and Vrechopoulos, 2014). Therefore, OMNI channel is the concept of complete integration

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of all channels (Rigby, 2011; Klosek, (2012); Frazer and Stiehler, 2014). Allowing us to enable each other and work together under the same set of data. Therefore, all channels can work together and able to meet the needs of customers. This is an era of combining all channels. Therefore, Omnichannel refers to the phenomenon in which customers consider all sales of retailer and marketing channels in one form and the shopping experience goes smoothly regardless of which channels the customer uses (Herhausen et al., 2015). For example, ordering a Starbucks on the mobile application while walking to the store and receiving the drink instantly upon arrival via receipt showing on the phone screen, which can be seen that customers use both online and offline channels simultaneously, but the customer doesn't feel stuck at all because all channels work together.

2.1.2 Multi-channel

Today, businesses focus on managing multiple channels in the form of Multi-channel which has a service point (Touchpoint) or a variety of ways to access and serve customers to create convenience and increase choices for customers. Each channel may have different management and create different experiences for customers.

A multi-channel sale allows consumers to choose whether to shop with the store or online, just one channel, but OMNI channel will be more advanced than that, is to create a connected experience from all channels which is the process of contacting or selling may be from one of the other channels, but customers are able to pick up the product through another channel as you wish. For example, customers can find information via telephone to compare the prices from the website but decided to buy at the store. The salesperson also has information and can know whether customers have contacted through the website before or another example is customers have the opportunity to test the product with recommendations from the salesperson and went home to search for additional reviews on the website to make an informed decision, and finally, ordering via mobile phone. The important thing is not how the sales will occur, but the use of every channel to meet the needs of customers at all times when customers continuously interact with all moments of customer the journey.

The retail business from the past until the present time has changed from In-store shops only as the internet grew and entered fully online commerce. Today, there is a mixture of both the offline and online worlds together. To gain more understanding, we must study the evolution of retail each period as follows.

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2.1.3 Single-Channel Era

The era of retailing in which of the technology has not been developed much that will be the only way to trade through the in-store shop. The customer must be the person to go to buy at the store by themselves. The reaching customers through physical distribution products and channels on business at that time (Moriarty and Moran, 1990). Multi-channel hiring for customer transactions and interactions later by Kumar and Venkatesan (2005) influences multichannel customer concepts (Neslin et al., 2006). Preliminary studies focused primarily on sales transactions and how they can contribute and optimize their finances (Kumar and Venkatesan, 2005; Venkatesan et al., 2007).

2.1.4 Multi-channel Era

As the internet becomes more active in everyday life, e-mail, websites, and social media are becoming more widespread. The store has more ways to contact customers. In addition to traditional media such as TV, radio, newspapers, and mail, there are also social networks or search for a store's website via Google search. Right now, e-commerce is occurring, but most of the information between the in-store shop and the online store is still having no connection. For example, if customers order products online via an e-commerce system but are unable to pick up products in the store etc. Zhang et al. (2010) evolved the integration and cooperation of multi-channel retail to facilitate the multi-channel research strategies and developments which identified the opportunities for managing multi-channel collaboration. These highlights are the importance of cross-channel operations such as pricing and promotion through customer communication channels. Gabisch and Gwebu (2011) proposed a channel consistency model for multiple channels and channel consistency across the channels: perception, self-image, and behavior.

2.1.5 Cross-Channel Era

The cross-Channel era was developed from the era of multi-channel where customers can buy products across channels, but the customer data between the online and offline worlds have no connection. For example, when customers find online advertisements that are 20% off products through e-commerce stores. Customers want to choose the products by themselves, but when going to a store near the home, found that is no discount promotion for the above products at the store. Causing customers to have a poor buying experience. Cao and Li (2015) revealed the impact of cross-channel sales that cross-channel integration can increase retail sales. Picot-Coupey et al.

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(2016) commented that directly switching OMNI channels is difficult for retailers because of facing challenges related to the transformation process strategy. Therefore, it is recommended that organizations should learn from trial and error in channel design.

2.1.6 Omni-Channel Era

Cross-Channel era is to lead and improve by connecting and syncing data between the online and offline worlds together. For example, if customers choose to buy products through the e-commerce system and want to pick up the products at the nearest branch. The system will have to check the inventory in the stock and deliver it to the closest office for the customer order. Including customers who have ever been interested in products online but have not yet purchased the product. When customers have an opportunity to visit the store, the system will offer the promotion or recommend products that are expected to meet customers' needs. It may be notified via mobile as soon as a customer enters the store or alert employees to present products that customers are interested.

Blom et al. (2017) explored how retailers benefit from using digital shopping data to increase purchases and improve brand image based on the product category and purchase type. Thus, Gao and Su (2018) offered OMNI channel service execution with online and offline self-ordering technology to optimize service and cost. Barwitz and Maas (2018) say that individualized omni-channel customer journeys influence customer journey patterns, one-time interaction, and sequence effects. Therefore, innovation and technology should serve customer convenience and customer satisfaction with applications and the relationship between values, consistency, misbehavior, social values, and willingness to give back to retailers (Iyer et al., 2018). That is the best fundamental motivation is customer value.

2.1.7 Principles of creating an OMNI channel experience.

Making the OMNI channel Experience to be perfect is a complicated matter. Therefore, many sections must be prepared and considered factors mainly as follows.

1. Consistency: Developing all channels to be consistent in all aspects whether the customer has access to the design or the process of use so that customers can feel the consistency of use regardless of the channel, location, or method. For example, customers who buy insurance online from a computer screen should not feel much difference from offline.

2. Seamless integration: looking at each step of every working process to find an access point that can make natural channel changes happen with uninterrupted and continuous as much as possible. Customers must not feel the difference; for example, customers order insurance on the website but have not made a payment. Customers must be able to pay immediately when switching to a mobile application without having to start the new ordering process from the beginning.

3. Channel capabilities: Understanding what each channel can do and cannot do. For development, to be suitable for use and seamlessly connected, such as the use of Line applications. Currently, it may not be suitable for using in transactions that require a lot of information or large amounts of financial transactions get involved

4. Ecosystem participation: Looking for opportunities in today's environment to collaborate with other players because they cannot do everything themselves. The specialization of each business will help each other very well, such as connecting with the bank's applications as a payment method to create convenience for customers or offering our services for other partners to use as part of the ecosystem.

5. Data integration and utilization: Collecting information from all channels, whether the data from the call center mobile applications, websites, or social media, etc. that must be linked and stored to be analyzed for further use.

6. Personalization: Collecting and analyzing a lot of data, whether personal information, questions that have been asked via call center or live chat, buying information in the past including browsing history so that customers feel that know him and create a specific experience for each customer, such as offering a special promotion to meet the needs of each particular client. Creating a list of favorites so that customers can access the most frequently used services or collecting customer contact information so that customers don't have to repeat it every time they contact.

7. IT system and integration: Looking at the restructuring of IT systems that can connect all channels and departments to support data that is collected and used in real-time, such as editing the personal information of customers who call. Report to the call center must be recorded in the CRM system that will bring this information to appear on the customer's personal information in channels such as applications, websites, Line, etc.

8. Cost, investment, and return: In addition to considering all important aspects, Investment worthiness is also an essential part because the company does not have enough resources to improve many systems at the same time. Therefore, there must be a prioritization of

things to do and control the costs of developing an OMNI channel. To create the most rewarding return, whether it is increasing sales or a continuously growing customer base in the future.

2.1.8 Business adaptation to OMNI channel

1. Combining information from each channel to create a connection and continuous by “Consumer” as the center. Focusing on consumer convenience, for example, integrating contact information from websites with call centers, social media, stores, or applications on the phone because the principal is the staff of each team that manages each channel can access the information of other channels such as the sales team, the marketing team, and the support team can access the information of other teams seamlessly allow to contact with customers can impress customers.

2. Adjusting strategies for communicating with consumers and should create continuity at every point where customers can connect with the brand (Brand Touch Point) that promotes the efficiency of all channels, such as behavior of people like using mobile phones to search for information. A Call-to-Action button is required for customers can proceed immediately, such as pressing the button and can call the store number directly. Adding Google Maps on the web to make it easier for customers to navigate to the store, or to have a button to place an order instantly on the website or mobile application when multiple channels are linked together. Various factors that affect the customer's purchase decision are easier.

3. When the online world and offline trade channels are merged. The important thing is to manage both the stock and transportation management by adjusting to various stores that can also become a storage place in addition to sending directly from the warehouse. The product delivery in the form of OMNI channel is diverse and can be combined in many channels, including

- Order online, but the products are delivered from the nearest store, a non-warehouse.
- Order products within the store or via mobile phone and can order to be delivered to the house.
- Buy online, and then the customer goes to pick up the item at the selected store.
- Buy online and pick up at the store that is convenient for shoppers.

4. Payment methods. Finally, various online payment services that are popular in e-commerce. Currently, there are many forms of payment, such as credit card payment, ATM or debit card, installments, payment at counters, destination payment, or at the store that accepts products that can be done. The latest, there are convenient and fast online payment methods. Entrepreneurs

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should manage their own systems to support most payment methods, especially online payment systems because the more convenient, the more impressed the customer is with the brand.

2.1.9 Sample of Omni-channel business development

Many retail businesses began to develop OMNI channel to enhance service and revolutionize business by blending online and offline together. One example that is often mentioned is the famous fashion business, “Pomelo” which has stepped out from just an online store to a store that provides a full OMNI channel experience with a mobile application that comes with an in-store mode that makes the experience of buying clothes on hand and in branches together seamlessly with four main features as following.

1. Pomelo picks up, which is a response to consumer behavior of trying on dresses. The customer can order the dress through the application without having to pay and come to try at the branch or pick up point and then try and buy only the set that you like which is the solution to the problem of products out of stock and unsure of the size when ordering online.
2. Fitting room booking is a reservation for a fitting room queue in the branch to not waste time waiting in which customers can browse other products while waiting for the reserved time which is a concept made to reduce the problem of customers leaving the branch because of the long queue.
3. Personal stylist, who tells the basic needs and reservations for helping mix and match products according to the style you want.
4. Digital checkout, which is a purchase through the application, customers can scan the price tag and pay instantly without having to queue up and use cash, which is to reduce the problem of queuing for a long time to pay.

In conclusion, today's behavior has changed due to technology; customers come in from many channels through multiple devices. Entrepreneurs must prepare and integrate all channels of commerce to connect to help facilitate the customers until the satisfaction that leads to brand loyalty is finally known. Let us connect each of the sales channels.

2.1.10 Omni-channel implementation

Competition is increasing every day, notice that businesses are beginning to focus on developing customer-centric solutions and providing unparalleled and unexpected experiences to create excellent experience for customers, to help facilitate customers until the satisfaction that

leads to Brand Loyalty and adding value to their products. Applying the OMNI channel experience is considered one of the essential tools that can change the pattern of trading in the future and upgrade the business to excellence.

The OMNI channel is the key essential to the development and increase the growth potential of the current retail business. It can also complete valuable experiences for customers and create sustainable trade in the future as well.

2.2 FMCG and Large appliance

2.2.1 FMCG

FMCG is a short form of fast-moving consumer goods, is also known as consumer packaging products. Any product is used very often, sometimes every day, and moves quite fast. (Consumed at least once a month) at the end of the retailer can be classified as FMCG, for example, soap, toothpaste, batteries, beverages, and cigarettes.

Therefore, consumer goods are important and low-priced items that have been repeatedly sold. FMCG products are known as non-durable goods that are tangible products and consumed quickly or become obsolete and are only consumed once. (Majumdar, 1998). Leading FMCG companies around the world, including Coca-cola, Nestlé, Unilever, Procter and Gamble, Colgate-Palmolive, Sara Lee, Heineken, etc.

The fast-moving consumer goods sector (FMCG) is the sector to touch all aspects of human life. The FMCG producers realized that there is ample opportunity to enter the rural market.

The changed of FMCG branded in rural areas because of recent social, economic, and political changes that made rural areas a more potent market compared to urban areas. Economic and political changes in society lead to changes in the way of life of rural people who support FMCG branded products.

In this context, this study is in a more specific position in the fast-moving consumer goods sector (FMCG). FMCG is considered a large part of the consumer budget in every country (Çelen et al., 2005). It is defined as inexpensive goods, frequent purchases, and fast consumption that customers use the least effort to buy (Leahy, 2011).

According to Leahy (2011), customer views and relationships do not exist in the FMCG market, and the nature of exchanges in several markets is not based on relationships. This research

was conducted to determine the influence of brand expansion on customer perceptions and to find out if that variable influenced customer perception in the FMCG sector. For more understanding of FMCG categories and products as table 2.1 below

Table 2.1 FMCG categories and products

Category	Products
Household care	Fabric wash (synthetic detergents and laundry soaps), Household cleaners (dish/utensil, cleaners, air fresheners, insecticides and mosquito repellents, furniture, and metal polish)
Food and beverages	Health beverages, soft drinks, bottled water, tea, coffee, soft drinks, staples/cereals, bakery products, snack food, chocolates, ice cream, processed fruits, vegetables, dairy products, branded rice, branded sugar, branded flour, juices etc.
Personal care	Oral care, skin care, hair care, personal wash (soaps), cosmetics and toiletries, perfumes, deodorants, feminine hygiene, paper products.

Source: Brajesh K. & Gogoi M., (2013)

2.2.2 Large appliance

Household appliances, home decoration, and office equipment are part of large appliances, are the primary users in households of industrial countries (Weiss et al., 2010). OMNI business influence today's consumer decision-making for slow-moving consumer products (SMCG), which is related to ration and cognitive behavior, high participation, and more complex decision-making (Hamiln and Wilson 2004). They believed that the decision-making process is slower and involves more steps in the case of FMCG when considering how to make decisions. Regarding the different types of products and the lack of research on SMCG, they confirmed that there is a theoretical need to explain the consumers decisions within SMCG in OMNI channel context (Ewerhard et al., 2019).

Household appliances, home decoration, and office equipment are the product categories that customers bought through OMNI channel retailing, but the decision process is different, and customer adoption of OMNI-channel retailing has been late.

The characteristics of household appliances, home decoration, and office equipment are durability, high participation, and slow-moving, decisions are less likely, as shown in table 2.1 Large appliance categories and products. Consumers use a variety of channels and accessories. Therefore, if a retailer has tailored its service, it should improve on the brand and the customer experience.

The further changes for only online decisions and ordering. This is one of the critical challenges for retailers must adapt, is retaining potential customers at each touch points.

Table 2.2 Large appliance categories and products.

Category	Products
Household appliance	Washing machines, Laundry dryers, Refrigerators, Freezers, TV
Home decoration	Furniture
Office equipment	Laptop and desktop computers, printers

Source: Weiss et al. (2008), Ewerhard et al., (2019), Selvefors et al. (2017)

FMCG and Large appliance are product groups that differ in many aspects such as physical aspects, product demand, substitutes, and customer attitude towards the product. Therefore, the use of different product groups in research is able to show completely results to the framework.

2.3 Theories and concepts of IS Success Model

The research of information systems is accepted and used as a guideline for evaluating information systems (DeLone & McLean, 1992, 2003). The model that is used in most information systems research (Rai et al., 2002; Agourram and Robson, 2006; Agourram and Ingham, 2007; Agourram, 2009)

2.3.1 Definitions

2.3.1.1 Definitions of system

Systems refer to a series or combination of sub-linked components or rely on each other by arranging them in a complex theme for achieving one objective (Koontz and Wehrich, 1978).

A system refers to groups of sub-components that are related to each other. When combined, they will fulfill their duties as a target set (FitzGerald and FitzGerald, 1987).

A system refers to a set of subassemblies that are related to each other, perform duties together and aim for the same goal (Smith, 1993).

A system refers to a group of subsystems or various components that work together to achieve the goal set. It has four main components which are input, process, output, and feedback (Stair and Reynolds, 2006).

2.3.1.2 Definitions of information system

Keeranani (1998) said that the Information System means the system which consists of various parts such as hardware, software, network system, database, system developer, user and system related to personnel and expert. All these components work together to determine, collect, store data and data processing, and then get the results or information obtained to support planning, decision making, operations management, control analysis and tracking results of the user.

The information system is the application of components that are related to the system for recording, collecting, processing, and forwarding of information for the benefit of planning, control, management, and support for executive decisions (McLeod & Schell, 2006).

2.3.1.3 Definitions of IS Success Model

DeLone & McLean (1992) said that the success of the system Information could be measured at three different levels, consisting of (1) the technical level is the measurement of the accuracy and efficiency of the system (2) the definition level is the measurement of the intention to

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convey the meaning of information and (3) the effectiveness level measure the level of impact that information can have on users.

DeLone & McLean (2002) said that the success of the information system could be measured by system usage variables. If the user's system is used, that means the system has enough value to use and is considered a success of that information system.

DeLone & McLean (2003) said that amid the growth of information systems and electronic commerce systems by voluntarily. It is more important than system use only. Therefore, voluntary use is created from the true intentions of the user that has value and is considered the best measure of the success of the information system.

DeLone & McLean (2004) said that the measure of success of electronic commerce systems must use metrics in six areas, which are (1) System Quality (2) Information Quality (3) Service Quality (4) Use (5) User Satisfaction and (6) Net Benefits.

DeLone & McLean (2016) proposed the new measurements of e-commerce identified through 6 areas and expanded the metrics, Net Benefits, to include the benefits of Individual, Group, Organizational, and Industry.

Moreover, other research which describes the meaning of the key components of the IS Success Model as shown in table 2.3 below

Table 2.3 Definitions of observe variables of products.

Constructs	Literature support	Definitions
System assurance	Rust and Kannan (2002)	The customer's perceived security and privacy are the things to be aware of when using the e-tailer's products.
	Kuan et al. (2005)	The best way to facilitate a positive customer experience is a good website quality and will increase a buying opportunity.
	Li et al. (2015)	A generate user-friendly website is a positive perception regarding the realism and tangibility of products, the product availability, and the value of promotions.

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Table 2.3 (Continue)

Constructs	Literature support	Definitions
Quality	Chen et al. (2015)	The effective products and quality services will affect customer extension and also sustainable service quality that the quality services and useful products extension of consumers perceive will be recognized by customers.
	Muhammad et al. (2016)	The customer loyalty is affected by the good service quality, both direct and indirect objects through satisfaction.
	Kaisiri et al. (2017)	The diverse approaches are to enhance service and product quality, and therefore, each strategy should be assessed the effect of various aspects and review as the basis, is the importance of sustainable service quality.
Information	Lohse et al. (2000); Rowley (2000); Ratchford et al. (2003); Kim and Park (2005).	Multiple channels were the customer way to reduce shopping costs by collecting and comparing product information and were also seek out more information from the search engine when purchasing online products.
	Kennedy and Coughlan (2006)	Information technology is the key to push the dynamics of retailing and reevaluate another channel of retailing practice, namely, e-tailing.

Therefore, this research describes the observe variables of products as:

Product is combined with system assurance, quality, information, referred to the effective products and quality services with the right information for building positive customer experience and for increasing trust, satisfaction, and sale opportunity.

System assurance referred to the customer confidence of system experience that combines with user-friendly quality, speed, security, and privacy to build a positive customer experience for increasing trust, satisfaction, and sale opportunity.

Quality referred to effective products, and quality services will affect customer extension and sustainable service quality.

Information referred to comparing product information is general customer activities to gain some information before purchasing; thus, the right information is a key factor when customers would like to buy something.

2.3.2 Theories and concepts of IS Success Model

Discussing the theory that can be used to measure technical results, measure the accuracy and efficiency of the system, and measure the impact on user data. Surely, the IS success model is applied to various system metrics including intensity variables. In addition, this theory can improve new metrics of e-commerce net benefits that includes individuals, groups, organizations and industries.

DeLone & McLean (1992) have developed a successful model of the information system consisting of six related variables which are

1. System Quality is the measurement of the performance of the information system that has the scope of the measurement, such as the convenience of access, the flexibility of the system, integration of systems, response time, realization of user expectations, and system stability, etc.
2. Information Quality is the measurement of the quality of the information received from the output from the system, which has a scope of measures such as accuracy, precision, currency, timeliness, completeness, conciseness, and relevance), etc.
3. Use is the measurement of information used from the user's information system, which has a scope of evaluation such as use or non-use, frequency of use, and motivation to use, etc.

4. User satisfaction is the measurement of the satisfaction or response of users to the results of an information system that has the scope of evaluation such as user satisfaction and enjoyment, etc.

5. Individual impact is the measurement of the impact of information on the behavior of users of the information system. The term “Impact” is the measurement of the information system that has given users a better decision-making state after receiving information, meaning that information has improved their decision-making which has the scope of evaluation such as user confidence, quality of decision analysis, efficient decisions, time taken to complete a task and change in decision behavior, etc.

6. The organizational impact is the impact of information on organization potential, which has the scope of the measurement such as profit performance, sales growth, productivity in production, etc. as shown in figure 2.1, the framework of IS Success Model

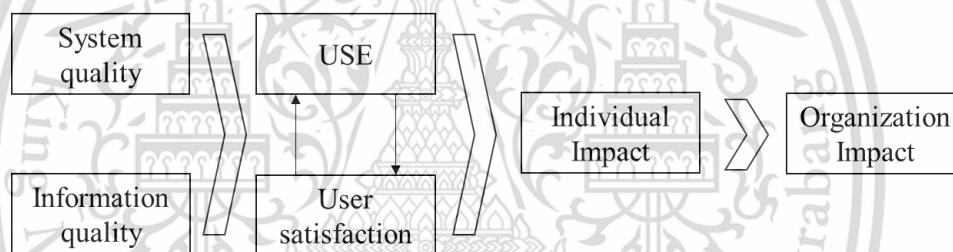


Figure 2.1 The framework of IS Success Model

Source: DeLone, W. H., & McLean, E. R. (1992)

In summary, the IS success model in figure 2.1 seeks to reflect the relevant variables. It is the natural process of the IS success model for six variables in the framework are more than six independent variables in success, but it is the six variables that are interrelated in the dimensions of the success of the technology. This model of success is critical to develop and inspect before being used as an indicator and is a tool for measuring the results of the IS success model (DeLone & McLean, 1992).

The nature of the IS success model. It is imperative to pay attention to the definition and the evaluation of each variable that affects the variable for choosing measurement and various dimensions. The IS success model should depend on the objectives and the main context of research (DeLone & McLean, 1992).

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DeLone & McLean (2002) has improved the IS success model that both published in the year 1992 by reviewing all of the success indicators for variables in the 1992 framework, a new “service quality” has been added, which measure the tangibles, reliability, responsiveness, assurance, empathy into the framework. The quality variables in the new three conceptual frameworks consist of the quality of the system, information quality and service quality. The difference in weight of all three variables depends on the level of analysis for measuring the success of the single system, the quality of the information or the quality of the system. It is one of the most critical components in quality components for measuring the overall success of the information systems department. In terms of quality, services may become an important variable for research.

Regarding the impact, the IS successful model has been updated in the year 2002 has included effects on individual users and the effect on the organization to only one variable and change its name to “net benefits” (DeLone & McLean, 2002).

Use variables are challenging to interpret. DeLone & McLean (2002) suggested that intention to use is an alternative to use for the best measuring, that is, the intention to use is the attitude, the use is the behavior, both of which promote each other by usage variables and the user satisfaction variables are closely related, affecting each other in the loop.

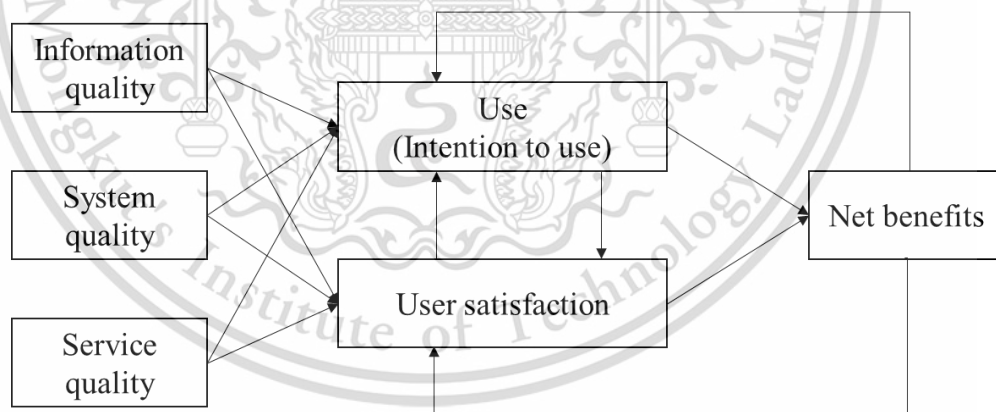


Figure 2.2 The Reformulated IS Success Model (2002)

Source: DeLone, W. H., & McLean, E. R. (2002).

DeLone & McLean (2003) improved the success model of the information system. That is called The Update DeLone & McLean IS Success Model (DeLone & McLean, 2003), which is developed from the information system success model of DeLone & McLean, 1992) and DeLone & McLean's reformulated IS success model (DeLone & McLean, 2002). The model has not yet

passed the empirical validation, but there are guidelines for continuing research for other researchers in various disciplines. Therefore, there are many researchers' efforts in studying relationships in multiple dimensions to measure results IS success model as DeLone & McLean, 1992, 2002) (Seddon and Kiew, 1996; Goodhue and Thompson, 1995; Etezadi-Amoli and Farhoom, 1996; Jurison, 1996; Saarinen, 1996; Guimaraesand & Lgbaria, 1997; Igbariaand & Tan, 1997; Teo and Wong, 1998; Rai et al., 2002 and DeLone and McLean, 2003).

The development of the DeLone and McLean model (DeLone & McLean, 2003) is based on research that is an empirical study and demonstrates the theoretical benefits which are research based on the model of DeLone & McLean (DeLone & McLean, 1992, 2002) During the year 1993 – 2002, has 285 items, with slightly different variations of interstitial variables in 2002, usage variables are measured in the dimension of their intended use. In 2003, the model that has been modified, had separated usage variables with variables that are intended to work out distinctly, which will result in the satisfaction of users until causing clear feedback and more concrete, that is to say, the use of the user. If leading to the satisfaction of the user, it will result in intention to use again and once used again will lead to satisfaction which continued around like this as shown in figure 2.3 (DeLone & McLean, 2003)

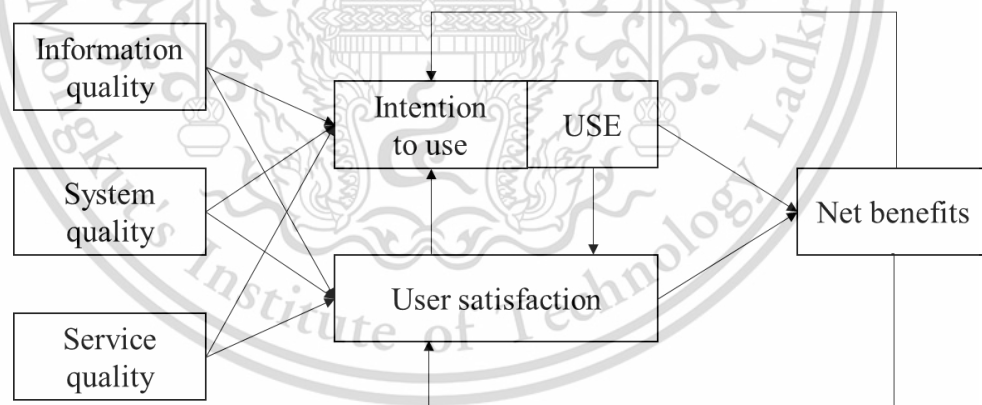


Figure 2.3 The Reformulated IS Success Model (2003)

Source: DeLone, W. H., & McLean, E. R. (2003).

As shown in figure 2.3, the IS success model, which was improved in 2003, divided the quality into three dimensions, namely information quality, system quality, and service quality. Each variable should be separated from each other because each variable will affect its use and satisfaction of users. Besides, the use and the satisfaction of the users have a very close relationship

in the process sense, usage will lead to satisfaction; as for the causal sense, a positive experience leads to increased user satisfaction. Generally, increasing the satisfaction leads to the intention to use and growing usage. However, the results from use and user satisfaction create a net benefit, which is a variable (DeLone & McLean, 2003).

DeLone & McLean (2003) suggested that Intention to use can be used as an alternative measure in some situations. As mentioned above, usage intent is an attitude, while usage is behavior. Both attitudes and behaviors are interrelated, which is difficult to measure. Therefore, many researchers choose to leave only one variable, namely use, such as DeLone & McLean (2004) that uses the IS success model to show how to measure the success of electronic commerce (e-Commerce) through two case studies, Barnes & Noble.com and ME Electronics etc. as shown in figures 2.4 and 2.5.



Figure 2.4 The conceptual of Barnes & Noble.com

Source: DeLone, W. H., & McLean, E. R. (2004)



Figure 2.5 The conceptual of ME Electronics

Source: DeLone, W. H., & McLean, E. R. (2004)

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Later, Petter, DeLone and McLean (2008) studied the measures of IS success model. The study was conducted from 90 pieces of research that used the IS success model of DeLone and McLean (2003) in their study. Petter et al. (2008) summarized the influence of the relationships of the variables in the IS success model of DeLone and McLean (2003), all 15 pairs, as in table 2.4.

Table 2.4 The influence of relationships of variables in the success model of DeLone and McLean information systems (DeLone and McLean, 2003).

Pair no.	Variable relationship
1	The relationship of system quality variables that influence system use variables.
2	The relationship of system quality variables that influence user satisfaction variables.
3	The relationship of system quality variables that influence net benefits variables.
4	The relationship of information quality variables that influence system use variables.
5	The relationship of information quality variables that influence user satisfaction variables.
6	The relationship of information quality variables that influence net benefits variables.
7	The relationship of service quality variables that influence system use variables.
8	The relationship of service quality variables that influence user satisfaction variables.
9	The relationship of service quality variables that influence net benefits variables.
10	The relationship of system use variables that influence user satisfaction variables.
11	The relationship of system use variables that influence net benefits variables.
12	The relationship of user satisfaction variables that influence system use variables.
13	The relationship of user satisfaction variables that influence net benefits variables.
14	The relationship of net benefits variables that influence system use variables.
15	The relationship of net benefits variables that influence user satisfaction variables.

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2008)

Petter et al. (2008) focusing on finding international relations for democracy and terrorism as

1. Study of public relations. In the individual model, a total of 90 research studies have found relationships as in table 2.5.

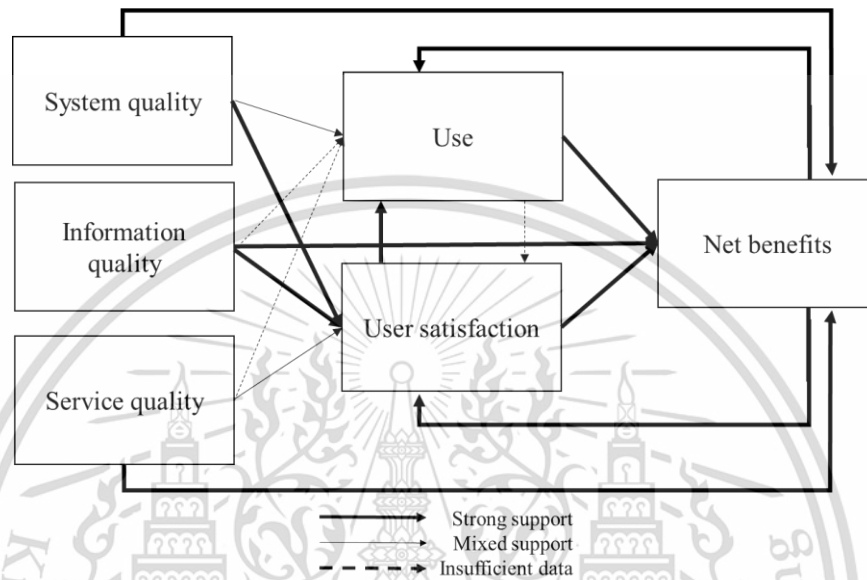


Figure 2.6 Relationships between variables in the context of the individual

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2008)

Table 2.5 Relationships of variables in the IS Success Model of DeLone & McLean (2003) in the context of the individual

Pair no.	Variable relationship	Influence
1	The relationship of system quality variables that influence system use variables.	Quite influential
2	The relationship of system quality variables that influence user satisfaction variables.	Very influential
3	The relationship of system quality variables that influence net benefits variables.	Very influential
4	The relationship of information quality variables that influence system use variables.	Not enough data

Table 2.5 (Continue)

Pair no.	Variable relationship	Influence
5	The relationship of information quality variables that influence user satisfaction variables.	Very influential
6	The relationship of information quality variables that influence net benefits variables.	Very influential
7	The relationship of service quality variables that influence system use variables.	Not enough data
8	The relationship of service quality variables that influence user satisfaction variables.	Quite influential
9	The relationship of service quality variables that influence net benefits variables.	Very influential
10	The relationship of system use variables that influence user satisfaction variables.	Not enough data
11	The relationship of system use variables that influence net benefits variables.	Very influential
12	The relationship of user satisfaction variables that influence system use variables.	Very influential
13	The relationship of user satisfaction variables that influence net benefits variables.	Very influential
14	The relationship of net benefits variables that influence system use variables.	Very influential
15	The relationship of net benefits variables that influence user satisfaction variables.	Very influential

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2008)

2. The organizational context from figure 2.7 in the study of the relationship between variables in the context of the organization from a total of 90 studies, found relationships as in table 2.6.

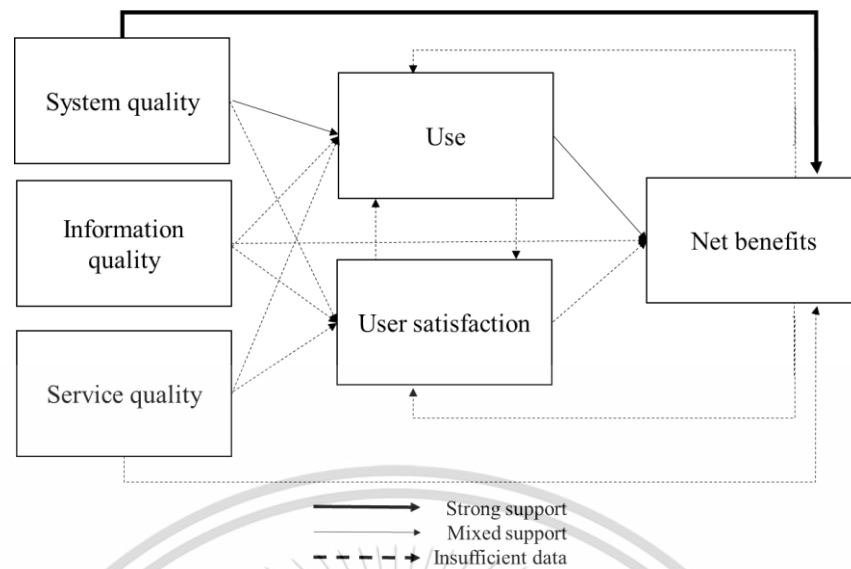


Figure 2.7 Relationship between variables in an organizational context

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2008)

Table 2.6 Relationships of variables in the IS Success Model of DeLone & McLean (2003) in the context of the organizational

Pair no.	Variable relationship	Influence
1	The relationship of system quality variables that influence system use variables.	Quite influential
2	The relationship of system quality variables that influence user satisfaction variables.	Not enough data
3	The relationship of system quality variables that influence net benefits variables.	Very influential
4	The relationship of information quality variables that influence system use variables.	Not enough data
5	The relationship of information quality variables that influence user satisfaction variables.	Not enough data
6	The relationship of information quality variables that influence net benefits variables.	Not enough data
7	The relationship of service quality variables that influence system use variables.	Not enough data

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Table 2.6 (Continue)

Pair no.	Variable relationship	Influence
8	The relationship of service quality variables that influence user satisfaction variables.	Not enough data
9	The relationship of service quality variables that influence net benefits variables.	Not enough data
10	The relationship of system use variables that influence user satisfaction variables.	Not enough data
11	The relationship of system use variables that influence net benefits variables.	Quite influential
12	The relationship of user satisfaction variables that influence system use variables.	Not enough data
13	The relationship of user satisfaction variables that influence net benefits variables.	Not enough data
14	The relationship of net benefits variables that influence system use variables.	Not enough data
15	The relationship of net benefits variables that influence user satisfaction variables.	Not enough data

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2008)

Petter et al. (2008) concluded that although the relationship of variables in the context of The organization does not have enough supporting information when evaluating the relationships of the two contexts, it was found that the relationships with the most influential variables in measuring the IS success model are relationship of system quality variable and the relationship of net benefits variable which can be interpreted as If the system has a high quality, it will lead to the most benefit and the system that give users the maximum benefit that will lead to intensive use.

Petter et al. (2008) have also presented some interesting things about independent variables in the IS success model in the year 2013; the research has been done in the form of information systems based on research in the last 15 years. It was found that are 43 styles of independent variables. Many variables have a direct impact on the success of the information system. In addition,

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this research examined the relationship and influence between each factor of success on a particular dimension of information system success. This research has opened a gap of knowledge about independent variables in the IS Success Model for the benefit of future research.

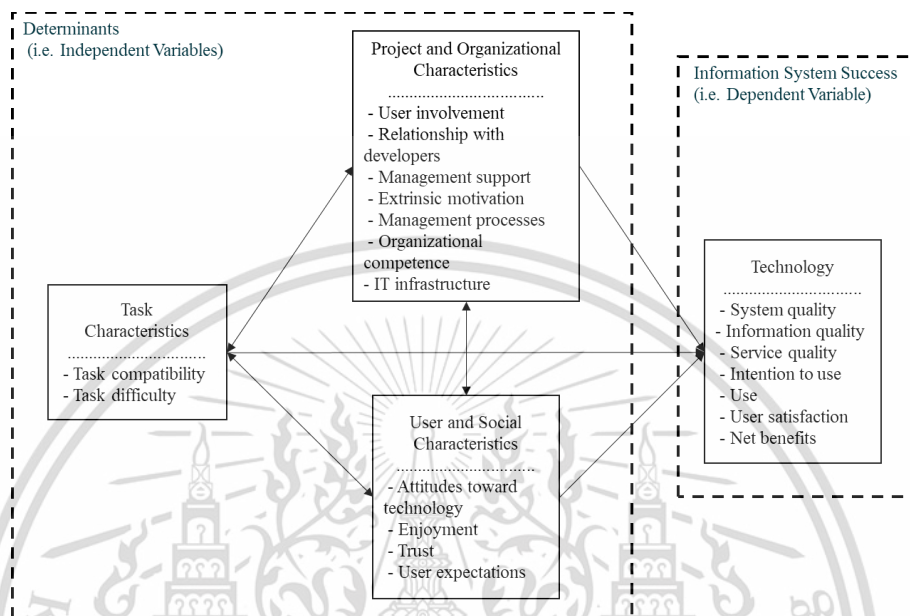


Figure 2.8 Independent variables of the IS Success Model

Source: Petter, S., DeLone, W. H., & McLean, E. R. (2013)

The evolution of these factors is continually. Product and satisfaction are the most important factors that customers tend to consider before order. Therefore, the theory of IS Success Model plays an important role in this research.

2.4 Theories and concepts of Loyalty Model

2.4.1 Definitions

A brand for the long-term success, not at the number of customers who bought, it depends on the number of regular customers who purchased that brand (Jacoby and Chestnut, 1978; Odin, Odin, and Valette-Florence, 2001). This sentence shows that we should focus on the loyalty of consumers towards the brand, which is an exciting strategy in practice, is to build a good relationship with customers or customer relationship management (CRM) because this strategy is essential to build customer loyalty (Kim, Morris, and Swait, 2008). Building good relationships with customers comes from the principle of the belief of building lasting relationships with

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customers. It is an important foundation for acquiring loyal customers and is also a group that can generate more profits for organizations than non-loyal customers (Mohammed and Rashid, 2012). In addition, it was found that strategies for building good relationships with customers affect consumer satisfaction and brand loyalty. Both lead to market performance (Sansook and Ussahawanitchakit, 2010).

Brand loyalty is expressed behavior in many forms, such as special preference more than other brands and continuous buying, etc. (Zeithaml et al., 1996; Silva and Alwi, 2006). Loyalty to the brand contributes to marketing benefits such as word-of-mouth, against competitors' marketing strategies (Dick, 1994; Chaudhuri and Holbrook, 2001). In addition, according to the concept of Aaker (1991), Chaudhuri and Holbrook, (2001) that brand loyalty leads to marketing advantages such as reducing marketing costs, increasing new customers, and using more commercial benefits.

Assessing brand loyalty that measured by repurchasing behavior. Suppose the goods that consumers want to buy are out of stock or temporarily unavailable in the warehouse. Consumers will wait to purchase that product or go to buy in other stores. Such behavior can sometimes lead to confusion as store loyalty or brand loyalty (Cunningham, 1967; Odin and Valette-Florence, 2001), both of which are different (Odin and Valette-Florence, 2001) concluded that loyalty to a store is an important thing and is the cause of brand loyalty.

Therefore, brand loyalty is very important in marketing, as many market competitors have used various strategies to present products to consumers. If a marketer can make a brand more loyal to consumers, the chance that consumers will switch to buy other brands will be less. According to the research by Chaudhuri and Holbrook (2001), studying the effect of the chain from brand trust and brand affect to brand performance. In the role of brand loyalty, it is found that marketers, who enable consumers to buy with Purchase loyalty, will be able to gain more market share. Allowing consumers to be more attentive in attitudinal loyalty can set prices more than competitors. In addition, it is based on research on brand loyalty in emerging markets in Thailand and Vietnam. It found that product quality perceptions have a positive relationship with brand loyalty (Nguyen, Barrett, and Miller, 2011) and from the research on understanding the ways of buying products that have valuable brands. It is found that quality perceptions influence trade values, which are highly correlated with the willingness to purchase again (Tsai, 2005).

Moreover, other research which describes the meaning of the key components of the Loyalty Model as shown in table 2.7 below

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Table 2.7 Definitions of observe variables of Loyalty Model

Constructs	Literature support	Definitions
Satisfaction	Omar and Sawmong (2007); Amin and Isa (2008); Jayasankaraprasad and Kumar (2012)	Many researchers have agreed that the tendency of good words and loyalty increases, causing customer satisfaction
Brand attachment	Keller (2010)	A privileged position is developed for customers to their brands that be argued between multichannel retailer and single retailer. Its synergies both channels interestingly, attachment involves and engages others who connected with the brand.
	Park et al. (2010)	The brand attachment is the willingness of customers to engage the varieties of behaviors in the relation to recommending the brand or purchasing.
	Dolbec and Chebat (2013)	A sense of friendship and community creation is from physical stores with a salesman who impacts the customer-brand relationship. Powerful brand experiences are a strong impact on brand attachment.
Offline image	Pappu and Quester (2006)	The customer satisfaction level should have a favorable and positive impact on the brand image in the mindset of the customer.
	Kwon and Lennon (2009b)	Offline customers were getting a high service quality and stronger image when compared with those who were getting a lower service quality. Almost multichannel retailers utilize the halo effect of their existing physical

Table 2.7 (Continue)

Constructs	Literature support	Definitions
		store image and get favorable evaluations of their online performance.
Offline image	Vegholm (2011)	Employees are interacting with customers; they are constantly transferring a brand image of the firm that will affect the brand image of the whole firm.
Customer experience	Mathwick et al. (2001); Shobeiri et al. (2013); Trevinal and Stenger (2014)	Online customer experience is a complex firm but subjective and holistic process that customers' interact with the web engine. Various studies have demonstrated the experiential firm of customer experience in such areas as system improvement, e-retailer preferences.
	Hübner et al. (2016); Hüseyinoglu et al. (2017); Galipoglu et al. (2018)	Customers requires fast, convenient, and seamless customer experience from the beginning product search to the last mile, which encompasses the delivery mode, time of delivery, return and refund.
	Kahn (2018)	Several providers of retailers that succeeded in retaining customers by serving the customer experience pleasurable and smooth
Brand experience	Alloza (2008)	Brand experience as the customer perceptions, at every moment of contact with the brand, whether in advertising about the brand images projected, during the first personal contact or the quality level concerning the individual treatment they receive.

Table 2.7 (Continue)

Constructs	Literature support	Definitions
Brand experience	Brakus et al. (2009)	Brand experience is defined conceptualized as feelings, cognitions, sensations, and behavioral responses evoked by being part of the brand's design and identity, communications, packaging, and environments.
	Azize et al. (2011)	Brand experiences encourage customer loyalty by creating emotional connections through a compelling, engaging, and consistent context that is the encountered environment occurs; it encompasses the relational characteristics and physical thing of the setting in which the customer consumes the service.
Online trust	Lin, H.F. (2007); Anderson and Swaminathan (2011); Choi and Jin (2015)	E-Trust is a key to maintaining continuous relationships with the consumers and building customer loyalty that is a consensus that supports the evidence of the trust impact on customer loyalty.
	Dabholkar and Sheng (2012)	In cognitive trust consumers are confident of a service provider, is reliable and competent in keeping promises, whereas in trust consumers who believe but the service providers seek to profits.
	Das (2016)	The trust in the online retailer positively influences recommendations, purchase intentions, and repurchase.

Table 2.7 (Continue)

Constructs	Literature support	Definitions
Online brand trust	Azize et al. (2011)	Brand trust combines two dimensions. Firstly, reliability, has a competence-based or nature technical, involving the willingness and ability to keep promises and satisfy consumers' needs. Secondly, it comprises the attribution of good intentions to the consumers' interests and welfare.
	Bock et al. (2012)	In the multichannel retail environment, customers are more likely to trust a brand that can experience in an offline shop. There are a handful of papers of investigation between behavioral intentions and retail brand trust for multichannel retailers.
	Khan and Rahman (2015)	The brand trust developed through positive experiences encourages loyalty towards the online retailer.
Offline trust	Kuan and Bock (2007)	Customers are likely to capitalize and to predict their offline trust and evaluate the online operation attributions. Customers' offline trust has a strong potential to influence customers' online behavior because of dealing with the same retailer.
	Sirdeshmukh et al. (2002); Guenzi et al. (2009); Sun and Lin (2010)	The role of trust is based on mitigating risks, variance, and uncertainty in a business relationship. Therefore, the link between trust in the retailer and loyalty in several settings were confirmed in the offline retail context.

Table 2.7 (Continue)

Constructs	Literature support	Definitions
Offline trust	Qing et al. (2008); Jones and Kim (2010); Piercy (2012)	An offline shop is trusted, customers will be trusted by the organization and willing to provide more valuable services through its online channel.
Offline brand trust	Keller (1987); Bart, et al. (2005)	A brand is a trust mark for all intangible trust-generating activity, and absent human touch, it can be a symbol of quality and assurance in building trust.
	Lau and Lee (1999); Chaudhuri and Holbrook (2001)	Brand trust is the relationship between the confident expectations of the consumer and the resulting responsibility of the brand or retailer.
	Delgado-Ballester and Luis Munuera-Alemán (2001)	When individuals have experiences that are highly relevant to them, they feel confident about the ability of the brand to deliver promises, which in turn develops trust in the brand.
Online loyalty	Valvi and Fragkos (2012).	E-loyalty was considered in several factors of before, during and after sales to prove the repurchase intention that is a significant consequence of e-loyalty.
	Llach et al. (2013); Gonçalves et al. (2016)	E-loyalty is conceived as a positive attitude and future disposition by recommending it to other consumers or making a new online purchase on the same website.

Table 2.7 (Continue)

Constructs	Literature support	Definitions
Online loyalty	Toufaily et al. (2013)	These are all antecedents of e-loyalty, are customer attributes of perceived value, motivation, satisfaction, trust, product (attributes of product and service quality, price sense), operating (attributes of policies, online sales strategy, competitiveness), information technology (attributes of security, download speed, system-service quality, sales effectiveness, accessibility/credibility), and environmental attributes.
Online brand loyalty	Morrison and Crane (2007); Ishida and Taylor (2012); Nysveen et al. (2013) Ramaseshan and Stein (2014)	Unique e-tail brand will create and develop brand experience to customers and hard influences brand loyalty in the retail of product and service. Brand experience influences brand loyalty in retail brands and the context of service. Brand loyalty is an important outcome of brand experiences through brand relationship and brand personality constructs
	Khan and Rahman (2016)	E-tail brands face severe competition in the constant pressure and the virtual market to differentiate themselves and build loyal customers. Unique e-tail brand experiences to customers are an effective way to develop e-brand loyalty, e-brand trust, and differentiate the e-tail brand. Certainly, in the expanding online environment, creating

Table 2.7 (Continue)

Constructs	Literature support	Definitions
		and managing a superior brand experience is one of the key challenges.
Offline loyalty	Walsh et al. (2008); Oliver (2010)	Customer loyalty as a strong customer commitment to re-purchase or re-patronize a product consistently in the future that leads to repeat as same-brand purchase.
	Homburg et al. (2011)	The market is becoming increasingly more competitive, is becoming more aware of being customer-oriented to enhance customer loyalty and survival.
	Belanche et al. (2012)	The conceptualization of offline loyalty is accepted in the behavioral and attitudinal approach.
Offline brand loyalty	Brakus et al. (2009)	When customers have unique and memorable brand experiences, they are more likely to repeat their visits and become loyal to the brand.
	Algesheimer et al. (2005)	Loyalty has been referred to in a variety of market-specific contexts. For example, service, store and vendor loyalty, contexts that reflect the unit of measurement; customer and brand loyalty.
	Fournier (1999)	The consumer-brand relationship is critical to the building of brand loyalty.

Therefore, this research gives the description of the observe variables of Loyalty Model as

Satisfaction is combined with brand attachment, offline image, customer experience, and brand experience referred to the customer relationship with good experience through great brand are the tendency of good words and loyalty increases, causing customer satisfaction.

Brand attachment referred to the brand attachment is the customer-brand relationship with powerful brand experiences to engage the varieties of behaviors and synergies multichannel and single retailer.

Offline image referred to physical store image is the first touch of the customer satisfaction levels when they favor the good products that will impact sale performance.

Customer experience referred to fast, convenient, and seamless customer experience are success factors in the purchasing cycle such as product search engine to last-mile delivery in any mode, lead time, return, and refund as smooth.

Brand experience referred to brand experiences create emotional connections through engaging with customer perceptions about brand image via brand composition, look and feel packaging, and environment.

Online Trust referred to the online trust positively maintains the continuous relationship and building customer loyalty and also influences recommendation, purchase intentions, and repurchases in multichannel retailers.

Online Brand trust referred to positive brand experiences and encourages loyalty cause by the brand trust, especially in the multichannel retail environment, when customers gain satisfaction and have a good experience in multichannel retailers.

Offline Trust referred to a strong potential of offline trust was initiated from an offline shop where is a physical shop that customer can contact easily and have a potential to lead behavior of customer to the online channel because as the same retailer.

Offline Brand trust referred to an excellent customer experience with a brand that is highly strong and feels confident on a brand activates to deliver customer promises.

Online Loyalty referred to recommend to other consumers, and repurchase intention is a significant consequence of e-loyalty because of positive experience and good satisfaction.

Online Brand loyalty referred to Unique e-tail brand will create and develop brand experience for customers and hard influences brand loyalty in retail of product.

Offline Loyalty referred to a strong customer commitment is the important key to be the potential of re-purchase a product consistently even though the cost of the product will be higher price or any condition change.

Offline Brand loyalty referred to brand relationship and experience in the physical shop are the main important factor to repeat customer visits and be brand loyalty.

2.4.2 Theories and concepts of loyalty Model

Consumers have a good attitude, toward the brand leads to buying behavior. If they satisfied with the use of a product, it leads to repeated buying behavior. When the products are used continuously by that product, able to meet the needs of customers, that is brand loyalty

Brand loyalty means consumer satisfaction with products and services, and also consumers have a deep connection with the brand and service, resulting in repeat buying behavior (Oliver, 1999). Dick and Basu, (1994), Chaudhuri, and Holbrook (2001) said brand loyalty in product is continuous buying behavior.

Therefore, from the above definition, it can be concluded that brand loyalty arises from consumer satisfaction with products and services. When consumers are satisfied, it leads to buying behavior, and once they have used the products, they feel a bond with the brand and become a repeat purchase behavior.

Brand loyalty, according to the concept of Oliver (1999) is divided into four steps as follows

1. Cognitive loyalty is the period in which consumers receive information about products or brands. Getting brand knowledge, information, and understanding is about the characteristics, or benefits of the brand.
2. Affective loyalty is the stage where consumers feel like or dislike the brand.
3. Conative loyalty is a step that shows the actions of consumers towards the brand, such as the intention to buy the product or try to buy, etc.
4. Action loyalty is the final step in which consumers display their willingness to go back and buy again or repeat purchases.

Brand loyalty (Jacoby and Kyner, 1971; Odin and Valette-Florence, 2001) is characterized by

1. Biased
2. Responsive behavior such as buying, telling, etc.
3. There is an expression of that brand all the time.
4. It is one of the deciding factors.
5. No interest in other brands
6. It is a process that involves psychosis, such as decisions, evaluations, etc.

Many researchers (Odin and Valette Florence, 2001; Gomez, Arranz and Cillan, 2006; Chaudhuri and Holbrook, 2001) have conducted studies on brand loyalty that defined two types of brand loyalty: attitudinal loyalty and behavioral loyalty which can be summarized as in figure 2.9.

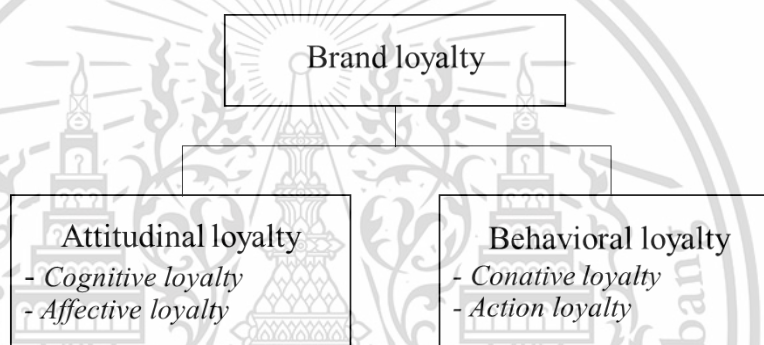


Figure 2.9 Type of brand loyalty

Source: Chaudhuri, A., Holbrook, M. B. (2001)

2.4.2.1 Attitudinal loyalty

Attitude is an important part of creating brand loyalty. If the consumer has a good attitude towards the brand, it will lead to buying behavior. Attitude is the feeling of the consumer that has a permanent relationship with the object or experience of the product. Loyalty in consumer attitudes is essential because consumers have a good attitude towards the brand, which will lead to repeated buying behavior, which is considered true brand loyalty (Oliver, 1980; Gomez, Arranz, and Cillan, 2006).

Attitudes come from three components are perception, feelings, and behavior (Breckler, 1984; Kim, Morris and Swait, 2008). Kim, Morris, and Swait (2008) stated that attitude strength comes from the perceptions and feelings which reflects in five characteristics include.

1. Extremity is an assessment of one likes or dislike of an object
2. Intensity is the individual's strong feelings towards the object

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3. Certainty is the validity of an individual attitude
4. Importance is the attitude of personal priority
5. Knowledge is information about objects that have been collected

According to a study by Johnson, Herrmann and Huber (2006) examining the evolution of loyalty intentions, it found that attitudes are divided into two types: an intermediary, which creates a relationship between value and intention: affective commitment and brand equity. Feeling is a factor that creates a relationship with consistency. For brand value, it is the factor that has been influenced by factors such as repeat buying behavior, brand satisfaction, word of mouth, and brand identity, etc.

In addition, the word is “Cognition leads to emotion” (Lazarus, 1991; Bagozzi et al., 1999; Bigne, Mattila and Andreu, 2008). The emotions are divided into two dimensions: pleasure and arousal, where joy refers to the emotional levels of the person who feels good, fun or happy. For impulses, it means motivation that leads people to become active (Mattila and Wirtz, 2000; Bigne, Mattila and Andreu, 2008) From they studied on the impact of the perceived experience on consumption and the behavior of the emotional intent. According to the study of Hedonic Services, they found the result of satisfaction, is not limited to loyalty but also results in other responsive behaviors, such as consumers willing to pay more in exchange for good service etc. Moreover, expectations before buying also effect on- the- spot behaviors, such as buying souvenirs and photography. It is also found that emotions, especially pleasure in a positive way, it will be linked with satisfaction and sent to loyalty behaviors.

A study by Kim, Morris and Swait (2008) found that brand loyalty can only be achieved when the cognitive brand conviction and the confidence in the affective brand conviction is at a high level and have only attitude strength.

Gomez, Arranz, and Cillan (2006) described the affective Dimension as the emotional attachment of a person to something. In which a loyal attitude may be considered an intermediary or marketing tool that affects emotional loyalty behavior, the main components for developing emotional loyalty are attitude, satisfaction, trust, and commitment. According to a study of the role of loyalty programs in behavior and feelings, Gomez, Arranz, and Cillan (2006) found that the relationship of emotional loyalty for those who participate in the loyalty program shows good attitude, satisfaction, credibility, and relationships have a higher level of relationship than those who do not participate in the loyalty program. Silva and Alwi (2006) conducted a study on the

perception of characteristics, feelings, and response behaviors in corporate brands, retailers found that brand attributes correlated with the brand image of the organization, which this relationship affects the response of consumers. Zajonc and Markus (1982) said that emotional factors play an important role in the development and treatment.

Therefore, it can be concluded that good attitude towards consumer brand, resulting in consumers preferring that brand and lead to buying behavior.

2.4.2.2 Behavioral loyalty

Brand loyalty behavior is a consideration of the consumer actions on the brand, such as trial purchases, repeat purchases, product acceptance, etc.

Gomez, Arranz, and Cillan (2006) said brand loyalty is the behavioral dimension to continuous buying behavior. The role of loyalty programs in behavior and loyalty of consumer feeling who participated in the loyalty program had better behavior and impact on loyalty than those who did not join. However, consumers who participated in the program did not change their buying behavior. Therefore, the strategy for retaining loyal customers is to maintain existing customers. This will reinforce the emotional relationship between customers and retailers. In addition, consumers who are already loyal to the brand will continue to have repeat buying behavior. Therefore, emotional relationships should be emphasized in order to strengthen positive relationships with customers, which is considered as one way to cause repeat buying behavior, such as when consumers are satisfied with the purchase of that product, consumers will buy the brand again and so on.

Brand loyalty can be measured directly from repeat purchase behavior which can be divided into two other areas:

1. Reflective loyalty is the result of brand commitment or a positive attitude towards the brand.
2. Inertia is the repetitive buying behavior of the original brand without the incentive to buy, such as no product to choose from or buy because the brand has a discounted price, etc. (Odin and Valette-Florence, 2001). Kim, Morris, and Swait (2008) proposed that inert buying behavior, is buying behavior because of spurious behavior. Consumers may be artificially created by buying without a brand attachment. It is a repeat purchase that is different from true brand loyalty. According to Kim, Morris and Swait (2008) research, True brand loyalty is caused by five factors: brand credibility, affective brand conviction, cognitive brand conviction, attitude strength, and

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brand commitment. Therefore, loyalty to the brand in terms of behavior can be considered from continuous buying behavior. The buying behavior is a result of consumers having a positive attitude towards the brand.

From research studies and literatures, it found that satisfaction, brand attachment, offline image, offline image, customer experience, brand experience, online trust, online brand trust, offline trust, offline brand trust, online loyalty, online brand loyalty, offline loyalty, and offline brand loyalty are all integral and rooted in the loyalty model. Applying the theory of loyalty model is considered to create a framework in this important research.

2.5 Theories and concepts of sustainable consumption

Sustainability is considered an important starting point for economic and social development today because sustainability will affect in the long run. Meanwhile, many businesses want to build awareness of sustainability by laying a valuable and meaningful foundation. Therefore, business sustainability today focuses on creating strategies and policies for sustainable business development, so that the business can grow and live with society forever and sustainably.

2.5.1 Definitions

The trend of sustainable consumption increased the demand for sustainable products (Vermeir and Verbele, 2008). Examples of sustainable products are organic products, fair trade products, animal-friendly products, environmentally friendly products, local products (Vermeir and Verbele, 2008).

From the literature review, it found many studies showing important factors that influence sustainable consumption behavior such as attitudes, values, norms, intentions, motivation and beliefs (Ajzen et al., 1991; Hines et al., 1987; Kollmuss and Agyeman, 2002; Lee, 2014).

The demographic characteristics are not very clear but only the relationships of age, gender, income, and education (Robinson and Smith, 2002) related to the purchase of organic and local products. As for the metrics used to analyze the characteristics of consumers in a sustainable manner, all 3 aspects are unclear. It is only the research of Balderjahn et al. (2013) that has developed the consciousness for sustainable consumption. In all three dimensions, holistically, for the context of sustainable consumption, it found that consumers are sufficiently interested in

consumption, promoting environmentally friendly markets and resources are recycled only. It can be seen that the three dimensions of sustainable consumption have not been emphasized, and the characteristics of consumers are sustainable. It is unclear in the characteristic of sustainable consumers (Thai Environment Institute, 2011).

Sustainable Consumption plays a role in producers and consumers, which the meaning that sustainable production and consumption means production and consumption that can continuously meet the needs of today's generation. Under the limited condition of natural resources that must be preserved and utilized for the next generation (Thailand Environment Institute, 2011). Sustainable consumption principles or more commonly are known as “Triple bottom line”, which is to focus on environmental quality, social justice, economic prosperity (Elkington, 1997; Balderjahn et al., 2013). From a production perspective, the triple bottom line is to balance with the three aspects of view, environment, society, and economy by creating business growth. Caring for the environment and support to the surrounding society and including operations with transparency and good governance, which will create a competitive advantage for the business in the future.

Moreover, other research describes the meaning of the key components of sustainable consumption as shown in table 2.8 below.

Table 2.8 Definitions of observe variables of sustainable consumption.

Constructs	Literature support	Definitions
Sustainable consumption	Cotte and Trudel (2009)	Consumers value sustainability as a product attribute are often willing to pay more for it.
	Stamenkov and Dika (2015)	Sustainable service quality is the capacity to provide uninterrupted services with exceptional sustainable quality over a long period of time.
	McDonald and Oats (2006); Hunt (2011)	The conceptual development of sustainability combined with the three pillars, the empirical work is limited to cultivating and evaluating the “green” dimension of sustainability or the “green consumer” as a market segment, often

Table 2.8 (Continue)

Constructs	Literature support	Definitions
		to the exclusion of the social and economic dimensions.
	Peregrin T. (2012); Kwak et al. (2014)	Corporate social responsibility refers to the business intention that does the right ways and contributes to society beyond the legal and economic needs. The green management is a term widely used alongside sustainability that is the effort by an organization and ethical responsibility in energy and conserving resources by using them efficiently to minimize carbon dioxide and environmental contamination.
Environment	Press and Arnould (2009); White et al. (2011); Phipps and BraceGovan (2011); Schäfer et al. (2012); Csutora (2012); White and Simpson (2013); McDonagh and Prothero (2014); Austgulen (2014); Claudy and Peterson (2014); Heiskanen et al. (2014); Gershoff and Frels (2015); DeVincenzo and Scammon (2015); Schroeder and Anantharaman (2017)	Sustainability focused on environmental issues such as participation in recycling and environmentally friendly activities, evaluations of intention to purchase products or water/energy conservation for contemporary research on marketing and environmental sustainability.

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Table 2.8 (Continue)

Constructs	Literature support	Definitions
Social	Carroll (2000); Lantos (2001); Jones et al. (2006)	Businesses have the potential to make positive contributions to social goals, in addition to remaining profitable, are expected to exhibit ethical behavior, corporate social responsibility, and moral management.
	Jones et al. (2008)	Many companies have responded to increased CSR attention by focusing on sustainability, and firms are making sustainability an integral part of the business.
	Hult (2011)	The corporate social sustainability and responsibility are often used interchangeably, which serves to highlight the potential.
Economic	Shrivastava and Hart (1995)	Sustainable business practices are an important core value within sustainability and also require a deep executive commitment to balance environmental and social needs as highly as financial results.
	Bansal (2005)	Economic prosperity maintains sustainability, should lead to economic success as an enhancement to the ability to generate stakeholder loyalty and the firm's reputation.
	Benton and Dulin (2010)	Determining the meanings that consumers on sustainability is imperative, for sustainable business, marketing, or consumption and understanding how consumers perceive in marketing materials and communication that is critical for delivering effective and ethical messages by examining whether the

Table 2.8 (Continue)

Constructs	Literature support	Definitions
		dimensions and conceptualizations of sustainability.
Quality of life	Brown and Brown (2005)	Goodness of life with living more successfully and happily within the environment.
	Gregory et al. (2009)	The standard indicators include wealth and employment rate and also the built environment for good physical and mental health, leisure time, and social ownership.
	Inoguchi and Fujii (2013)	Satisfaction, ambition, remembrance of a neutral quality of life, and having good health are part of the quality of life.

Therefore, this research gives the description of the observed variables of sustainable consumption as

Sustainable Consumption is combined with the environment, social, and economic referred to consumers value sustainability as a product attribute are often willing to pay more for it with service quality is the capacity to provide uninterrupted services with exceptional sustainable quality over a long period of time.

Environment referred to environmental sustainability-focused on environmental issues by participating in recycling, reuse, repackaging with environmentally friendly activities, and push the effort with organizations and ethical responsibility in energy, water, air pollution, etc.

Social referred to positive contributions are the major potential of business social sustainability to serve social goals without profitable and expected to exhibit ethical behavior, corporate social responsibility, and moral management.

Economic referred to economic sustainability requires executive commitment and stakeholder loyalty and the firm's reputation in getting balance financial results among environmental and social aspects.

Quality of life referred to Resource management on the basis of happiness and satisfaction in life which is also able to live more successfully and happily within the environment with ambition, remembrance of a neutral quality of life and having good health.

2.5.2 Theories and concepts of sustainable consumption

Sustainable consumption began to change the paradigm from green consumption to sustainable consumption from 1980-1990 (Thailand Environment Institute, 2011) and became clear in 1994 when there was a seminar on sustainable consumption of the Nordic countries, held in the city of Oslo, Norway gave the definition of sustainable consumption. “Using products and services which responds to basic needs and brings a better quality of life by reducing the use of natural resources and produces the least toxic waste and pollutants, throughout the life cycle of product and service. It does not affect to the advance need of the next generation”. The United Nations Environment Programme (UNEP) defined in the Advancing Sustainable Consumption in Asia: A Guidance Manual, published in 2005, and another year, The United Nations Environment Programme (2010) explained the sustainable consumption refers to “the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations”.

This is a way of consuming goods and services to meet the needs efficiently and effectively while also reducing the negative impact on the economy, society and environment with the ultimate goal of improving the quality of life now and in the future, which causes the least impact on valuables. From the definition of sustainable consumption, it can be said that reducing the impact negatively affecting the economy, society, and environment to a minimum. Elkington (1997) created a concept called the Triple Bottom Line, which has three dimensions: environmental quality, social justice and economic prosperity. As the same concept of Kanokthanaporn (2001), the meaning of the Triple Bottom Line is to focus on a balanced operation with economic, social, and environment to be a sustainable growth organization.

2.5.2.1 Thai sustainable consumption

Thailand Environment Institute (2011) studied the collection of definitions and concepts related to sustainable consumption in a global context from document reviews. Then, it compared with the concepts in Thailand, obtained from interviews with experts in education. The idea of Thai

society, regarding the community and sustainable community, 18 people, it was found that the definition of sustainable consumption in the direction of the sufficiency economy.

2.5.2.2 Sustainable consumption behavior

Factors that influence sustainable consumption behavior are psychological and social factors such as attitudes, values, norms, intentions, motivation, and belief at the individual level (Ajzen et al., 1991; Hines et al., 1987; Kollmuss and Agyeman, 2002; Lee, 2014) and another theory of sustainable consumption behavior using factors from sustainability dimension is called the Consumer-Centric Approach to Sustainable (Sheth, Sethia, and Srinivas, 2011).

It is a holistic measure based on the Mindful consumption (MC) concept. There are two main characteristics, the Mindful mindset, and the mindful behavior. There are three main characteristics regarding the care of sustainable consumption.

For behavior, it is a temperance-related feature. Demographic factors affecting sustainable consumption behavior are unclear but from a literature review, research shows that the relationship of age, gender, income, and education (Thompson and Kidwell, 1998; Ross et al., 2000; Robinson and Smith, 2002).

It found that females bought organic and local products more than men. There are some studies that argue gender factors may not affect the purchase of products. The study found that people with high education tend to buy organic products and are willing to pay more for organic products but some studies state that they do not affect buying behavior. A study of consumer groups in America found that high incomes tend to have a high purchasing behavior of organic products.

In terms of age, 61-70 year-olds tend to have more sustainable buying behaviors than those aged 18-30 (Robinson and Smith, 2002), consistent with Ross et al. (1999) concludes that consumers are older than 50 years, are likely to buy local products, some research that discusses younger consumers who tend to buy organic products. The research on sustainable behavior in the latter tends to use samples as young people or young people with education (Ross et al., 1999; Vermeir and Verbele, 2008; Lee, 2014).

Due to having a modern concept and an innovative concept, young people tend to support environmental protection and found the more youthful generation nowadays has concerns about laws/regulations in which sustainable consumption is related to justice, fairness and human rights that influence a person's purchases (Lee, 2014).

2.5.2.3 Consciousness of sustainable consumption

Balderjahn et al. (2013) developed the consciousness of sustainable consumption by using psychological factors such as belief and personal concern that led to action. In which the consciousness of sustainable consumption means the intentions of consumption related to the quality of life in the environment, society and economy as the results showed.

1. Environmental: Consumer awareness believes and focuses on recycling, packaging, use of resources/energy, local/regional production, and the impact on climate impact.
2. Social: Consumer awareness believes and gives importance to human rights, minimum social standards, child labor, and fair compensation.
3. Economic: Conscious consumers have faith and focus on voluntary simplicity, debt-free consumption, and collaborative consumption.
4. Quality of life: Conscious consumers have resource management based on happiness and satisfaction in life within the environment with ambition, remembrance of a neutral quality of life and having good health.

The main objectives of this research are sustainability studies in omni channel in the customer's point of view. Therefore, the theory of sustainable consumption is the foundation and outcome of this research. Another important variable has been added which is quality of life to complete this research through the customer's perspective.

2.6 Variables relationship analysis

From the research on the model of OMNI business sustainability: a consumer perspective. The researcher has researched, reviewed, literature and research related to the causal relationship of the Latin variables and the observed variables that influence this model from the literature review related to product, satisfaction, online trust, offline trust, online loyalty, offline loyalty, and sustainable consumption variables that influence the modeling and allow the researchers to write in the research framework of which the following formats

2.6.1 Relationship between Product and Satisfaction

The quality dimensions of services are sometimes considered to be the cause of direct loyalty (Srinivasan et al., 2002), which most studies see as the antecedents of satisfaction (Van.

Riel et al., 2004). Satisfaction is achieved as a mediator of the relationship between quality and loyalty (Caruana, 2002).

Ease of use determines service quality (Dabholkar, 1996) and is a measure of customer satisfaction as it improves service efficiency (Xue and Harker, 2002) in the context of e-tailing. Its use includes aspects such as operation, data access, ordering, and convenient navigation (Reibstein, 2002).

Guarantee the security and privacy of customers when using security services and is a concern to customers' services (Rust and Kannan, 2002). Receiving sensitive information about customers, while privacy involves concerns about the misuse of personal information. It may be caused by a marketer (Milne and Rohm, 2000).

In another model, this study is an empirical thing of the roles in service quality, satisfaction, and trust in the e-commerce context. Form the study found that e-trust has a direct impact on loyalty. The quality dimension of e-service is to trust sellers in loyalty through e-trust and e-satisfaction. Other e-quality dimensions, such as ease of use, response, and customization in e-loyalty, e-loyalty, mainly indirectly through satisfaction (Dina et al., 2004).



Figure 2.10 The Dina et al. Model

Source: Dina et al. (2004)

The product consists of a combination between consumers and the result of a shopping experience, which is the satisfaction and the loyalty (Ziaullah et al., 2014). This is the emphasis on tourism e-commerce because of instability and lack of real dealings in e-commerce and due to uncertainty with a lack of realism in the case of travel products (Winnie, 2014). As said, the product will, directly and indirectly, affect consumer confidence (Kim et al., 2008). Important for

consumers when shopping online because the transaction is anonymous and automated (Winnie, 2014).

Therefore, the website must show a concrete and realistic identity to the product, including information about the quantity, variety, and availability of the product and the purchase process such as prices, promotions, offers and payments (Gonçalves et al., 2016). For this reason, product information must make consumers aware that their expectations will come true (Kim and Benbasat, 2003).

Noor et al. (2019) studied the Sustainable of Service Quality and Customer Loyalty with the role of customer satisfaction and switching costs. The case study is the cellphone industry in Rawalpindi and Islamabad, Pakistan. The study found that Customer satisfaction had the role of strong mediator in creating direct relationships between sustainable service quality and customer loyalty, as shown in figure 2.11. This study has a research gap to work only in the telecom sector of Pakistan, which requires exploring in other countries or different cultures as well.

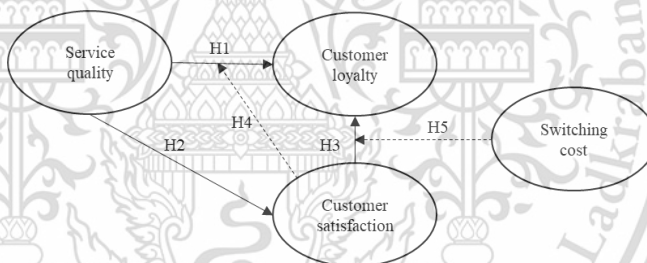


Figure 2.11 The Noor et al. Model

Source: Noor et al. (2019)

2.6.2 Relationship between Product Online Trust

The quality components of services are expected to directly affect online trust (Grönroos et al., 2000) as a trustworthy representative of the credibility of websites and systems to customers (Corritore et al., 2003) in the review of online confidence studies. Grabner-Kräuter and Kalusha (2003) also interpret quality factors as trust, such as trust, and intention to repurchase with intent.

In addition, Corritore et al. (2003) called the trusted objects and suggested that architecture, navigation, and design elements have a direct effect on trust.

Yongrok and Do (2019) worked on the research of B2C e-Commerce in Vietnam. For achieving the sustainable performance of B2C e-Commerce for making more proactive efforts to

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promote e-trust within Vietnamese shoppers enjoy value creation based on relational support by an intermediary. This research has a bottleneck in e-business because of the missing link of trust in online shopping in terms of convenience.

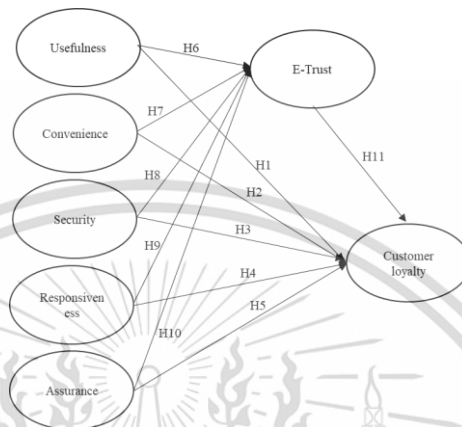


Figure 2.12 The Yongrok and Do Model

Source: Yongrok and Do. (2019)

2.6.3 Relationship between Product and Offline Trust

Trust is educated in many areas and in a business context that is considered important in building relationships. Ribbink et al. (2004) are entrusted with the willingness to rely on the partner that the person has confidence. This design is in line with the concept of trust by Lewicki et al. (1998, p.439) as “a confidence in the other’s intentions and motives”.

Trust is an important factor in building long-term relationships between organizations and customers. It is proposed to reduce the level of uncertainty, and buyers are looking for service quality signals (Coulter and Coulter, 2002; Zhou, 2011).

Sharma and Patterson (1999) indicated that trust in large development all the time by receiving both usability and technical quality. In addition, Coulter and Coulter (2002) suggested that quality should increase comfort levels, which will reduce risk, awareness and facilitate confidence.

Wong and Sohal (2006) argued that employees who interact with customers could promote a high trust level. Employees can demonstrate to the customer target through the service, discovering that they have the best interests in mind, able to understand and respond to their needs and have expertise in solving their problems.

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Wong and Sohal (2006) argued employees could build trusting relationships with their customers by demonstrating extensive knowledge of services, products, and procedures. These related factors of services-built trust relationships between firms and their customers. This relationship is stronger when customers experience continuous positive interaction and value from this interaction. In addition, because of the ongoing interaction between customers and the organization in the context of direct relationships with the organization tends to be established, which leads to offline trust.

Jengchung et al. (2015) studied the e-commerce web site loyalty with a cross-cultural comparison between Thailand and Taiwan. Understanding cultural differences between both countries that are very important for conducting e-commerce business. The results of this work that are significant different because consumers from both countries have a different view of system quality and information quality. However, the model in figure 2.13 proved that system quality, information quality, and service quality are related to trust. For e-trust, this is an opportunity for both academics and practitioners to develop the importance of various cultural elements in e-commerce websites.

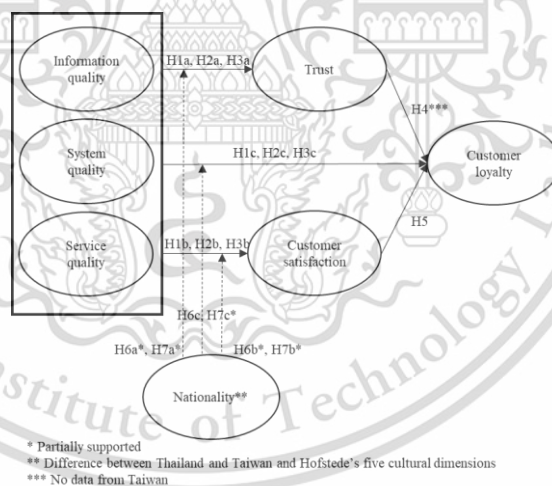


Figure 2.13 The Jengchung et al. Model

Source: Jengchung et al. (2015)

2.6.4 Relationship between Satisfaction and Online Loyalty

Customer satisfaction is much closely related to interpersonal trust (Geyskens et al., 1996) and is considered a trust (Garbarino and Johnson, 1999). The positive effects of satisfaction on trust can also be expected in the online environment, although empirical research in this domain is rare. This material is reserved for educational use only, not allowed for commercial use.

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The positive effect of customer satisfaction on service-related trust has been proven in the electronic book industry (Pavlou, 2003). In comparison to satisfactory experience of customers with electronic specifications are expected to increase their willingness to buy online, in addition to the loyalty and trust in online media (system-based trust).

When people have relevant experience with them, they feel confident about the brand's ability to deliver on a promise that will develop brand trust. (Delgado-Ballester and Luis Munuera-Alemán, 2001). According to Ha and Perks (2005), The customer experience with the brand is an important source of personal input that can develop trust. In other views, the process by which each individual develops brand confidence relies on their experience with the brand (Ramaseshan and Stein, 2014). Refer to the concept of trust is based on social psychology literature and personal relationship theory (Morgan and Hunt, 1994). In personality theory and social psychology, it is said that trust developed from previous interactions and past experiences (Rempel et al., 1985). A study of the experience of a brand in an online environment reveals that trust in a brand can be achieved by searching for information and experiences that arise during contact with customers (Lee and Jeong 2014).

The literature shows a two-way relationship between satisfaction and trust. The key reason was no consensus among scholars exists between these variables were dependent and independent variables as Lin and Wang (2005), and Chang (2006) suggested that trust leads to satisfaction. What customers believe in a service provider that may consider it as an experience. This study reasoned those customers firstly deal with business and assess business based on those experiences. When the customer experience meets their expectations, they will be satisfied and will trust later.

The study of Dabholkar and Sheng (2012) considered satisfaction as a trustworthy predictor that tested the effect of satisfaction on trust in the context of online business transactions. The implication is that due to a satisfactory experience with the business, customers have become more confident about their service providers (Dabholkar and Sheng, 2012).

The influences of customer satisfaction on customer confidence were confirmed by Ou and Sin (2003), suggested that to build customer confidence, the client's internet is stronger, online retailers must respond to firstly internet shoppers in terms of privacy and security.

This shows the effect of satisfaction on trust. Likewise, Olaru et al. (2008) insisted that the positive experiences that customers led to satisfaction and satisfying experiences result in customer confidence, confirmed by Boshoff and du Plessis (2009) that trust is important in

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relationships, meaning that customers must have a pleasant experience before they lead to satisfaction and ultimately lead to trust.

Customer loyalty is recognized as “a deeply held commitment to rebuy or repatronize a preferred product consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (Oliver, 1999, p. 34).

This general description seems to apply to online loyalty as well. Another more specific matter is procuring by Anderson and Srinivasan (2003, p. 125). Online Loyalists are “the customer’s favorable attitude toward an electronic business, resulting in repeat purchasing behavior.” Preference and favorable attitudes understood customer satisfaction, which is generally considered to be the primary driver of loyalty (Ellinger et al., 1999; Oliver, 1999) and in online settings (Gummerus et al., 2004), as it is considered different to get loyal customers on the internet or online platform (Gommans et al., 2001). Satisfaction with merchants and their services may be more important online than offline (Shankar et al., 2003; Van Riel et al., 2001).

Khan and Rahman (2016) researched in the area of the multichannel retailer to see the brand experiences from the product group of electronics, apparels, appliances, books, and others influence on e-brand trust and e-brand loyalty by moderating the role of gender. As resulting, it confirmed the relationship among brand experience, e-brand trust, and e-brand loyalty, which developed almost the same levels in e-brand trust and e-brand loyalty with both males and females. However, males have more loyal to e-tail brands than females when they got positive e-tail brand experiences, as shown in figure 2.14.

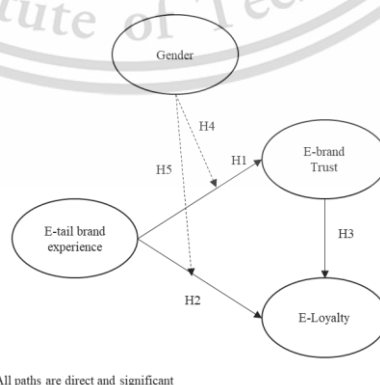


Figure 2.14 The Khan and Rahman Model

Source: Khan and Rahman (2016)

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Marco et al. (2019) interested in the multichannel retailer for the integration of online–offline purchasing with technology adoption and OMNI channel strategies in the multichannel retail environment. This research, it used a specific model for each characteristic of the sector. The relevant experiences and the benefits desired by customers; multichannel retailers pursue different goals through innovative strategies. This research proved the relationship of customer satisfaction and customer loyalty directly covers a wide range of sectors such as the food and grocery, restaurants, fashion and sportswear, which developed a richer understanding of customers’ preferences from the technology-enriched shopping experience. This research required to explore in the different retail markets characterized by a higher level of technology adoption in omnichannel integration, and to investigate the consumer viewpoint concerning about the shopping experience in the each scenarios, differentiating for better evaluation and quantify customers’ value perceptions as shown in figure 2.15 and 2.16.

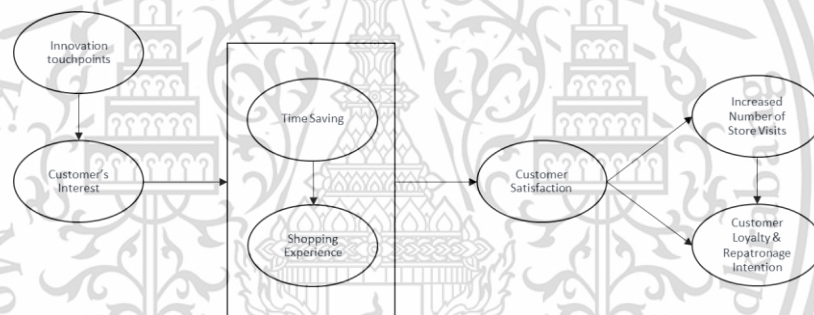


Figure 2.15 The Marco et al. Model: The food and grocery approach

Source: Marco et al. (2019)

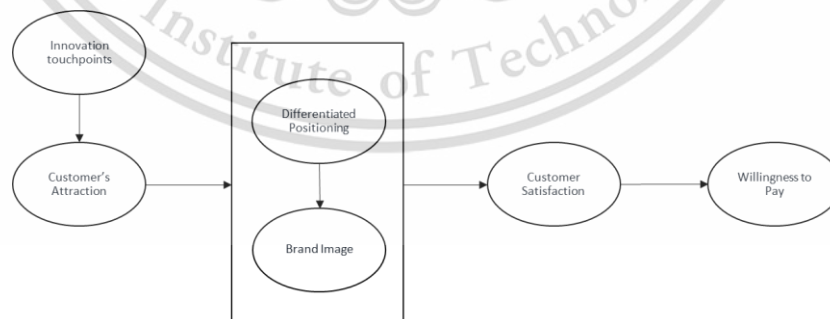


Figure 2.16 The Marco et al. Model: The fashion and sportswear approach

Source: Marco et al. (2019)

2.6.5 Relationship between Satisfaction and Offline Loyalty

Customer satisfaction is the most researched factor in the offline and online contexts because it is the variable that has the greatest influence on online loyalty (Anderson and Srinivasan, 2003; Wu and Hsu, 2015).

Customer satisfaction is more committed and willing to repeatedly buy on the same website and recommend it to others (Li et al., 2015; Chen and Wang, 2016). However, some authors claim the relationship between satisfaction and loyalty is complicated, as shown in some studies because of greater satisfaction, It does not have to come with increased loyalty due to the reduced cost of destination change (Sobihah et al., 2015).

Likewise, some authors found dissatisfied customers can maintain loyalty (Chang and Chen, 2008b). Satisfaction can be determined in two ways; firstly, the satisfaction refers to the psychological status that results from customer satisfaction after online shopping experiences, compared with shopping experiences in traditional stores (Cyr et al., 2008).

Secondly, Satisfaction refers to the perception of the previous expectations of the customers are confirmed after the online shopping experience (Anderson and Srinivasan, 2003). Other studies considered satisfaction from a cumulative and global look (Yang et al., 2009) compared with methods that considered satisfaction with customer experience at different stages of purchase (Afsar et al., 2013).

Finally, satisfaction is a multidimensional variable due to emotions (Oliver, 1993a, b), hedonic (Jones et al., 2006), and relational elements (Flavián et al., 2006).

Muhammad et al. (2016) studied the relationship of customer satisfaction in the Pakistani mobile telecommunication market. As resulting showed, the role of customer satisfaction was significant to assess the contribution of exogenous constructs. More than 80% of customer satisfaction and customer loyalty are both indirect effects. The important indicator of customer satisfaction is in the couple relationship of service quality and perceived value, which is direct to customer loyalty.

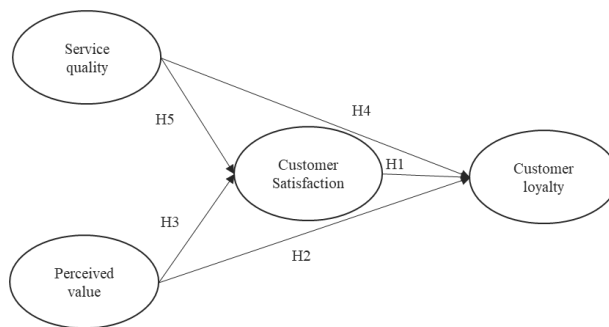


Figure 2.17 The Muhammad et al. Model

Source: Muhammad et al. (2016)

Sany and Maha (2016) explored customer loyalty in the Malaysian retailer by studying the concept of the relationship among B2B customers. The context of B2B advertisements and all marketing activities built and maintained the brand image hold less importance than the role of the salesperson to maintain the relationship.

However, this result does not deny the existence of the customer image on customer loyalty. This research recommends extending the model that might influence customer loyalty, which could be affected by factors in small retail stores, as shown in figure 2.18 below.

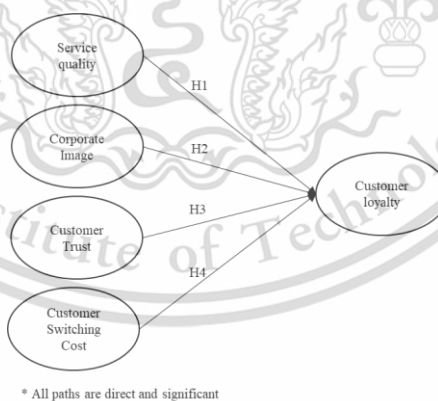


Figure 2.18 The Sany and Maha Model

Source: Sany and Maha (2016)

2.6.6 Relationship between Online Trust and Online Loyalty

Trust is proposed as another important thing in the past of loyalty (Reichheld et al., 2000). Concepts are studied in many disciplines and various ideas are presented (Lewicki et al., 1998).

Reliability is continuously associated with the Trustor vulnerability (Bigley and Pearce, 1998; Singh and Sirdeshmukh, 2000) because Trustor's vulnerability is unreliable. In business studies, it found that trust is important for building and maintaining long-term relationships (Rousseau et al., 1998; Singh and Sirdeshmukh, 2000). The most used trust is that of Moorman et al. (1992), who consider it a willingness to rely on one of their trade partners that is confident.

There is evidence to support the positive relationship between online trust and online loyalty, in terms of more increased spending (Gefen, 2000) and purchase intentions (Pavlou, 2003) or repurchases (Pan et al., 2002). Lack of trust is often cited as a reason for non-purchasing from online stores (Lee and Turban, 2001). In comparison to traditional loyalty research, positive word of mouth (Dick and Basu, 1994; Gremler and Brown, 1999) can be predicted to the result of trust. However, the lack of online confidence can only be contacted directly by online merchants who can trust their e-tailer.

Traders' trust is the most educated form of trust in online exchanges, while system-based trust is largely ignored. (Grabner-Kräuter and Kalusha, 2003). Online trust is expected to affect customers' willingness to buy online (Reichheld and Schefer, 2000) but there is no empirical evidence. Studied by Kim and Prabhakar (2000) found that online trust has a significant impact on the use of internet banking while confidence in the bank does not affect.

Honglei et al. (2015) developed the model of the interplay through the eTailQ scale and value perception is effective in developing customer loyalty, e-satisfaction and e-trust have been essential roles in shaping the development process in the UK e-commerce. It can prove the relationship between satisfaction, online trust, and online loyalty as shown in figure 2.19.

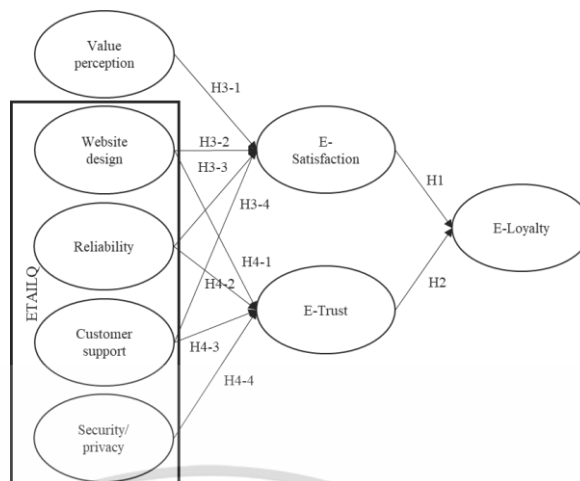


Figure 2.19 The Honglei et al. Model

Source: Honglei et al. (2015)

When customers trust service providers, they are more likely to be loyal to their service providers (Deng et al. 2010). Refer to Hong and Cho (2011); business reliability plays an important role in establishing and maintaining customer loyalty. Bansal et al. (2004) defined customer relationships that there is a significant positive path between customer trust and loyalty. Most results are compatible with other studies (Lin and Wang, 2005).

Avramakis (2011) showed in the Swiss financial system and reported about customer relationships that customers trust positively, predict customer loyalty. The positive relationship has been confirmed, which developed a framework for understanding customer trust and customer loyalty relationships in the airline and retailer industry.

The results showed that the credible behavior of consumers has a direct influence on trust. The authors argued that when service providers manage to build customer confidence, they will be less aware of the risks and will be more confident in the reliability and integrity of the service provider and resulting in loyalty. Deng et al. (2010) stated that gaining the trust of customers is a key factor for customer loyalty.

Marta et al. (2017) proved that online loyalty is strongly driven by offline loyalty, which is positively affected by brand trust and attachment, which both are part of online trust. These relationships hold across two different cultures in multichannel apparel shoppers in the UK and Spain.

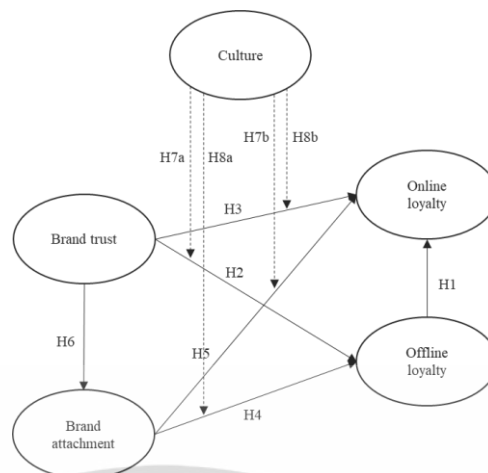


Figure 2.20 The Marta et al. Model

Source: Marta et al. (2017)

2.6.7 Relationship between Offline Trust and Offline Loyalty

Many researchers claimed that understanding trust is essential for the study of interpersonal behavior related to economic exchanges (Ba and Pavlou, 2002). Refer to Hahn and Kim (2009), trust is one of the prerequisites that allow customers to use multi-channel options. Doney and Cannon (1997) found in different processes that can develop trust in business relationships: calculation processes, prediction processes, competency processes, intention processes, and transfer processes. The transfer process shows that trust is transferred from one trust object to another that the truster has little or no experience (Qing et al., 2008).

Hahn and Kim (2009) argued that customers with a high trust level in traditional brick-and-mortar retailers would have a high trust level in shopping online as the same traditional store.

Shopping online tends to be highly risky, including financial risks, product risks and privacy and security concerns (Winch and Joyce, 2006), even for customer experience (Li and Zhang, 2002). Since customers do not have guaranteed information about the risk of online purchasing products with retailers, trust in the organization may be a risk factor for online purchasing products (Lee et al., 2007, 2011).

Trusted stores in customer mind, the organization has to willing and able to provide more valuable online services through the channel (Piercy, 2012; Qing et al., 2008), then customers are more likely to take advantage, based on their trust in predicting and evaluating the features of online

operations (Kuan and Bock, 2007), the customer's offline trust has the potential to show the customer's online behavior because they are dealing as same day retailers.

A high level of customer satisfaction will lead to trust and loyalty, and ultimately could attract more customers to repeat purchases (Kang et al., 2004). Deng et al. (2010) stated that customer loyalty was a crucial factor in predicting intention to re-purchase again.

The negative relationship between ongoing commitment and willingness to change in a study. Bansal et al. (2004) stated that customer commitment results in a willingness to purchase from a provider.

Meng et al. (2011) studied the post-behavioral of Taiwanese tourists found that is positive relationships between an image of a service provider and intention to purchase back. The key reason that customers are loyal to the service provider and show the loyalty leads to repurchase intentions.

2.6.8 Relationship between Offline Loyalty and Online Loyalty

Loyalty is a significant relationship in business and consumer relationships. The definition of Dick and Basu (1994) is “the strength of the relationship between an individual’s relative attitude and repeat patronage” (p. 99), which comprehends the attitudinal and behavioral components of loyalty.

Creating loyalty to tailors is an important prevention strategy with the advent of online retailing (Das, 2014b), researchers have created the differences between online and offline loyalty (Danaher et al., 2003) and then the seminal studies of Srinivasan et al (2002), many researchers have examined online loyalty factors such as Shankar et al., 2003, Kwon and Lennon, 2009b, Khan and Rahman, 2016.

Toufaily et al. (2013) is a meta-analysis and categorize the five determining factors of online loyalty, and our studies focus on the characteristics and types of customer perceptions. Instead of looking specifically at online loyalty, they follow knowledge-based incompatibility theories that support the research lines that focus on the effects of online and offline interaction (Badrinarayanan et al., 2012; Kwon and Lennon, 2009a,b; Jones and Kim, 2010; Fernández-Sabiote and Román, 2012).

Many shoppers are migrating online to the in-store shop. It seems there is reason to expect that the offline behavior patterns will be transferred to online channels. There is evidence to suggest the link between offline loyalty and online loyalty.

Balabanis and Reynolds (2001) found that the attitude towards retailer's brand had a positive effect on retailers' online attitudes. Kim and Park (2005) talked about expanding consumer channels to see how consumers' attitude towards offline retailers pass on online retailers' attitudes.

Rafiq and Fulford (2005) defined in the context of grocery retailing, have found support for the predictions of a dangerous model in which market leaders receive disproportionate benefits from transferring loyalty from the offline to the online.

Van Birgelen et al. (2006) revealed the impact of satisfaction between offline and online channels. As the same sector, Fernández-Sabiote and Román (2012) expanded their findings to show that assessing offline services affects online assessments and they interacted to create loyalty with the multichannel bank.

A study by Farag et al. (2007) confirms the collaboration between channels, as it is found that the frequency of in-store purchasing related to the frequency of online purchasing because of the frequency of online searches related to the frequency of in-store purchasing. Another, Jones and Kim (2010) supported the cognitive dissonance theory, confirming a strong relationship between offline patronage and online shopping intentions.

Therefore, there are convincing arguments that when a customer creates loyalty to offline channel of the retailer. It is likely to transfer their positive attitude and behavior to the retailer's online channel.

2.6.9 Relationship between Online Loyalty and Sustainable Consumption

Consumers are getting more information and have the tools to evaluate the procurement of products. Therefore, the decision whether to continue to purchase the same products depends on the company's perceptions. The study was conducted by Chen (2015); Mendleson and Polonsky (1995) showed that consumers agree with companies that comply with sustainability.

In addition, customers satisfied with the main activities developed by the company are happy to continue buying from the company (Chen and Lin, 2015; Shao et al., 2019). The study was tested that user of the company's social network with the intention to continue to buy the company's products in sustainability.

Reema (2019) explored an analysis of consumers' responses to the UK online grocery shopping experience. In this study, the researcher claimed that the relationship of customer ROI through frictionless customer experience to make sure that customers feel satisfied and worth the investment, as shown in figure 2.21. To compete in the UK online grocery market, retailers must

constantly listen to customers and respond to changing expectations, which have four characteristics and 13 consistent factors that capture the needs of consumers to stay with today's retailers.

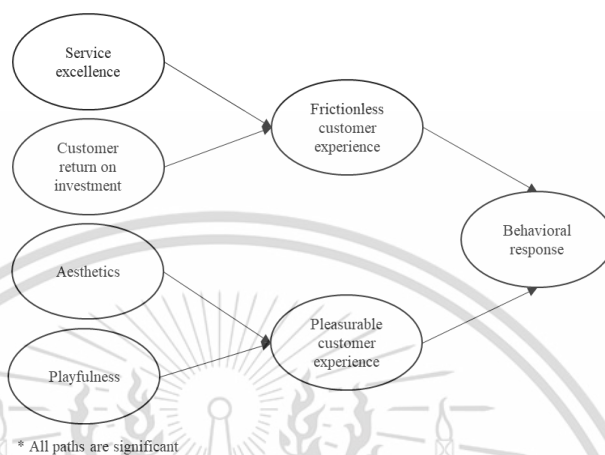


Figure 2.21 The Reema Model

Source: Reema (2019)

The perceived quality of online retailers relates to customer perception and consists of consumer reactions to information such as entertainment, usability, transaction capabilities enjoyment, and design aesthetics (Kim and Stoel, 2004a; Kim and Lee 2006).

Providing good quality service and product information on a website is a different job, especially apparel that is generally classified as high-touch products (Levin et al., 2003), causing customers to touch the product before purchasing. Apparel retailers have found innovative ways to replace the sensory experience in consumer stores when buying clothing.

One of these substitutions involves product information (Park and Stoel, 2005) that describes fabrics, sizes, and other details. Another method, Kim et al. (2007) used by retailers of online apparel is image-interactivity technology (IIT), which is different program features that are becoming more advanced.

A two-dimensional view of images in the older versions that can be changed color or perspective, while newer IIT programs can provide a model of three-dimensional virtual to display apparel (Kim et al., 2007). Consumers can evaluate firm, coordinate separates, look at clothes from various angles and zoom in for more clear details.

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IIT is used by websites that simulating the product experience that shoppers will generally get in general stores (Kim et al., 2007), indicate that consumers demonstrate in the higher levels of shopping and enjoyment and have a more positive perception about the online store environment when they received the high level of communication.

Finding pleasure in visiting a website is directly related to the viscosity of a website. Stickiness means anything about a website that encourages visitors to stay longer (Lin, 2007). A website not only invites visitors to stay longer but also encouraging them to return to the website often by making online stores more entertaining and fun, retailers are encouraging customers to stay longer and return more often.

This promotes repeat buying behavior and, ultimately, brand loyalty (Soltani and Gharbi, 2008). A side from offering interactive and entertaining websites, it needs to be a working place for retailers and consumers to do a business transaction. The site must be fast, easy to use and easy to find relevant information, secure for financial and information exchange, and offer high-level customer service.

The available selection of goods, along with the information provided about those goods, should be useful to the shopper (Loiacono, 2000; Kim and Stoel, 2004a; Kim and Lee, 2006). Design aesthetics is another important factor in website perception. Wang et al. (2010) found that the aesthetic appeal of its website (the degree to which the website is perceived to be fascinating and creative) determines a consumer's satisfaction during an encounter with a retailer.

Choosing an existing product along with the information provided about those products should be useful to shoppers (Kim and Stoel, 2004a; Kim and Lee, 2006). The design aesthetics were another important factor in recognition. Wang et al. (2010) found that attracting the beauty of the website (The perceived level of the website is attractive and creative) determines the satisfaction of consumers when meeting with retailers.

The perceptions of consumers were about the aesthetics of online stores create emotions that affect the attitude of consumers towards their stores and purchasing decisions (Tractinsky and Lowengart, 2007). The online platform required the attractive, creative, and aesthetically pleasing, and present the brand image with aesthetic design to present the brand and product in a manner consistent with other retailers' channels.

This can be done through the establishment, and use of a consistent brand identity using the brand's logo and color in the text, menu, and page background (Rowley, 2009) due to customers

cannot immerse themselves in that environment. Thus, the aesthetic design was responsible for transmitting the image through a computer screen.

Research has shown a good awareness from a customer on the online platform is more likely to make more purchasing in the in-store shop (Loiacono, 2000; Kim and Lee, 2006).

The impact of offline patronage on online shopping intention and fostering. There is reason to expect that online fostering may be important in building an online consumer base. The study of Kim and Park (2005) proposed a model for expanding consumer shopping channels and using the students affected by the original attitude of consumers towards offline retailers, the online channel of those retailers. Consumers' attitudes towards offline retail purchases in the study were measured in terms of consumer sentiment (agree-disagree, pleasant-unpleasant, and positive-negative) rather than in terms of online foster behavior. The study of Kim and Park changed the consistent attitude from offline to online stores. Farag et al. (2007) found that frequent in the store was frequent online shoppers and in-store shop and online shopping complement each other.

Many consumers used multiple channels and switch between channels frequently (Van Dijk et al., 2005), consumer sponsorship levels were traditional retailers, which can be an indicator of shopping opportunities, shopping for individuals at online retailers. As stated by the concept of cross-channel collaboration between two different channels, when well-coordinated may enhance the overall consumer shopping experience (Verhoef et al., 2006).

For example, consumers may try to purchase products at in-store shop but decided later to order online at a more convenient time. It has also been argued that cross-channel collaboration serves to increase customer loyalty to retailers (Wallace et al., 2004).

Therefore, customers who support a traditional retail store may be more willing than other stores to try out the retailer's online store to enhance their in-store shopping experience or because they expect the shopping experience in the platform of online store will be as satisfactory as offline shop.

2.7 Conceptual framework

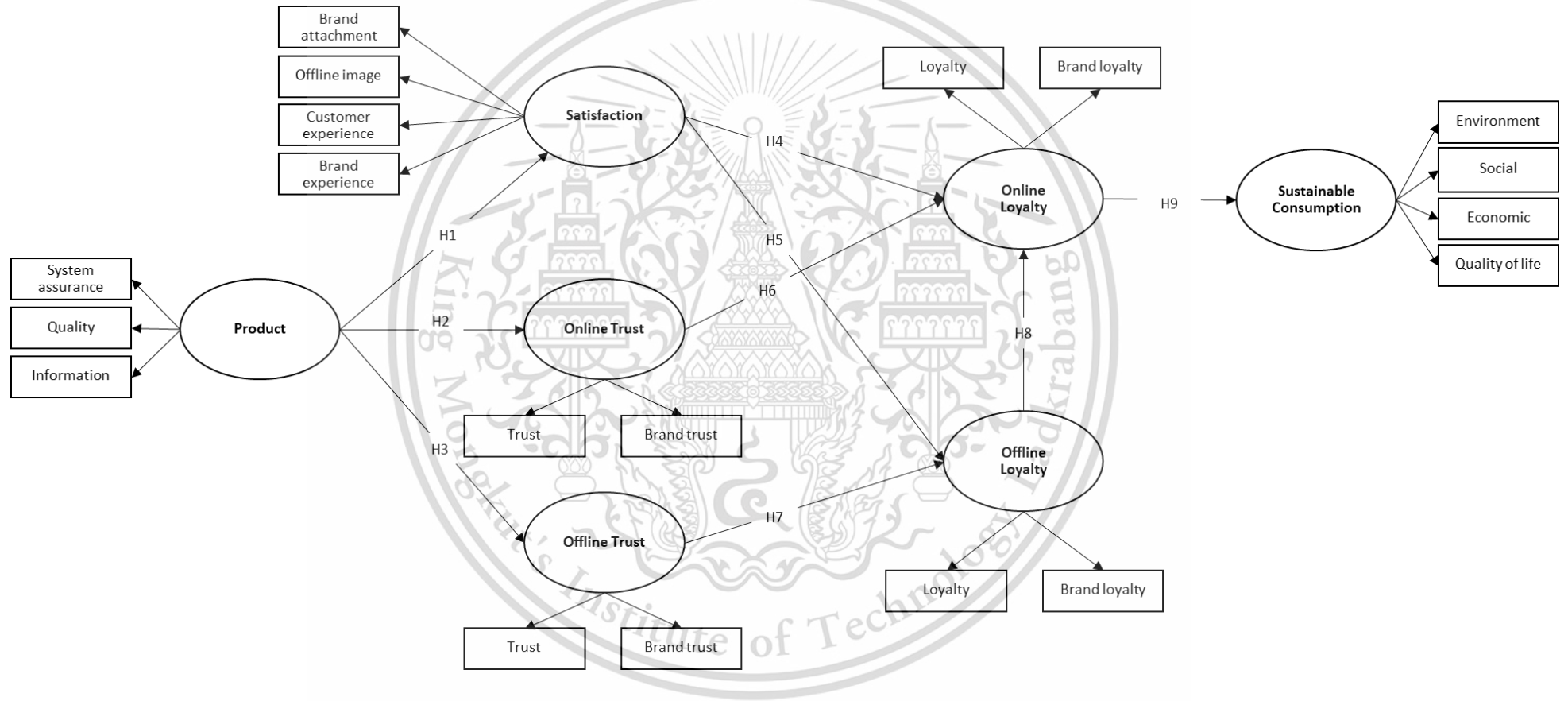


Figure 2.22 The conceptual framework

2.8 Research hypothesis

- 2.7.1 Hypothesis1 (H1): Product has a positive influence on Satisfaction
- 2.7.2 Hypothesis2 (H2): Product has a positive influence on Online Trust
- 2.7.3 Hypothesis3 (H3): Product has a positive influence on Offline Trust
- 2.7.4 Hypothesis4 (H4): Satisfaction has a positive influence on Online Loyalty
- 2.7.5 Hypothesis5 (H5): Satisfaction has a positive influence on Offline Loyalty
- 2.7.6 Hypothesis6 (H6): Online Trust has a positive influence on Online Loyalty
- 2.7.7 Hypothesis7 (H7): Offline Trust has a positive influence on Offline Loyalty
- 2.7.8 Hypothesis8 (H8): Offline Loyalty has a positive influence on Online Loyalty
- 2.7.9 Hypothesis9 (H9): Online Loyalty has a positive influence on Sustainable Consumption

CHAPTER 3

RESEARCH METHODOLOGY

The objective of this research is to understand the customer factors to change their mind in an OMNI business and also, the impact of OMNI business when factors change of which the sustaining an OMNI business in a competitive market. The quantitative method is applied for this research methodology by using the AMOS as statistical software.

The number of Thailand consumer goods purchased on e-commerce platform in the year 2019 at 37.5 million users from Thailand population from 69.24 million with total annual sales revenue 3.757 billion us dollar (Statista digital market outlook for e-commerce industry, 2019). Analysis of Moment Structure (AMOS) is used for analyzing covariance. In this paper, the main research methodology is quantitative research, to relies on secondary data in textbooks, journals, publishers, relevant research papers, and research questionnaire, which is related to the OMNI business both offline and online platform in the view of consumer perspective to find out and understand in the relationship of product, satisfaction, trust, loyalty and sustainable consumption of which the following quantitative research guideline below:

- 3.1 Quantitative research
 - 3.1.1 Population and samples
 - 3.1.2 Sampling size
 - 3.1.3 Sampling Method
 - 3.1.4 Variables
 - 3.1.5 Research instruments and scales
 - 3.1.6 Quality of the instruments
 - 3.1.7 Data collection
 - 3.1.8 Data analysis
 - 3.1.9 Statistics for analysis
 - 3.1.10 Ethical Consideration

The conceptual framework in this research is reviewed by textbooks, journals, publishers, relevant research papers about seven latent variables and 19 observed variables. From various literature reviews, to obtain the conceptual framework of the research that is presented in Chapter

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2. Therefore, to answer the research objectives for emphasizing the acquisition of analysis results and quantitative research for this research that has guidelines in the 2-step research procedure as shown in figure 3.1.

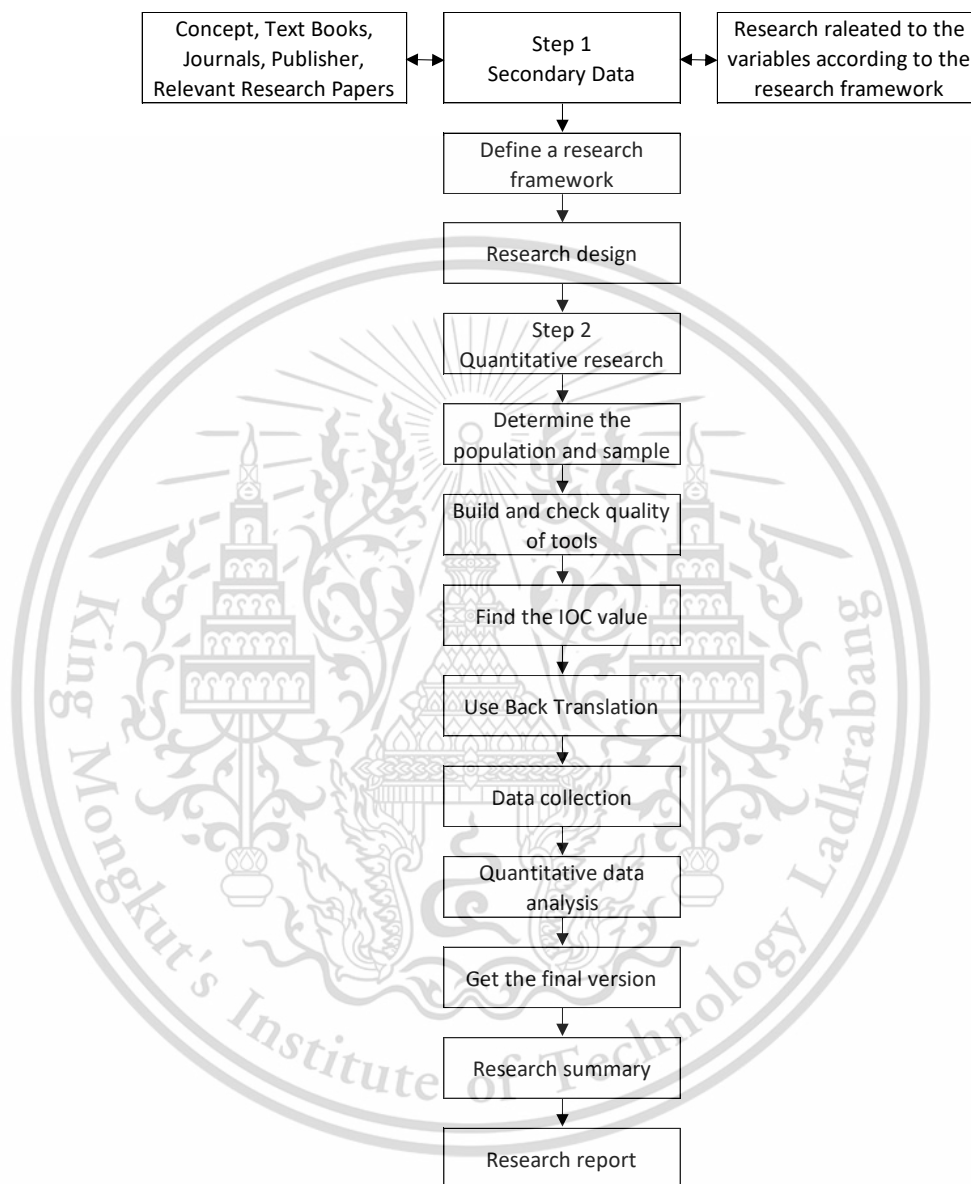


Figure 3.1 Research procedure

3.1 Quantitative research

3.1.1 Population and samples

The population of Thailand in 2019 was 69.24 million, with the target population aged between 18-70 years being 45 million (Statista digital market outlook for e-commerce industry, 2019). Therefore, the population in this research is the shoppers who experienced purchasing both online and offline platforms in the category of Fast-moving consumer goods (FMCG) and large appliance product groups in Thailand.

3.1.2 Sampling size

Probability sampling which collected data from OMNI Business users by using stratified random sampling with the size of the sample and used the Structural Equation Model (SEM) analysis or the analysis of the causal relationship between variables because the unknown of the population size of this research.

Correlation research was analyzed with advanced statistics, and a relationship model between variables for considering the sample size or the unknown population used in this study together with the number of independent variables involved. The estimation of the sample size is defined by using a ratio to the number of variables.

Stevens J. (1996) said considering the size of the sample or the population and the number of independent parameters needed, the estimated variables in the study should be 20 samples per 1 variable. Schumacker and Lomax (2010) said the analysis of the Structural Equation Model: SEM requires a larger sample size than the other methods. To give an accurate estimation and be able to represent the population well by using the ratio of 20 times per the number of variables.

Hair (2006) said finding a sample size that is large enough to be used for data analysis by applying structural equation models with data distribution is a normal curve and multicollinearity. According to this study, the researcher studied the observed variable in a total of 19 variables. Therefore, the total number of samples required by the specification is 380 participants ($20 \times 19 = 380$) (Schumacker and Lomax, 2010) from the number of sample sizes that are considered, are in an appropriate amount to use the AMOS program to help analyze the relationship of variables

This research needs to compare the models between different types of categories. Therefore, each category must have a sampling size that follows the rules of Hair (2006) for making the study model of each category is reliable enough. Therefore, the sampling size of this research

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is used totally of 760 participants by separating data collection into two product groups, Firstly, Target on fast-moving consumer goods (FMCG) 380 participants and large appliance 380 participants which collect data in Year 2020.

3.1.3 Sampling method

Thailand is a well-developed e-commerce market that has the second -largest economy in Southeast Asia, which is based on the online population. Pure e-commerce players and brick and mortar brands are competing for the market share for digital consumers with regional and national players fighting. Almost 70 million, Thailand's population is for a large majority online in the use of digital technologies, e-commerce, and mobile. The large player dominates still a lot of chance for growth as users become accustomed to e-commerce, as the Thai online market is entering a phase of maturity. The popular purchasing channels are in 2019 (ETDA, 2020) as shown in table 3.1.

Table 3.1 The popular purchasing channels were in 2019.

Rank	Platform	Ratio	Website
1	Shopee	75.60%	shopee.co.th
2	Lazada	65.50%	lazada.co.th
3	Facebook	47.50%	facebook.com
4	Line	38.90%	line.me
5	Instragram	21.80%	instragram.com
6	Twitter	5.70%	twitter.com

Source: ETDA (2019)

In this study, the researcher must use the online purchasing channels above and finding out the participants with those platforms because of

1. The selected online platforms are not OMNI channels but are the most active retailer, and almost of them used for purchasing such as Unilever, P&G, Johnson&Johnson, Tesco Lotus, Big C, etc.
2. The selected online platforms are a simpler way to find out the real OMNI users.
3. The selected online platforms have a chance to get the exact result from the participants.

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Therefore, to study the sustainability of the OMNI business from the consumer perspective is from table 3.1. from the have summarized the steps as follows:

1. Stratified random sampling using OMNI business into three groups:
 - Shopee
 - Lazada
 - Facebook

The main reason for choosing those three platforms because there are top three of the online platform year 2019.

2. Collecting information about people who used to buy products through online, offline, multi-channel with the person who cooperated. After that, the researcher divided the sample size by using the proportion comparison method until the 772 samples are shown in table 3.2 to provide accurate and complete information.

Table 3.2 Population and sample

Group no.	Platform	Product Category	Theoretical sampling
1	Shopee	FMCG	130
		Large Appliance	128
2	Lazada	FMCG	130
		Large Appliance	128
3	Facebook	FMCG	129
		Large Appliance	127
		Total	772

Due to the need for completeness in collecting research samples. This is the main reason for collecting this questionnaire was more than the theory stated. From table 3.2, the sampling size of this research was used 772 participants by separating data collection into two product groups. Firstly, Target on fast-moving consumer goods (FMCG) 389 participants and large appliance 383 participants. This research is to develop the strategy model of OMNI business sustainability from the consumer perspective.

3.1.4 Variables

This research variables are studied, collected, and reviewed the relevant theories, literatures, concepts, and research, and then come up with the relationship of the framework of which the following latent variables below:

1. Product is combined from the three observed variables as
 - System assurance
 - Quality
 - Information
2. Satisfaction is combined from the four observed variables as
 - Brand attachment
 - Offline image
 - Customer experience
 - Brand experience
3. Online Trust is combined from the two observed variables as
 - Trust
 - Brand trust
4. Offline Trust is combined from the two observed variables as
 - Trust
 - Brand trust
5. Online Loyalty is combined from the two observed variables as
 - Loyalty
 - Brand Loyalty
6. Offline Loyalty is combined from the two observed variables as
 - Loyalty
 - Brand Loyalty
7. Sustainable Consumption is combined from the three observed variables as
 - Environment
 - Social
 - Economic
 - Quality of life

3.1.5 Research instruments and scales

As the research instrument, the questionnaires are created for proving and finding the variables relevant to the model of OMNI business sustainability with the research instrument as the following procedure details.

1. Collect data from the relevant theories, literature, concepts, and research in order to create and prepare the structure of research questionnaires.
2. Study the relevant theories, literature, concepts, and research to acknowledge the relationships among internal latent, external latent, and observed variables for developing the structure of questionnaires.
3. Prepare and developed compliance questionnaires according to the structure studied by the three experts and specialists in offline and online business users. To check the IOC confidence and the consistency between the research questions and specified objectives by the researcher and consistent with the problems of research between 0.5-1. If the value is less than 0.5, the questions should be revised to be by the objectives to be measured.
4. Carry out an update to the query according to the instructions.
5. Take the updated questionnaire with recommendations from experts and specialists. Trial with 30 samples before launching the final questionnaires. To check each question as clear and as the same content between subject and question.
6. Measure the consistency and reliability of the 30 questionnaire results from the test with Cronbach's alpha is greater than 0.7.
7. Improve the questionnaires in case of a leak, revised the final one to use in the research.

The structure of the questionnaires

As the research structure, the questionnaires are developed based on the basis of the relevant theories, literatures, concepts and research in order to the variable set for product, satisfaction, online trust, offline trust, online loyalty, offline loyalty, and sustainable consumption influencing the model of OMNI business sustainability. The screened respondents will be given the completed version of the questionnaires which are divided into four parts as the following:

Part 1: Personal data of the respondents such as name, gender, age, status, shopping time, shopping channel, and purchasing product type. Nominal and ratio scale are applied.

Part 2: Questions about the basic knowledge of OMNI business

Part 3: Questions about the latent research variables

1. Question about “Product” is developed from the studies of System assurance, Quality, and Information.

The example of the questionnaires about “Product”

Instruction: Please choose the most match in your opinion by filling ✓ into five level of the scale.

16	Overall, you can easily buy products or services. โดยรวมท่านซื้อสินค้าหรือบริการได้ง่าย	Strongly disagree	1	2	3	4	5	Strongly agree
17	Overall, you can promptly buy products or services. โดยรวมท่านซื้อสินค้าหรือบริการได้อย่างรวดเร็ว	Strongly disagree	1	2	3	4	5	Strongly agree
18	Overall, you can confidently buy products or services. โดยรวมท่านรู้สึกมั่นใจในการซื้อสินค้าหรือใช้บริการ	Strongly disagree	1	2	3	4	5	Strongly agree

Ratio and Interval scale are applied.

Figure 3.2 Question about “Product”

2. Question about “Satisfaction” is developed from the studies of Brand attachment, Offline image, Customer experience, and Brand experience.

The example of the questionnaires about “Satisfaction”

Instruction: Please choose the most match in your opinion by filling ✓ into five level of the scale.

25	Product brand is a part of my life. แบรนด์สินค้าเป็นส่วนหนึ่งของชีวิตฉัน	Strongly disagree	1	2	3	4	5	Strongly agree
26	My personality is connected to product brand. บุคลิกของฉันเชื่อมโยงกับแบรนด์สินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
27	My perception and feeling to product brands always automatically related. ความคิดและความรู้สึกของฉันที่เกี่ยวกับแบรนด์สินค้ามักเป็นไปโดยอัตโนมัติ	Strongly disagree	1	2	3	4	5	Strongly agree

Ratio and Interval scale are applied.

Figure 3.3 Question about “Satisfaction”

3. Question about “Online and Offline Trust” is developed from the studies of Trust and Brand trust.

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The example of the questionnaires about “Online and Offline Trust”

Instruction: Please choose the most match in your opinion by filling ✓ into five level of the scale.

37	I am pleased with telling my information to the store for buying product. ฉันยินดีที่จะให้ข้อมูลส่วนบุคคลกับร้านค้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
38	I am pleased with settled payment in advance for shopping. ฉันยินดีชำระเงินล่วงหน้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
39	I am pleased to buy product from a well-known shop. ฉันยินดีซื้อสินค้ากับร้านค้าที่มีชื่อเสียง	Strongly disagree	1	2	3	4	5	Strongly agree

Ratio and Interval scale are applied.

Figure 3.4 Question about “Online and Offline Trust”

4. Question about “Online and Offline Loyalty” is developed from the studies of Loyalty and Brand loyalty.

The example of the questionnaires about “Online and Offline Loyalty”

Instruction: Please choose the most match in your opinion by filling ✓ into five level of the scale.

51	I will recommend the shop to others. ฉันจะแนะนำร้านนี้ให้กับบุคคลอื่น	Strongly disagree	1	2	3	4	5	Strongly agree
52	I will re-purchase products from the shop. ฉันจะซื้อสินค้าซ้ำจากร้านนี้	Strongly disagree	1	2	3	4	5	Strongly agree
53	I will consider the shop as the 1st choice if I want to buy again. ฉันจะพิจารณาร้านนี้ให้เป็นตัวเลือกแรกในการซื้อสินค้าครั้งต่อไป	Strongly disagree	1	2	3	4	5	Strongly agree

Ratio and Interval scale are applied.

Figure 3.5 Question about “Online and Offline Loyalty”

5. Question about “Sustainable Consumption” is developed from the studies of Environment, Social, and Economic.

The example of the questionnaires about “Sustainable Consumption”

Instruction: Please choose the most match in your opinion by filling ✓ into five level of the scale.

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65	The product that I buy must be eco-friendly product. สินค้าที่ฉันซื้อต้องเป็นมิตรกับสิ่งแวดล้อม	Strongly disagree	1	2	3	4	5	Strongly agree
66	The product that I buy must be made from natural material. สินค้าที่ฉันซื้อต้องทำมาจากวัสดุธรรมชาติ	Strongly disagree	1	2	3	4	5	Strongly agree
67	The packaging of the product that I buy must be made from natural material. สินค้าที่ฉันซื้อต้องใช้บรรจุภัณฑ์จากธรรมชาติ	Strongly disagree	1	2	3	4	5	Strongly agree

Ratio and Interval scale are applied.

Figure 3.6 Question about “Sustainable Consumption”

Part 4: Suggestions of respondents

The structure of questionnaires will be summarized in the following table.

Table 3.3 Questionnaire structure

Variable	Total question	Question no.	Form/ Scale
Part 1: Personal data of the respondents	8	1-8	Nominal
Part 2: Basic information about purchasing behavior	7	9-15	Nominal
Part 3: Questions about the latent research variables	60	16-75	Interval scale
2.1 Product	9	16-24	
2.1.1 System assurance	3	16-18	
2.1.2 Quality	3	19-21	
2.1.3 Information	3	22-24	
2.2 Satisfaction	12	25-36	
2.2.1 Brand attachment	3	25-27	
2.2.2 Offline image	3	28-30	
2.2.3 Customer experience	3	31-33	
2.2.4 Brand experience	3	34-36	
2.3 Online Trust	7	37-43	
2.3.1 Trust	4	37-40	

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Table 3.3 (Continue)

Variable	Total question	Question no.	Form/ Scale
2.3.2 Brand trust	3	41-43	
2.4 Offline Trust	7	44-50	
2.4.1 Trust	4	44-47	
2.4.2 Brand trust	3	48-50	
2.5 Online Loyalty	7	51-57	
2.5.1 Loyalty	4	51-54	
2.5.2 Brand loyalty	3	55-57	
2.6 Offline Loyalty	7	58-64	
2.6.1 Loyalty	4	58-61	
2.6.2 Brand loyalty	3	62-64	
2.7 Sustainable Consumption	11	65-75	
2.7.1 Environment	3	65-67	
2.7.2 Social	3	68-70	
2.7.3 Economic	3	71-73	
2.7.4 Quality of life	2	74-75	
Part 4: Suggestions of respondents	-	-	-

As of questionnaire set is instructed for quantitative research that based on the different sources and is developed with the conceptual framework and literature review is accepted and validated studying as shown in table 3.4.

Table 3.4 Development of scale and research questions

Latent variable	Observed variable	Prototype of research questions	Number of questions
Product	1) System assurance 2) Quality 3) Information	Rust and Kannan (2002), Kuan et al. (2005), Kennedy and Coughlan	9

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Table 3.4 (Continue)

Latent variable	Observed variable	Prototype of research questions	Number of questions
		(2006), Li et al. (2015), Chen et al. (2015), Muhammad et al. (2016), Kaisiri et al. (2017)	
Satisfaction	1) Brand attachment 2) Offline image 3) Customer experience 4) Brand experience	Pappu and Quester (2006), Alloza (2008), Brakus et al. (2009), Kwon and Lennon (2009b), Keller (2010), Parketal (2010), Azize et al. (2011), Vegholm (2011), Dolbec and Chebat (2013)	12
Online and Offline Trust	1) Trust 2) Brand trust	Keller (1987), Delgado- Ballester and Luis Munuera-Alemán (2001), Bart et al., (2005), Kuan and Bock (2007), Qing et al. (2008), Jones and Kim (2010), Azize et al. (2011), Bock et al. (2012), Dabholkar and Sheng (2012), Piercy (2012), Khan and Rahman (2015), Das (2016)	7
Online and Offline Loyalty	1) Loyalty 2) Brand loyalty	Fournier (1999), Algesheimer et at. (2005), Morrison and Crane (2007),	7

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Table 3.4 (Continue)

Latent variable	Observed variable	Prototype of research questions	Number of questions
		Brakus et al. (2009), Ishida and Taylor (2012), Valvi and Fragkos (2012), Nysveen et al. (2013), Toufaily et al. (2013), Ramaseshan and Stein (2014), Khan and Rahman (2016)	
Sustainable Consumption	1) Environment 2) Social 3) Economic 4) Quality of life	Shrivastava and Hart (1995), Carroll (2000), Lantos (2001), Bansal (2005), Jones et al. (2006), McDonald and Oats (2006), Jones et al. (2008), Benton and Dulin (2010), Hunt (2011), Peregrin (2012), Kwak et al. (2014), Brown and Brown (2005), Gregory et al. (2009), Inoguchi and Fujii (2013)	11

The data analysis is based on a 5-point rating scale (5-point Likert type scale), and then the questions are developed from other researchers by closing the gap of studied issues and improving new ones with relevant literature. In this research, the researcher used the 5-point rating scale of which the following scoring criteria in table 3.5.

Table 3.5 5-point scoring criteria

Point	Evaluation Criteria			
	Agreement	Frequency	Importance	Quality
5	Strongly Agree	Always	Very Important	Excellent
4	Agree	Often	Important	Good
3	Undecided	Sometimes	Moderately Important	Fair
2	Disagree	Rarely	Slightly Important	Poor
1	Strongly Disagree	Never	Unimportant	Very Poor

The interpretation of the variables from the 5-point rating scale, is based on the class interval calculation in compliance and the principle of classification. Therefore, the distance of each interval will be used in the evaluation criteria of the variables as shown in table 3.6.

Table 3.6 Evaluation criteria for Likert scale questions

Score Interval (Mean)	Evaluation Criteria			
	Agreement	Frequency	Importance	Quality
4.20-5.00	Strongly Agree	Always	Very Important	Excellent
3.40-4.19	Agree	Often	Important	Good
2.60-3.39	Undecided	Sometimes	Moderately Important	Fair
1.80-2.59	Disagree	Rarely	Slightly Important	Poor
1.00-1.79	Strongly Disagree	Never	Unimportant	Very Poor

Source: Gözde and Emel (2016)

3.1.6 Quality of the instruments

In this research, the researcher checked the quality of the questionnaires by three experts and specialists in OMNI business. The questionnaire used as a tool in this research and examined the quality of the equipment as below.

1. Validity checking, the researcher brought the questionnaire, is created and proved by all three experts and specialists. To check the completed question in the subject matter measured, or the content is comprehensive enough and in the use of language that allows respondents to read easily and direct to the point. And then, test for content validity by finding the consistency of the Index of Item Objective Congruence (IOC) between the questions of each variable used in the measurement (Rovinelli & Hambleton, 1977), then select proposal with an $IOC > 0.5$, use the formula to calculate the value.

$$IOC = \frac{\sum r}{N}$$

Where

IOC : The summary of all the points from experts and specialists.

N : Number of experts and specialists

1: The aforementioned questions were measured for objectives.

0: Not confident that the aforementioned questions were measured for objectives.

-1: The aforementioned questions were not measured for objectives.

The IOC has a value between -1 and +1. Therefore, a good question should be closed to 1. Any question that has an IOC less than 0.50, should be revised or eliminated.

1: Experts' opinions agree that the questions correspond to the content

0: Experts' opinions are not confident that the questions correspond to the content

-1: Experts' opinions agree that the questions do not correspond to the content

The consistency and validity of the instrument were verified the questionnaires by two experts and one professor who has knowledge and experience in online and offline business to review, consider and advise the details of questionnaire as simple for comprehending and achieving with the point of research view. Firstly, Monchai Intarapornudom, Managing Director of Ek-Chai

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Distribution System Co., Ltd. (Tesco Lotus), is expert and skillful in the online and the offline platforms. Secondly, Chakkit Chatupanyachotikul, E-commerce Director of Siam Makro PCL. who has expert and whole skill in the online and offline channels. Lastly, Assoc. Prof. Dr. Chalita Srinuan, Professor of King Mongkut's Institute of Technology Ladkrabang Business School who specializes in the online and offline markets. The criteria for considering IOC values as follows

- Questions with an IOC values between 0.5 - 1.00 have a validity value.
- Questions with an IOC value less than 0.5 must be updated and cannot be used.

2. Reliability checking by using the developed questionnaire to collect data with OMNI business users for testing (Pre-Test) amount of 30 questionnaire results to check the power of classification of each item and total by considering the correlation coefficient or corrected item total correlation (CITC) by providing questions with classification power more than 0.50, is considered to be sufficient quality and taken to find the whole confidence value (Reliability) by the Cronbach Alpha and by using the empirical variable questionnaire with confidence values greater than 0.70 and above is considered high confidence. This research uses a measure of internal consistency by using the method of determining the coefficient of reliability or internal consistency called "Cronbach's Alpha" which is the method that has been developed from the formula (Hair, 2006) into an alpha coefficient. It can be used with a non-systemic score of 0-1, such as the rating scale, etc. The formula is as follows

$$\alpha = \frac{K}{K-1} \left[1 - \frac{\sum i^2}{t^2} \right]$$

Where

α : Reliability coefficient

K: Number of questions

i^2 : Variance of scores for each question

t^2 : The aforementioned

When calculating Cronbach's alpha coefficient from the 30 questionnaires that were used in the experiment, it was then used to collect the actual data.

3.1.6.1 Back-Translation

Due to this research was issued the questionnaire in Thailand. Therefore, there must be methods and tools to help the translation of the questionnaire to ensure validity and reliability. Translation of research tools from English into Thai is not a verbatim translation. This may not be meaningful and lacking quality enough to lead to acceptance of linguistic and cultural differences (Hilton and Skrutkowski, 2002).

The goal of the cross-cultural research is to get translated research tools that are synonymous or cultural equivalence with the original set of research tools because the translated research toolkit is not created directly from concepts or theories but according to the original research tool that has passed validation. Therefore, the translation of research tools is one step that researchers need to pay attention to, and the translated research tools should go through reliable translation procedures or techniques. From the literature review report on how to translate the research tools of Maneesri wongkul and Dixon's research (2004) found many ways as follows:

1. Forward-only translation
2. Forward only translation with testing
3. Back-translation
4. Back-translation with monolingual test
5. Back-translation with bilingual test
6. Back-translation with both monolingual and bilingual test

3.1.6.2 Quality inspection of research instruments

Before the researchers used translated research tools to gather data. The equipment must be checked for quality as the same or equivalent to the original equipment. There are several methods for checking the quality of translated research tools (Hilton and Skrutkowski, 2002) as follows:

1. Examination by experts for consideration, comparing the original set of tools and translated tools, most of them are considered the same or equivalent in terms of content and meaning. To make suggestions regarding language clarity and cultural appropriateness.
2. Comparison of the answers of the samples between two sets of tools with bilinguals and / or monolingual by taking the two sets of scores that are statistically analyzed, which may be used by item analysis or Kappa statistics for assessing the consistency of item-to-item agreement.

3. Checking the accuracy and validity of the translated tool set, compared to the original tool set. If the translated set of tools has the same accuracy and precision as the original set of tools, it is an indication that the tools are the same or equivalent as well. The translated toolkit may be classified as a newly created tool, requiring an acceptable alpha coefficient of 0.7 or higher (Nunnally, 1978). In addition, if the original toolkit has a factor analysis to assess construct validity, researchers will need to check the validity of the translated toolkit using the factor analysis method as well.

Therefore, the research questionnaire has translated with the research tools from English into Thai to be used with this research in the context of Thai society with the following methods

1. Considering a quality tool. It is a tool that comes from a good development process with concepts and theory, which is the framework of development. There is evidence showing the quality of tools, both accuracy and reliability. Using data collection methods should not be complicated, have clear interpretation criteria for ensuring that the translated tools are identical or equivalent to the original instruments in terms of technical concept and criteria.

2. Choosing the translator of the original set of tools and the reverse translator who has the knowledge and skills in translating the tools according to the concepts of Maxwell (1996) regarding the qualifications of suitable translators are

- Good knowledge of English.
- Excellent knowledge in the target language that needs to be translated.
- Experience in both the language and culture of both countries.
- Experience with the target population who wants to study.
- Skills in tool development.

Therefore, the number of translators for this research will divide translators into at least two groups in order to compare the translation results and find a conclusion.

3. Translation of original research tools is from English into Thai. Translators have to use short sentences with only one verb, use active voice sentences instead of passive voices, and use nouns for pronouns. Avoiding adverbs, prepositions or ambiguous explanations and avoid the use of academic or formal languages that are unfamiliar to the public. Also, considering a back-translation. Therefore, the tool translator of the English version is into the Thai version in the first step, will choose words that have the most direct meaning to the original language. Although the words chosen in the beginning, may not use a good word or difficult to understand, but should

maintain the grammatical form that questions use (Brislin, 1970) and then adjust some content to Thai cultural adaptation before the tool is put into practice.

4. Trial with samples. The researcher will bring translated tools to experiment with a sample group that represents the target population to test the understanding of the answers to the questions of the respondents. If the respondent does not understand the issue, the tool or question in question may need to be modified again.

5. Preparation of the final research tool after translation. The researchers will create the final tools and documentation systematically and ready for using such as a summary of the opinions of experts in the reversal tool kit, summary of the problems encountered in translation, including explanations of the use of the tools, the characteristics of the sample that tried the tool.

Therefore, the translation of research tools is for cross-cultural research. This research focuses on translation techniques by choosing the reverse translation technique and choosing a translator who is proficient in both languages and familiar with both cultures. Including translators have more experience in translating research tools, and when the translation is finished, each step of the translation quality will be checked by comparing the equivalence of the translated toolkit and the original toolkit. In addition, before using the translated tool, the researchers will check the quality, both the accuracy and reliability of the translated set of tools as well. To provide sufficient quality research tools and measure the things that need to be studied, making the research results reliable and able to refer to the target population.

The accuracy and validity of the translation were verified the original one and compared to the translated version by three experts who have knowledge and experience in both Thai and English languages and cultures. Three experts are qualified translators who are qualified to have good English language knowledge, excellent knowledge in the target language that needs to be translated, experience in both Thai and English languages and cultures, experience with the target population who wants to study both online and offline platforms, and fully skills in tool development.

3.1.7 Data collection

3.1.7.1 Quantitative data collection

Primary data

1. Provide and request the letters of cooperation for collecting data and approved by the authorized person from the Ph.D. Program in Industrial Business Administration, KMITL. The proposal of requested letters is to ask for user information from 772 respondents to collect the data in this research.

2. Distribute the questionnaires to 772 respondents until completed data as the target.

3. Compile the completeness of the 772 questionnaires, and then through the step of data analysis.

Secondary data

The data collection is from the relevant theories, literatures, concepts and researches from various sources, e. g. , books, journals, documents, internet, statistical data and report both government and private sectors that also used for synthesis and analysis to initiate the knowledge and analysis data in this research.

3.1.8 Data analysis

3.1.8.1 Quantitative data analysis

As the completed questionnaires, the researcher has to examine the basic data for compliance with the analysis agreement. For the statistical testing in the level of significance and acceptable error (α) is 0.05. The procedure and statistics for analysis as following below.

1. In the basics of statistical analysis of sample distribution by using descriptive statistics, i. e. , percentage, mean, and the basic statistical analysis for developing the model. This research consisted of 19 observed variables for acknowledging the distribution and variation of the structural equation model. Descriptive statistics in the research included SD, mean, coefficient of variation, skewness, and kurtosis from AMOS.

2. The relationship analysis among the variables, AMOS is the main program to use and another, Pearson's correlation coefficient. The factors of the structural equation model as basic data. Table 3.7 shows the consideration criteria of the correlation coefficient.

3. For suitability measurement of the data, KMO is considered for testing congruence between empirical data and the conceptual framework.

4. Examined congruence of the conceptual framework by using the AMOS and also obtained the theories, concepts, and the review of relevant literatures.

Table 3.7 5-point scoring criteria

Correlation coefficient (r)	The relationship level
$r > 0.8$	Very high
$0.6 < r < 0.8$	Quite high
$0.4 < r < 0.6$	Moderate
$0.2 < r < 0.4$	Quite low
$R < 0.2$	low

Source: Taweerat, P. (1997)

3.1.9 Statistics for analysis

In this research, the researcher uses the Structural Equation Modeling (SEM), which is a model that combines the principles of statistical analysis of two types together, namely path analysis and factor analysis (Brown, 2006). Hair et. Al. (2006) explains that the structural equation model is a multivariate analysis technique which combines the factor analysis and multiple regressions, allows researchers to greatly benefit from the SEM technique, and is used to examine the relationships between variables in the conceptual framework both direct and indirect. The most popular statistical programs used in SEM inspection are AMOS.

The program of AMOS Version 21 is used for analyzing data in this research for

1. Studying the relationship between latent variables by testing the theoretical basis
2. Analyzing the relationship between latent variables and Indicators or empirical variables

By examining the quality of the measurement, the AMOS program increases the opportunity to analyze variance and covariance by applying this technique to confirm factor analysis (Confirmatory Factor Analysis: CFA) to check the harmony, accuracy or consistency of the gauge construction. The objective of the technique is for testing the hypothesis of the

relationship between latent variables and manifest variables, including studying the relationship between exogenous latent variables and endogenous latent variables (Ullman, 2001).

Analysis of joint variants in this research study, the researcher uses techniques to analyze the variable of all variables by studying the overall picture according to the equation to confirm the completeness or failure to introduce indicators or empirical variables used to create theoretical variables as well as the relevant statistics to assess the consistency of the conceptual framework and the empirical data, as shown in table 3.8.

Table 3.8 Statistics for evaluating the conceptual framework with empirical data.

Statistic	Symbol	Objective	Statistics for the conceptual framework with empirical data
Chi-square	λ^2	To test the null hypothesis, the conceptual framework is consistent with the empirical data.	$p > 0.05$
Relative Chi-square	λ^2/df	To prove the conceptual framework is consistent with empirical data	$\lambda^2/df < 2.00$
Goodness of Fit Index	GFI	To measure the level of harmonious harmony between 0-1.00	≥ 0.90
Comparative Fit Index	CFI	To measure the level of harmonious harmony to compare perfectly value between 0-1.00	≥ 0.90
Adjusted Goodness of Fit Index	AGFI	To measure the level of harmonious harmony between 0-1.00	≥ 0.90
Root Mean Square Residual	RMR	To measure the error of the conceptual framework in the form of the mean square with a value between 0-100.	< 0.05

Table 3.8 (Continue)

Statistic	Symbol	Objective	Statistics for the conceptual framework with empirical data
Root Mean Square Error of Approximation	RMSEA	To inform the tolerances of the conceptual framework, the root form of the mean square of the estimated error between 0 -100.	< 0.05

Source: Hair et al. (2006), Schumacker & Lomax (2010)

3.1.10 Ethical Consideration

The data collection is for this research only. No asking personal questions and personal information was not shared with others. There are efforts to prevent participants from harming and respect their dignity in all areas. Finally, the researchers of this research project received full consent from all respondents and should be certified by Ethics in Human Research before asking questions in the survey.

CHAPTER 4

RESEARCH RESULTS

The purpose of this research is to develop the strategy model of OMNI business sustainability from the consumer perspective, to expand the sustainable consumption of academic practice in OMNI business, to endorse and explore the relevant theories of the research, and to investigate the direct, indirect, and combined influence of variables on OMNI business sustainability in the perspective of consumers. To obtain the findings that answer the objectives of this research study. The researcher used the quantitative research method to confirm research hypothesizes. Moreover, this searcher has tested the research tools with various statistics to support and confirm the quality of research tools and align with international research standards.

After the researcher collected data from a 5-Point Likert Scale measurement, the sample target is the shopper who buys products online, offline, and multi-channel with the person who cooperated. The researcher distributed more questionnaires than the theoretically stated number of samples in order to get the total number of exams back as the theory stipulated which can be classified according to product type: 380 sets of fast-moving consumer goods (FMCG) and 380 sets of large appliances.

The sampling size of this research was used 772 participants by separating data collection into two product groups. Firstly, Target on fast-moving consumer goods (FMCG) 389 participants and large appliance 383 participants. This research is to develop the strategy model of OMNI business sustainability from the consumer perspective. It was tested the research tools with various statistics for encouraging and endorsing the quality of the research instruments according to the standard of statistical testing (Hair et al., 2006). Therefore, the results of the sequential analysis are presented respectively as follows.

- 4.1 Fast Moving Consumer Goods (FMCG)
- 4.2 Large Appliance

The questionnaire was examined by three experts by using the expert scores to find the consistency index between the question and the index of item objective congruence (IOC). This result has a conformity index from 0.50 onward, and 75 questions passed all criteria as the results in Appendix E.

This study presented the results of a quantitative analysis of the data, the results of the consistency index between the question and the main points of the content, confidence, and reliable results with a descriptive analysis of survey elements, and the results of the elemental confirmation analysis, the main points are as follows.

4.1 Fast Moving Consumer Goods (FMCG)

4.1.1 Socio-demographic information

The researcher surveyed the data of the respondents. The socio-demographic data of the fast-moving consumer goods (FMCG) respondents. There were 389 questionnaires with the socio-demographic information is showed in table 4.1.

Table 4.1 Frequencies and percentages of sample FMCG demographic (N=389)

Socio-demographic information	Frequency	Percentage (%)
Gender		
Male	155	39.84
Female	234	60.16
Total	389	100.00
Age		
18-22 years (1998 – 2002)	20	5.15
23-40 years (1980 – 1997)	244	62.87
41-55 years (1965 – 1979)	109	27.91
56-70 years (1950 – 1960)	16	4.07
Total	389	100.00
Highest education		
Below a bachelor's degree	16	4.06
A bachelor's degree	199	51.22
Higher a bachelor's degree	174	44.72
Total	389	100.00

Occupation

Employee	260	66.70
Freelance	38	9.75
Business owner	34	8.67
Student	25	6.50
Government official	16	4.06
Retired	7	1.90
Housewife	5	1.35
Unemployed	2	0.55
State Enterprise Employee	2	0.55
Total	389	100.00

Online shopping experience

1-3 years	150	38.48
4-6 years	161	41.46
7-9 years	39	10.03
10-12 years	18	4.61
13-15 years	7	1.90
More than 15 years	14	3.52
Total	389	100.00

Offline shopping experience

1-3 years	22	5.69
4-6 years	44	11.38
7-9 years	15	3.79
10-12 years	31	7.86
13-15 years	14	3.53
More than 15 years	263	67.75
Total	389	100.00

Income per month

Less than or equal to 20,000 baht	66	17.07
20,001-40,000 baht	88	22.76
40,001-60,000 baht	91	23.31

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60,001-80,000 baht	31	7.86
80,001-100,000 baht	58	14.91
Above than 100,000 baht	55	14.09
Total	389	100.00
Domicile		
Bangkok Metropolitan	288	73.98
Central	46	11.92
Northeastern	40	10.30
Northern	9	2.17
Southern	4	1.09
Eastern	1	0.27
Western	1	0.27
Total	389	100.00
Online shopping channel		
Shopee	190	48.78
Lazada	144	37.13
Grab	24	6.23
Line	10	2.44
Other	10	2.44
Facebook	4	1.09
Tesco Lotus	3	0.81
JD.com	2	0.54
Instragram	2	0.54
Total	389	100.00
Purchase frequency		
1 time per month	151	38.75
1 time per two weeks	124	31.98
1-3 times per week	93	23.85
4-6 times per week	17	4.34
Everyday	4	1.08
Total	389	100.00

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Purchasing value per bill

Less than 1,000 baht	162	41.74
1,001-5,000 baht	213	54.74
5,001-10,000 baht	13	3.25
More than 10,000 baht	1	0.27
Total	389	100.00

Transaction location

Home	254	65.31
Store/Shop	101	26.02
Office	27	6.78
University	4	1.08
Others	3	0.81
Total	389	100.00

Purchasing motivation

Product promotion	147	37.67
Product reliability	130	33.33
Product price	93	23.86
Product quality	5	1.36
Convenience	4	1.08
Trial product	4	1.08
Requirements for use	3	0.81
Product needs	2	0.54
Aftersales service	1	0.27
Total	389	100.00

Factors that prevent purchasing product

Unreliability of the product	191	49.05
The price of the product is not reasonable.	106	27.10
Product promotion is not attractive.	60	15.45
Aftersales service is unsatisfactory	19	4.88
The product has no quality	7	1.90
Personal satisfaction	2	0.54

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Brand ethics	2	0.54
Additional shipping charges	1	0.27
Product needs	1	0.27
Total	389	100.00
Satisfaction with OMNI channel		
Satisfied	389	100.00
Unsatisfied	0	0.00
Total	389	100.00

Table 4.1 shows the sample consisted of 155 (39.84%) male respondents and 234 (60.16%) female respondents. The age group of 23 to 40 years old for 244 (62.87%) respondents, 41-55 years old for 109 (27.91%) respondents, minimal respondents fell within the range of 18-22 years old for 20 (5.15%) respondents, and 56-70 years old for 16 (4.07%) respectively. From the education level, a bachelor's degree is a greater number of respondents for 199 (51.22%), followed by a higher bachelor's degree for 174 (44.72) respondents, and below a bachelor's degree for 16 (4.06%) respondents. In term of occupation, the employee occupied the highest amount for 260 (66.70%) respondents, followed by freelance for 38 (9.75%) respondents, business owner for 34 (8.67%) respondents, the student for 25 (6.50%) respondents, the government official for 16 (4.06%) respondents, retired for 7 (1.90%) respondents, housewife for 5 (1.35%) respondents, minimal respondents fell in unemployed and state enterprise employee for 2 (0.55%) respondents, respectively.

The online shopping experiences, the range of 4-6 years is the highest amount for 161 (41.46%) respondents, 1-3 years for 150 (38.48%) respondents, 7-9 years for 39 (10.03%) respondents, 10-12 years for 18 (4.61%) respondents, more than 15 years for 14 (3.52%) and 13-15 years for 7 (1.90%) respondents, respectively. The offline shopping experiences, the range of more than 15 years is the highest amount for 263 (67.75%) respondents, 4-6 years for 44 (11.38%) respondents, 10-12 years for 31 (7.86%) respondents, 1-3 years for 22 (5.69%) respondents, 7-9 years for 15 (3.79%) respondents, and 13-15 years for 14 (3.53%) respondents, respectively.

Refer to income per month, the most of respondents earned 40,001-60,000 baht for 91 (23.31%), followed by 20,001-40,000 baht for 88 (22.76%) respondents, less than or equal to 20,000 baht for 66 (17.07%) respondents, 80,001-100,000 baht for 58 (14.91%) respondents, above

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than 100,000 baht for 55 (14.09%) respondents, and 60,001-80,000 baht for 31 (7.86%) respondents, respectively.

For domicile, the most of respondents are Bangkok Metropolitan for 288 (73.98%) respondents, Central for 46 (11.92%) respondents, Northeastern for 40 (10.30%) respondents, Northern for 9 (2.17%) respondents, Southern for 4 (1.09%) respondents, and minimal respondents fell in Eastern and Western for 1 (0.27%) respondent, respectively.

In the online shopping channel, the most respondents are Shopee for 190 (48.78%) respondents, Lazada for 144 (37.13%) respondents, grab for 24 (6.23%) respondents, Lineman and Other for 10 (2.44%) respondents, Facebook for 4 (1.09%) respondents, Tesco Lotus for 3 (0.81%) respondents, and minimal respondents fell in JD.com and IG for 2 (0.54%) respondents, respectively.

Focusing on the purchase frequency, most of the respondents bought one time per month for 151 (38.75%) respondents, followed by one time per two weeks for 124 (31.98%) respondents, 1-3 times per week for 93 (23.85%) respondents, 4-6 times per week for 17 (4.34%) respondents, and every day for 4 (1.08%) respondents, respectively.

For the purchasing value per time, the most of respondents bought 1,001-5,000 baht for 213 (54.74%) respondents, less than 1,000 baht for 162 (41.74%) respondents, 5,001-10,000 baht for 13 (3.25%) respondents, and more than 10,000 baht for 1 (0.27%) respondent, respectively.

The purchasing of transection location, the most of respondents bought at home for 254 (65.31%) respondents, at store/shop for 101 (26.02%) respondents, at the office for 27 (6.78%) respondents, at university for 4 (1.08) and at others for 3 (0.81%) respondents, respectively.

In term of purchasing motivation, the most of respondents bought products because of product promotion for 147 (37.67%) respondents, product reliability for 130 (33.33%) respondents, product price for 93 (23.86%) respondents, product quality for 5 (1.36%) respondents, convenience, and trial product for 4 (1.08%) respondents, using requirements for 3 (0.81%) respondents, product needs for 2 (0.54%) and aftersales service for 1 (0.27%) respondent, respectively.

On the other hand, the most factors that prevent purchasing product is the unreliability of the product for 191 (49.05%) respondents, the price of the product is not reasonable for 106 (27.10%) respondents, product promotion is not attractive for 60 (15.45%) respondents, aftersales service is unsatisfactory for 19 (4.88%) respondents, the product has no quality for 7 (1.90%) respondents, product satisfaction and brand ethics for 2 (0.54%) respondents, and product needs

and additional shipping charges for 1 (0.27%) respondents respectively. Overall, customer satisfaction with OMNI channel is satisfied for 389 (100%) respondents.

4.1.2 Normality test

The normality test of FMCG related to skewness, kurtosis, and the normal distribution was declared in table 4.2 based on seven Latin variables that included nineteen observed variables which are; product 3 observed variables (system, quality, information), satisfaction 4 observed variables (brand attachment, offline image, customer experience, brand experience), online trust 2 observed variables (trust, brand trust), offline trust 2 observed variables (trust, brand trust), online loyalty 2 observed variables (loyalty, brand loyalty), offline loyalty 2 observed variables (loyalty, brand loyalty), and sustainable consumption 4 observed variables (environment, social, economic, quality of life).

From table 4.2, it was found that the product measured from 3 observed variables has skewness range from -0.242 to 0.218, and kurtosis range from -0.206 to -0.046. The satisfaction measured from 4 observed variables have skewness range from -0.319 to 0.204 and kurtosis range from -0.471 to 0.380. The online trust measured from 2 observed variables have skewness range from -0.018 to 0.081 and kurtosis range from -0.796 to 0.367. The offline trust measured from 2 observed variables have skewness range from 0.013 to 0.180 and kurtosis range from -0.727 to 0.192. The online loyalty measured from 2 observed variables have skewness range from 0.120 to 0.420 and kurtosis range from -0.281 to -0.019. The offline loyalty measured from 2 observed variables have skewness range from 0.104 to 0.343 and kurtosis range from -0.487 to -0.080. The sustainable consumption measured from 4 observed variables have skewness range from -0.252 to 0.111, and kurtosis range from -1.289 to 0.979.

Table 4.2 Normality test result (FMCG)

Latin Variable	Variable	Skewness	Kurtosis	Normal distribution
Product	PSA	0.218	0.046	Pass
	PQ	-0.242	-0.206	Pass
	PI	-0.197	-0.013	Pass

Table 4.2 (Continue)

Latin Variable	Variable	Skewness	Kurtosis	Normal distribution
Satisfaction	SBA	0.020	0.078	Pass
	SOI	-0.138	-0.471	Pass
	SCE	0.204	-0.060	Pass
	SBE	-0.319	0.380	Pass
Online trust	ONTT	0.081	0.367	Pass
	ONTB	-0.018	-0.796	Pass
Offline trust	OFFT	0.013	0.192	Pass
	OFFTB	0.180	-0.727	Pass
Online loyalty	ONLL	0.420	-0.019	Pass
	ONLB	0.120	-0.281	Pass
Offline loyalty	OFFL	0.343	0.080	Pass
	OFFLB	0.104	-0.487	Pass
Sustainable consumption	SEn	0.019	-0.313	Pass
	SSo	-0.252	0.979	Pass
	SEc	0.111	-1.048	Pass
	SQL	0.072	-1.289	Pass

4.1.3 Correlation coefficient

The correlation coefficient was measured the stringency of the relationship between the relative motion of two variables. The FMCG result of the correlation coefficient was explained based on the analysis of seven laten variables, as shown in table 4.4.

FMCG results showed the correlation coefficient value is not less than 0.30 (Nonglak, 2012). Therefore, this result implies that the proper variables for CFA analysis. In another way, the correlation coefficient is not over 0.80. Multicollinearity does not occur. It means the proper variables are ready for SEM analysis. The abbreviation of variables is in table 4.3 below.

Table 4.3 The abbreviation of variables

Type of variable	Abbreviation	Meaning
Latent variables	Prod	Product
Observed variables	PSystem (PSA)	System
Observed variables	PQuality (PQ)	Quality
Observed variables	PInfo (PI)	Information
Latent variables	Satis	Satisfaction
Observed variables	SBAttach (SBA)	Brand attachment
Observed variables	SOffImage (SOI)	Offline image
Observed variables	SCusExp (SCE)	Customer experience
Observed variables	SBExp (SBE)	Brand experience
Latent variables	OnTrust	Online trust
Observed variables	OnTrust (ONTT)	Online trust
Observed variables	OnTrustB (ONTB)	Online brand trust
Latent variables	OffTrust	Offline trust
Observed variables	OffTrust (OFFT)	Offline trust
Observed variables	OffTrustB (OFFTB)	Offline brand trust
Latent variables	OnLoyalty	Online loyalty
Observed variables	OnLoyalty (ONLL)	Online loyalty
Observed variables	OnLoyaltyB (ONLB)	Online brand loyalty
Latent variables	OffLoyalty	Offline loyalty

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Table 4.3 (Continue)

Type of variable	Abbreviation	Meaning
Observed variables	OffLoyalty (OFFL)	Offline loyalty
Observed variables	OffLoyaltyB (OFFLB)	Offline brand loyalty
Latent variables	Sustain	Sustainable consumption
Observed variables	SEnv (SEn)	Environment
Observed variables	SSocial (SSo)	Social
Observed variables	SEconomic (SEc)	Economic
Observed variables	SQualityLife (SQL)	Quality of life

Table 4.4 The result of correlation coefficient (FMCG)

Variable	Product	Satisfaction	Online trust	Offline trust	Online loyalty	Offline loyalty	Sustainability
Product	1						
Satisfaction	0.496**	1					
Online trust	0.484**	0.675**	1				
Offline trust	0.451**	0.663**	0.682**	1			
Online loyalty	0.451**	0.623**	0.584**	0.574**	1		
Offline loyalty	0.403**	0.568**	0.536**	0.529**	0.601**	1	
Sustainability	0.387**	0.550**	0.582**	0.612**	0.546**	0.564**	1

** . Correlation is significant at the 0.01 level (2-tailed).

4.1.4 Basic statistical values from descriptive data

The basic statistical values of the observed variables of each model are model 1: product, model 2: satisfaction, model 3: online trust, model 4: offline trust, model 5: online loyalty, model 6: offline loyalty, and model 7: sustainable consumption. This research proposes an analysis of this basic statistical data one by one as follows.

4.1.4.1 Basic statistical values of Product

Model 1: Product has 9 questions in total, consisting of 3 observed variables as (1) System, there is 3 questions, the mean is 4.195, the standard deviation is 0.45 with the skewness is a high level, right-skew curve (2) Quality, there is 3 questions, the mean is 4.285, the standard deviation is 0.478, with the skewness is a high level, left-skew curve. (3) Information there is 3 questions, the mean is 4.201, the standard deviation is 0.527 with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is 0.046, -0.206 and -0.013 respectively. The three variables were platykurtic, which means that this set of data is highly distributed, and the quality is the most average variable as detailed in table 4.5.

Table 4.5 Product statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Product	PSystem	4.195	0.450	0.218	0.046
	PQuality	4.285	0.478	-0.242	-0.206
	PInfo	4.201	0.527	-0.197	-0.013
	Overall	4.227	0.400	0.140	-0.388

4.1.4.2 Basic statistical values of Satisfaction

Model 2: Satisfaction has 12 questions in total, consisting of 4 observed variables as (1) Brand attachment, there is 3 questions, the mean is 3.941, the standard deviation is 0.549 with the skewness is a high level, right-skew curve (2) Offline image, there is 3 questions, the mean is 4.067, the standard deviation is 0.57, with the skewness is a high level, left-skew curve. (3) Customer experience there is 3 questions, the mean is 4.081, the standard deviation is 0.465 with the skewness is a high level, right-skew curve. (4) Brand experience there is 3 questions, the mean is 4.143, the

standard deviation is 0.506 with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is 0.078, -0.471, -0.06 and 0.38, respectively. The three variables were platykurtic, which means that this set of data is highly distributed, and the customer experience is the most average variable as detailed in table 4.6.

Table 4.6 Satisfaction statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Satisfaction	SBAAttach	3.941	0.549	0.020	0.078
	SOffImage	4.067	0.570	-0.138	-0.471
	SCusExp	4.081	0.465	0.204	-0.060
	SBExp	4.143	0.506	-0.319	0.380
	Overall	4.058	0.456	0.300	-0.396

4.1.4.3 Basic statistical values of Online trust

Model 3: Online trust has 7 questions in total, consisting of 2 observed variables as (1) Trust, there is 3 questions, the mean is 3.93, the standard deviation is 0.517 with the skewness is a high level, right-skew curve. (2) Brand trust, there is 3 questions, the mean is 4.043, the standard deviation is 0.612, with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is 0.367, and -0.796. The three variables were platykurtic, which means that this set of data is highly distributed, and the Brand trust is the most average variable as detailed in table 4.7.

Table 4.7 Online trust statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Online trust	OnTrust	3.930	0.517	0.081	0.367
	OnTrustB	4.043	0.612	-0.018	-0.796
	Overall	3.987	0.511	0.382	-0.500

4.1.4.4 Basic statistical values of Offline trust

Model 4: Offline trust has 7 questions in total, consisting of 2 observed variables as (1) Trust, there is 3 questions, the mean is 3.886, the standard deviation is 0.553 with the skewness is a high level, right-skew curve. (2) Brand trust, there is 3 questions, the mean is 4.036, the standard deviation is 0.6, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is 0.192, and -0.727. The three variables were platykurtic, which means that this set of data is highly distributed, and the Brand trust is the most average variable as detailed in table 4.8.

Table 4.8 Offline trust statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Offline trust	OffTrust	3.886	0.553	0.013	0.192
	OffTrustB	4.036	0.600	0.180	-0.727
		3.961	0.542	0.102	-0.354

4.1.4.5 Basic statistical values of Online loyalty

Model 5: Online loyalty has 7 questions in total, consisting of 2 observed variables as (1) Loyalty, there is 3 questions, the mean is 4.022, the standard deviation is 0.482 with the skewness is a high level, right-skew curve. (2) Brand loyalty, there is 3 questions, the mean is 3.797, the standard deviation is 0.574, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is -0.19, and -0.281. The three variables were platykurtic, which means that this set of data is highly distributed, and the loyalty is the most average variable, as detailed in table 4.9.

Table 4.9 Online loyalty statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Online loyalty	OnLoyalty	4.022	0.482	0.420	-0.019
	OnLoyaltyB	3.797	0.574	0.120	-0.281
	Overall	3.909	0.501	0.347	-0.220

4.1.4.6 Basic statistical values of Offline loyalty

Model 6: Offline loyalty has 7 questions in total, consisting of 2 observed variables as (1) Loyalty, there is 3 questions, the mean is 4.033, the standard deviation is 0.491 with the skewness is a high level, right-skew curve. (2) Brand loyalty, there is 3 questions, the mean is 3.854, the standard deviation is 0.623, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is 0.08, and -0.487. The three variables were platykurtic, which means that this set of data is highly distributed, and the loyalty is the most average variable as detailed in table 4.10.

Table 4.10 Offline loyalty statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Offline loyalty	OffLoyalty	4.033	0.497	0.343	0.080
	OffLoyaltyB	3.854	0.623	0.104	-0.487
	Overall	3.943	0.521	0.457	-0.050

4.1.4.7 Basic statistical values of Sustainable Consumption

Model 7: Sustainable Consumption has 11 questions in total, consisting of 4 observed variables as (1) Environment, there is 3 questions, the mean is 3.846, the standard deviation is 0.649 with the skewness is a high level, right-skew curve. (2) Social, there is 3 questions, the mean is 3.949, the standard deviation is 0.575, with the skewness is a high level, left-skew curve. (3) Economic, there is 3 questions, the mean is 4.364, the standard deviation is 0.498 with the skewness is a high level, right-skew curve. (4) Quality of life, there is 2 questions, the mean is 4.417, the standard deviation is 0.488 with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is -0.313, 0.979, -1.048, and -1.289 respectively. The three variables were platykurtic, which means that this set of data is highly distributed, and the economic is the most average variable as detailed in table 4.11.

Table 4.11 Sustainable Consumption statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Sustainable consumption	SEnv	3.846	0.649	0.019	-0.313
	SSocial	3.949	0.575	-0.252	0.979
	SEconomic	4.364	0.498	0.111	-1.048
	SQualityLife	4.417	0.488	0.072	-1.289
	Overall	4.144	0.450	0.387	-0.324

4.1.5 Confirmatory Factor Analysis (CFA)

The model of OMNI business sustainability has a total of 60 questions to determine the construct validity or altitude straightness with affirmative analysis. Confirmatory Factor Analysis (CFA) is to verify the consistency of the model of OMNI business sustainability, which are integral to whether are consistent with empirical data of (1) Product (2) Satisfaction (3) Online trust (4) Offline trust (5) Online loyalty (6) Offline loyalty, and (7) Sustainable consumption.

The statistics in this research used to verify the consistency between the research hypothesis model and the empirical data (Goodness of Fit Measures) by using accepted benchmarks (Hair et al., 2006) as follows:

1. Chi-Square Statistics was no statistical significance ($p > 0.05$), indicating that the research hypothesis model was consistent with the empirical data.
2. Goodness of Fit Index (GFI) is between 0 and 1. If the value approaches 1, the research hypothesis model is consistent with the empirical data. The value of GFI index should be 0.90 and above.
3. Comparative Fit Index (CFI) is between 0 and 1. If the value approaches 1, the research hypothesis model is consistent with the empirical data. The value of GFI index should be 0.90 and above.
4. Adjusted Goodness-of-Fit Index (AGFI) has the same properties as the GFI index. It has a value between 0 and 1. If the value approaches 1, it indicates a hypothetical pattern. The research is consistent with empirical data, the AGFI index should be 0.90 and above.
5. Root Mean Square Residual (RMR) measures the error of the conceptual framework in the form of the mean square, and the value should be lower 0.05.

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6. Root Mean Square Error of Approximation (RMSEA) indicates the pattern generated is consistent with the empirical data, and the value should be lower 0.05.

4.1.5.1 Confirmatory Factor Analysis: Product variable

For the assumed validity analysis results for Model 1: Product with Confirmatory Factor Analysis (CFA) of three variables: system, quality, and information. The analysis results in figure 4.1, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 0, df was equal to 0 because it was a saturated model. Goodness of Fit Index (GFI) was 1. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the quality had the highest factor weight value at 0.79, followed by information and system with factor weight value at 0.78 and 0.59, respectively.

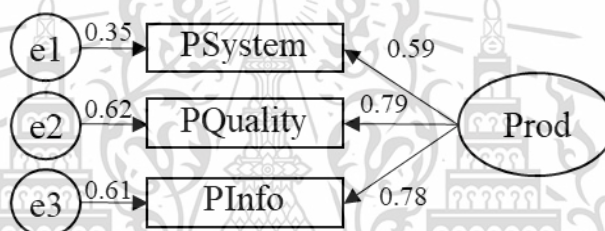


Figure 4.1 FMCG Product variable

4.1.5.2 Confirmatory Factor Analysis: Satisfaction variable

For the assumed validity analysis results for Model 2: Satisfaction with Confirmatory Factor Analysis (CFA) of four variables: brand experience, and customer experience, offline image, and brand attachment. The analysis results in figure 4.2, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 31.682, df was equal to 2 because it was a saturated model. Goodness of Fit Index (GFI) was 0.959. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the brand experience had the highest factor weight value at 0.71, followed by brand attachment, customer experience, and offline image with factor weight value at 0.70, 0.70, and 0.63, respectively.

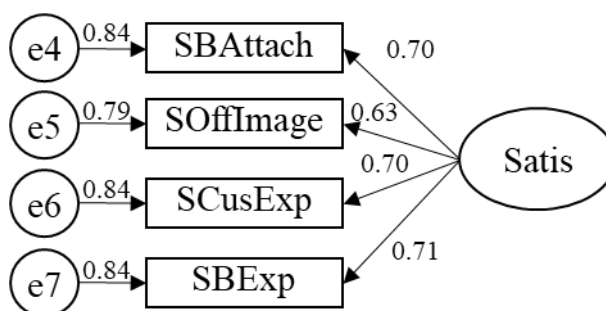


Figure 4.2 FMCG Satisfaction variable

4.1.5.3 Confirmatory Factor Analysis: Online trust variable

For the assumed validity analysis results for Model 3: Online trust with Confirmatory Factor Analysis (CFA) of two variables: trust, and brand trust. The analysis results in figure 4.3, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 0.758, df was equal to 1 because it was a saturated model, Goodness of Fit Index (GFI) was 0.999. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the brand trust had the highest factor weight value at 0.69, followed by trust with factor weight value at 0.59.

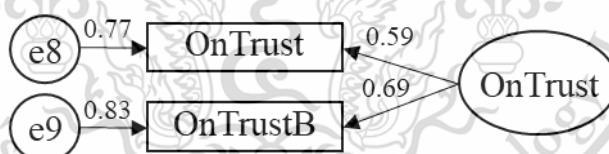


Figure 4.3 FMCG Online trust variable

4.1.5.4 Confirmatory Factor Analysis: Offline trust variable

For the assumed validity analysis results for Model 4: Offline trust with Confirmatory Factor Analysis (CFA) of two variables: trust, and brand trust. The analysis results in figure 4.4, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 0.105, df was equal to 1 because it was a saturated model. Goodness of Fit Index (GFI) was 1. Considering factor loading, it was found that the factor weight was statistically significant level at

0.05. Therefore, the brand trust had the highest factor weight value at 0.91, followed by trust with factor weight value at 0.84.

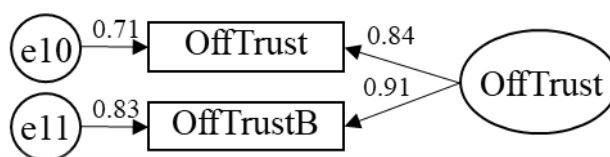


Figure 4.4 FMCG Offline trust variable

4.1.5.5 Confirmatory Factor Analysis: Online loyalty variable

For the assumed validity analysis results for Model 5: Online loyalty with Confirmatory Factor Analysis (CFA) of two variables: loyalty, and brand loyalty. The analysis results in figure 4.5, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 180.245, df was equal to 8 because it was a saturated model. Goodness of Fit Index (GFI) was 0.849. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the loyalty had the highest factor weight value at 0.92, followed by brand loyalty with factor weight value at 0.87.

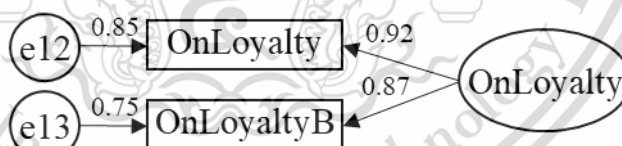


Figure 4.5 FMCG Online loyalty variable

4.1.5.6 Confirmatory Factor Analysis: Offline loyalty variable

For the assumed validity analysis results for Model 6: Offline loyalty with Confirmatory Factor Analysis (CFA) of two variables: loyalty, and brand loyalty. The analysis results in figure 4.6, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 57.587, df was equal to 1 because it was a saturated model. Goodness of Fit Index (GFI) was 0.932. Considering factor loading, it was found that the factor weight was statistically

significant level at 0.05. Therefore, the loyalty had the highest factor weight value at 0.86, followed by brand loyalty with factor weight value at 0.85.

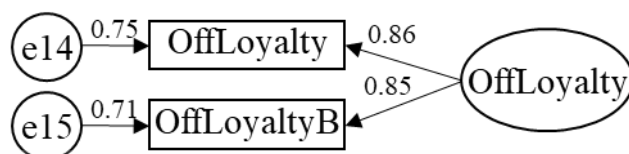


Figure 4.6 FMCG Offline loyalty variable

4.1.5.7 Confirmatory Factor Analysis: Sustainable consumption variable

For the assumed validity analysis results for Model 7: Sustainable consumption with Confirmatory Factor Analysis (CFA) of four variables: environment, social, economic, and quality of life. The analysis results in figure 4.7, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 115.338, df was equal to 2 because it was a saturated model. Goodness of Fit Index (GFI) was 0.873. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the economic had the highest factor weight value at 0.89, followed by quality of life, environment, and social with factor weight value at 0.83, 0.66, and 0.53, respectively.

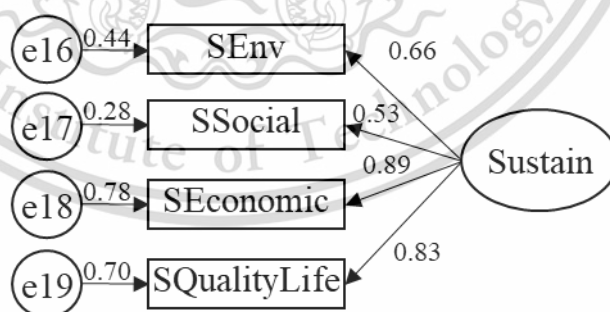


Figure 4.7 FMCG Sustainable consumption variable

4.1.6 The Structure Equation Model (SEM) of OMNI business sustainability in a consumer perspective





The model of OMNI business sustainability in a consumer perspective has been conducted to study the causal relationship which effecting the sustainable consumption by focusing the relationship between product (Prod) which includes system (PSystem), quality (PQuality), and information (PInfo), satisfaction (Satis) which includes brand attachment (SBAttach), offline image (SOffImage), customer experience (SCusExp), and brand experience (SBExp), online trust, which includes trust (OnTrust), and brand trust (OnTrustB), offline trust, which includes trust (OffTrust), and brand trust (OffTrustB), online loyalty which includes loyalty (OnLoyalty), and brand loyalty (OnLoyaltyB), offline loyalty which includes loyalty (OffLoyalty), and brand loyalty (OffLoyaltyB), and lead to sustainable consumption (Sustain) which includes environment (SEnv), social (SSocial), economic (SEconomic), and quality of life (SQualityLife). The symbol of the Structure Equation Model is in table 4.12 as below.

AMOS Model version 24.0 was used in this model analysis to test the empirical data and model by the Structural Equation Model Analysis (SEM).

For multicollinearity, the model consisted of 19 observed variables with a moderate positive correlation ($r < 0.80$), which could not generate multicollinearity. Therefore, it is unnecessary to discharge the observed variables from the AMOS Model Analysis (Leahy, 2001).

Structural Equation Modeling (SEM) was tested the model of the hypothesis. The series of structural equations propose the SEM approach's causal relationships and then tested simultaneously to impose how optimize the model representation.

Table 4.12 The symbol of Structure Equation Model

	Latent variable
	Observed variable
	Causal relationship
	Non causal relationship

3.1.6.1 The measurement model of OMNI business sustainability

The seven dimensions in this study include product (Prod), satisfaction (Satis), online trust, offline trust, online loyalty, offline loyalty, and sustainable consumption (Sustain). For the initial model in figure 4.8, The FMCG model of OMNI business sustainability (Before), this model represented seven latent variables and nineteen observed variables that showed OMNI business sustainability (FMCG) does not fit well. Therefore, the model was modified by using the AMOS program for the model improvement.

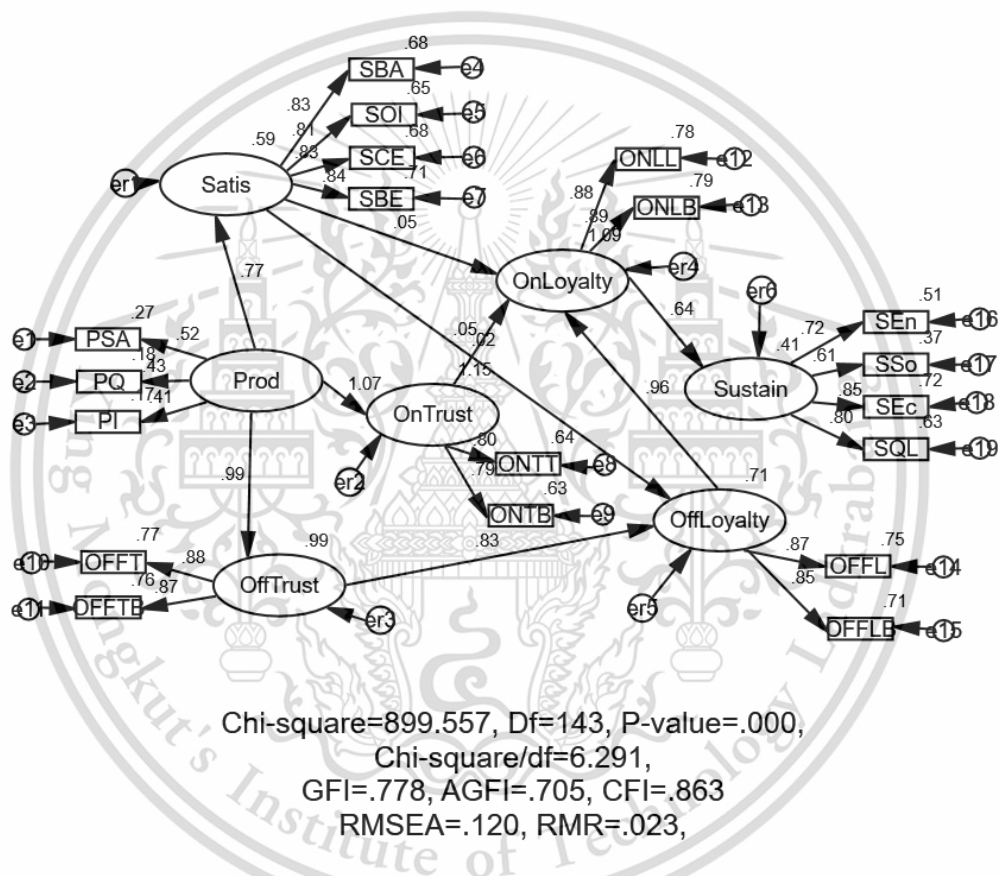


Figure 4.8 The FMCG model of OMNI business sustainability (Before)

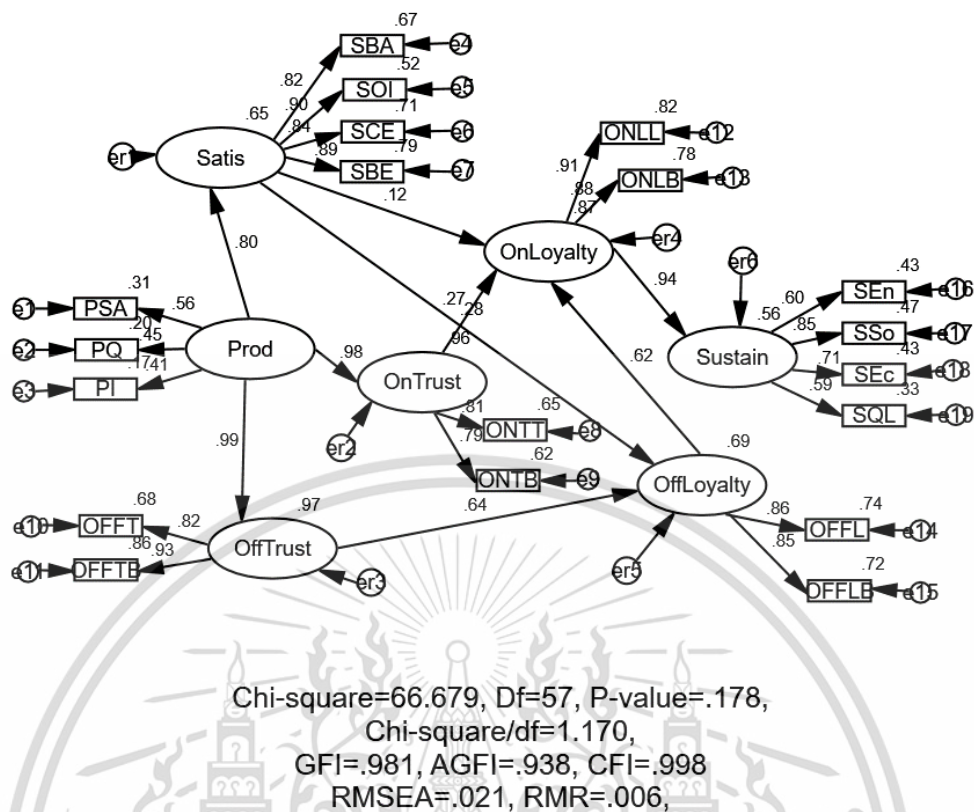


Figure 4.9 The FMCG model of OMNI business sustainability (After)

According to figure 4.9, the Overall Model Fit Measure of CFA results (after adjusting the model) shown that Chi-square is equal to 66.679 with probability level is more than 0.05, and Chi-square/df is equal to 1.17, which is less than 3.00 that mean accepted value. Moreover, the accepted Index range is greater than 0.9 which are GFI = 0.981, AGFI = 0.938, and CFI = 0.998 found that all is passed the criteria. The accepted Index range is lower than 0.05, which are RMSEA = 0.021 and RMR = 0.006 found that all is passed the criteria as well.

The model comparison before adjusting, the empirical data does not fit well in the model. The Chi-square /df is equal to 6.291, which is higher than 3.00 which means not to pass the criteria. Moreover, the accepted Index range is lower than 0.05, which are RMR = 0.023 found that is passed the criteria but RMSEA = 0.120 found that is not passed the criteria. However, the accepted Index range is greater than 0.9 which is GFI = 0.778, AGFI = 0.705, and CFI = 0.863 found that all is not passed the criteria. All the mentioned details were indicated in table 4.13.

Table 4.13 The overall measurement model of OMNI business sustainability (FMCG)

Indices	Criteria	Statistic values	
		Before	After
1. P-value	> 0.05	0.000	0.178
2. λ^2/df	< 2.00	6.291	1.170
3. GFI	> 0.90	0.778	0.981
4. AGFI	> 0.90	0.705	0.938
5. CFI	> 0.90	0.863	0.998
6. RMSEA	< 0.05	0.120	0.021
7. RMR	< 0.05	0.023	0.006
Conclusion		Model does not fit	Model fit

4.1.7 Hypothesis Testing

The technique of AMOS model analysis tested all the hypotheses in this research which was performed by comparing the t-statistic with 1.95 (significance at 0.05). The outcomes of hypothesis testing are shown in table 4.14 below.

Table 4.14 Result of the hypothesis testing

Hypothesis Testing	DE	Result
H1: Product => Satisfaction	0.803	Accept
H2: Product => Online trust	0.978	Accept
H3: Product => Offline trust	0.987	Accept
H4: Satisfaction => Online loyalty	0.296	Accept
H5: Satisfaction => Offline loyalty	0.284	Accept
H6: Online trust => Online loyalty	0.274	Accept
H7: Offline trust => Offline loyalty	0.643	Accept
H8: Offline loyalty => Online loyalty	0.621	Accept
H9: Online loyalty => Sustainable consumption	0.941	Accept

From Table 4.14 above, the interpretation of the hypothesis testing results on the seven Latin variables in this research is explained as follows.

4.1.7.1 Hypothesis1 (H1): Product has a positive influence on Satisfaction

The product has a significant direct effect on the satisfaction of the OMNI business, which provides the causal relationship value at 0.803. Therefore, this testing can explain that a higher product would bring higher satisfaction. According to this hypothesis result, product has a positive influence on satisfaction, is accepted.

4.1.7.2 Hypothesis2 (H2): Product has a positive influence on Online trust

The result of hypothesis testing showed that product has a significant direct effect on the online trust of OMNI business, which provides the causal relationship value at 0.978. Therefore, this testing can explain the hypothesis that is a higher product would bring higher online trust. According to this hypothesis result, product has a positive influence on online trust, is accepted.

4.1.7.3 Hypothesis3 (H3): Product has a positive influence on Offline trust

The result of hypothesis testing shows that the product directly affects the offline trust of the OMNI business, which provides the causal relationship value at 0.987. Therefore, this testing can explain the hypothesis that is a higher product would bring higher offline trust. According to this hypothesis result, product has a positive influence on offline trust, is accepted.

4.1.7.4 Hypothesis4 (H4): Satisfaction has a positive influence on Online loyalty

The result of hypothesis testing showed that satisfaction has a significant direct effect on the online loyalty of OMNI business, which provides the causal relationship value at 0.296. Therefore, this testing can explain the hypothesis that is a higher satisfaction would bring higher online loyalty. According to this hypothesis result, satisfaction has a positive influence on online loyalty, is accepted.

4.1.7.5 Hypothesis5 (H5): Satisfaction has a positive influence on Offline loyalty

The result of hypothesis is testing showed that satisfaction directly affects OMNI business's offline loyalty, which provides the causal relationship value at 0.284. Therefore, this testing can explain that a higher satisfaction would bring higher offline loyalty. According to this hypothesis result, satisfaction has a positive influence on offline loyalty, is accepted.

4.1.7.6 Hypothesis6 (H6): Online trust has a positive influence on Online loyalty

The result of hypothesis testing showed that online trust directly affects OMNI business's online loyalty, which provides the causal relationship value at 0.274. Therefore, this testing can explain the higher online trust would bring higher online loyalty. According to this hypothesis result, online trust has a positive influence on online loyalty, is accepted.

4.1.7.7 Hypothesis7 (H7): Offline trust has a positive influence on Offline loyalty

The result of hypothesis testing showed that offline trust directly affects OMNI business's offline loyalty, which provides the causal relationship value at 0.643. Therefore, this testing can explain that a higher offline trust would bring higher offline loyalty. According to this hypothesis result, offline trust has a positive influence on offline loyalty, is accepted.

4.1.7.8 Hypothesis8 (H8): Offline loyalty has a positive influence on Online loyalty

The result of hypothesis testing showed that offline loyalty directly affects OMNI business's online loyalty, which provides the causal relationship value at 0.621. Therefore, this testing can explain that a higher offline loyalty would bring higher online loyalty. According to this hypothesis result, offline loyalty has a positive influence on online loyalty, is accepted.

4.1.7.9 Hypothesis9 (H9): Online loyalty has a positive influence on Sustainable consumption

The result of hypothesis testing showed that online loyalty directly affects OMNI business's sustainable consumption, which provides the causal relationship value at 0.941. Therefore, this testing can explain that a higher online loyalty would bring higher sustainable consumption. According to this hypothesis result, online loyalty has a positive influence on sustainable consumption, which is accepted.

4.1.8 Direct effects, and indirect effects

The content of direct effects, and indirect effects of variables on the model of the OMNI business in FMCG is summarized as follows.

4.1.8.1 Direct effects

As the results from table 4.15, the six variables, which have a positive direct effect on the model of the OMNI business in FMCG, include online loyalty with a coefficient of 0.941.

4.1.8.2 Indirect effects

The five variables, which have a positive indirect effect on the model of the OMNI business in FMCG, include product, satisfaction, online trust, offline trust, and offline loyalty with coefficient at 0.846, 0.278, 0.258, 0.376, and 0.584, respectively, as shown in the table 4.15 and figure 4.10 as see more details in Appendix H.

Table 4.15 FMCG: Direct effects, indirect effects, and total effects

Variable	Direct Effects	Indirect Effects	Total Effects
Product		0.846	0.846
		$(0.803 \times 0.119 \times 0.941) +$ $(0.803 \times 0.284 \times 0.621 \times$ $0.941) + (0.978 \times 0.274 \times$ $0.941) + (0.987 \times 0.643 \times$ $0.621 \times 0.941)$	
Satisfaction		0.278	0.278
		$(0.119 \times 0.941) + (0.284 \times$ $0.621 \times 0.941)$	
Online Trust		0.258	0.258
		(0.274×0.941)	
Offline Trust		0.376	0.376
		$(0.643 \times 0.621 \times 0.941)$	
Online loyalty	0.941		0.941
Offline loyalty		0.584	0.584
		(0.621×0.941)	

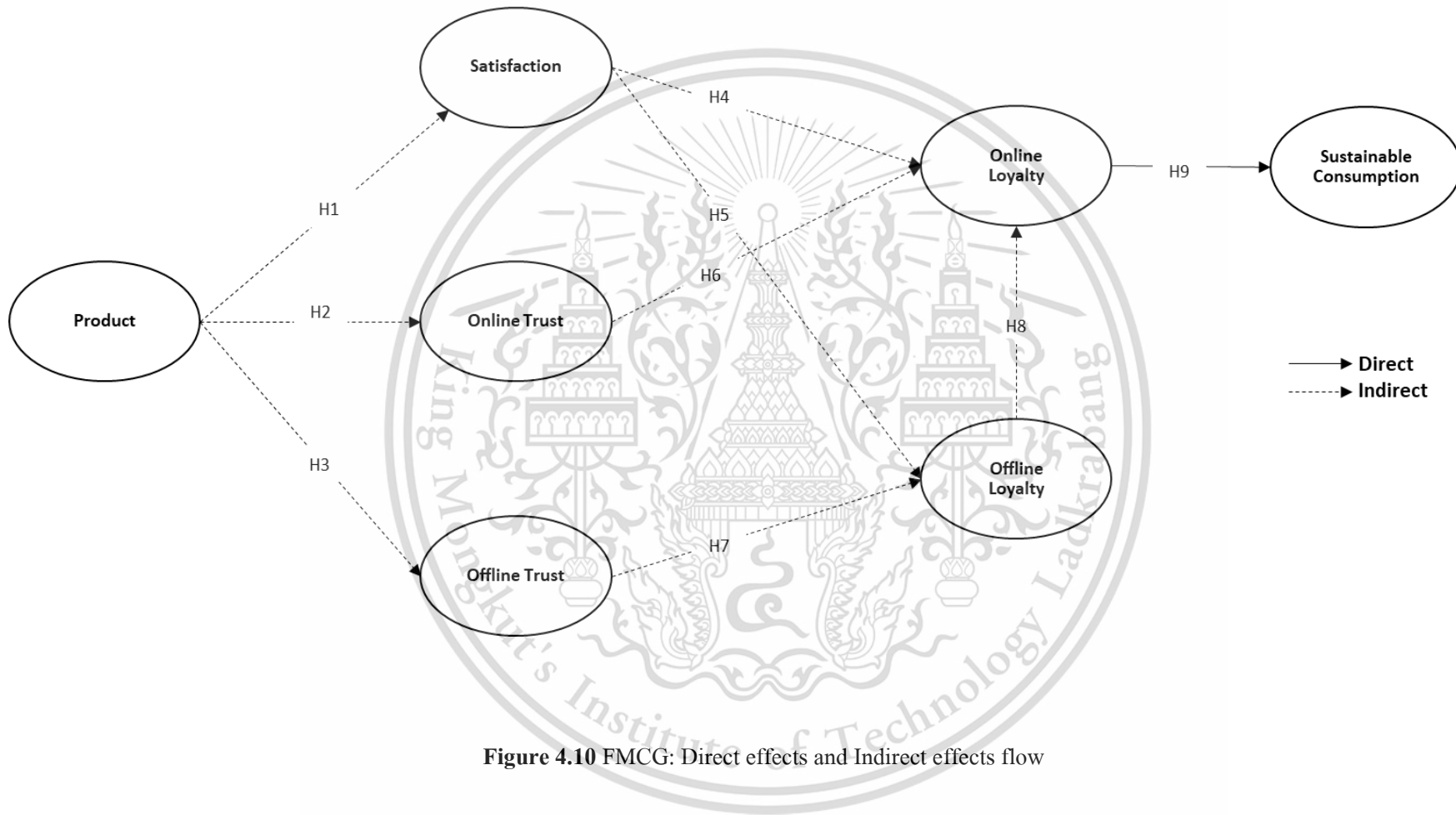


Figure 4.10 FMCG: Direct effects and Indirect effects flow

4.2 Large Appliance

4.2.1 Socio-demographic information

Another category in the survey, the socio-demographic data of the large appliance respondents. There were 383 questionnaires with the socio-demographic information is showed in table 4.16.

Table 4.16 Frequencies and percentages of sample large appliance demographic (N=383)

Socio-demographic information	Frequency	Percentage (%)
Gender		
Male	189	49.31
Female	194	50.69
Total	383	100.00
Age		
18-22 years (1998 – 2002)	8	2.20
23-40 years (1980 – 1997)	205	53.44
41-55 years (1965 – 1979)	141	36.92
56-70 years (1950 – 1960)	29	7.44
Total	383	100.00
Highest education		
Below a bachelor's degree	39	10.20
A bachelor's degree	251	65.65
Higher a bachelor's degree	93	24.24
Total	383	100.00
Occupation		
Employee	217	56.75
Freelance	77	20.11
Business owner	56	14.60
Government official	13	3.30
Student	11	2.75

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Retired	4	1.10
Housewife	3	0.83
Unemployed	1	0.28
State Enterprise Employee	1	0.28
Total	383	100.00
Online shopping experience		
1-3 years	173	45.18
4-6 years	169	44.08
7-9 years	21	5.50
10-12 years	13	3.31
13-15 years	3	0.83
More than 15 years	4	1.10
Total	383	100.00
Offline shopping experience		
1-3 years	16	4.13
4-6 years	149	38.84
7-9 years	67	17.63
10-12 years	13	3.31
13-15 years	11	3.03
More than 15 years	127	33.06
Total	383	100.00
Income per month		
Less than or equal to 20,000 baht	27	7.17
20,001-40,000 baht	147	38.29
40,001-60,000 baht	126	32.78
60,001-80,000 baht	25	6.61
80,001-100,000 baht	26	6.89
Above than 100,000 baht	32	8.26
Total	383	100.00

Domicile

Bangkok Metropolitan	145	37.74
Eastern	92	23.97
Northeastern	68	17.63
Central	64	16.80
Northern	9	2.48
Southern	3	0.83
Western	2	0.55
Total	383	100.00

Online shopping channel

Shopee	191	49.86
Lazada	169	44.08
JD.com	7	1.93
Other	7	1.93
Grab	5	1.10
Line	3	0.82
Facebook	1	0.28
Total	383	100.00

Purchase frequency

1 time per 6 months	78	20.39
1 time per month	146	38.02
1 time per two weeks	105	27.27
1-3 times per week	41	10.74
4-6 times per week	7	1.93
Everyday	6	1.65
Total	383	100.00

Purchasing value per bill

Less than 1,000 baht	34	8.82
1,001-5,000 baht	255	66.67
5,001-10,000 baht	71	18.45

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More than 10,000 baht	23	6.06
Total	383	100.00
Transaction location		
Home	316	82.64
Store/Shop	51	13.22
Office	13	3.31
Others	3	0.83
Total	383	100.00
Purchasing motivation		
Product reliability	196	51.23
Product price	117	30.58
Product promotion	60	15.70
Aftersales service	6	1.38
Product needs	3	0.83
Requirements for use	1	0.28
Total	383	100.00
Factors that prevent purchasing product		
Aftersales service is unsatisfactory	169	44.08
Unreliability of the product	98	25.62
The price of the product is not reasonable.	62	16.25
Product promotion is not attractive.	54	14.05
Total	383	100.00
Satisfaction with OMNI channel		
Satisfied	378	98.62
Unsatisfied	5	1.38
Total	383	100.00

From the table 4.16 shows the sample consisted of 189 (49.31%) male respondents and 194 (50.69%) female respondents. The age group of 23 to 40 years old for 205 (53.44%) respondents, 41-55 years old for 141 (36.92%) respondents, 56-70 years old for 29 (7.44%)

respondents, and 18-22 years old for 8 (2.20%) respondents respectively. From the education level, a bachelor's degree is greater number of respondents for 251 (65.65%), followed by higher a bachelor's degree for 93 (24.24) respondents, and below a bachelor's degree for 39 (10.20%) respondents. In term of the occupation, the employee occupied the highest amount for 217 (56.75%) respondents, followed by freelance for 77 (20.11%) respondents, business owner for 56 (14.60%) respondents, the government official for 13 (3.30%) respondents, the student for 11 (2.75%) respondents, retired for 4 (1.10%) respondents, housewife for 3 (0.83%) respondents, minimal respondents fell in unemployed and state enterprise employee for 1 (0.28%) respondent, respectively.

The online shopping experiences, the range of 1-3 years is the highest amount for 173 (45.18%) respondents, 4-6 years for 169 (44.08%) respondents, 7-9 years for 21 (5.50%) respondents, 10-12 years for 13 (3.31%) respondents, more than 15 years for 4 (1.10%) and 13-15 years for 3 (0.83%) respondents, respectively. The offline shopping experiences, the range of 4-6 years is the highest amount for 149 (38.84%) respondents, more than 15 years for 127 (33.06%) respondents, 7-9 years for 67 (17.63%) respondents, 1-3 years for 16 (4.13%) respondents, 10-12 years for 13 (3.31%) respondents, and 13-15 years for 11 (3.03%) respondents, respectively.

Refer to income per month, the most of respondents earned 20,001-40,000 baht for 147 (38.29%), followed by 40,001-60,000 baht for 126 (32.78%) respondents, above than 100,000 baht for 32 (8.26%) respondents, less than or equal to 20,000 baht for 27 (7.17%) respondents, 80,001-100,000 baht for 26 (6.89%) respondents, and 60,001-80,000 baht for 25 (6.61%) respondents, respectively.

For domicile, the most of respondents is Bangkok Metropolitan for 145 (37.74%) respondents, Eastern for 92 (23.97%) respondents, Northeastern for 68 (17.63%) respondents, Central for 64 (16.80%) respondents, Northern for 9 (2.48%) respondents, Southern for 3 (0.83%) respondents, and minimal respondents fell in Western for 2 (0.55%) respondents, respectively.

In the online shopping channel, the most of respondents are Shopee for 191 (49.86%) respondents, Lazada for 169 (44.08%) respondents, JD.com and Other for 7 (1.93%) respondents, grab for 5 (1.10%) respondents, Lineman for 3 (0.82%) respondents, and minimal respondents fell in Facebook for 1 (0.28%) respondent, respectively.

Focusing on the purchase frequency, most of the respondents bought one time per month for 146 (38.02%) respondents, followed by one time per two weeks for 105 (27.27%) respondents,

one time per six months for 78 (20.39%) respondents, 1-3 times per week for 41 (10.74%) respondents, 4-6 times per week for 7 (1.93%) respondents, and every day for 6 (1.65%) respondents, respectively.

For the purchasing value per time, the most of respondents bought 1,001-5,000 baht for 255 (66.67%) respondents, 5,001-10,000 baht for 71 (18.45%) respondents, less than 1,000 baht for 34 (8.82%) respondents, and more than 10,000 baht for 23 (6.06%) respondents, respectively.

The purchasing of transaction location, the most of respondents bought at home for 316 (82.64%) respondents, at store/shop for 51 (13.22%) respondents, at the office for 13 (3.31%) respondents, and at others for 3 (0.83%) respondents, respectively.

In term of purchasing motivation, the most of respondents bought products because of product reliability for 196 (51.23%) respondents, product price for 117 (30.58%) respondents, product promotion for 60 (15.70%) respondents, aftersales service for 6 (1.38%) respondents, product needs for 3 (0.83%) respondents, and using requirements for 1 (0.28%) respondent, respectively.

On the other hand, the most of factors that prevent purchasing product are aftersales service is unsatisfactory for 169 (44.08%) respondents, unreliability of the product for 98 (25.62%) respondents, the price of the product is not reasonable for 62 (16.25%) respondents, and product promotion is not attractive for 54 (14.05%) respondents, respectively. In the overall of the customer satisfaction with OMNI channel is satisfied for 378 (98.62%) respondents and unsatisfied for 5 (1.38%) respondents.

4.2.2 Normality test

The normality test of large appliance related to skewness, kurtosis, and the normal distribution was declared in the table 4.17 based on seven Latin variables that included nineteen observed variables which are; product 3 observed variables (system, quality, information), satisfaction 4 observed variables (brand attachment, offline image, customer experience, brand experience), online trust 2 observed variables (trust, brand trust), offline trust 2 observed variables (trust, brand trust), online loyalty 2 observed variables (loyalty, brand loyalty), offline loyalty 2 observed variables (loyalty, brand loyalty), and sustainable consumption 4 observed variables (environment, social, economic, quality of life).

From the table 4.17, it was found that the product measured from 3 observed variables has skewness range from -0.254 to 0.282, and kurtosis range from -0.621 to -0.476. The satisfaction measured from 4 observed variables have skewness range from -0.177 to 0.093 and kurtosis range from -0.779 to -0.010. The online trust measured from 2 observed variables have skewness range from -0.155 to 0.113, and kurtosis range from -0.743 to 0.925. The offline trust measured from 2 observed variables have skewness range from -0.327 to 0.215 and kurtosis range from -0.452 to -0.002. The online loyalty measured from 2 observed variables have skewness range from 0.210 to 0.662 and kurtosis range from 0.022 to 0.112. The offline loyalty measured from 2 observed variables have skewness range from 0.217 to 0.459 and kurtosis range from -0.126 to 0.191. The sustainable consumption measured from 4 observed variables have skewness range from -0.542 to 0.170, and kurtosis range from -0.896 to 1.302.

All skewness and kurtosis outcomes in FMCG and Large Appliance are normal distribution because skewness is not more than 0.75, and kurtosis is not more than 1.5 (Hooland, 1998). The normal distribution data is appropriated for using confirmatory factor analysis (CFA) and structural equation model analysis (SEM). Therefore, the CFA and SEM analysis results are precise and correct because the observed variables are normal distribution.

Table 4.17 Normality test result (Large Appliance)

Latin Variable	Variable	Skewness	Kurtosis	Normal distribution
Product	PSA	0.282	-0.542	Pass
	PQ	-0.165	-0.621	Pass
	PI	-0.254	-0.476	Pass
Satisfaction	SBA	-0.177	-0.284	Pass
	SOI	0.022	-0.605	Pass
	SCE	0.093	-0.010	Pass
	SBE	-0.006	-0.779	Pass

Table 4.17 (Continue)

Latin Variable	Variable	Skewness	Kurtosis	Normal distribution
Online trust	ONTT	-0.155	0.925	Pass
	ONTB	0.113	-0.743	Pass
Offline trust	OFFT	0.215	-0.002	Pass
	OFFTB	-0.327	-0.452	Pass
Online loyalty	ONLL	0.662	0.022	Pass
	ONLB	0.210	0.112	Pass
Offline loyalty	OFFL	0.459	0.191	Pass
	OFFLB	0.217	-0.126	Pass
Sustainable consumption	SEn	0.170	-0.073	Pass
	SSo	-0.542	1.302	Pass
	SEc	-0.007	-0.687	Pass
	SQL	-0.121	-0.896	Pass

4.2.3 Correlation coefficient

The correlation coefficient was measured the stringency of the relationship between the relative motion of two variables. The large appliance result of the correlation coefficient was explained based on the analysis of seven laten variables, as shown in table 4.19.

Large appliance results showed the correlation coefficient value is not less than 0.30 (Nonglak, 2012). Therefore, this result implies that the proper variables for CFA analysis. In another way, the correlation coefficient is not over 0.80. Multicollinearity does not occur. It means the proper variables are ready for SEM analysis. The abbreviation of variables is in table 4.18 as below.

Table 4.18 The abbreviation of variables

Type of variable	Abbreviation	Meaning
Latent variables	Prod	Product
Observed variables	PSystem (PSA)	System
Observed variables	PQuality (PQ)	Quality
Observed variables	PInfo (PI)	Information
Latent variables	Satis	Satisfaction
Observed variables	SBAttach (SBA)	Brand attachment
Observed variables	SOffImage (SOI)	Offline image
Observed variables	SCusExp (SCE)	Customer experience
Observed variables	SBExp (SBE)	Brand experience
Latent variables	OnTrust	Online trust
Observed variables	OnTrust (ONTT)	Online trust
Observed variables	OnTrustB (ONTB)	Online brand trust
Latent variables	OffTrust	Offline trust
Observed variables	OffTrust (OFFT)	Offline trust
Observed variables	OffTrustB (OFFTB)	Offline brand trust
Latent variables	OnLoyalty	Online loyalty
Observed variables	OnLoyalty (ONLL)	Online loyalty
Observed variables	OnLoyaltyB (ONLB)	Online brand loyalty
Latent variables	OffLoyalty	Offline loyalty

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Table 4.18 (Continue)

Type of variable	Abbreviation	Meaning
Observed variables	OffLoyalty (OFFL)	Offline loyalty
Observed variables	OffLoyaltyB (OFFLB)	Offline brand loyalty
Latent variables	Sustain	Sustainable consumption
Observed variables	SEnv (SEn)	Environment
Observed variables	SSocial (SSo)	Social
Observed variables	SEconomic (SEc)	Economic
Observed variables	SQualityLife (SQL)	Quality of life

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Table 4.19 The result of correlation coefficient (Large Appliance)

Variable	Product	Satisfaction	Online trust	Offline trust	Online loyalty	Offline loyalty	Sustainability
Product	1						
Satisfaction	0.499**	1					
Online trust	0.485**	0.681**	1				
Offline trust	0.457**	0.662**	0.682**	1			
Online loyalty	0.466**	0.643**	0.581**	0.580**	1		
Offline loyalty	0.415**	0.576**	0.526**	0.526**	0.616**	1	
Sustainability	0.404**	0.564**	0.622**	0.648**	0.577**	0.578**	1

** . Correlation is significant at the 0.01 level (2-tailed).

4.2.4 Basic statistical values from descriptive data

The basic statistical values of the observed variables of each model are model 1: product, model 2: satisfaction, model 3: online trust, model 4: offline trust, model 5: online loyalty, model 6: offline loyalty, and model 7: sustainable consumption. This research proposes an analysis of this basic statistical data one by one as follows.

4.2.4.1 Basic statistical values of Product

Model 1: Product has 9 questions in total, consisting of 3 observed variables as (1) System, there is 3 questions, the mean is 4.169, the standard deviation is 0.417 with the skewness is a high level, right-skew curve. (2) Quality, there is 3 questions, the mean is 4.241, the standard deviation is 0.54, with the skewness is a high level, left-skew curve. (3) Information there is 3 questions, the mean is 4.265, the standard deviation is 0.532 with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is -0.542, -0.621 and -0.476 respectively. The three variables were platykurtic, which means that this set of data is highly distributed, the system is the most average variable as detailed in table 4.20.

Table 4.20 Product statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Product	PSystem	4.169	0.417	0.282	-0.542
	PQuality	4.241	0.540	-0.165	-0.621
	PInfo	4.265	0.532	-0.254	-0.476
	Overall	4.225	0.400	0.147	-0.388

4.2.4.2 Basic statistical values of Satisfaction

Model 2: Satisfaction has 12 questions in total, consisting of 4 observed variables as (1) Brand attachment, there is 3 questions, the mean is 4.051, the standard deviation is 0.54 with the skewness is a high level, left-skew curve. (2) Offline image, there is 3 questions, the mean is 4.015, the standard deviation is 0.56, with the skewness is a high level, right-skew curve. (3) Customer experience there is 3 questions, the mean is 4.062, the standard deviation is 0.465 with the skewness is a high level, right-skew curve. (4) Brand experience there is 3 questions, the mean is 4.107, the standard deviation is 0.458 with the skewness is a high level, left-skew curve. The kurtosis of the

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three sub-variables is -0.284, -0.605, -0.01 and -0.779 respectively. The three variables were platykurtic, which means that this set of data is highly distributed, and the brand experience is the most average variable as detailed in table 4.21.

Table 4.21 Satisfaction statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Satisfaction	SBAAttach	4.051	0.540	-0.177	-0.284
	SOffImage	4.015	0.560	0.022	-0.605
	SCusExp	4.062	0.465	0.093	-0.010
	SBExp	4.107	0.543	-0.006	-0.779
	Overall	4.059	0.458	0.312	-0.415

4.2.4.3 Basic statistical values of Online trust

Model 3: Online trust has 7 questions in total, consisting of 2 observed variables as (1) Trust, there is 3 questions, the mean is 3.973, the standard deviation is 0.484 with the skewness is a high level, left-skew curve. (2) Brand trust, there is 3 questions, the mean is 3.978, the standard deviation is 0.631, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is 0.925, and -0.743. The three variables were platykurtic, which means that this data set is highly distributed, and the Brand trust is the most average variable as detailed in table 4.22.

Table 4.22 Online trust statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Online trust	OnTrust	3.973	0.484	-0.155	0.925
	OnTrustB	3.978	0.631	0.113	-0.743
	Overall	3.976	0.530	0.170	-0.434

4.2.4.4 Basic statistical values of Offline trust

Model 4: Offline trust has 7 questions in total, consisting of 2 observed variables as (1) Trust, there is 3 questions, the mean is 3.864, the standard deviation is 0.558 with the skewness is a high level, right-skew curve. (2) Brand trust, there is 3 questions, the mean is 4.075, the standard deviation is 0.592, with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is -0.002, and -0.452. The three variables were platykurtic, which means that this data set is highly distributed, and the Brand trust is the most average variable as detailed in table 4.23.

Table 4.23 Offline trust statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Offline trust	OffTrust	3.864	0.558	.215	-.002
	OffTrustB	4.075	0.592	-.327	-.452
		3.970	0.547	-.001	-.309

4.2.4.5 Basic statistical values of Online loyalty

Model 5: Online loyalty has 7 questions in total, consisting of 2 observed variables as (1) Loyalty, there is 3 questions, the mean is 4.03, the standard deviation is 0.486 with the skewness is a high level, right-skew curve. (2) Brand loyalty, there is 3 questions, the mean is 3.82, the standard deviation is 0.56, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is 0.022, and 0.112. The three variables were platykurtic, which means that this set of data is highly distributed, and the loyalty is the most average variable, as detailed in table 4.24.

Table 4.24 Online loyalty statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Online loyalty	OnLoyalty	4.030	0.486	0.662	0.022
	OnLoyaltyB	3.820	0.560	0.210	0.112
	Overall	3.925	0.495	0.410	-0.174

4.2.4.6 Basic statistical values of Offline loyalty

Model 6: Offline loyalty has 7 questions in total, consisting of 2 observed variables as (1) Loyalty, there is 3 questions, the mean is 4.022, the standard deviation is 0.49 with the skewness is a high level, right-skew curve. (2) Brand loyalty, there is 3 questions, the mean is 3.865, the standard deviation is 0.598, with the skewness is a high level, right-skew curve. The kurtosis of the three sub-variables is 0.191, and -0.126. The three variables were platykurtic, which means that this set of data is highly distributed, and the loyalty is the most average variable as detailed in table 4.25.

Table 4.25 Offline loyalty statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
	OffLoyalty	4.022	0.490	0.459	0.191
Offline loyalty	OffLoyaltyB	3.865	0.598	0.217	-0.126
	Overall	3.944	0.522	0.446	-0.045

4.2.4.7 Basic statistical values of Sustainable Consumption

Model 7: Sustainable consumption has 11 questions in total, consisting of 4 observed variables as (1) Environment, there is 3 questions, the mean is 3.869, the standard deviation is 0.647 with the skewness is a high level, right-skew curve. (2) Social, there is 3 questions, the mean is 3.957, the standard deviation is 0.613, with the skewness is a high level, left-skew curve. (3) Economic, there is 3 questions, the mean is 4.321, the standard deviation is 0.518 with the skewness is a high level, left-skew curve. (4) Quality of life, there is 2 questions, the mean is 4.404, the standard deviation is 0.506 with the skewness is a high level, left-skew curve. The kurtosis of the three sub-variables is -0.073, 1.302, -0.687, and -0.896 respectively. The three variables were platykurtic, which means that this set of data is highly distributed, and the economic is the most average variable as detailed in table 4.26.

Table 4.26 Sustainable consumption statistical values

Latent variables	Observed variables	Mean	SD	Skewness	Kurtosis
Sustainable consumption	SEnv	3.869	0.647	0.170	-0.073
	SSocial	3.957	0.613	-0.542	1.302
	SEconomic	4.321	0.518	-0.007	-0.687
	SQualityLife	4.404	0.506	-0.121	-0.896
	Overall	4.138	0.469	0.136	0.038

4.2.5 Confirmatory Factor Analysis (CFA)

The model of OMNI business sustainability has a total of 60 questions to determine the construct validity or altitude straightness with affirmative analysis. Confirmatory Factor Analysis (CFA) is to verify the consistency of the model of OMNI business sustainability, which are integral to whether are consistent with empirical data of (1) Product (2) Satisfaction (3) Online trust (4) Offline trust (5) Online loyalty (6) Offline loyalty, and (7) Sustainable consumption.

The statistics in this research used to verify the consistency between the research hypothesis model and the empirical data (Goodness of Fit Measures) by using accepted benchmarks (Hair et al., 2006) as follows:

1. Chi-Square Statistics was no statistical significance ($p > 0.05$), indicating that the research hypothesis model was consistent with the empirical data.
2. Goodness of Fit Index (GFI) is between 0 and 1. If the value approaches 1, the research hypothesis model is consistent with the empirical data. The value of GFI index should be 0.90 and above.
3. Comparative Fit Index (CFI) is between 0 and 1. If the value approaches 1, the research hypothesis model is consistent with the empirical data. The value of GFI index should be 0.90 and above.
4. Adjusted Goodness-of-Fit Index (AGFI) has the same properties as the GFI index. It has a value between 0 and 1. If the value approaches 1, it indicates a hypothetical pattern. The research is consistent with empirical data, the AGFI index should be 0.90 and above.
5. Root Mean Square Residual (RMR) measures the error of the conceptual framework in the form of the mean square, and the value should be lower 0.05.

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6. Root Mean Square Error of Approximation (RMSEA) indicates the pattern generated is consistent with the empirical data, and the value should be lower 0.05.

4.2.5.1 Confirmatory Factor Analysis: Product variable

For the assumed validity analysis results for Model 1: Product with Confirmatory Factor Analysis (CFA) of three variables: system, quality, and information. The analysis results in figure 4.11, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 0, df was equal to 0 because it was a saturated model. Goodness of Fit Index (GFI) was 1. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the quality had the highest factor weight value at 0.99, followed by information and system with factor weight value at 0.60 and 0.35, respectively.

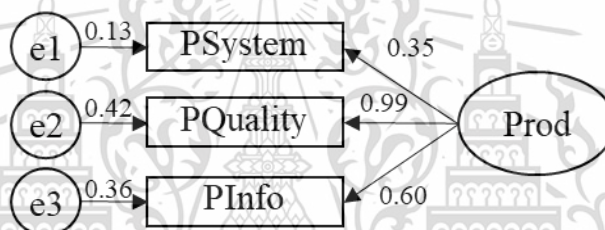


Figure 4.11 Large Appliance Product variable

4.2.5.2 Confirmatory Factor Analysis: Satisfaction variable

For the assumed validity analysis results for Model 2: Satisfaction with Confirmatory Factor Analysis (CFA) of four variables: brand experience, and customer experience, offline image, and brand attachment. The analysis results in figure 4.12, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 6.753, df was equal to 2 because it was a saturated model. Goodness of Fit Index (GFI) was 0.991. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the offline image had the highest factor weight value at 0.93, followed by customer experience, brand experience, and brand attachment with factor weight value at 0.63, 0.62, and 0.56, respectively.

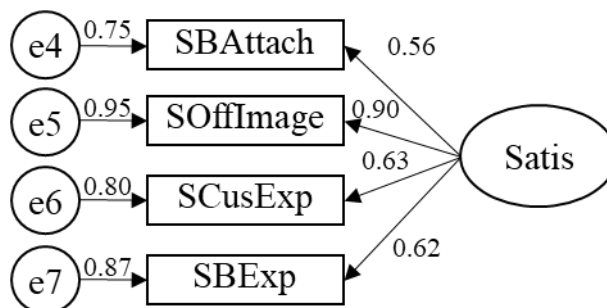


Figure 4.12 Large Appliance Satisfaction variable

4.2.5.3 Confirmatory Factor Analysis: Online trust variable

For the assumed validity analysis results for Model 3: Online trust with Confirmatory Factor Analysis (CFA) of two variables: trust, and brand trust. The analysis results in figure 4.13, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 0.129, df was equal to 1 because it was a saturated model. Goodness of Fit Index (GFI) was 1. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the trust had the highest factor weight value at 0.83, followed by brand trust with factor weight value at 0.78.

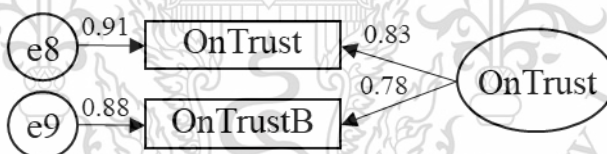


Figure 4.13 Large Appliance Online trust variable

4.2.5.4 Confirmatory Factor Analysis: Offline trust variable

For the assumed validity analysis results for Model 4: Offline trust with Confirmatory Factor Analysis (CFA) of two variables: trust, and brand trust. The analysis results in figure 4.14, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 7.162, df was equal to 1 because it was a saturated model. Goodness of Fit Index (GFI) was 0.99. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the brand trust had the highest factor weight value at 0.92, followed by trust with factor weight value at 0.88.

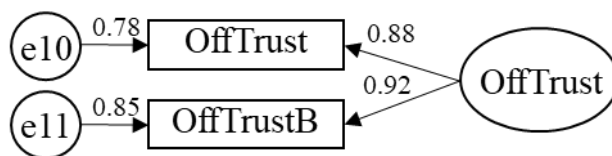


Figure 4.14 Large Appliance Offline trust variable

4.2.5.5 Confirmatory Factor Analysis: Online loyalty variable

For the assumed validity analysis results for Model 5: Offline loyalty with Confirmatory Factor Analysis (CFA) of two variables: loyalty, and brand loyalty. The analysis results in figure 4.15, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 133.067, df was equal to 8 because it was a saturated model. Goodness of Fit Index (GFI) was 0.889. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the brand loyalty had the highest factor weight value at 0.9, followed by loyalty with factor weight value at 0.87.

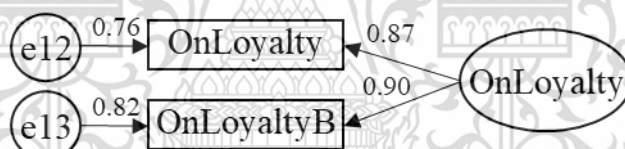


Figure 4.15 Large Appliance Online loyalty variable

4.2.5.6 Confirmatory Factor Analysis: Offline loyalty variable

The assumed validity analysis results for Model 6: Offline loyalty with Confirmatory Factor Analysis (CFA) of two variables: loyalty, and brand loyalty. The analysis results in figure 4.16, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 20.095, df was equal to 1 because it was a saturated model. Goodness of Fit Index (GFI) was 0.974. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the brand loyalty had the highest factor weight value at 0.93, followed by loyalty with factor weight value at 0.90.

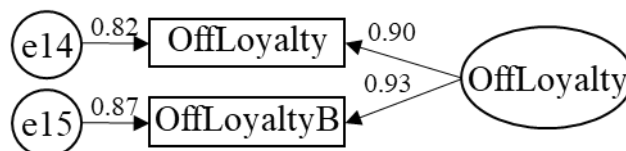


Figure 4.16 Large Appliance Offline loyalty variable

4.2.5.7 Confirmatory Factor Analysis: Sustainable consumption variable

For the assumed validity analysis results for Model 7: Sustainable consumption with Confirmatory Factor Analysis (CFA) of four variables: environment, social, economic, and quality of life. The analysis results in figure 4.17, it was found that the structure was consistent with the empirical data, considering the Chi-Square was 93.725, df was equal to 2 because it was a saturated model. Goodness of Fit Index (GFI) was 0.885. Considering factor loading, it was found that the factor weight was statistically significant level at 0.05. Therefore, the environment had the highest factor weight value at 0.80, followed by social, quality of life, and economic with factor weight value at 0.77, 0.73, and 0.69, respectively.

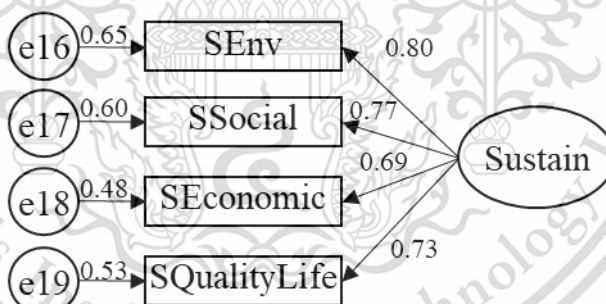


Figure 4.17 Large Appliance Sustainable consumption variable

4.2.6 The Structure Equation Model (SEM) of OMNI business sustainability in a consumer perspective

The model of OMNI business sustainability in a consumer perspective has been conducted to study the causal relationship which effecting the Sustainable consumption by focusing the relationship between product (Prod) which includes system (PSystem), quality (PQuality), and information (PInfo), satisfaction (Satis) which includes brand attachment (SBAttach), offline image (SOffImage), customer experience (SCusExp), and brand experience (SBExp), online trust, which

includes trust (OnTrust), and brand trust (OnTrustB), offline trust, which includes trust (OffTrust), and brand trust (OffTrustB), online loyalty which includes loyalty (OnLoyalty), and brand loyalty (OnLoyaltyB), offline loyalty which includes loyalty (OffLoyalty), and brand loyalty (OffLoyaltyB), and lead to sustainable consumption (Sustain) which includes environment (SEnv), social (SSocial), economic (SEconomic), and quality of life (SQualityLife).

AMOS Model was used in this model analysis to test the empirical data and model by the Structural Equation Model Analysis (SEM).

For multicollinearity, the model consisted of 19 observed variables with a moderate positive correlation ($r < 0.80$), which could not generate multicollinearity. Therefore, it is unnecessary to discharge the observed variables from the AMOS Model Analysis (Leahy, 2001).

Structural Equation Modeling (SEM) was tested the model of hypothesis. The series of structural equations propose the causal relationships by the SEM approach, and then tested simultaneously to impose how optimize the model representation.

4.2.6.1 The measurement model of OMNI business sustainability

The seven dimensions in this study include product (Prod), satisfaction (Satis), online trust, offline trust, online loyalty, offline loyalty, and sustainable consumption (Sustain). For the initial model in figure 4.18 The large appliance model of OMNI business sustainability (Before) represented seven latent variables and nineteen observed variables that showed the model of OMNI business sustainability (Large Appliance) does not fit well. Therefore, the model was modified by using the AMOS program for the model improvement.

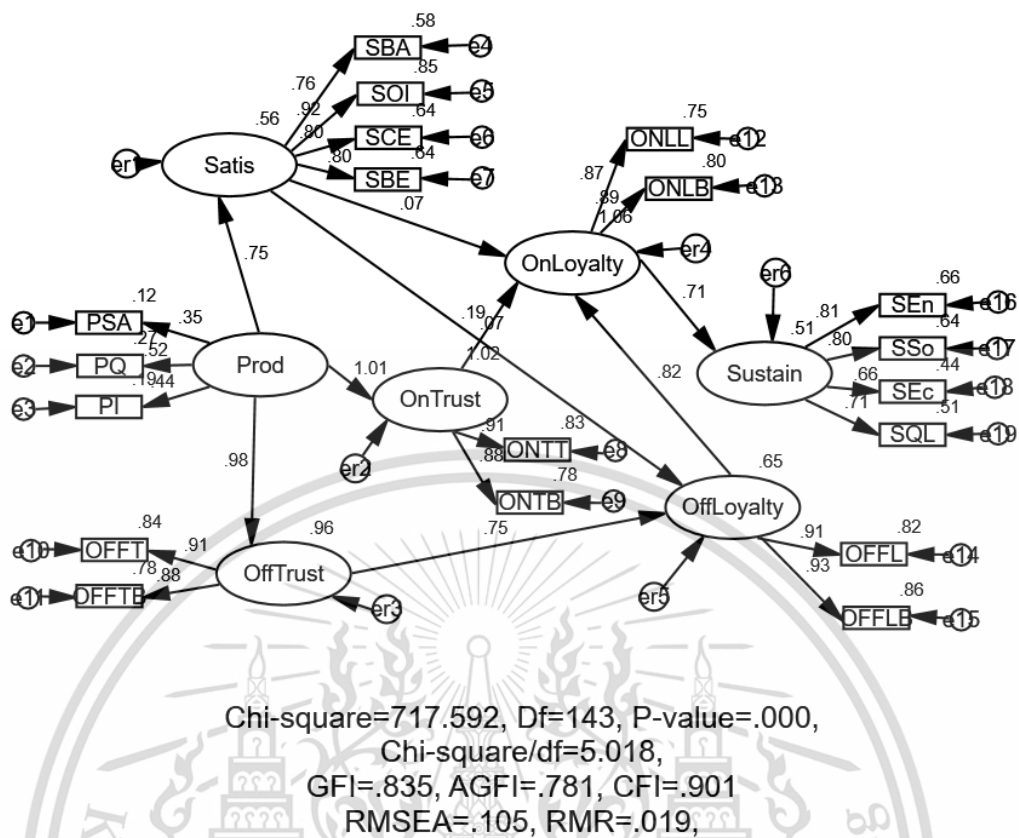


Figure 4.18 The large appliance model of OMNI business sustainability (Before)

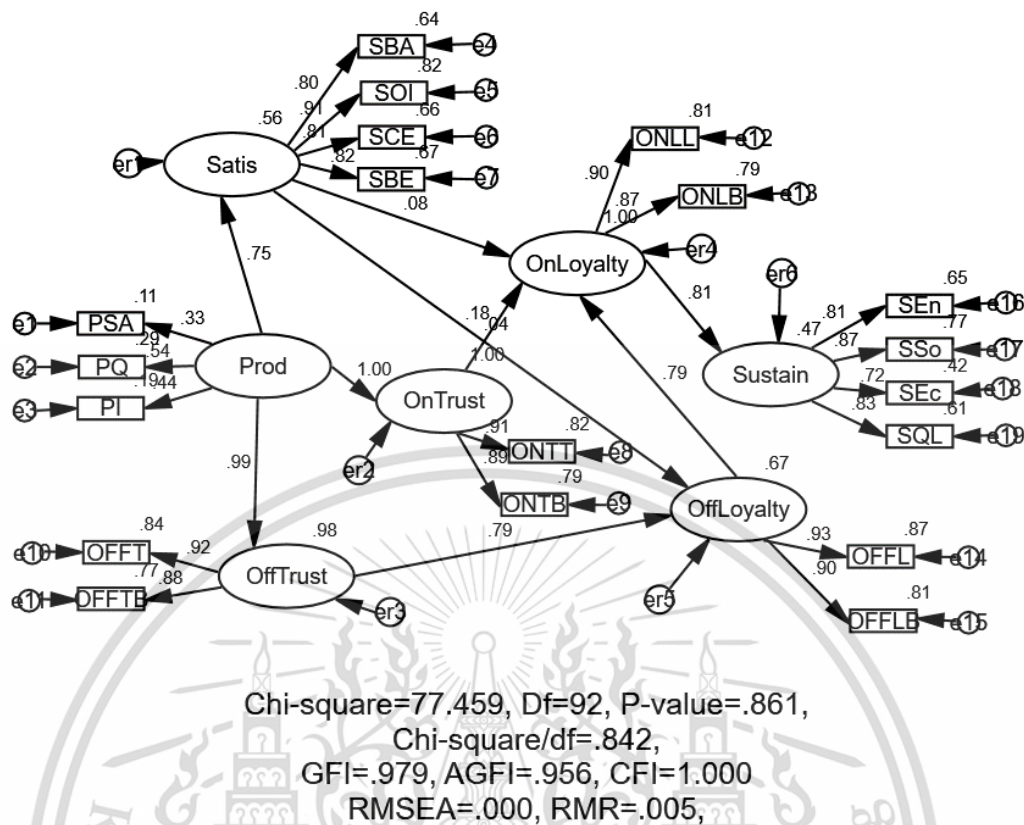


Figure 4.19 The large appliance model of OMNI business sustainability (After)

According to figure 4.19, the Overall Model Fit Measure of CFA results (after adjusting the model) shown that Chi-square is equal to 77.459 with probability level is more than 0.05, and Chi-square/df is equal to 0.842 which is less than 3.00 that mean accepted value. Moreover, the accepted Index range is greater than 0.9 which are GFI = 0.979, AGFI = 0.956, and CFI = 1.000 found that all is passed the criteria. The accepted Index range is lower than 0.05, which are RMSEA = 0.000 and RMR = 0.005 found that all is passed the criteria.

The model comparison before adjusting, the empirical data does not fit well in the model. The Chi-square/df is equal to 5.018, which is higher than 3.00, which means not passing the criteria. Moreover, the accepted Index range is lower than 0.05, which is only RMR = 0.019 that passed the criteria but RMSEA = 0.105 found that is not passed the criteria. However, the accepted Index range is greater than 0.9 which is only CFI = 0.901 is passed the criteria but GFI = 0.835, and AGFI = 0.781 found that is not passed the criteria. All the mentioned details were indicated in table 4.27.

Table 4.27 The overall measurement model of OMNI business sustainability (Large Appliance)

Indices	Criteria	Statistic values	
		Before	After
1. P-value	> 0.05	0.000	0.861
2. λ^2/df	< 2.00	5.018	0.842
3. GFI	> 0.90	0.835	0.979
4. AGFI	> 0.90	0.781	0.956
5. CFI	> 0.90	0.901	1.000
6. RMSEA	< 0.05	0.105	0.000
7. RMR	< 0.05	0.019	0.005
Conclusion		Model does not fit	Model fit

4.2.7 Hypothesis Testing

The AMOS model analysis technique tested all the hypotheses in this research, which was performed by comparing the t-statistic with a t-table of 1.95 (significance at 0.05). The outcomes of hypothesis testing are shown in table 4.28 below.

Table 4.28 Result of the hypothesis testing

Hypothesis Testing	DE	Result
H1: Product => Satisfaction	0.747	Accept
H2: Product => Online trust	0.998	Accept
H3: Product => Offline trust	0.991	Accept
H4: Satisfaction => Online loyalty	0.112	Accept
H5: Satisfaction => Offline loyalty	0.038	Reject
H6: Online trust => Online loyalty	0.179	Accept
H7: Offline trust => Offline loyalty	0.788	Accept
H8: Offline loyalty => Online loyalty	0.793	Accept
H9: Online loyalty => Sustainable consumption	0.812	Accept

From Table 4.28 above, the interpretation of the hypothesis testing results on the seven Latin variables in this research is explained as follows.

4.2.7.1 Hypothesis1 (H1): Product has a positive influence on Satisfaction

The result of hypothesis testing showed that product has a significant direct effect on satisfaction of OMNI business, which provides the causal relationship value at 0.747. Therefore, this testing can explain that is a higher product would bring higher satisfaction. According to this hypothesis result, product has a positive influence on satisfaction, is accepted.

4.2.7.2 Hypothesis2 (H2): Product has a positive influence on Online trust

The result of hypothesis testing showed that product directly affects the online trust of OMNI business, which provides the causal relationship value at 0.998. Therefore, this testing can explain that a higher product would bring higher online trust. According to this hypothesis result, product has a positive influence on online trust, is accepted.

4.2.7.3 Hypothesis3 (H3): Product has a positive influence on Offline trust

The result of hypothesis testing showed that product directly affects OMNI business's offline trust, which provides the causal relationship value at 0.991. Therefore, this testing can explain that a higher product would bring higher offline trust. According to this hypothesis result, product has a positive influence on offline trust, is accepted.

4.2.7.4 Hypothesis4 (H4): Satisfaction has a positive influence on Online loyalty

The result of hypothesis testing showed that the satisfaction directly affects the online loyalty of the OMNI business, which provides the causal relationship value at 0.112. Therefore, this testing can explain that is a higher satisfaction would bring higher online loyalty. According to this hypothesis result, satisfaction has a positive influence on online loyalty, is accepted.

4.2.7.5 Hypothesis5 (H5): Satisfaction has a positive influence on Offline loyalty

The result of hypothesis testing showed that the satisfaction has an insignificant direct effect on OMNI business 's offline loyalty, which provides the causal relationship value at 0.038. Therefore, this testing can explain the hypothesis that is a higher satisfaction would bring lower offline loyalty or a lower satisfaction would bring higher offline loyalty. According to this hypothesis result, satisfaction has a positive influence on offline loyalty, which is rejected.

4.2.7.6 Hypothesis6 (H6): Online trust has a positive influence on Online loyalty

The result of hypothesis testing showed that the online trust directly affects the online loyalty of the OMNI business, which provides the causal relationship value at 0.179. Therefore, this testing can explain that is a higher online trust would bring higher online loyalty. According to this hypothesis result, online trust has a positive influence on online loyalty, is accepted.

4.2.7.7 Hypothesis7 (H7): Offline trust has a positive influence on Offline loyalty

The result of hypothesis testing showed that the offline trust directly affects the offline loyalty of the OMNI business, which provides the causal relationship value at 0.788. Therefore, this testing can explain that is a higher offline trust would bring higher offline loyalty. According to this hypothesis result, offline trust has a positive influence on offline loyalty, is accepted.

4.2.7.8 Hypothesis8 (H8): Offline loyalty has a positive influence on Online loyalty

The result of hypothesis testing showed that the offline loyalty directly affects the online loyalty of the OMNI business, which provides the causal relationship value at 0.793. Therefore, this testing can explain that is a higher offline loyalty would bring higher online loyalty. According to this hypothesis result, offline loyalty positively influences online loyalty, which is accepted.

4.2.7.9 Hypothesis9 (H9): Online loyalty has a positive influence on Sustainable consumption

The result of hypothesis testing showed that the online loyalty directly affects the sustainable consumption of the OMNI business, which provides the causal relationship value at 0.812. Therefore, this testing can explain that is a higher online loyalty would bring higher sustainable consumption. According to this hypothesis result, online loyalty has a positive influence on sustainable consumption, is accepted.

4.2.8 Direct effects, and indirect effects

The content of direct effects, and indirect effects of variables on the model of the OMNI business in large appliance which is summarized as follows.

4.2.8.1 Direct effects

As the results from table 4.29, the six variables, which have a positive direct effect on the model of the OMNI business in large appliance, include online loyalty with coefficient at 0.812.

4.2.8.2 Indirect effects

The five variables, which have a positive indirect effect on the model of the OMNI business in large appliance, include product, satisfaction, online trust, offline trust, and offline loyalty with coefficient at 0.698, 0.067, 0.145, 0.507, and 0.644, respectively as show in the table 4.29 and figure 4.20 as see more details in Appendix H.

Table 4.29 Large appliance: Direct effects, indirect effects, and total effects

Variable	Direct Effects	Indirect Effects	Total Effects
Product		0.698	0.698
		(0.747*0.082*0.812)+ (0.998*0.179*0.812)+ (0.991*0.788*0.793* 0.812)	
Satisfaction		0.067	0.067
		(0.082*0.812)	
Online Trust		0.145	0.145
		(0.179*0.812)	
Offline Trust		0.507	0.507
		(0.788*0.793*0.812)	
Online loyalty	0.812		0.812
Offline loyalty		0.644	0.644
		(0.793*0.812)	

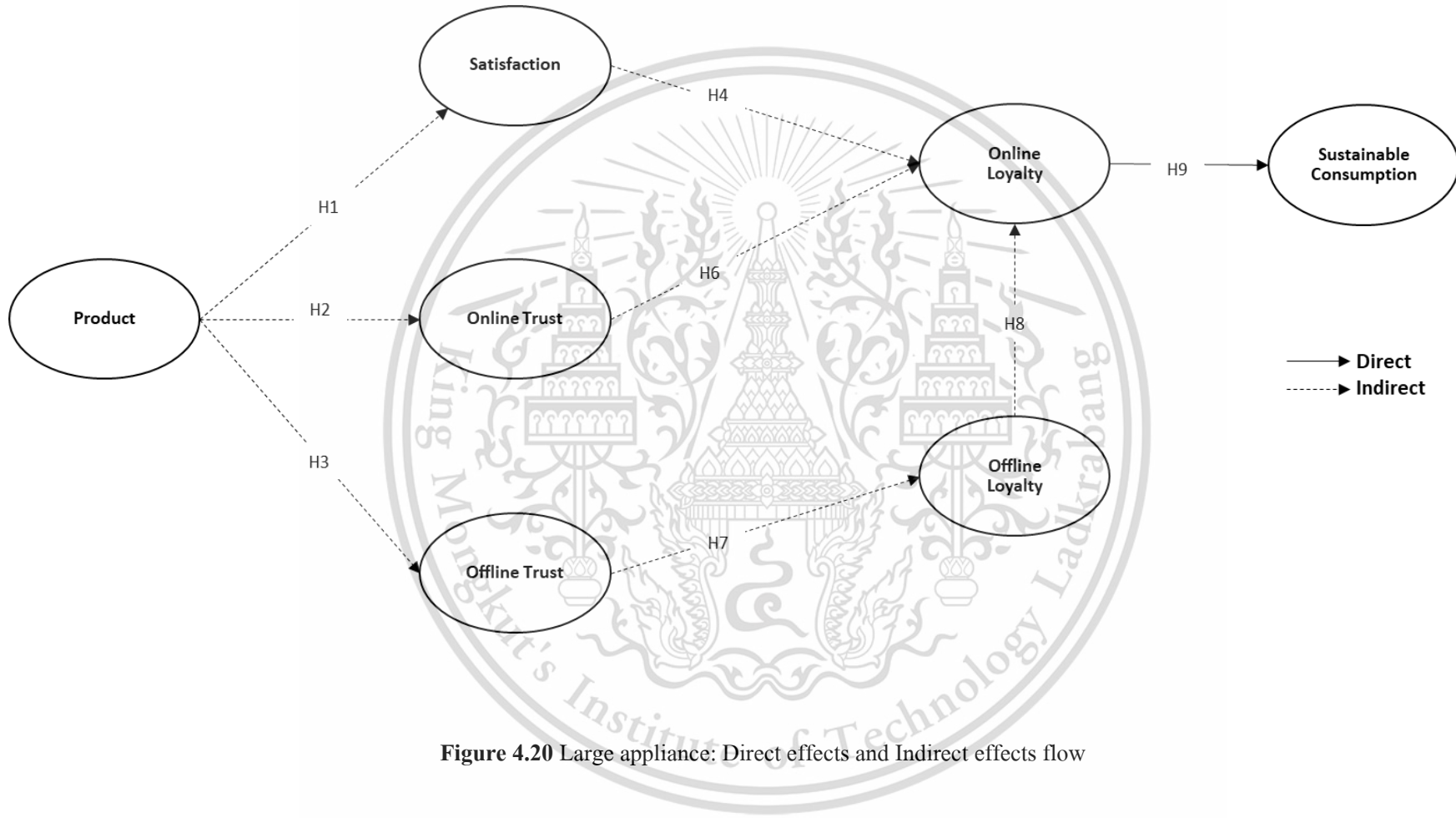


Figure 4.20 Large appliance: Direct effects and Indirect effects flow

CHAPTER 5

CONCLUSIONS AND DISCUSSIONS

The objective of the research on "The model of OMNI business sustainability: Consumer Perspectives" is mainly to 1) to develop the strategy model of OMNI business sustainability focus on consumer perspectives, 2) to expand the sustainable consumption of academic practice in OMNI businesses, 3) to endorse and explore the relevant theories of the research, and 4) to investigate the direct, indirect, and combined influence of variables on OMNI business sustainability in the perspective of consumers.

This research consisted of seven latent variables and 19 observed variables. This research's sampling size was used a total of 772 participants by separating data collection into two-product groups. Firstly, targeting on fast-moving consumer goods (FMCG) came from 389 participants and large appliance with 383 participants. Descriptive statistics through the Statistical Package for Social Science (SPSS) program was used to analyze and explain social-demographic data. In the testing of models and hypotheses presented by a confirmation factor analysis (CFA) and the structural equation model (SEM) through Analysis of Moment Structures (AMOS) program was used to test the model. Therefore, this study can develop and compare the strategy model of OMNI business sustainability from consumer perspective among fast-moving consumer goods (FMCG) and large appliances, which can summarize research findings, discuss results, present theoretical effects and practice including recommendations as follows.

5.1 Conclusions

This study is summarized with the model of OMNI business sustainability: consumer perspectives with two categories, as follows.

In terms of FMCG target respondents' characteristics, this survey has most respondents were female (60.16%), from the age group of 23-40 years old (62.87%). Most of them were bachelor's degrees (51.22%). The employee occupied the highest amount (66.70%) and earned income from 40,001-60,000 baht per month (23.31%). The range of 4-6 years of the online

shopping experiences is the highest (41.46%). The offline shopping experiences, the range of more than 15 years is the highest amount (67.75%).

Most respondents were Bangkok metropolitan (73.98%) with the most online shopping channel, is Shopee (48.78%). In terms of the purchase frequency, most of the respondents bought one time per month (38.75%) with the purchasing value about 1,001-5,000 baht (54.74%). Most of the respondents bought at home (65.31%) with the purchasing motivation because of product promotion (37.67%). On the other hand, the most important factor that prevent purchasing product is the unreliability of the product (49.05%). Overall, customer satisfaction with OMNI channel in FMCG is satisfied (100.00%).

According to the model of OMNI business sustainability: consumer perspectives, the analysis of SEM found on measuring overall model fit (after adjusting model) through AMOS, Chi-square differs from zero, which was statistically insignificant at 0.05 with the established criteria (Chi-square = 66.679; df = 57; CFI = 0.998; RMR = 0.006; RMSEA = 0.021; Chi-square/DF = 1.17).

As a result, it was shown that the model was consistent with the empirical data. In other words, the validity was consistent with statistical values. Considering the model fit index, the Goodness of Fit (GFI) was 0.981, and Adjust Goodness of Fit (AGFI) was 0.938. GFI and AGFI were greater than 0.90, which means that the model is empirically consistent, especially when the value is close to 1.

Furthermore, the Root Mean Square Error of Approximation value (RMSEA) was equal to 0.021, which was less than 0.05, which means that the model was quite consistent with the empirical data. Considering the relative Chi-square, Chi-square per degrees of freedom (CMIN/DF) was 1.170, which was less than 3. All indices passed the criteria. In the overall pattern of OMNI business sustainability: consumer perspective, there is a factor loading of observed variables ranging from 0.587 to 0.922 with statistically significant at 0.05 and found that the residual errors ranged from 0.284 to 0.850.

In terms of characteristics of large appliance target respondents, this survey has most respondents were female (50.69%), from the age group of 23-40 years old (53.44%). Most of them were bachelor's degrees (65.65%). The employee occupied the highest amount (56.75%) and earned income from 20,001-40,000 baht per month (38.29%). The range of 1-3 years of the online

shopping experiences is the highest (45.18%). The offline shopping experiences, the range of 4-6 years is the highest amount (38.84%).

Most respondents are Bangkok metropolitan (37.74%) with the most online shopping channel, is Shopee (49.86%). In terms of the purchase frequency, most of the respondents bought one time per month (38.02%) with the purchasing value about 1,001-5,000 baht (66.67%). Most of the respondents bought at home (82.64%) with the purchasing motivation because of product reliability (51.23%). On the other hand, the most important factor that prevent purchasing product is the unsatisfaction on aftersales service (44.08%). Overall, customer satisfaction with OMNI channel in large appliance is satisfied (98.62%).

According to the model of OMNI business sustainability: consumer perspectives, the analysis of SEM found on measuring overall model fit (after adjusting model) through AMOS, Chi-square differs from zero, which was statistically insignificant at 0.05 shown with the established criteria (Chi-square = 77.459; df = 92; CFI = 1.000; RMR = 0.005; RMSEA = 0.000; Chi-square/DF = 0.842).

As a result, it was shown that the model was consistent with the empirical data. In other words, the validity was consistent with statistical values. Considering the model fit index, the Goodness of Fit (GFI) was 0.979, and Adjust Goodness of Fit (AGFI) was 0.956. GFI and AGFI were greater than 0.90, which means that the model is empirically consistent, especially when the value is close to 1.

Furthermore, the Root Mean Square Error of Approximation value (RMSEA) was equal to 0.000 which was less than 0.05, which means that the model was quite consistent with the empirical data. Considering the relative Chi-square, Chi-square per degrees of freedom (CMIN/DF) was 0.842, which was less than 3. All indices passed the criteria. In the overall pattern of the model of OMNI business sustainability: consumer perspectives, there is a factor loading of observed variables range from 0.355 to 0.990 with statistically significant at 0.05 and found that the residual errors ranged from 0.126 to 0.948.

5.1.1 The sustainable consumption of academic practice in OMNI business.

The results of this study show that the variables observed in the conceptual framework were proven based on statements proposed by the IS Success Model (DeLone & McLean, 2003), the Loyalty Model (Oliver, 1999), and Sustainable consumption (The United Nations Environment

Programme, 2010. and Balderjahn et al., 2013). This study examined the direct effects of observed variables related to sustainable consumption. The key factors influencing sustainable consumption are attitudes, values, norms, intentions, motivations and beliefs. In addition, the key variable under the consumer perspective that can prove positively correlated with the framework of Omni business sustainability is quality of life which is considered a necessary factor for the lives of today's consumers highly.

5.1.2 The direct, indirect, and combined influence of variables on OMNI business sustainability from the perspective of consumers.

This study found It is unlikely that there will be a direct influence between online and offline channels. In today's circumstances, this can only happen through indirect influence. It arises from a product group that has a simple physical appearance, a product that is not difficult to replace, and use the principles of consideration to make uncomplicated purchase decisions.

Another point of view of consumers, product group with complex physical characteristics, irreplaceable products, and must use the principles of consideration in order to make a careful purchase decision. Even if the satisfaction in the product but building loyalty and sustainability can be quite difficult.

5.1.3 The strategy model of OMNI business sustainability from the consumer perspective.

The perspective of consumers often places value and well-being that are important. Therefore, entrepreneurs should promote and stimulate various factors. It focuses on product, satisfaction, trust and loyalty both online and offline, and emphasizing on understanding and listening to opinions about customer needs in order to develop products and services. These strategies will enable entrepreneurs to continue to grow according to the changing needs of customers and lead to sustainable consumption.

5.2 Discussions

The OMNI business sustainability in consumer perspectives conceptual framework in this research was proposed by references from theories, articles, and reports. It is consisted of and is presented in Chapter 2, literature review. Therefore, the seven hypotheses were proposed in the research framework.

Moreover, the causal relationship between the variables studied and tested the hypothesis was completed, and the results were presented in Chapter 4. In this section, a more detailed discussion of the hypotheses obtained in this study can be described as follows.

5.2.1 Fast Moving Consumer Goods (FMCG)

5.2.1.1 The Influence of Product on Satisfaction

The study results showed that the system, quality, and information of products has a significant direct effect on satisfaction at a 0.05 statistical significance level, which provides the causal relationship value of 0.803. This research found that the best way to provide positive comfort is to sufficient and appropriate information, product quality, good purchasing management system which can be used to increase the chances of purchasing products (Kuan et al., 2005). Information technology is the key to driving the dynamics of retail and resurrecting another channel of online retail (Kennedy and Coughlan, 2006). While developing the quality of services and expanding efficient consumer products will make them known to the customers (Chen et al., 2015). Therefore, increasing the customer satisfaction level will have a positive effect on the image of the customers. Customers deserve a high quality of products and services that will contribute to a better image (Pappu and Quester, 2006). This is because multi-channel retailers can also take advantage of a positive store image and good performance evaluation (Kwon and Lennon, 2009b). Supportively, it was stated by Vegholm (2011).

Entrepreneurs have to keep up with the market developments as this is an essential part of customer satisfaction studies to understand the modern market and differentiate it from competitors. Moreover, they must strive to fulfill customer needs and expectations by adding value perceived through marketing strategies. These things can satisfy customers (Kaptanoglu and Yukselen, 2020). Entrepreneurs must improve the quality of products due to impacts the customer satisfaction in both online and offline platforms (Sirait et al., 2020).

5.2.1.2 The Influence of Product on Online Trust

The result of hypothesis testing showed that the system, quality, and information of product has a significant direct effect on online trust at 0.05 statistical significance level, which provides the causal relationship value of 0.978. This research found that Most people often shared, rated, and commented on the general information on the internet. It can influence perceptions about service, quality, value, and satisfaction (Gutiérrez et al., 2013). The quality of good products and services will directly or indirectly affect satisfaction (Muhammad et al., 2016). Thus, it should be careful about the quality of products and services to make customers trust and feel security and privacy while using the online service (Rust and Kannan, 2002). Brand credibility is a technique for building the willingness and ability to keep promises and meet consumer needs and a good intention of consumer interests and welfare (Azize et al., 2011). Therefore, in a multi-channel retail environment, customers are more likely to trust a tangible brand. Documents between behavioral intention and retail brand trust for multi-channel retailers can be examined (Bock et al., 2012). Accumulation of cumulative trust results from the customer receiving the same good experience as the original capital and increasing the positive experience continuously (YuSheng and Ibrahim, 2019).

5.2.1.3 The Influence of Product on Offline Trust

This study revealed that the system, quality, and information of the product have a significant direct effect on offline trust at 0.05 statistical significance level, which provides the causal relationship value of 0.987. This study found that creating a user-friendly ordering management system can create a positive perception of the products and services' realism and feasibility, availability of products and their promotional values (Li et al., 2015). Entrepreneurs must improve the ability of staffs about customers' product knowledge to ensure that customers will receive accurate information about products and services (Sirait et al., 2020). The system has an interesting approach, enhancing the quality of services and products that require a strategy to evaluate various aspects, including a review of the basics of needs to maintain the importance of sustainable product quality and service (Kaisiri et al., 2017). Therefore, building experience and confidence among customers helps customers feel confident that brands will keep up with promises and develop trust continuously. (Delgado-Ballester and Luis Munuera-Alemán, 2001). If customers trust offline stores, customers will trust the organization and accept a more valuable service (Piercy,

2012). Supportively, they were stated by Qing et al. (2008) and Jones and Kim (2010). It is possible for customers to always receive accurate information about products and services from staffs. Entrepreneurs must always attend to the education and training of staff in-store (Sirait et al., 2020).

5.2.1.4 The Influence of Satisfaction on Online Loyalty

The hypothesis testing result showed that the brand attachment, offline image, customer experience, and brand experience of satisfaction have a significant direct effect on online loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.296. Under the brand experience through satisfaction represents the customer's perception at every moment of contact with the brand, whether it is advertising media or brand image. That is the first thing for customers to acknowledge (Alloza, 2008). Therefore, developing privileges for both online and offline customers is an interesting synergy. Customer satisfaction is the customer retention to engage and connect with the brand (Keller, 2010). Satisfaction is one of the most important elements in determining online success, which researchers studied the most frequently researched topics (Nisar and Prabhakar 2017). Adding new channels and products can lead to increased customer satisfaction. It also helps them understand new market segments and respond to customer needs. Finally, making satisfaction is using to build customer loyalty as well (Smigielska and Oczkowska 2017). A positive brand experience fosters customer loyalty by creating emotional connections through compelling contexts. Participation and coherence, confrontation environments, cover the relational and physical characteristics of the locations where customers use the services (Azize et al., 2011). Therefore, it is therefore regarded that electronic loyalty is determined by several factors before buying, while buying, and after-sales. To prove the repurchase intent is an essential consequence of online loyalty (Valvi and Fragkos, 2012).

5.2.1.5 The Influence of Satisfaction on Offline Loyalty

This research showed that the brand attachment, offline image, customer experience, and brand experience of satisfaction have a significant direct effect on offline loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.284. Customer loyalty is very important for long-term performance. Therefore, it is imperative that the relationship of satisfaction and loyalty always be at a good level (Çoban and Demirhan, 2019). The brand experience of satisfaction from being part of the design and communication identity of the brand's packaging and environment (Brakus et al., 2009), which is linked to the brand attachment through satisfaction is

the willingness of customers who want to engage with behaviors related to brand referrals and purchases (Parketal, 2010). Therefore, the presence of customers as part of the brand is due to the norm of satisfaction. These are the feeling of friendships. If the store has an effective interaction with customers or communities, it will directly impact the relationships between satisfaction and offline loyalty (Dolbec and Chebat, 2013).

5.2.1.6 The Influence of Online Trust on Online Loyalty

This study showed that trust and brand trust of online trust has a significant direct effect on online loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.274. The most important antecedent of online loyalty is online trust (Sijoria et al., 2018). Some researchers revealed a positive relationship between brand trust and the tendency towards positive online trust of customers participating online (Akrouf and Nagy, 2018; Jain et al., 2018). Online retailers should be reliable and must keep their promises. Moreover, they should have a good understanding of customer needs to give customers confidence and trust in online retailers (Dabholkar and Sheng, 2012), online trust and loyalty should be developed based on positive experiences to promote online retailers' loyalty (Khan and Rahman, 2015). These have a positive influence on recommendation intent and repeat purchases (Das, 2016). Therefore, it can be concluded that online trust is key important to maintain ongoing relationships with consumers and building customer loyalty. This is considered an impact of trust on customer loyalty. The online loyalty attributes that online retailers should be considered to educate their customers, such as perception, value, motivation, satisfaction, and trust in information technology, price sense. It should operate information technology policy, online sales strategy, competitiveness, website security features, download speed, quality of service systems, sales efficiency, accessibility, trust and environmental characteristics (Toufaily et al., 2013).

5.2.1.7 The Influence of Offline Trust on Offline Loyalty

The result of hypothesis testing revealed that the trust and brand trust of offline trust has a significant direct effect on offline loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.643. Brand trust is an intangible sign of offline trust. It shows a symbol of quality and confidence to build trust (Bart et al., 2005). Supportively, it is mentioned by Keller (1987). There is a correlation between the expectations of consumers and the responsibilities of offline retailers. Therefore, customers are more likely to take advantage and predict their offline

trust and rate action features. In addition, customer offline trust has a high influence on customer behavior (Kuan and Bock, 2007). Customer offline loyalty is a commitment to repeat purchases or to promote repeat products and services in the future consistently. It will also lead to repeat purchases under the same brand (Oliver, 2010). Supportively, as stated by Walsh et al. (2008). Consumer brand relationships are essential to building offline loyalty (Fournier, 1999), and formulating the concept of offline loyalty to be accepted according to the behavioral and attitude guidelines. (Belancheetal, 2012). Building a relationship between customers and brand trust that increases offline loyalty with the brand (Marzocchi et al.,2013), shows that if a customer feels connected to an in-store, they are more likely to show positive brand behavior (Kim and Kim, 2017; Jain et al., 2018).

5.2.1.8 The Influence of Offline Loyalty on Online Loyalty

The hypothesis testing result revealed that the loyalty and brand loyalty of offline loyalty has a significant direct effect on online loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.621. The offline loyalty of the customer is the commitment to purchasing and supporting products consistently in the future. It may lead to purchase under the same brand, and includes market-specific customer loyalty, such as dedicated storage, and vendor loyalty. This will also reflect the customer's loyalty and the brand (Algesheimer et al., 2005). Customer loyalty refers to the commitment that customers make to the in-store brand in both online and offline platforms based on a positive attitude, which is reflected in their purchasing behavior (Bismo et al., 2018), whether offline loyalty or online loyalty is on customer loyalty that most researcher has focused (Zheng et al., 2017). In an increasingly competitive market environment, increasing customer focus awareness improves customer loyalty (Homburg et al., 2011). On the other hand, online loyalty is a positive and managerial attitude for future customers to encourage new customers to shop online on the same website (Gonçalves et al., 2016). Supportively, they were stated by Llach et al. (2013). However, online brand loyalty faces stiff competition amid sustained pressures and virtual markets to differentiate themselves and build customer online loyalty. Creating unique experiences on the online platform for customers. It is an effective way to develop the online brand trust, the online brand loyalty, and differentiate with the online brand loyalty to support the expanding online environment. Creating and managing a superior brand experience is a big challenge (Khan and Rahman, 2016).

5.2.1.9 The Influence of Online Loyalty on Sustainable Consumption

This research revealed that the loyalty and brand loyalty of online loyalty has a significant direct effect on sustainable consumption at a 0.05 statistical significance level, which provides the causal relationship value of 0.941. The experiences of online loyalty influence brand loyalty in the retail brand and its service context (Nysveen et al., 2013). Supportively, the statement was stated by Morrison and Crane (2007) and Ishida and Taylor (2012). The main result is brand experience through brand relationships and brand personality formation (Ramaseshan and Stein, 2014). The concept of sustainability was adopted and combined with three principles which are Green, Sustainability and Green Consumers, whose adoption of this concept has not been met as well, both socially and economically (Hunt, 2011). Supportively, these were as stated by McDonald and Oats (2006). In comparison, online loyalty is beginning to focus on positive social goals by showing ethical behavior, social responsibility, and moral management (Jones et al., 2006). Supportively, they were stated by Carroll (2000) and Lantos (2001). Therefore, operating a sustainable consumption is a core value within sustainability. Still, it also wants to develop a profound online loyalty to balance as many environmental and social needs as financial results can achieve (Shrivastava and Hart, 1995). Economy and sustainability leading to economic success is the empowerment of stakeholder loyalty (Bansal, 2005). The current situation and consumption habits change. There is a tendency to increase online purchases of goods or services. This trend can alter the relationship between sustainable consumption practices and well-being in several ways (Castellacci and Tveito, 2018). There are four main channels through which internet users can affect the quality of personal life of consumption: 1) enhancing the purchasing capacity, 2) enabling new consumption, 3) facilitating access to information, and 4) improve communication between customers and producers. Nowadays, new services are emerging, especially sustainable consumption by reusing products and sharing products such as homes (Airbnb), cars (Lyft, Uber), hourly rental offices, etc. It has a positive effect on the quality of personal life and promotes socialization and relationships (Kasser, 2017).

5.2.2 Large Appliance

5.2.2.1 The Influence of Product on Satisfaction

The result of hypothesis testing revealed that the system, quality, and information of product has a significant direct effect on satisfaction at 0.05 statistical significance level, which provides the causal relationship value of 0.747. The finding indicates that convenience has adequate and appropriate information, product quality, and a good purchasing management system. It will increase shopping opportunities (Kuan et al., 2005), adopting information technology as a key driver of the retail dynamics, another channel of online and offline retails (Kennedy and Coughlan, 2006). This technology will have a good image and performance evaluation (Kwon and Lennon 2009b). Supportively, it was stated by Vegholm (2011). Improving the quality of service and expanding the product's efficiency (Chen et al., 2015) will benefit the customer image and increase customer satisfaction to buy good products and services that lead to a better image (Pappu and Quester, 2006). Improving the product quality in both online and offline platforms will increase customer satisfaction with good experiences (Sirait et al., 2020). The continuous market development of entrepreneurs is an essential part of studying the modern market and differentiating it from competitors to ensure customer satisfaction. Therefore, entrepreneurs must always strive to meet the needs and expectations of their customers in advance (Kaptanoglu and Yukselen, 2020).

5.2.2.2 The Influence of Product on Online Trust

The research showed that the system, quality, and information of product has a significant direct effect on online trust at a 0.05 statistical significance level, which provides the causal relationship value of 0.998. This study found that influence on perceptions about service, quality, as well as value and satisfaction arise from sharing common information, evaluation, and personal opinion on the internet (Gutiérrez et al., 2013). The key topic is the quality of products and services. It will provide customers with a more reliable, secure feel and privacy when using their online services (Rust and Kannan, 2002). Therefore, it can be said that the good quality of products and services, both directly and indirectly, will have an impact on satisfaction (Muhammad et al., 2016). It is gaining a positive experience from previous customer experiences. It will be able to produce results, namely cumulative trust (YuSheng and Ibrahim, 2019). Tangibles and the possible origins result in customer trust, which the multi-channel retailers often use to build trust by keeping promises and meeting consumers needs immediately. This includes a well-intentioned

demonstration of consumers' interests and welfare (Azize et al., 2011). The Influence of Product on Offline Trust.

5.2.2.3 Influence of Product on Offline Trust

The hypothesis testing result revealed that the system, quality, and information of the product has a significant direct effect on offline trust at 0.05 statistical significance level, which provides the causal relationship value of 0.991. Improving the quality of products and services requires a strategy to assess all aspects of demand by relying on the customer's basic needs (Kaisiri et al., 2017). This is used to build a positive perception of the realism, feasibility and availability of products and services that promote sales value through a user-friendly order management system (Li et al., 2015). Therefore, the starting point for customer trust in offline stores. Entrepreneurs must improve the ability of staff about customers' product knowledge to ensure that customer will receive accurate information about products and services (Sirait et al., 2020). As a result, customers will trust the organization and accept new products and services more easily (Piercy, 2012). Supportively, this was stated by Qing et al. (2008) and Jones and Kim (2010). Moreover, the customer's brand confidence can keep promises and continually develop trust to create a positive experience and trust. (Delgado-Ballester and Luis Munuera-Alemán, 2001).

5.2.2.4 The Influence of Satisfaction on Online Loyalty

This study showed that the brand attachment, offline image, customer experience, and brand experience of satisfaction have a significant direct effect on online loyalty at a 0.05 statistical significance level, which provides the causal relationship value of 0.112. Advertising material or brand image is the first thing that customers get from the brand. Therefore, the perception of a brand affects satisfaction through the brand experience (Alloza, 2008). Moreover, building a good brand experience will affect customer loyalty. To convince through the context that the customer is interested in and involved by creating connections through emotion. This covers the locations where the customer uses the product and service, both relational and physical (Azize et al., 2011). Therefore, online loyalty should be considered among many factors; before buying, while buying, and after-sale to prove online customer loyalty (Valvi and Fragkos, 2012). This can build online loyalty with our customers by building customer relationships by attracting customers' attention both online and offline through promotions or special privileges for customers. If the customer is satisfied, we will maintain a customer base to engage and connect with brands and loyalty in the

end (Keller, 2010). Determining the success of online satisfaction is often one of the important elements in the most researched topics (Nisar and Prabhakar 2017). Satisfaction is increased by adding new channels and products. This helps to meet customer needs and understand new market segments as well as building loyalty of consumers (Smigielska and Oczkowska 2017).

5.2.2.5 The Influence of Satisfaction on Offline Loyalty

This research revealed that the brand attachment, offline image, customer experience, and brand experience of satisfaction have a positive insignificant direct effect on offline loyalty at a 0.05 statistical significance level, which provides the causal relationship value of 0.038. Customer satisfaction depends on variability and uncertainty in the relationship between the customer and offline channel. There is a link between satisfaction and loyalty in offline retailers. It mentions that a brand experience through powerful satisfaction will greatly affect brand engagement. Brand trust is the relationship between the customer's expectations and the responsibility arising from the brand or retailer (Chaudhuri and Holbrook, 2001). Supportively, they were stated by Lau and Lee (1999). In the case of a product category of large appliance, it is a product that faces high customer expectations and the responsibility of the retailer. This can be supposed that the retailer does not meet what the customer wants. In that case, it cannot create a brand experience and customer behavioral responses (Brakus et al., 2009). Maintaining satisfaction is not enough for customer expectations. These influences decreased customer loyalty and an impact on long-term performance (Çoban and Demirhan, 2019). Finally, it cannot hand over brand attachment to engage customers with behavior related to brand referrals and purchases (Parketal, 2010).

5.2.2.6 The Influence of Online Trust on Online Loyalty

The hypothesis testing result showed that the trust and brand trust of online trust has a significant direct effect on online loyalty at 0.05 statistical significance level, which provides the causal relationship value of 0.179. A positive relationship between trust tends to have positive online trust of customers in online platforms (Akroun and Nagy, 2018; Jain et al., 2018). Therefore, it can be said that online trust is essential to online loyalty (Sijoria et al., 2018). Online trust is the key element to maintain an ongoing relationship with consumers, which is the relationship between consumer expectations and the responsibilities posed by the brand or online retailer. Therefore, the online retailers should educate their customers about their satisfaction, trust, value, motivation, and perception of information technology in order to achieve the strategic customers, online sales

policy, sales performance, quality of service systems, competitiveness, site security, accessibility, trust, and environmental support (Toufaily et al., 2013). Moreover, building customer loyalty has a direct impact on their trust in customer loyalty that the online retailers should create confidence, reliability, and ability to maintain their customer contracts (Dabholkar and Sheng, 2012). Developing trust through a positive experience can foster loyalty with online retailers (Khan and Rahman, 2015) and have a positive influence on recommendation intentions and repeat purchases (Das, 2016).

5.2.2.7 The Influence of Offline Trust on Offline Loyalty

The study results showed that the trust and brand trust of offline trust has a significant direct effect on offline loyalty at a 0.05 statistical significance level, which provides the causal relationship value of 0.788. The prediction and utilization of offline trust have a high influence on customer behavior (Kuan and Bock, 2007). It is supposed that the customer has already expressed a connection with the in-store. They tend to exhibit positive brand behavior (Kim and Kim, 2017; Jain et al., 2018), which is considered to increase offline loyalty with the brand and cause a good relationship between customers and brand trust (Marzocchi et al., 2013). Brand trust of offline trust is the relationship between consumer expectations and the responsibility of offline retailers. However, brand trust of offline trust is the intangible mark of trust. Moreover, it indicates that quality and confidence are used for building trust (Bart, et al., 2005). Supportively, it was stated by Keller (1987). In addition, the concept of loyalty is defined offline to be accepted based on the behavioral and attitude approach (Belancheetal, 2012). The relationships with the consumer brand are essential to building brand loyalty (Fournier, 1999). Therefore, customer offline loyalty with the intention of supporting a product or repurchasing it consistently in the future. It will also lead to purchases under the same brand (Oliver, 2010). Supportively, they were stated by Walsh et al. (2008).

5.2.2.8 The Influence of Offline Loyalty on Online Loyalty

This study revealed that the loyalty and brand loyalty of offline loyalty has a significant direct effect on online loyalty at a 0.05 statistical significance level, which provides the causal relationship value of 0.793. In a highly competitive market, increasing customer focus awareness increases customer loyalty (Homburg et al., 2011), referred to as the customer's offline loyalty. This can be seen from the willingness to support the product regularly and leads to product

sponsorship under the same brand (Algesheimer et al., 2005). The offline loyalty can lead to online loyalty because loyalty is all a positive attitude and behavior of the customer expressed whether buying or promoting a product, encouraging, and persuading new customers to buy on the same platform (Gonçalves et al., 2016). Supportively, they were stated by Llach et al. (2013). Nowadays, both the offline and the online loyalty faces stiff competition amidst the pressure to make a differentiation, retain and expand customer loyalty. Hence creating a unique customer experience and a superior brand experience is one of the significant challenges for a retailer. It is also an effective way to develop brand loyalty online and make a difference (Khan and Rahman, 2016). Customer loyalty, both offline loyalty and online loyalty, is focused on in the literatures (Zheng et al., 2017). which can see that customer commitment to store brands is customer loyalty with a positive attitude both online and offline platforms that can be reflected in their purchasing behavior (Bismo et al., 2018).

5.2.2.9 The Influence of Online Loyalty on Sustainable Consumption

The result of hypothesis testing showed that the loyalty and brand loyalty of online loyalty has a significant direct effect on sustainable consumption at 0.05 statistical significance level, which provides the causal relationship value of 0.812. Brand experience through brand relationships and brand personality is an important outcome (Ramaseshan and Stein, 2014). Specifically, the experiences of brand loyalty influence online loyalty in retail brands and the context of services (Nysveen et al., 2013). Supportively, they were stated by Morrison and Crane (2007) and Ishida and Taylor (2012). The indispensable things that modern society often speaks of our social responsibility. That is a business intention that wants to contribute to society in addition to legal and economic needs. Green management is widely used as a key term along with the sustainability. It is an ethical effort and responsibility in energy and resource conservation to apply it effectively for the environment (Kwak et al., 2014). Supportively, it was stated by Peregrin T. (2012). As such, many companies have responded to a growing interest in Corporate Social Responsibility (CSR) with a focus on sustainability as an integral part of their businesses (Jones et al., 2008), with many focused on the potential of sustainability and social responsibility (Hult, 2011). It also takes customer loyalty to define the meaning of business sustainability. It is an important message to present it effectively and ethically with the concept of sustainability (Benton and Dulin, 2010). Sustainable consumption through product recycling and product sharing is emerging as several new

services, such as homes (Airbnb), cars (Lyft, Uber), hourly rental offices, etc. which have a positive effect on the quality of personal life (Kasser, 2017). Current conditions and consumer behavior change. There is an increasing trend to purchase goods or services online. Thus, these trends can transform the relationship between sustainable consumption practices and wellbeing in four main ways in which internet users can affect the quality of personal life of consumption: 1) enhancing shopping capability, 2) enabling new consumption, 3) facilitating access to information, and 4) improving communication between consumers and producers (Castellacci and Tveito, 2018).

5.3 Implications

This research was developed by the development of the model of OMNI business sustainability in consumer perspectives based on the leading theory of IS Success Model (DeLone and McLean, 1992, 2002, 2003, 2004, 2016), Loyalty model (Oliver, 1999), and Sustainable Consumption (The United Nations Environment Program, 2010 and Balderjahn et al., 2013). The purpose of this research is to develop the strategy model of OMNI business sustainability from the consumer perspective, to expand the sustainable consumption of academic practice in OMNI business, to endorse and explore the relevant theories of the research, and to investigate the direct, indirect, and combined influence of variables on OMNI business sustainability in the perspective of consumers. By focusing on the influence of sustainable consumption and external factors on the consumer's point of view, this study reveals that almost all determinants had a strong positive influence on the proposed assumptions. It further proves the positive perception of the product, satisfaction, trust, and loyalty of the categories of Fast Moving Consumer Goods (FMCG) and Large Appliance. This can indicate that sustainable consumption generated by the results of this study significantly contributed by expanding the current theoretical and empirical knowledge of product, satisfaction, trust, and loyalty, all of which are implied. This will be discussed in the following details.

5.3.1 Theoretical Implication

Overall, the model and the results of this study are important to the theoretical understanding of the factors that influence sustainable consumption (Vermeir and Verbele, 2008).

Firstly, the only one theory may not be a new framework. Therefore, if we would like to create and develop a conceptual framework for this research, we put forward some material and put the theories that relate to the model together in ways that have never been done before. It is the integration of theory between the IS success model (DeLone and McLean, 1992), loyalty model (Oliver, 1999), and sustainable consumption (The United Nations Environment Program, 2010 and Balderjahn et al., 2013).

All of these are created as the main conceptual framework of this research. The model presents and examines the multidimensional factors involved in sustainable consumption, such as product, satisfaction, online trust, online trust, online loyalty and, offline loyalty in the categories of fast-moving consumer goods (FMCG) and large appliance to compare differentiating tests. There are many differences between the two product groups in terms of physical and functional characteristics, which distinguishes and compares the different product groups as the same model to prove whether the model can be used for all product groups.

This study is designed to focus primarily on OMNI business sustainability from a consumer perspective. Their decisions are individually validated. This research provides significant knowledge of the various aspects of OMNI business sustainability and includes variables that are directly or indirectly related to OMNI business sustainability. Besides, the testing of the model is very different in the physical and functional categories. It gives customers different perspectives on products through the same model.

Secondly, the results of this study show that the observed variables in the conceptual framework were proved and synchronized by the main theories such as the observed variable of product affects satisfaction according to a statement proposed by the IS Success Model (DeLone & McLean, 2003), while the study results of the influence of satisfaction, online trust, and offline loyalty had a direct influence on online loyalty. Another, satisfaction, and offline trust indirectly influenced online loyalty based on the statement proposed by the loyalty model (Oliver, 1999). Finally, it proves the influence of observed variable of sustainable consumption (The United Nations Environment Programme, 2010 and Balderjahn et al., 2013).

Thirdly, this study examines the direct effects of observed variables related to sustainable consumption with only online loyalty. It found that many important factors influence sustainable consumption, such as attitudes, values, norms, intentions, motivation, and beliefs (Ajzen et al.,

1991; Hines. et al., 1987; Kollmuss and Agyeman, 2002; Lee, 2014). However, research on the quality of life is lacking, proving that quality of life positively correlates with the model.

Finally, the results of the structural equation model, this study confirms that the influence of satisfaction has a significant direct impact on online loyalty in both categories of FMCG and Large Appliance. Surprisingly, FMCG only can also indirectly influence satisfaction through offline loyalty and then, pass to online loyalty. In the end, the only path of online loyalty has a direct influence on sustainable consumption in both the categories of FMCG and large appliances.

5.3.2 Practical Implication

Industrial growth is becoming more important to today's society. Due to economic and social expansion, daily life becomes more hectic coupled and rapidly changing customer behavior, saving time, comfort, and very affordable. In modern times, consumer behavior has changed in purchasing patterns, a convenient logistics system to deliver products. It is very necessary that the retail business becomes more competitive.

Firstly, the entrepreneurs should consider how responsive to customer needs customers in each product group have different needs. Therefore, entrepreneurs must have a fundamental understanding of their customer groups. This allows them to evaluate their products, product quality, distribution channels, and after-sales service under the scope of quality, system assurance, and information, which is useful for entrepreneurs to sell products to real customers of the product group. In addition, customer needs and responses should be assessed regularly due to the changing behavior of customers all the time.

Secondly, entrepreneurs can use this study's results to support products and services for improving their products and increasing their service level to meet the highest demands of their customers. This is the management team's challenge to consider in enhancing customer needs, especially by retaining existing customers and expanding a new customer base. Entrepreneurs set goals and strategic plans to create mechanisms that can meet various aspects of their customers' needs. The results are coming in satisfaction, trust, loyalty, and sustainability at the end.

Thirdly, the entrepreneurs should understand the customers including the trend of customer needs, because the retailer is a very competitive business and new entrepreneurs can quickly enter the market. Therefore, in this situation, entrepreneurs tend to delay their investments and be more careful with their spending. At the same time, they must maintain a level of satisfaction to meet the

needs of customers. Therefore, increasing and developing diversified sales channels and supporting the customer's purchasing activity is very necessary. As the results of this study show the positive influence of product, satisfaction, trust and, loyalty in both the online and offline channels to lead to sustainable consumption.

Creating a product management system and a borderless purchase channel allows customers to do transactions whenever and wherever the customer is convenient or any transaction without conditions such as selecting products at the in-store shop but order via mobile phone, and then pick up the product at the desired location, product selection, and order via mobile phone but pick up the product at the in-store shop or make the order via mobile phone in the past and get the discount for the next purchase at the in-store shop or via mobile phone as the customer is convenient, etc. This can reduce the transaction barrier for customers. It is going to be able to create new behaviors for customers and determine the direction in the OMNI business development to ultimately achieve sustainability.

Fourthly, for enabling customers to carry out transactions with entrepreneurs continuously, the customers should get interested with incentives by emphasizing promotion, reliability, and price because more than 96% of research results focus on this content. Moreover, 98% of research results show that customers are likely not to purchase if they find that the product's unreliability is not reached their mind, the price of the product is not reasonable, product promotion is not attractive, and aftersales service is unsatisfactory. These are data obtained from customer surveys in the categories of fast moving consumer goods (FMCG) and large appliance which yield similar results. Therefore, entrepreneurs should understand the different needs of customers to meet and develop the needs of customers to be more efficient and truly suitable for their customers.

Customers who are familiar with and knowledgeable about using OMNI business services may deal and purchase with fluency and comfort. On the other hand, customers with limited knowledge of OMNI business may need operating assistance about how to buy products and services including incentives for purchasing products and services in which the entrepreneurs can use appropriate strategies. In addition, channels of communication and interaction with customers should be considered or other methods for specific customer groups. Most importantly, entrepreneurs should make the trading of commodities easier for every customer. This issue will be another incentive to retain customers and expand a new customer base. Not only do they affect our

customers' positive experiences and satisfaction, but trust and loyalty also be defined to lead to sustainability.

Fifthly, aside from what we mentioned about product, satisfaction, trust and loyalty. It notices that online loyalty only has a direct influence on sustainable consumption. Leading to sustainability, integrity and boundless connection of the online and offline platforms must be achieved. Therefore, online loyalty is the last step before sustainability, which must be recognized the most in customer loyalty. The relationships before through online loyalty such as influenced directly by satisfaction or trust, and satisfaction creates an indirect influence on offline loyalty, and then online loyalty and sustainable consumption. Therefore, the entrepreneurs cannot leave one thing at all. As products in each category may have different direct and indirect influences, FMCG is directly influenced by product on satisfaction, product on online trust, product on offline trust, satisfaction on online loyalty, satisfaction on offline loyalty, online trust on online loyalty, offline trust on offline loyalty, offline loyalty on online loyalty, and online loyalty on sustainable consumption. At the same time, the large appliance is directly influenced by product on satisfaction, product on online trust, product on offline trust, satisfaction on online loyalty, online trust on online loyalty, offline trust on offline loyalty, offline loyalty on online loyalty, and online loyalty on sustainable consumption. Therefore, it can be concluded that product groups with different physical and functional characteristics will be different models of influence to create sustainability.

Sixthly, this study found that direct influence between online and offline channels are difficult. This can happen only through indirect influence which arises from a product group of the physical and the functional characteristics that use the ability to make uncomplicated purchasing decisions. It is possible to use substitute products such as indirect influence between offline loyalty and online loyalty in the FMCG while this cannot happen with a large appliance.

Seventhly, this study found that from the beginning to the end of the relationship. There is no cross-relationship between, online, and offline, except for the relationship between, online loyalty and offline loyalty, which is a precursor to sustainable consumption. Therefore, it can be concluded that even though the product groups are different but the satisfaction, trust, and loyalty each channel takes place separately. Because the combination of channels is not yet complete. Therefore, customer attitudes towards products in each purchasing channel remain separately. In the end, to achieve sustainable consumption, the last variable is required online loyalty that can lead to sustainability completely.

Eighthly, during the epidemic situation, it can drive consumers to become familiar with and open the door to the online trading channel and platform, which promotes and supports the lock-down measures to reduce the spread of COVID-19 as well. This result is in a change in consumer behaviour and leads to sustainability. An interesting strategy is proposed by Sawmong (2020). The 4Pks Strategy consists of Political, Persistent, Persuasion, and Purchase intent. These were focused on the study of the current government policies and the plan of marketing strategies during the recession. Marketing planning at this stage has to face the timing and strategy of the government, deal with customer needs consistently, persuade customers to use more products or services, and planning every marketing strategy by considering in the timing and delivery of the product within the time and the communication with the customer with a focus on health is a priority.

Lastly, most customers have a view on value and wellbeing importantly. Therefore, entrepreneurs should promote and stimulate all factors that will lead to sustainable consumption including a focus on product, satisfaction, trust, and loyalty on both the online and offline channels, emphasizing sharing opinions about customer needs as important. This is used to enable entrepreneurs to continually improve and grow with the changing needs of their customers.

5.4 Limitation and recommendation

This research has the following limitations and recommendations. Firstly, this study measures the OMNI business sustainability from the consumer perspective by evaluating some positive aspects. However, this research is new. Thus, the respondents may have a level of understanding of OMNI business that is not the same with different contexts according to personal experience. Therefore, if we educate or test the knowledge of the respondents, it will be very beneficial to the research.

Secondly, this research is used only a quantitative method to achieve the level of the opinion of the online and offline experiences. However, a deeper understanding of OMNI business sustainability should use a qualitative method for interviewing and deeper understanding, including strengthening the present work for future research.

Thirdly, collecting data from respondents with different consumption behaviors, such as respondents living in the city, living in the suburbs and living in remote areas that tend to have different behaviors to access the online and the offline platforms. Therefore, these discrepancies may affect the analysis of the data to reflect reality.

Finally, current studies use factors from the IS success model, loyalty model, and sustainable consumption. Therefore, future research can study other approaches using other theories or other factors from the same theory to strengthen and understand OMNI business sustainability. Another important thing is understanding the long-term impact of OMNI business. It is considered additional research that can extend the study to other contexts.



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APPENDIX A

THESIS APPROVAL LETTER



ประกาศคณะกรรมการธุรกิจ
สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง
ที่ 0๗๘ / 2563
เรื่อง ผลการพิจารณาหัวข้อและเค้าโครงวิทยานิพนธ์

คณะกรรมการธุรกิจ สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง โดยความเห็นชอบของ คณะกรรมการพิจารณาหัวข้อและเค้าโครงวิทยานิพนธ์ ขอประกาศรายชื่หัวข้อและเค้าโครงวิทยานิพนธ์ หลักสูตรปริญญาตรีบัณฑิต สาขาวิชาบริหารธุรกิจอุตสาหกรรม (นานาชาติ) ซึ่งได้รับอนุมัติเมื่อวันที่ 25 มิถุนายน พ.ศ. 2563 ให้ดำเนินการดังนี้

นางสาวอัสกรินทร์ กุลชิตาพงษ์ รหัสประจำตัว 62611001 ให้ทำวิทยานิพนธ์เรื่อง “The Model of Omni Business Sustainability: Consumer Perspective”

โดยมี ผู้ช่วยศาสตราจารย์ ดร.สิงหะ ฉวีสุข เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก

ผู้ช่วยศาสตราจารย์ ดร.วอนชนก ไชยสุนทร เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม

ทั้งนี้ ให้นักศึกษาค้นคว้าและเขียนวิทยานิพนธ์ โดยปรึกษากับอาจารย์ที่ปรึกษาวิทยานิพนธ์ ให้เสร็จสิ้น ภายในเวลาที่กำหนด ในระเบียบสถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง

ประกาศ ณ วันที่ ๒3 กรกฎาคม 2563

(ผู้ช่วยศาสตราจารย์ ดร.สุดาพร สาวม่วง)

คณบดีคณะกรรมการธุรกิจ

APPENDIX B

ETHICS IN HUMAN RESEARCH



Certificate of Completion

National Research Council of Thailand (NRCT) and Forum for Ethical Review Committee in Thailand (FERCIT)

Certify that

Issarin Kulchitaphong

Has completed the ON-LINE RESEARCH ETHICS TRAINING
Course หลักสูตรหลักจริยธรรมการวิจัยในมนุษย์ สำหรับนักศึกษา/นักวิจัย

Date approved
(17/06/2563)

Date expired
(17/06/2566)

S. Songsivilai

(Professor Dr.Sirirug Songsivilai)
Secretary-General
National Research Council of Thailand

APPENDIX C

KRIS APPROVAL LETTER



ลำดับที่ 058
EC-KMITL_63_058

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ประจำ
สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง

เอกสารรับรองการยกเว้นพิจารณาจริยธรรมโครงการวิจัย

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหาร
ลาดกระบังดำเนินการให้การรับรองการยกเว้นพิจารณาจริยธรรมโครงการตามแนวทางหลักจริยธรรมการวิจัย
ในคนที่เป็นมาตรฐานสากล ได้แก่ Declaration of Helsinki, The Belmont Report, CMOS Guideline,
International Conference on Harmonization in Good Clinical Practice หรือ ICH-GCP

ชื่อโครงการวิจัย : แบบจำลองความยั่งยืนทางธุรกิจ OMNI: มุมมองของผู้บริโภค
รหัสโครงการ : EC-KMITL_63_058

ผู้วิจัยหลัก : นางสาวอิสศรินทร์ กุลชิตาพงศ์

สังกัดหน่วยงาน คณะบริหารและการจัดการ (คณะบริหารธุรกิจ)

เอกสารที่ได้รับการพิจารณา : 1. แบบเสนอโครงการวิจัย ฉบับที่ 1 ลงวันที่ 22 กรกฎาคม พ.ศ. 2563
2. โครงการวิจัยฉบับเต็ม ฉบับที่ 2 ลงวันที่ 4 สิงหาคม พ.ศ. 2563
3. แบบบันทึกข้อมูล ฉบับที่ 1 ลงวันที่ 15 มิถุนายน พ.ศ. 2563
4. ประวัติผู้วิจัย ฉบับที่ 1 ลงวันที่ 22 กรกฎาคม พ.ศ. 2563

ลงชื่อ *พิศตรภรณ์ ทิพย์โสธร*

(ผู้ช่วยศาสตราจารย์ ดร.พิศตรภรณ์ ทิพย์โสธร)

ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์ ประจำ
สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง พ.ศ. 2563

วันที่รับรองการยกเว้น : วันที่ 31 สิงหาคม พ.ศ. 2563

หมายเหตุ ไม่ต้องทบทวนต่อเนื่อง

APPENDIX D

RESEARCH INSTRUMENT

Questionnaire

The model of OMNI business sustainability: Consumer perspective

แบบจำลองความยั่งยืนทางธุรกิจ OMNI: มุมมองของผู้บริโภค

This questionnaire is a part of the research of the Doctor of Philosophy Program in Industrial Business Administration, Faculty of Administration and Management, King Mongkut's Institute of Technology Ladkrabang. This questionnaire consists of 75 questions divided into 4 parts as the following:

แบบสอบถามนี้จัดทำขึ้นเพื่อประกอบการศึกษาวิจัยในระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต สาขาวิชาบริหารธุรกิจอุตสาหกรรม คณะการบริหารธุรกิจ สถาบันเทคโนโลยีพระจอมเกล้าคุณทหารลาดกระบัง แบบสอบถามนี้ประกอบด้วยคำถาม 75 ข้อแบ่งออกเป็น 4 ส่วนดังนี้

Part 1: Personal data of the respondents

ข้อมูลพื้นฐานของผู้ตอบแบบสอบถาม

Part 2: Questions about the basic knowledge of OMNI business

ข้อมูลพื้นฐานเกี่ยวกับพฤติกรรมการซื้อขายสินค้า

Part 3: Questions about the latent research variables

ข้อมูลเกี่ยวกับตัววัดของตัวแปร

Part 4: Suggestions of respondents

ข้อเสนอแนะ

Remark (หมายเหตุ)

- 1) Kindly please request to answer all questions according to the opinion and the most truthful. The responses will be kept confidential and the results will be analyzed in the general overview, no disclosure, and this data will be used for research benefits only.

ขอความอนุเคราะห์ผู้ตอบแบบสอบถาม ตอบแบบสอบถามทุกข้อ ตามความเห็นและตรงตามความเป็นจริงที่สุด โดยข้อมูลที่ตอบจะถูกเก็บไว้เป็นความลับและนำผลไปวิเคราะห์เป็นภาพรวม ไม่มีการเปิดเผยข้อมูล และข้อมูลนี้จะนำมาใช้เพื่อประโยชน์ทางการศึกษาวิจัยเท่านั้น

- 2) The document is a research tool that has the objectives of the questionnaire as follows
 - a. To develop a model of OMNI business sustainability in consumer perspective. เพื่อพัฒนารูปแบบความยั่งยืนทางธุรกิจของ OMNI ในมุมมองของผู้บริโภค
 - b. To investigate the direct, indirect, and combined influence of variables on business sustainability OMNI in the consumer perspective.

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เพื่อตรวจสอบอิทธิพลโดยตรงและโดยอ้อมของตัวแปรที่มีต่อความยั่งยืนทางธุรกิจ OMNI ในมุมมองของผู้บริโภค

- 3) Questionnaire part 3, please see the definition of variables before answering the question which defines the indicators of each variable that needs to be measured. The researcher wrote above the questions for each factor.

แบบสอบถามส่วนที่ 3 โปรดดูคำนิยามของตัวแปรก่อนตอบคำถาม ซึ่งนิยามตัวชี้วัดของตัวแปรแต่ละตัวที่ต้องการจะวัด ผู้วิจัยได้เขียนอธิบายไว้เหนือคำถามแต่ละปัจจัย

Definitions

OMNI channel refers to unite the online and offline channels into a single service and focus on creating good experience continuously for customers through the integration of all channels and managing as one.

ธุรกิจ OMNI หมายถึง ธุรกิจการซื้อขายหรือแลกเปลี่ยนสินค้าที่เชื่อมโยงกันหลายช่องทาง ไม่ว่าจะเป็นร้านค้า/หน้าร้าน เว็บไซต์หรือแอปพลิเคชัน เพื่อเพิ่มความสะดวก รวดเร็วในการซื้อขายสินค้ามากขึ้น

Fast-moving consumer goods (FMCG) refers to the product are used very often, sometimes every day and moves quite fast. (consumed at least once a month) at the end of the retailer can be classified as FMCG, for example, soap, toothpaste, batteries, beverages, and cigarettes etc.

สินค้าอุปโภคบริโภคที่ใช้ในชีวิตประจำวัน มีลักษณะทั่วไปคือ ขายง่าย ขายเร็ว สินค้าราคาประหยัด ต้นทุนต่ำ สามารถผลิตได้ง่ายและทดแทนกันได้ ผลิตภัณฑ์ในกลุ่มนี้ เช่น สบู่ ยาสีฟัน แชมพู ผงซักฟอก อาหารสำเร็จรูป และเครื่องดื่ม เป็นต้น

Large Appliance refers to is slow-moving consumer products (SMCG) which are related to ration and cognitive behavior, high participation, and more complex decision-making because almost products are expensive and non-daily product such as washing machines, laundry dryers, refrigerators, freezers, furniture, laptop, desktop computers, and printers etc.

สินค้าขายช้า มีราคาสูง ไม่ใช่สินค้าใช้ประจำวัน ซึ่งต้องอาศัยการตัดสินใจที่ซับซ้อนมากขึ้น เช่น เครื่องซักผ้า, เครื่องอบผ้า, ตู้เย็น, ตู้แช่, เฟอร์นิเจอร์, โน้ตบุ๊ก, คอมพิวเตอร์, ปริ้นเตอร์ เป็นต้น

Online refers to the channel of purchasing products through the website or application.

ช่องทางในการซื้อสินค้าผ่านเว็บไซต์หรือแอปพลิเคชัน

Offline refers to the channel of purchasing products from the in-store such as convenience stores, department stores.

ช่องทางในการซื้อสินค้าจากร้านที่มีหน้าร้าน เช่น ร้านสะดวกซื้อ, ห้างสรรพสินค้า

Part 1: Personal data of the respondents

ข้อมูลพื้นฐานของผู้ตอบแบบสอบถาม

Explanation: Please mark / into that really matches your information.

คำชี้แจง โปรดทำเครื่องหมาย / ลงใน ที่ตรงกับข้อมูลท่านตามสภาพความเป็นจริง

1. Gender (เพศ)

<input type="checkbox"/> Male (ชาย)	<input type="checkbox"/> Female (หญิง)
-------------------------------------	--
2. Age (อายุ)

<input type="checkbox"/> 18-22 years (18-22ปี)	<input type="checkbox"/> 23-40 years (23-40ปี)
<input type="checkbox"/> 41-55 year (41-55ปี)	<input type="checkbox"/> 56-70 years (56-70ปี)
3. Highest education (การศึกษาสูงสุด)

<input type="checkbox"/> Under a bachelor's degree (ต่ำกว่าปริญญาตรี)
<input type="checkbox"/> Bachelor's degree (ปริญญาตรี)
<input type="checkbox"/> Higher than a bachelor's degree (สูงกว่าปริญญาตรี)
4. Occupation (อาชีพ)

<input type="checkbox"/> Employee (พนักงานบริษัท)	<input type="checkbox"/> Freelance (อาชีพอิสระ)
<input type="checkbox"/> Business owner (เจ้าของกิจการ)	<input type="checkbox"/> Student (นักเรียน/นักศึกษา)
<input type="checkbox"/> Government official (รับราชการ)	<input type="checkbox"/> Retired (เกษียณอายุ)
<input type="checkbox"/> Housewife (แม่บ้าน)	<input type="checkbox"/> Unemployed (ไม่มีงานทำ)
<input type="checkbox"/> State Enterprise Employee (พนักงานรัฐวิสาหกิจ)	
5. Online shopping experience (ประสบการณ์ซื้อสินค้าผ่านช่องทางออนไลน์)

<input type="checkbox"/> 1-3 years (1-3 ปี)	<input type="checkbox"/> 4-6 years (4-6 ปี)
<input type="checkbox"/> 7-9 years (7-9 ปี)	<input type="checkbox"/> 10-12 years (10-12 ปี)
<input type="checkbox"/> 13-15 years (13-15 ปี)	<input type="checkbox"/> More than 15 years (มากกว่า 15ปี)
6. Offline shopping experience (ประสบการณ์ซื้อสินค้าจากร้านที่มีหน้าร้าน เช่น ร้านสะดวกซื้อ, ห้างสรรพสินค้า)

<input type="checkbox"/> 1-3 years (1-3 ปี)	<input type="checkbox"/> 4-6 years (4-6 ปี)
<input type="checkbox"/> 7-9 years (7-9 ปี)	<input type="checkbox"/> 10-12 years (10-12 ปี)
<input type="checkbox"/> 13-15 years (13-15 ปี)	<input type="checkbox"/> More than 15 years (มากกว่า 15ปี)

7. Income per month (รายได้ต่อเดือน)

- ≤ 10,000 baht (น้อยกว่าหรือเท่ากับ 10,000 บาท)
- 10,001-20,000 baht (10,001-20,000 บาท)
- 20,001-30,000 baht (20,001-30,000 บาท)
- 30,001-40,000 baht (30,001-40,000 บาท)
- 40,001-50,000 baht (40,001-50,000 บาท)
- 50,001-60,000 baht (50,001-60,000 บาท)
- 60,001-70,000 baht (60,001-70,000 บาท)
- 70,001-80,000 baht (70,001-80,000 บาท)
- 80,001-90,000 baht (80,001-90,000 บาท)
- 90,001-100,000 baht (90,001-100,000 บาท)
- > 100,000 baht (มากกว่า 100,000 บาท)

8. Domicile (คุณอาศัยอยู่ภาคใดของประเทศไทย)

- Eastern (ภาคตะวันออก)
- Northern (ภาคเหนือ)
- Western (ภาคตะวันตก)
- Bangkok and metropolitan (กรุงเทพฯ และปริมณฑล)
- Northeastern (ภาคตะวันออกเฉียงเหนือ)
- Southern (ภาคใต้)
- Central (ภาคกลาง)

Part 2: Questions about the basic knowledge of OMNI business**ข้อมูลพื้นฐานเกี่ยวกับพฤติกรรมกรซื้อสินค้า**

9. Online shopping channel (คุณมักซื้อสินค้าบนช่องทางเว็บไซต์หรือแอปพลิเคชันช่องทางใดมากที่สุด)

- Lazada
 - Facebook
 - Instragram
 - JD.com
 - Grab
 - Shopee
 - Line
 - Tesco Lotus
 - Twitter
 - Other (please state): _____
- อื่นๆ (โปรดระบุ)

10. Purchase frequency (คุณซื้อสินค้าบ่อยแค่ไหน)

- 1 time/6 months (1 ครั้ง/6 เดือน)
- 1 time/2weeks (1 ครั้ง/2 สัปดาห์)
- 4-6 times/week (4-6 ครั้ง/สัปดาห์)
- 1 time/month (1 ครั้ง/เดือน)
- 1-3 times/week (1-3 ครั้ง/สัปดาห์)
- Everyday (ทุกวัน)

11. Purchasing value per bill (มูลค่าในการซื้อสินค้าหรือใช้บริการโดยเฉลี่ยต่อครั้ง)
- $\leq 1,000$ bath (น้อยกว่าหรือเท่ากับ 1,000 บาท) 1,001-5,000 bath (1,001-5,000 บาท)
- 5,001-10,000 bath (5,001-10,000 บาท) $> 10,000$ bath (มากกว่า 10,000 บาท)
12. The most frequently transacted location to complete the order (สถานที่ใดที่ท่านมักทำธุรกรรมในการซื้อสินค้า)
- Home (บ้าน) Office (ที่ทำงาน)
- University (มหาวิทยาลัย) Store/Shop (ห้าง/ร้านค้า)
- Other (please state): _____
อื่นๆ (โปรดระบุ)
13. Purchasing motivation (แรงจูงใจใดสำคัญที่สุดในการซื้อสินค้า)
- Product promotion (โปรโมชั่นของสินค้า)
- Product reliability (ความน่าเชื่อถือของสินค้า)
- Product price (ราคาของสินค้า)
- Product quality (คุณภาพของสินค้า)
- Convenience (ความสะดวกสบาย)
- Trial product (ต้องการทดลองสินค้า)
- Requirements for use (ความต้องการในการใช้งาน)
- Product needs (ความจำเป็นในการซื้อสินค้า)
- Aftersales service (บริการหลังการขาย)
14. Factors that influence not to purchase decision (ปัจจัยสำคัญใดที่ทำให้ท่านไม่ซื้อสินค้า)
- Product promotion is not attractive (โปรโมชั่นของสินค้าไม่น่าสนใจ)
- Aftersales service is unsatisfactory (บริการหลังการขายไม่เป็นที่น่าพอใจ)
- The product has no quality (สินค้าไม่มีคุณภาพ)
- Personal satisfaction (ความพึงพอใจส่วนบุคคล)
- Brand ethics (จรรยาบรรณของแบรนด์สินค้า)
- Product needs (ความจำเป็นในการซื้อสินค้า)
- Additional shipping charges (คิดค่าจัดส่งเพิ่มเติม)
15. Did you satisfy with overall OMNI channel? (โดยภาพรวมคุณพอใจกับการใช้บริการการสั่งซื้อใน OMNI Channel หรือไม่?)
- Satisfied (พอใจ) Unsatisfied (ไม่พอใจ)

Part 3: Questions about the latent research variables

ข้อมูลเกี่ยวกับตัวชี้วัดของตัวแปร

Question about “Product” is developed from the studies of System assurance, Quality, and Information.

ท่านให้ความสำคัญมากที่สุดต่อ “สินค้า” ซึ่งประกอบด้วยปัจจัยหลักด้านระบบจัดการการซื้อขายสินค้า, คุณภาพของสินค้า รวมถึงข้อมูลที่เกี่ยวข้องกับสินค้า

16	Overall, you can easily buy products or services. โดยรวมท่านซื้อสินค้าหรือบริการได้ง่าย	Strongly disagree	1	2	3	4	5	Strongly agree
17	Overall, you can promptly buy products or services. โดยรวมท่านซื้อสินค้าหรือบริการได้อย่างรวดเร็ว	Strongly disagree	1	2	3	4	5	Strongly agree
18	Overall, you can confidently buy products or services. โดยรวมท่านรู้สึกมั่นใจในการซื้อสินค้าหรือใช้บริการ	Strongly disagree	1	2	3	4	5	Strongly agree
19	Acquiring an appropriate and good quality of products and services. การได้รับสินค้าที่มีคุณภาพเหมาะสม	Strongly disagree	1	2	3	4	5	Strongly agree
20	Acquiring a good quality of product makes you feel confident. การได้รับสินค้าที่มีคุณภาพทำให้ฉันมั่นใจ	Strongly disagree	1	2	3	4	5	Strongly agree
21	Acquiring a good quality of product makes you feel satisfied. การได้รับสินค้าที่มีคุณภาพทำให้ฉันพอใจ	Strongly disagree	1	2	3	4	5	Strongly agree
22	Thoroughly acquiring product information. การได้รับข้อมูลเกี่ยวกับสินค้าอย่างครบถ้วน	Strongly disagree	1	2	3	4	5	Strongly agree
23	Acquiring useful product information. การได้รับข้อมูลเกี่ยวกับสินค้าที่มีประโยชน์	Strongly disagree	1	2	3	4	5	Strongly agree
24	Acquiring product information helps making decision. การได้รับข้อมูลเกี่ยวกับสินค้าที่ช่วยสนับสนุนการตัดสินใจได้	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Satisfaction” is developed from the studies of brand attachment, offline image, customer experience, and brand experience.

ท่านให้ความสำคัญมากที่สุดต่อ “ความพึงพอใจ” ซึ่งประกอบด้วยปัจจัยหลักด้านแบรนด์, ภาพลักษณ์ของแบรนด์, ประสบการณ์ของลูกค้า และประสบการณ์การใช้แบรนด์สินค้า

25	Product brand is a part of my life. แบรนด์สินค้าเป็นส่วนหนึ่งของชีวิตฉัน	Strongly disagree	1	2	3	4	5	Strongly agree
26	My personality is connected to product brand. บุคลิกของฉันเชื่อมโยงกับแบรนด์สินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
27	My perception and feeling to product brands always automatically related. ความคิดและความรู้สึกของฉันที่เกี่ยวกับแบรนด์สินค้ามักเป็นไปโดยอัตโนมัติ	Strongly disagree	1	2	3	4	5	Strongly agree
28	My always used brand has a unique character comparing with another brand. แบรนด์ที่ใช้เป็นประจำมีคุณสมบัติที่เป็นเอกลักษณ์เมื่อเทียบกับยี่ห้ออื่น	Strongly disagree	1	2	3	4	5	Strongly agree
29	Brand makes me feel looking good. แบรนด์ทำให้ฉันรู้สึกดี	Strongly disagree	1	2	3	4	5	Strongly agree
30	Brand makes me trust and having faith with products. แบรนด์ทำให้ฉันรู้สึกเชื่อมั่นและศรัทธาในสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
31	My experience after-sale service is feeling comfortable. ประสบการณ์ของฉันหลังใช้สินค้า คือความรู้สึกสะดวกสบาย	Strongly disagree	1	2	3	4	5	Strongly agree
32	My experience after-sale service is feeling as quick as I expected. ประสบการณ์ของฉันหลังใช้สินค้า คือความรู้สึกรวดเร็วและทันใจ	Strongly disagree	1	2	3	4	5	Strongly agree
33	I acknowledge the policy and procedure of purchasing/return/and claim thoroughly. ฉันทราบถึงนโยบายและขั้นตอนการซื้อ/คืน/เคลมสินค้าเป็นอย่างดี	Strongly disagree	1	2	3	4	5	Strongly agree
34	Using branded product makes me feel safe. การใช้สินค้าแบรนด์ ทำให้ฉันรู้สึกปลอดภัย	Strongly disagree	1	2	3	4	5	Strongly agree

35	Using branded product makes me impressed. การใช้สินค้าแบรนด์ สร้างความประทับใจ	Strongly disagree	1	2	3	4	5	Strongly agree
36	Using branded product makes me trust after-sales service. การใช้สินค้าแบรนด์ ทำให้ฉันมั่นใจในบริการหลังการขาย	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Online trust” is developed from the studies of trust and brand trust.

ท่านให้ความสำคัญมากที่สุดต่อ “ความน่าเชื่อถือของออนไลน์” ซึ่งประกอบด้วยความน่าเชื่อถือและความน่าเชื่อถือของแบรนด์สินค้า

37	I am pleased with telling my information to the store for buying product. ฉันยินดีที่จะให้ข้อมูลส่วนบุคคลกับร้านค้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
38	I am pleased with settled payment in advance for shopping. ฉันยินดีชำระเงินล่วงหน้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
39	I am pleased to buy product from a well-known shop. ฉันยินดีซื้อสินค้ากับร้านค้าที่มีชื่อเสียง	Strongly disagree	1	2	3	4	5	Strongly agree
40	I am pleased with being advised for buying product from the store. ฉันยินดีรับคำแนะนำในการซื้อสินค้าจากร้านค้า	Strongly disagree	1	2	3	4	5	Strongly agree
41	I trust brand will always be honest to their customer. ฉันเชื่อถือแบรนด์ว่ามีความซื่อสัตย์ต่อลูกค้า	Strongly disagree	1	2	3	4	5	Strongly agree
42	I trust brand will always consider their customers benefits. ฉันเชื่อถือแบรนด์ว่าคำนึงถึงผลประโยชน์ของลูกค้า	Strongly disagree	1	2	3	4	5	Strongly agree
43	I trust brand will always guarantee customers satisfaction. ฉันเชื่อถือแบรนด์ว่ามีการรับประกันความพึงพอใจในสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Offline trust” is developed from the studies of trust and brand trust.

ท่านให้ความสำคัญมากที่สุดคือ “ความน่าเชื่อถือของออฟไลน์” ซึ่งประกอบด้วยความน่าเชื่อถือและความน่าเชื่อถือของแบรนด์สินค้า

44	I am pleased with telling my information to the store for buying product. ฉันยินดีที่จะให้ข้อมูลส่วนบุคคลกับร้านค้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
45	I am pleased with settled payment in advance for shopping. ฉันยินดีชำระเงินล่วงหน้าเพื่อซื้อสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree
46	I am pleased to buy product from a well-known shop. ฉันยินดีซื้อสินค้ากับร้านค้าที่มีชื่อเสียง	Strongly disagree	1	2	3	4	5	Strongly agree
47	I am pleased with being advised for buying product from the store. ฉันยินดีรับคำแนะนำในการซื้อสินค้าจากร้านค้า	Strongly disagree	1	2	3	4	5	Strongly agree
48	I trust brand will always be honest to their customer. ฉันเชื่อถือแบรนด์ว่ามีความซื่อสัตย์ต่อลูกค้า	Strongly disagree	1	2	3	4	5	Strongly agree
49	I trust brand will always consider their customers benefits. ฉันเชื่อถือแบรนด์ว่าคำนึงถึงผลประโยชน์ของลูกค้า	Strongly disagree	1	2	3	4	5	Strongly agree
50	I trust brand will always guarantee customers satisfaction. ฉันเชื่อถือแบรนด์ว่ามีการรับประกันความพึงพอใจในสินค้า	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Online loyalty” is developed from the studies of loyalty and brand loyalty.

ท่านให้ความสำคัญมากที่สุดคือ “ความจงรักภักดีในช่องทางออนไลน์” ซึ่งประกอบด้วยความจงรักภักดีและความจงรักภักดีในแบรนด์สินค้า

51	I will recommend the shop to others. ฉันจะแนะนำร้านนี้ให้กับบุคคลอื่น	Strongly disagree	1	2	3	4	5	Strongly agree
52	I will re-purchase products from the shop. ฉันจะซื้อสินค้าซ้ำจากร้านนี้	Strongly disagree	1	2	3	4	5	Strongly agree

53	I will consider the shop as the 1st choice if I want to buy again. ฉันจะพิจารณาร้านค้านี้ให้เป็นตัวเลือกแรกในการซื้อสินค้าครั้งต่อไป	Strongly disagree	1	2	3	4	5	Strongly agree
54	I spend more time with the shop because I am happy with being in this shop. ฉันใช้เวลาที่ร้านค้านี้มากขึ้นเพราะมีความสุขกับการอยู่ในร้านนี้	Strongly disagree	1	2	3	4	5	Strongly agree
55	Although there is another cheaper brand, I still buy my favorite brand. ถึงแม้ว่าจะมีแบรนด์อื่นขายถูกกว่า ฉันก็จะซื้อแบรนด์โปรด	Strongly disagree	1	2	3	4	5	Strongly agree
56	Advertising of the other competitor brand cannot change my mind from the favorite brand. โฆษณาของแบรนด์คู่แข่งไม่สามารถทำให้ฉันเปลี่ยนใจจากแบรนด์โปรดได้	Strongly disagree	1	2	3	4	5	Strongly agree
57	If my favorite brand can keep up the quality I do not need to change to any other brand. หากแบรนด์โปรดยังคงคุณภาพของสินค้า ฉันไม่จำเป็นต้องเปลี่ยนไปใช้แบรนด์อื่น	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Offline loyalty” is developed from the studies of loyalty and brand loyalty.

ท่านให้ความสำคัญมากที่สุดต่อ “ความจงรักภักดีในช่องทางออฟไลน์” ซึ่งประกอบด้วยความจงรักภักดีและความจงรักภักดีในแบรนด์สินค้า

58	I will recommend the shop to others. ฉันจะแนะนำร้านนี้ให้กับบุคคลอื่น	Strongly disagree	1	2	3	4	5	Strongly agree
59	I will re-purchase products from the shop. ฉันจะซื้อสินค้าซ้ำจากร้านนี้	Strongly disagree	1	2	3	4	5	Strongly agree
60	I will consider the shop as the 1st choice if I want to buy again. ฉันจะพิจารณาร้านค้านี้ให้เป็นตัวเลือกแรกในการซื้อสินค้าครั้งต่อไป	Strongly disagree	1	2	3	4	5	Strongly agree
61	I spend more time with the shop because I am happy with being in this shop.	Strongly disagree	1	2	3	4	5	Strongly agree

61	I spend more time with the shop because I am happy with being in this shop. ฉันใช้เวลาที่ร้านค้านี้มากขึ้นเพราะมีความสุขกับการอยู่ในร้านนี้	Strongly disagree	1	2	3	4	5	Strongly agree
62	Although there is another cheaper brand, I still buy my favorite brand. ถึงแม้ว่าจะมีแบรนด์อื่นขายถูกกว่า ฉันก็จะซื้อแบรนด์โปรด	Strongly disagree	1	2	3	4	5	Strongly agree
63	Advertising of the other competitor brand cannot change my mind from the favorite brand. โฆษณาของแบรนด์คู่แข่งไม่สามารถทำให้ฉันเปลี่ยนใจจากแบรนด์โปรดได้	Strongly disagree	1	2	3	4	5	Strongly agree
64	If my favorite brand can keep up the quality I do not need to change to any other brand. หากแบรนด์โปรดยังคงคุณภาพของสินค้า ฉันไม่จำเป็นต้องเปลี่ยนไปใช้แบรนด์อื่น	Strongly disagree	1	2	3	4	5	Strongly agree

Question about “Sustainable consumption” is developed from the studies of environment, social, economic, and quality of life.

ท่านให้ความสำคัญมากที่สุดต่อ “การบริโภคอย่างยั่งยืน” ซึ่งประกอบด้วยปัจจัยทางด้านสิ่งแวดล้อม, สังคม, เศรษฐกิจ และคุณภาพชีวิต

65	The product that I buy must be eco-friendly product. สินค้าที่ฉันซื้อต้องเป็นมิตรกับสิ่งแวดล้อม	Strongly disagree	1	2	3	4	5	Strongly agree
66	The product that I buy must be made from natural material. สินค้าที่ฉันซื้อต้องทำมาจากวัสดุธรรมชาติ	Strongly disagree	1	2	3	4	5	Strongly agree
67	The packaging of the product that I buy must be made from natural material. สินค้าที่ฉันซื้อต้องใช้บรรจุภัณฑ์จากธรรมชาติ	Strongly disagree	1	2	3	4	5	Strongly agree
68	The shops need to emphasize or support corporate social responsibility (CSR) ร้านค้าต้องให้ความสำคัญและสนับสนุนกิจกรรมทางสังคม (อาทิ ผู้เป็นสุข, ทำความสะอาดสถานที่)	Strongly disagree	1	2	3	4	5	Strongly agree

69	The shops added value or make any choices for CSR to customers. ร้านค้าเพิ่มการรับรู้เรื่องนโยบายที่เป็นมิตรกับสังคมให้กับลูกค้า	Strongly disagree	1	2	3	4	5	Strongly agree
70	The shops influence customer for joining CSR campaign. ร้านค้าจูงใจให้ลูกค้าเข้าร่วมกิจกรรมทางสังคมที่ร้านค้าจัดขึ้น	Strongly disagree	1	2	3	4	5	Strongly agree
71	The product that I buy is appropriate in comparing with price quantity. สินค้าที่ฉันซื้อมีความเหมาะสมเมื่อเทียบราคากับคุณภาพ/ปริมาณ	Strongly disagree	1	2	3	4	5	Strongly agree
72	The product that I buy is appropriate in comparing with price and satisfaction. สินค้าที่ฉันซื้อมีความเหมาะสมเมื่อเทียบราคากับความพอใจ	Strongly disagree	1	2	3	4	5	Strongly agree
73	The product that I buy is appropriate in comparing with price and the acquired service. สินค้าที่ฉันซื้อมีความเหมาะสมเมื่อเทียบราคากับบริการที่ได้รับ	Strongly disagree	1	2	3	4	5	Strongly agree
74	The product that I buy is appropriate with my financial status. สินค้าที่ฉันซื้อเป็นสินค้าที่สอดคล้องกับฐานะทางการเงินของตนเอง	Strongly disagree	1	2	3	4	5	Strongly agree
75	The product that I buy is focusing on safety and health care standard. สินค้าที่ฉันซื้อเป็นสินค้าที่มุ่งเน้นมาตรฐานด้านความปลอดภัยและสุขอนามัย	Strongly disagree	1	2	3	4	5	Strongly agree

Part 4: Suggestions of respondents

APPENDIX E

INSTRUMENT'S RELIABILITY AND VALIDITY

In this research, the researcher checked the quality of the questionnaires by three experts and specialists in OMNI business. The questionnaire used as a tool in this research and examined the quality of the equipment as below

1. Validity checking, the researcher brought the questionnaire, is created, and proved by all three experts and specialists. To check the completed question in the subject matter measured, or the content is comprehensive enough and in the use of language that allows respondents to read easily and direct to the point. And then, test for content validity by finding the consistency of the Index of Item Objective Congruence (IOC) between the questions of each variable used in the measurement (Rovinelli & Hambleton, 1977), then select proposal with an $IOC > 0.5$, use the formula to calculate the value

$$IOC = \frac{\sum r}{N}$$

Where

IOC: The summary of all the points from experts and specialists.

N: Number of experts and specialists

1: The aforementioned questions were measured for objectives.

0: Not confident in the aforementioned questions were

measured for objectives.

- 1: The aforementioned questions were not measured for objectives.

The IOC has a value between -1 and +1. Therefore, a good question should be closed to 1. Any question has an IOC less than 0.50, should be revised or eliminated.

1: Experts' opinions agree that the questions correspond to the content

0: Experts' opinions are not confident that the questions correspond to the content

- 1: Experts' opinions agree that the questions do not correspond to the content

The consistency and validity of the instrument was verified the questionnaires by two experts and one professors who has a knowledge and experience in online and offline business to review, consider and advise the details of questionnaire as simple for comprehending and achevieing with the point of research view. Firstly, Monchai Intarapornudom, Managing Director of Ek-Chai Distribution System Co., Ltd. (Tesco Lotus) who has expert and skillful in the online and the offline platforms. Secondly, Chakkit Chatupanyachotikul, E-commerce Director of Siam Makro PCL. who has expert and fully skill in the online and the offline channels. Lastly, Assoc. Prof. Dr. Chalita Srinuan, Professor of King Mongkut's Institute of Technology Ladkrabang Business School who specialize in the online and offline markets. The questionnaire was examined by three experts by using the expert scores to find the consistency index between the question and the index of item objective congruence (IOC). This result has

a conformity index from 0.50 onward, and 76 questions passed all criteria as the results below

Questionnaire	Opinion of			IOC	Result	
	Expert1	Expert2	Expert3			
General information						
1	Gender	1	1	1	1	Pass
2	Age	1	1	1	1	Pass
3	Highest Education	1	1	1	1	Pass
4	Occupation	1	1	1	1	Pass
5	Online shopping experience	1	1	0	0.67	Pass
6	Offline shopping experience	1	1	0	0.67	Pass
7	Income per month	1	1	1	1	Pass
8	Domicile	1	1	1	1	Pass
9	Frequent Online shopping channel	0	1	1	0.67	Pass
10	Purchase frequency	0	1	1	0.67	Pass
11	Purchasing value per bill	1	1	1	1	Pass
12	The most frequently transacted location to complete the order	0	1	1	0.67	Pass
13	Purchasing motivation	0	1	1	0.67	Pass
14	Factors that influence not to purchase decision	0	1	1	0.67	Pass
15	Did you satisfy with Overall OMNI channel online shopping service?	1	1	1	1	Pass
Product						
16	Overall, you can easily buy products or services.	1	1	1	1	Pass
17	Overall, you can promptly buy products or services.	1	1	1	1	Pass
18	Overall, you can confidently buy products or services.	1	1	1	1	Pass
19	Acquiring an appropriate and good quality of products and services.	1	1	1	1	Pass
20	Acquiring a good quality of product makes you feel confident.	1	1	0	0.67	Pass
21	Acquiring a good quality of product makes you feel satisfied.	1	1	0	0.67	Pass
22	Thoroughly acquiring product information.	1	1	1	1	Pass
23	Acquiring useful product information	1	1	1	1	Pass

24	Acquiring product information helps making decision.	1	1	1	1	Pass
----	--	---	---	---	---	------

Satisfaction

25	Product brand is a part of my life.	1	1	1	1	Pass
26	My personality is connected to product brand.	1	1	1	1	Pass
27	My perception and feeling to product brands always automatically related.	1	1	1	1	Pass
28	My always used brand has a unique character comparing with another brand.	1	1	1	1	Pass
29	Brand makes me feel looking good.	1	1	1	1	Pass
30	Brand makes me trust and having faith with products.	1	1	1	1	Pass
31	My experience after-sale service is feeling comfortable.	1	1	1	1	Pass
32	My experience after-sale service is feeling as quick as I expected.	1	1	0	0.67	Pass
33	I acknowledge the policy and procedure of purchasing/return/and claim thoroughly.	1	1	1	1	Pass
34	Using branded product makes me feel safe.	1	1	1	1	Pass
35	Using branded product makes me impressed.	1	1	1	1	Pass
36	Using branded product makes me trust after-sales service.	1	1	1	1	Pass

Online Trust

37	I am pleased with telling my information to the store for buying product.	1	1	1	1	Pass
38	I am pleased with settled payment in advance for shopping.	1	1	1	1	Pass
39	I am pleased to buy product from a well-known shop.	1	1	1	1	Pass
40	I am pleased with being advised for buying product from the store.	1	1	1	1	Pass
41	I trust brand will always be honest to their customer.	1	1	1	1	Pass
42	I trust brand will always consider their customers benefits.	1	1	1	1	Pass

43	I trust brand will always guarantee customers satisfaction.	1	1	1	1	Pass
----	---	---	---	---	---	------

Offline Trust

44	I am pleased with telling my information to the store for buying product.	1	1	1	1	Pass
45	I am pleased with settled payment in advance for shopping.	1	1	1	1	Pass
46	I am pleased to buy product from a well-known shop.	1	1	1	1	Pass
47	I am pleased with being advised for buying product from the store.	1	1	1	1	Pass
48	I trust brand will always be honest to their customer.	1	1	1	1	Pass
49	I trust brand will always consider their customers benefits.	1	1	1	1	Pass
50	I trust brand will always guarantee customers satisfaction.	1	1	1	1	Pass

Online Loyalty

51	I will recommend the shop to others.	1	1	1	1	Pass
52	I will re-purchase products from the shop.	1	1	1	1	Pass
53	I will consider the shop as the 1st choice if I want to buy again.	1	1	1	1	Pass
54	I spend more time with the shop because I am happy with being in this shop.	1	1	1	1	Pass
55	Although there is another cheaper brand, I still buy my favorite brand.	1	1	1	1	Pass
56	Advertising of the other competitor brand cannot change my mind from the favorite brand.	1	1	1	1	Pass
57	If my favorite brand can keep up the quality I do not need to change to any other brand.	1	1	1	1	Pass

Offline Loyalty

58	I will recommend the shop to others.	1	1	1	1	Pass
59	I will re-purchase products from the shop.	1	1	1	1	Pass
60	I will consider the shop as the 1st choice if I want to buy again.	1	1	1	1	Pass

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61	I spend more time with the shop because I am happy with being in this shop.	1	1	1	1	Pass
62	Although there is another cheaper brand, I still buy my favorite brand.	1	1	1	1	Pass
63	Advertising of the other competitor brand cannot change my mind from the favorite brand.	1	1	1	1	Pass
64	If my favorite brand can keep up the quality I do not need to change to any other brand.	1	1	1	1	Pass
Sustainability						
65	The product that I buy must be eco-friendly product.	1	1	1	1	Pass
66	The product that I buy must be made from natural material.	1	1	1	1	Pass
67	The packaging of the product that I buy must be made from natural material.	1	1	1	1	Pass
68	The shops need to emphasize or support corporate social responsibility (CSR)	1	1	1	1	Pass
69	The shops added value or make any choices for CSR to customers.	1	1	1	1	Pass
70	The shops influence customer for joining CSR campaign.	1	1	1	1	Pass
71	The product that I buy is appropriate in comparing with price quantity.	1	1	1	1	Pass
72	The product that I buy is appropriate in comparing with price and satisfaction.	1	1	1	1	Pass
73	The product that I buy is appropriate in comparing with price and the acquired service.	1	1	0	0.67	Pass
74	The product that I buy is appropriate with my financial status.	1	1	1	1	Pass
75	The product that I buy is focusing on safety and health care standard.	1	1	1	1	Pass
Overall		70	75	69	0.71	Pass

APPENDIX F

CFA ANALYSIS RESULT

FMCG

Case Processing Summary

		N	%
Cases	Valid	389	100.0
	Excluded ^a	0	.0
	Total	389	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.944	19

LARGE APPLIANCE

Case Processing Summary

		N	%
Cases	Valid	383	100.0
	Excluded ^a	0	.0
	Total	383	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.890	19

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FMCG**Title**

FMCG: 01 October 2020 20:39

Groups**Group number 1 (Group number 1)****Notes for Group (Group number 1)**

The model is recursive.

Sample size = 389

Variable Summary (Group number 1)**Your model contains the following variables (Group number 1)**

Observed, endogenous variables

PI

PQ

PSA

SEn

SSo

SEc

SQL

OFFTB

OFFT

ONTT

ONTB

SBE

SCE

SOI

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SBA

OFFLB

OFFL

ONLB

ONLL

Unobserved, endogenous variables

Sustain

OffTrust

OnTrust

OnLoyalty

Satis

OffLoyalty

Unobserved, exogenous variables

Prod

e3

e2

e1

e16

e17

e18

e19

er1

er4

e11

e10

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er2

e9

e8

e7

e6

e5

e4

e15

e14

e13

e12

er5

er3

er6

Variable counts (Group number 1)

Number of variables in your model:	51
Number of observed variables:	19
Number of unobserved variables:	32
Number of exogenous variables:	26
Number of endogenous variables:	25

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	32	0	0	0	0	32
Labeled	0	0	0	0	0	0
Unlabeled	21	0	26	0	0	47
Total	53	0	26	0	0	79

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Models**Default model (Default model)****Notes for Model (Default model)****Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 190

Number of distinct parameters to be estimated: 47

Degrees of freedom (190 - 47): 143

Result (Default model)**Minimum was achieved**

Chi-square = 899.557

Degrees of freedom = 143

Probability level = .000

Group number 1 (Group number 1 - Default model)**Estimates (Group number 1 - Default model)****Scalar Estimates (Group number 1 - Default model)****Maximum Likelihood Estimates****Regression Weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
OffTrust	<---	Prod	2.406	0.296	8.114	***	par_6
Satis	<---	Prod	1.609	0.215	7.480	***	par_14
OnTrust	<---	Prod	2.409	0.299	8.064	***	par_7
OffLoyalty	<---	Satis	0.028	0.079	0.353	0.724	par_9
OffLoyalty	<---	OffTrust	0.831	0.073	11.369	***	par_10
OnLoyalty	<---	Satis	0.049	0.041	1.204	0.229	par_8
OnLoyalty	<---	OffLoyalty	0.779	0.060	12.953	***	par_11
OnLoyalty	<---	OnTrust	0.042	0.057	0.732	0.464	par_21
Sustain	<---	OnLoyalty	0.702	0.065	10.824	***	par_12
PI	<---	Prod	1.000				
PQ	<---	Prod	0.943	0.155	6.089	***	par_1
PSA	<---	Prod	1.076	0.160	6.745	***	par_2
SEn	<---	Sustain	1.000				

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SSo	<---	Sustain	0.754	0.070	10.805	***	par_3
SEc	<---	Sustain	0.906	0.063	14.456	***	par_4
SQL	<---	Sustain	0.836	0.060	13.866	***	par_5
ONTT	<---	OnTrust	0.852	0.047	18.236	***	par_13
SBE	<---	Satis	0.942	0.050	18.927	***	par_15
SCE	<---	Satis	0.848	0.046	18.393	***	par_16
SOI	<---	Satis	1.016	0.057	17.794	***	par_17
SBA	<---	Satis	1.000				
OFFLB	<---	OffLoyalty	1.000				
OFFL	<---	OffLoyalty	0.819	0.037	22.091	***	par_18
ONLB	<---	OnLoyalty	1.201	0.047	25.578	***	par_19
ONLL	<---	OnLoyalty	1.000				
ONTB	<---	OnTrust	1.000				
OFFTB	<---	OffTrust	1.000				
OFFT	<---	OffTrust	0.925	0.039	23.462	***	par_20

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OffTrust	<---	Prod	0.994
Satis	<---	Prod	0.767
OnTrust	<---	Prod	1.074
OffLoyalty	<---	Satis	0.024
OffLoyalty	<---	OffTrust	0.826
OnLoyalty	<---	Satis	0.052
OnLoyalty	<---	OffLoyalty	0.965
OnLoyalty	<---	OnTrust	0.048
Sustain	<---	OnLoyalty	0.641
PI	<---	Prod	0.41
PQ	<---	Prod	0.427
PSA	<---	Prod	0.518
SEn	<---	Sustain	0.717
SSo	<---	Sustain	0.61
SEc	<---	Sustain	0.846
SQL	<---	Sustain	0.797
ONTT	<---	OnTrust	0.799
SBE	<---	Satis	0.845
SCE	<---	Satis	0.828
SOI	<---	Satis	0.808
SBA	<---	Satis	0.826
OFFLB	<---	OffLoyalty	0.845
OFFL	<---	OffLoyalty	0.868
ONLB	<---	OnLoyalty	0.889

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ONLL	<---	OnLoyalty	0.883
ONTB	<---	OnTrust	0.793
OFFTB	<---	OffTrust	0.873
OFFT	<---	OffTrust	0.875

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Prod	0.047	0.012	4.015	***	par_22
er1	0.085	0.010	8.190	***	par_23
er3	0.003	0.007	0.526	0.599	par_24
er2	-0.036	0.008	-4.463	***	par_25
er5	0.079	0.011	7.508	***	par_26
er4	-0.016	0.004	-4.568	***	par_27
er6	0.127	0.018	7.129	***	par_28
e3	0.230	0.017	13.417	***	par_29
e2	0.186	0.014	13.402	***	par_30
e1	0.148	0.011	13.296	***	par_31
e16	0.204	0.018	11.289	***	par_32
e17	0.207	0.017	12.314	***	par_33
e18	0.070	0.009	8.097	***	par_34
e19	0.087	0.009	9.722	***	par_35
e11	0.085	0.008	10.764	***	par_36
e10	0.071	0.007	10.687	***	par_37
e9	0.139	0.012	11.455	***	par_38
e8	0.096	0.009	11.311	***	par_39
e7	0.073	0.007	10.080	***	par_40
e6	0.068	0.006	10.531	***	par_41
e5	0.112	0.010	10.944	***	par_42
e4	0.096	0.009	10.565	***	par_43
e15	0.110	0.010	11.512	***	par_44
e14	0.061	0.006	10.858	***	par_45
e13	0.069	0.006	11.030	***	par_46
e12	0.051	0.005	11.253	***	par_47

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Satis	0.588
OffTrust	0.987
OffLoyalty	0.713
OnTrust	1.154
OnLoyalty	1.090
Sustain	0.411
ONLL	0.779

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ONLB	0.790
OFFL	0.753
OFFLB	0.715
SBA	0.683
SOI	0.653
SCE	0.685
SBE	0.714
ONTB	0.629
ONTT	0.639
OFFT	0.766
OFFTB	0.762
SQL	0.635
SEc	0.716
SSo	0.372
SEn	0.514
PSA	0.268
PQ	0.183
PI	0.168

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	47	899.557	143	0	6.291
Saturated model	190	0	0		
Independence model	19	5680.336	171	0	33.218

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.023	0.778	0.705	0.585
Saturated model	0	1		
Independence model	0.139	0.184	0.093	0.165

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.842	0.811	0.863	0.836	0.863
Saturated model	1		1		1
Independence model	0	0	0	0	0

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	0.836	0.704	0.721
Saturated model	0	0	0
Independence model	1	0	0

NCP

Model	NCP	LO 90	HI 90
Default model	756.557	665.596	855.002
Saturated model	0	0	0
Independence model	5509.336	5266.453	5758.561

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	2.444	2.056	1.809	2.323
Saturated model	0	0	0	0
Independence model	15.436	14.971	14.311	15.648

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.12	0.112	0.127	0
Independence model	0.296	0.289	0.303	0

AIC

Model	AIC	BCC	BIC	CAIC
Default model	993.557	998.959	1177.365	1224.365
Saturated model	380	401.839	1123.051	1313.051
Independence model	5718.336	5720.52	5792.641	5811.641

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.7	2.453	2.967	2.715
Saturated model	1.033	1.033	1.033	1.092
Independence model	15.539	14.879	16.216	15.545

HOELTER

Model	HOELTER	HOELTER
Default model	0.05	0.01
Independence model	71	76
	14	15

Execution time summary

Minimization:	0.089
Miscellaneous:	0.813
Bootstrap:	0
Total:	0.902

LARGE APPLIANCE**Title**

LARGE APPLIANCE: 02 October 2020 22:52

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.

Sample size = 383

Variable Summary (Group number 1)**Your model contains the following variables (Group number 1)**

Observed, endogenous variables

PI

PQ

PSA

SEn

SSo

SEc

SQL

OFFTB

OFFT

ONTT

ONTB

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SBA

OFFLB

OFFL

ONLB

ONLL

Unobserved, endogenous variables

Sustain

OffTrust

OnTrust

OnLoyalty

Satis

OffLoyalty

Unobserved, exogenous variables

Prod

e3

e2

e1

e16

e17

e18

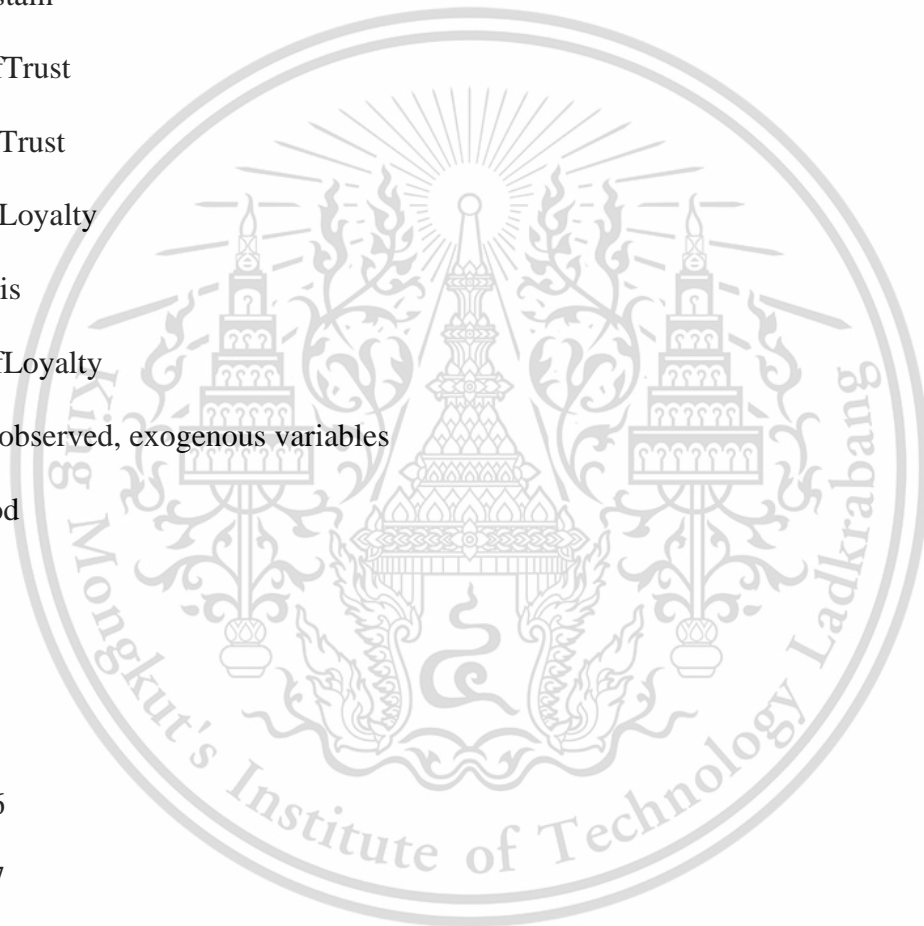
e19

er1

er4

e11

e10



er2

e9

e8

e7

e6

e5

e4

e15

e14

e13

e12

er5

er3

er6

Variable counts (Group number 1)

Number of variables in your model:	51
Number of observed variables:	19
Number of unobserved variables:	32
Number of exogenous variables:	26
Number of endogenous variables:	25

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	32	0	0	0	0	32
Labeled	0	0	0	0	0	0
Unlabeled	21	26	26	0	0	47
Total	53	26	26	0	0	79

Models**Default model (Default model)****Notes for Model (Default model)****Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 190

Number of distinct parameters to be estimated: 47

Degrees of freedom (190 - 47): 143

Result (Default model)**Minimum was achieved**

Chi-square = 717.592

Degrees of freedom = 143

Probability level = .000

Group number 1 (Group number 1 - Default model)**Estimates (Group number 1 - Default model)****Scalar Estimates (Group number 1 - Default model)****Maximum Likelihood Estimates****Regression Weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
OffTrust	<---	Prod	2.195	0.252	8.696	***	par_6
Satis	<---	Prod	1.322	0.172	7.687	***	par_14
OnTrust	<---	Prod	2.401	0.275	8.732	***	par_7
OffLoyalty	<---	Satis	0.092	0.083	1.109	0.268	par_9
OffLoyalty	<---	OffTrust	0.801	0.069	11.615	***	par_10
OnLoyalty	<---	Satis	0.068	0.034	2.001	0.045	par_8
OnLoyalty	<---	OffLoyalty	0.624	0.036	17.263	***	par_11
OnLoyalty	<---	OnTrust	0.147	0.036	4.053	***	par_21
Sustain	<---	OnLoyalty	0.887	0.068	13.137	***	par_12
PI	<---	Prod	1.000				
PQ	<---	Prod	1.195	0.170	7.039	***	par_1
PSA	<---	Prod	0.617	0.113	5.452	***	par_2
SEn	<---	Sustain	1.000				

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SSo	<---	Sustain	0.932	0.059	15.748	***	par_3
SEc	<---	Sustain	0.650	0.051	12.692	***	par_4
SQL	<---	Sustain	0.687	0.049	13.908	***	par_5
ONTT	<---	OnTrust	0.792	0.031	25.917	***	par_13
SBE	<---	Satis	1.057	0.066	16.041	***	par_15
SCE	<---	Satis	0.904	0.056	16.037	***	par_16
SOI	<---	Satis	1.253	0.067	18.666	***	par_17
SBA	<---	Satis	1.000				
OFFLB	<---	OffLoyalty	1.000				
OFFL	<---	OffLoyalty	0.800	0.027	29.828	***	par_18
ONLB	<---	OnLoyalty	1.187	0.047	25.020	***	par_19
ONLL	<---	OnLoyalty	1.000				
ONTB	<---	OnTrust	1.000				
OFFTB	<---	OffTrust	1.000				
OFFT	<---	OffTrust	0.976	0.037	26.230	***	par_20

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OffTrust	<---	Prod	0.98
Satis	<---	Prod	0.748
OnTrust	<---	Prod	1.008
OffLoyalty	<---	Satis	0.069
OffLoyalty	<---	OffTrust	0.755
OnLoyalty	<---	Satis	0.067
OnLoyalty	<---	OffLoyalty	0.822
OnLoyalty	<---	OnTrust	0.194
Sustain	<---	OnLoyalty	0.711
PI	<---	Prod	0.439
PQ	<---	Prod	0.516
PSA	<---	Prod	0.345
SEn	<---	Sustain	0.813
SSo	<---	Sustain	0.799
SEc	<---	Sustain	0.66
SQL	<---	Sustain	0.715
ONTT	<---	OnTrust	0.91
SBE	<---	Satis	0.803
SCE	<---	Satis	0.803
SOI	<---	Satis	0.924
SBA	<---	Satis	0.764
OFFLB	<---	OffLoyalty	0.929
OFFL	<---	OffLoyalty	0.907
ONLB	<---	OnLoyalty	0.893

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ONLL	<---	OnLoyalty	0.868
ONTB	<---	OnTrust	0.882
OFFTB	<---	OffTrust	0.883
OFFT	<---	OffTrust	0.915

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Prod	0.054	0.013	4.294	***	par_22
er1	0.075	0.010	7.707	***	par_23
er3	0.011	0.007	1.642	0.101	par_24
er2	-0.005	0.007	-0.632	0.528	par_25
er5	0.108	0.012	9.257	***	par_26
er4	-0.011	0.002	-4.379	***	par_27
er6	0.136	0.017	7.941	***	par_28
e3	0.228	0.017	13.285	***	par_29
e2	0.213	0.016	13.196	***	par_30
e1	0.153	0.011	13.358	***	par_31
e16	0.142	0.015	9.303	***	par_32
e17	0.136	0.014	9.677	***	par_33
e18	0.151	0.013	11.835	***	par_34
e19	0.125	0.011	11.253	***	par_35
e11	0.077	0.007	10.609	***	par_36
e10	0.051	0.006	9.138	***	par_37
e9	0.088	0.008	10.566	***	par_38
e8	0.040	0.004	9.195	***	par_39
e7	0.104	0.009	11.279	***	par_40
e6	0.077	0.007	11.282	***	par_41
e5	0.046	0.007	6.699	***	par_42
e4	0.121	0.010	11.808	***	par_43
e15	0.049	0.006	8.848	***	par_44
e14	0.042	0.004	10.275	***	par_45
e13	0.063	0.006	11.296	***	par_46
e12	0.058	0.005	12.053	***	par_47

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Satis	0.559
OffTrust	0.961
OffLoyalty	0.650
OnTrust	1.015
OnLoyalty	1.061

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Sustain	0.506
ONLL	0.753
ONLB	0.798
OFFL	0.823
OFFLB	0.863
SBA	0.583
SOI	0.854
SCE	0.645
SBE	0.645
ONTB	0.778
ONTT	0.827
OFFT	0.837
OFFTB	0.780
SQL	0.511
SEc	0.436
SSo	0.638
SEn	0.660
PSA	0.119
PQ	0.267
PI	0.193

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	47	717.592	143	0	5.018
Saturated model	190	0	0		
Independence model	19	5949.005	171	0	34.79

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.019	0.835	0.781	0.629
Saturated model	0	1		
Independence model	0.146	0.174	0.082	0.157

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.879	0.856	0.901	0.881	0.901
Saturated model	1		1		1
Independence model	0	0	0	0	0

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	0.836	0.735	0.753
Saturated model	0	0	0
Independence model	1	0	0

NCP

Model	NCP	LO 90	HI 90
Default model	574.592	494.695	662.008
Saturated model	0	0	0
Independence model	5778.005	5529.282	6033.068

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.982	1.587	1.367	1.829
Saturated model	0	0	0	0
Independence model	16.434	15.961	15.274	16.666

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.105	0.098	0.113	0
Independence model	0.306	0.299	0.312	0

AIC

Model	AIC	BCC	BIC	CAIC
Default model	811.592	817.089	994.629	1041.629
Saturated model	380	402.222	1119.937	1309.937
Independence model	5987.005	5989.227	6060.999	6079.999

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.242	2.021	2.483	2.257
Saturated model	1.05	1.05	1.05	1.111
Independence model	16.539	15.852	17.243	16.545

HOELTER

Model	HOELTER	HOELTER
Default model	0.05	0.01
Independence model	87	94
	13	14

Execution time summary

Minimization:	0.058
Miscellaneous:	0.675
Bootstrap:	0
Total:	0.733

APPENDIX G

SEM ANALYSIS RESULT

FMCG

Title

FMCG: 09 October 2020 00:58

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.

Sample size = 389

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

PI

PQ

PSA

SEn

SSo

SEc

SQL

OFFTB

OFFT

ONTT

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ONTB

SBE

SCE

SOI

SBA

OFFLB

OFFL

ONLB

ONLL

Unobserved, endogenous variables

Sustain

OffTrust

OnTrust

OnLoyalty

Satis

OffLoyalty

Unobserved, exogenous variables

Prod

e3

e2

e1

e16

e17

e18

e19

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er1

er4

e11

e10

er2

e9

e8

e7

e6

e5

e4

e15

e14

e13

e12

er5

er3

er6

Variable counts (Group number 1)

Number of variables in your model:	51
Number of observed variables:	19
Number of unobserved variables:	32
Number of exogenous variables:	26
Number of endogenous variables:	25

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	32	0	0	0	0	32
Labeled	0	0	0	0	0	0
Unlabeled	21	86	26	0	0	133
Total	53	86	26	0	0	165

Models**Default model (Default model)****Notes for Model (Default model)****Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 190

Number of distinct parameters to be estimated: 133

Degrees of freedom (190 - 133): 57

Result (Default model)**Minimum was achieved**

Chi-square = 66.679

Degrees of freedom = 57

Probability level = .178

Group number 1 (Group number 1 - Default model)**Estimates (Group number 1 - Default model)****Scalar Estimates (Group number 1 - Default model)****Maximum Likelihood Estimates****Regression Weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
OffTrust	<---	Prod	2.519	0.359	7.022	***	par_6
Satis	<---	Prod	1.655	0.239	6.922	***	par_14
OnTrust	<---	Prod	2.160	0.318	6.788	***	par_7
OffLoyalty	<---	Satis	0.333	0.336	0.992	0.321	par_9

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OffLoyalty	<---	OffTrust	0.610	0.220	2.780	0.005	par_10
OnLoyalty	<---	Satis	0.116	0.219	0.532	0.595	par_8
OnLoyalty	<---	OffLoyalty	0.516	0.099	5.210	***	par_11
OnLoyalty	<---	OnTrust	0.249	0.179	1.396	0.163	par_21
Sustain	<---	OnLoyalty	0.843	0.086	9.857	***	par_12
PI	<---	Prod	1.000				
PQ	<---	Prod	0.979	0.121	8.080	***	par_1
PSA	<---	Prod	1.152	0.160	7.185	***	par_2
SEn	<---	Sustain	1.000				
SSo	<---	Sustain	1.250	0.534	2.343	0.019	par_3
SEc	<---	Sustain	0.892	0.079	11.357	***	par_4
SQL	<---	Sustain	0.721	0.079	9.168	***	par_5
ONTT	<---	OnTrust	0.863	0.056	15.446	***	par_13
SBE	<---	Satis	0.997	0.067	14.798	***	par_15
SCE	<---	Satis	0.868	0.058	14.878	***	par_16
SOI	<---	Satis	1.136	0.072	15.743	***	par_17
SBA	<---	Satis	1.000				
OFFLB	<---	OffLoyalty	1.000				
OFFL	<---	OffLoyalty	0.809	0.042	19.140	***	par_18
ONLB	<---	OnLoyalty	1.157	0.050	23.096	***	par_19
ONLL	<---	OnLoyalty	1.000				
ONTB	<---	OnTrust	1.000				
OFFTB	<---	OffTrust	1.000				
OFFT	<---	OffTrust	0.819	0.061	13.386	***	par_20

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OffTrust	<---	Prod	0.987
Satis	<---	Prod	0.803
OnTrust	<---	Prod	0.978
OffLoyalty	<---	Satis	0.284
OffLoyalty	<---	OffTrust	0.643
OnLoyalty	<---	Satis	0.119
OnLoyalty	<---	OffLoyalty	0.621
OnLoyalty	<---	OnTrust	0.274
Sustain	<---	OnLoyalty	0.941
PI	<---	Prod	0.412
PQ	<---	Prod	0.452
PSA	<---	Prod	0.559
SEn	<---	Sustain	0.605
SSo	<---	Sustain	0.850
SEc	<---	Sustain	0.706

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SQL	<---	Sustain	0.585
ONTT	<---	OnTrust	0.807
SBE	<---	Satis	0.888
SCE	<---	Satis	0.842
SOI	<---	Satis	0.897
SBA	<---	Satis	0.820
OFFLB	<---	OffLoyalty	0.849
OFFL	<---	OffLoyalty	0.862
ONLB	<---	OnLoyalty	0.884
ONLL	<---	OnLoyalty	0.912
ONTB	<---	OnTrust	0.789
OFFTB	<---	OffTrust	0.928
OFFT	<---	OffTrust	0.824

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Prod	0.048	0.013	3.661	***	par_108
er1	0.072	0.014	5.076	***	par_109
er3	0.008	0.013	0.620	0.535	par_110
er2	0.010	0.015	0.671	0.502	par_111
er5	0.087	0.024	3.635	***	par_112
er4	0.025	0.014	1.778	0.075	par_113
er6	0.068	0.026	2.625	0.009	par_114
e3	0.233	0.018	13.063	***	par_115
e2	0.177	0.014	12.948	***	par_116
e1	0.139	0.012	11.583	***	par_117
e16	0.241	0.031	7.736	***	par_118
e17	0.177	0.026	6.841	***	par_119
e18	0.140	0.020	6.990	***	par_120
e19	0.157	0.016	9.942	***	par_121
e11	0.050	0.021	2.351	0.019	par_122
e10	0.099	0.014	6.944	***	par_123
e9	0.141	0.015	9.698	***	par_124
e8	0.093	0.010	9.097	***	par_125
e7	0.054	0.016	3.416	***	par_126
e6	0.062	0.009	6.972	***	par_127
e5	0.155	0.022	7.099	***	par_128
e4	0.099	0.013	7.837	***	par_129
e15	0.108	0.012	8.901	***	par_130
e14	0.063	0.008	8.221	***	par_131
e13	0.072	0.008	8.744	***	par_132
e12	0.041	0.006	7.405	***	par_133

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Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Satis	0.645
OffTrust	0.975
OffLoyalty	0.689
OnTrust	0.956
OnLoyalty	0.870
Sustain	0.560
ONLL	0.821
ONLB	0.782
OFFL	0.744
OFFLB	0.720
SBA	0.672
SOI	0.523
SCE	0.709
SBE	0.788
ONTB	0.623
ONTT	0.651
OFFT	0.678
OFFTB	0.861
SQL	0.332
SEc	0.431
SSo	0.471
SEn	0.428
PSA	0.313
PQ	0.205
PI	0.170

Model Fit Summary**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	133	66.679	57	0.178	1.170
Saturated model	190	0	0		
Independence model	19	5680.336	171	0	33.218

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.006	0.981	0.938	0.294
Saturated model	0	1		
Independence model	0.139	0.184	0.093	0.165

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.988	0.965	0.998	0.995	0.998
Saturated model	1		1		1
Independence model	0	0	0	0	0

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	0.333	0.329	0.333
Saturated model	0	0	0
Independence model	1	0	0

NCP

Model	NCP	LO 90	HI 90
Default model	9.679	0	34.202
Saturated model	0	0	0
Independence model	5509.336	5266.453	5758.561

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	0.181	0.026	0	0.093
Saturated model	0	0	0	0
Independence model	15.436	14.971	14.311	15.648

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RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.021	0	0.040	0.996
Independence model	0.296	0.289	0.303	0

AIC

Model	AIC	BCC	BIC	CAIC
Default model	332.679	347.966	852.815	985.815
Saturated model	380	401.839	1123.051	1313.051
Independence model	5718.336	5720.52	5792.641	5811.641

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	0.904	0.878	0.971	0.946
Saturated model	1.033	1.033	1.033	1.092
Independence model	15.539	14.879	16.216	15.545

HOELTER

Model	HOELTER	HOELTER
Default model	0.05	0.01
Independence model	418	468
	14	15

Execution time summary

Minimization:	0.085
Miscellaneous:	1.625
Bootstrap:	0
Total:	1.71

LARGE APPLIANCE

Title

LARGE APPLIANCE: 08 October 2020 23:54

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.

Sample size = 383

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

PI

PQ

PSA

SEn

SSo

SEc

SQL

OFFTB

OFFT

ONTT

ONTB

SBE

SCE

SOI

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SBA

OFFLB

OFFL

ONLB

ONLL

Unobserved, endogenous variables

Sustain

OffTrust

OnTrust

OnLoyalty

Satis

OffLoyalty

Unobserved, exogenous variables

Prod

e3

e2

e1

e16

e17

e18

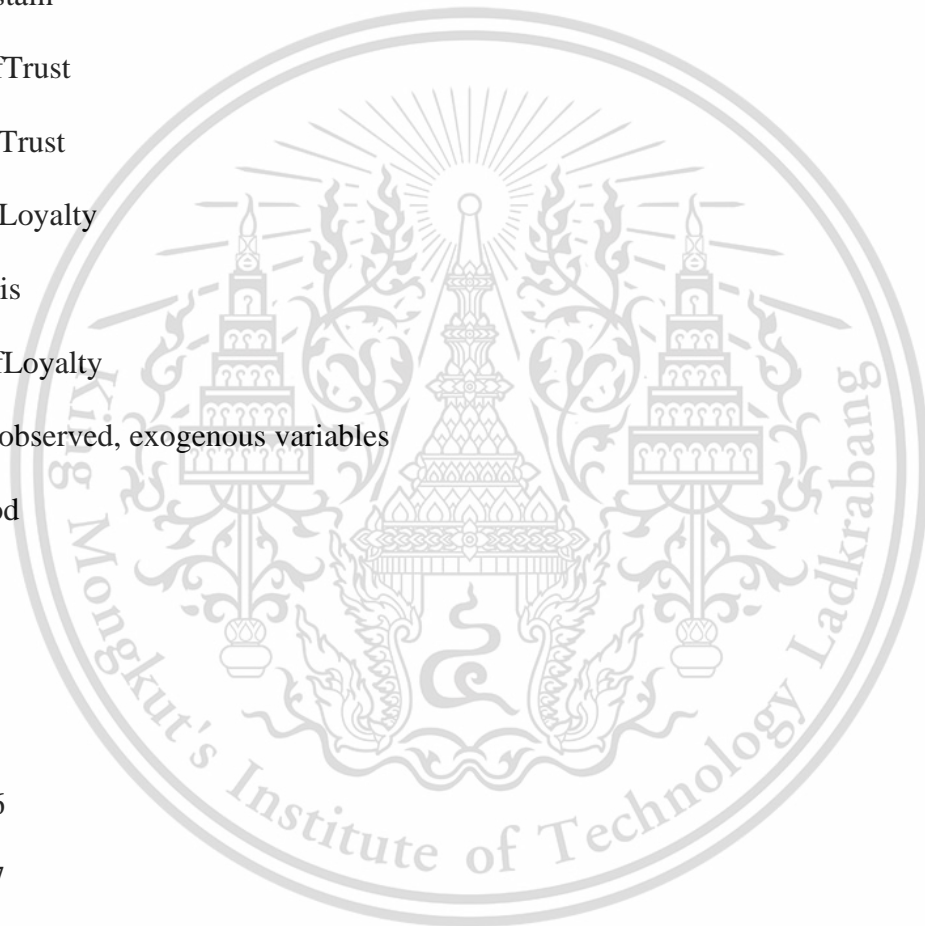
e19

er1

er4

e11

e10



er2

e9

e8

e7

e6

e5

e4

e15

e14

e13

e12

er5

er3

er6

Variable counts (Group number 1)

Number of variables in your model:	51
Number of observed variables:	19
Number of unobserved variables:	32
Number of exogenous variables:	26
Number of endogenous variables:	25

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	32	0	0	0	0	32
Labeled	0	0	0	0	0	0
Unlabeled	21	51	26	0	0	98
Total	53	51	26	0	0	130

Models**Default model (Default model)****Notes for Model (Default model)****Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 190

Number of distinct parameters to be estimated: 98

Degrees of freedom (190 - 98): 92

Result (Default model)**Minimum was achieved**

Chi-square = 77.459

Degrees of freedom = 92

Probability level = .861

Group number 1 (Group number 1 - Default model)**Estimates (Group number 1 - Default model)****Scalar Estimates (Group number 1 - Default model)****Maximum Likelihood Estimates****Regression Weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
OffTrust	<---	Prod	2.200	0.269	8.174	***	par_6
Satis	<---	Prod	1.385	0.181	7.641	***	par_14
OnTrust	<---	Prod	2.398	0.284	8.448	***	par_7
OffLoyalty	<---	Satis	0.048	0.078	0.611	0.541	par_9
OffLoyalty	<---	OffTrust	0.817	0.069	11.887	***	par_10
OnLoyalty	<---	Satis	0.083	0.035	2.367	0.018	par_8
OnLoyalty	<---	OffLoyalty	0.644	0.038	17.070	***	par_11
OnLoyalty	<---	OnTrust	0.139	0.036	3.841	***	par_21
Sustain	<---	OnLoyalty	0.972	0.083	11.682	***	par_12
PI	<---	Prod	1.000				
PQ	<---	Prod	1.253	0.114	10.950	***	par_1
PSA	<---	Prod	0.580	0.109	5.314	***	par_2
SEn	<---	Sustain	1.000				

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SSo	<---	Sustain	1.025	0.069	14.874	***	par_3
SEc	<---	Sustain	0.717	0.069	10.337	***	par_4
SQL	<---	Sustain	0.803	0.071	11.253	***	par_5
ONTT	<---	OnTrust	0.784	0.030	26.393	***	par_13
SBE	<---	Satis	1.030	0.065	15.849	***	par_15
SCE	<---	Satis	0.871	0.056	15.508	***	par_16
SOI	<---	Satis	1.169	0.063	18.460	***	par_17
SBA	<---	Satis	1.000				
OFFLB	<---	OffLoyalty	1.000				
OFFL	<---	OffLoyalty	0.848	0.030	28.091	***	par_18
ONLB	<---	OnLoyalty	1.119	0.045	24.984	***	par_19
ONLL	<---	OnLoyalty	1.000				
ONTB	<---	OnTrust	1.000				
OFFTB	<---	OffTrust	1.000				
OFFT	<---	OffTrust	0.989	0.038	26.308	***	par_20

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OffTrust	<---	Prod	0.991
Satis	<---	Prod	0.747
OnTrust	<---	Prod	0.998
OffLoyalty	<---	Satis	0.038
OffLoyalty	<---	OffTrust	0.788
OnLoyalty	<---	Satis	0.082
OnLoyalty	<---	OffLoyalty	0.793
OnLoyalty	<---	OnTrust	0.179
Sustain	<---	OnLoyalty	0.812
PI	<---	Prod	0.440
PQ	<---	Prod	0.543
PSA	<---	Prod	0.327
SEn	<---	Sustain	0.809
SSo	<---	Sustain	0.874
SEc	<---	Sustain	0.723
SQL	<---	Sustain	0.833
ONTT	<---	OnTrust	0.907
SBE	<---	Satis	0.820
SCE	<---	Satis	0.814
SOI	<---	Satis	0.905
SBA	<---	Satis	0.802
OFFLB	<---	OffLoyalty	0.902
OFFL	<---	OffLoyalty	0.932
ONLB	<---	OnLoyalty	0.873

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ONLL	<---	OnLoyalty	0.898
ONTB	<---	OnTrust	0.889
OFFTB	<---	OffTrust	0.879
OFFT	<---	OffTrust	0.918

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Prod	0.054	0.013	4.200	***	par_73
er1	0.083	0.010	7.932	***	par_74
er3	0.005	0.007	0.676	0.499	par_75
er2	0.001	0.009	0.161	0.872	par_76
er5	0.096	0.011	8.914	***	par_77
er4	0.000	0.002	0.156	0.876	par_78
er6	0.144	0.025	5.756	***	par_79
e3	0.226	0.017	13.302	***	par_80
e2	0.204	0.016	12.705	***	par_81
e1	0.153	0.011	13.526	***	par_82
e16	0.144	0.024	6.073	***	par_83
e17	0.086	0.031	2.809	0.005	par_84
e18	0.155	0.015	10.458	***	par_85
e19	0.098	0.019	5.125	***	par_86
e11	0.079	0.007	11.275	***	par_87
e10	0.049	0.006	8.580	***	par_88
e9	0.083	0.008	10.320	***	par_89
e8	0.042	0.004	9.662	***	par_90
e7	0.097	0.009	10.416	***	par_91
e6	0.072	0.007	10.552	***	par_92
e5	0.056	0.007	7.555	***	par_93
e4	0.103	0.011	9.749	***	par_94
e15	0.066	0.007	9.440	***	par_95
e14	0.031	0.004	7.062	***	par_96
e13	0.066	0.006	10.798	***	par_97
e12	0.046	0.004	10.258	***	par_98

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Satis	0.558
OffTrust	0.982
OffLoyalty	0.666
OnTrust	0.996
OnLoyalty	0.998

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Sustain	0.470
ONLL	0.807
ONLB	0.790
OFFL	0.869
OFFLB	0.814
SBA	0.644
SOI	0.820
SCE	0.663
SBE	0.672
ONTB	0.790
ONTT	0.823
OFFT	0.843
OFFTB	0.773
SQL	0.615
SEc	0.419
SSo	0.771
SEn	0.654
PSA	0.107
PQ	0.295
PI	0.194

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	98	77.459	92	0.861	0.842
Saturated model	190	0	0		
Independence model	19	5949.005	171	0	34.79

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.005	0.979	0.956	0.474
Saturated model	0	1		
Independence model	0.146	0.174	0.082	0.157

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.987	0.976	1.002	1.005	1
Saturated model	1		1		1
Independence model	0	0	0	0	0

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	0.538	0.531	0.538
Saturated model	0	0	0
Independence model	1	0	0

NCP

Model	NCP	LO 90	HI 90
Default model	0	0	8.447
Saturated model	0	0	0
Independence model	5778.005	5529.282	6033.068

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	0.214	0	0	0.023
Saturated model	0	0	0	0
Independence model	16.434	15.961	15.274	16.666

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0	0	0.016	1
Independence model	0.306	0.299	0.312	0

AIC

Model	AIC	BCC	BIC	CAIC
Default model	273.459	284.921	655.11	753.11
Saturated model	380	402.222	1119.937	1309.937
Independence model	5987.005	5989.227	6060.999	6079.999

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	0.755	0.796	0.819	0.787
Saturated model	1.05	1.05	1.05	1.111
Independence model	16.539	15.852	17.243	16.545

HOELTER

Model	HOELTER	HOELTER
Default model	0.05	0.01
Independence model	13	14

Execution time summary

Minimization:	0.058
Miscellaneous:	0.954
Bootstrap:	0
Total:	1.012

APPENDIX H

DIRECT EFFECTS, INDIRECT EFFECTS AND TOTAL EFFECTS

THE MODEL OF FMCG

Direct Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	1.655	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	2.160	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	2.519	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	1.809	0.288	0.249	0.315	0.000	0.516	0.000
Offline Loyalty	2.089	0.333	0.000	0.610	0.000	0.000	0.000
Sustainability	1.525	0.243	0.210	0.265	0.843	0.435	0.000
PSA	1.152	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.979	0.000	0.000	0.000	0.000	0.000	0.000
PI	1.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	1.655	1.000	0.000	0.000	0.000	0.000	0.000
SOI	1.880	1.136	0.000	0.000	0.000	0.000	0.000
SCE	1.437	0.868	0.000	0.000	0.000	0.000	0.000
SBE	1.650	0.997	0.000	0.000	0.000	0.000	0.000

Online Loyalty	1.809	0.172	0.000	0.315	0.000	0.000	0.000
Offline Loyalty	2.089	0.000	0.000	0.000	0.000	0.000	0.000
Sustainability	1.525	0.243	0.210	0.265	0.000	0.435	0.000
PSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	1.655	0.000	0.000	0.000	0.000	0.000	0.000
SOI	1.880	0.000	0.000	0.000	0.000	0.000	0.000
SCE	1.437	0.000	0.000	0.000	0.000	0.000	0.000
SBE	1.650	0.000	0.000	0.000	0.000	0.000	0.000
ONTT	1.864	0.000	0.000	0.000	0.000	0.000	0.000
ONTB	2.160	0.000	0.000	0.000	0.000	0.000	0.000
OFFT	2.062	0.000	0.000	0.000	0.000	0.000	0.000
OFFTB	2.519	0.000	0.000	0.000	0.000	0.000	0.000
ONLL	1.809	0.288	0.249	0.315	0.000	0.516	0.000
ONLB	2.093	0.334	0.288	0.364	0.000	0.597	0.000
OFFL	1.690	0.270	0.000	0.494	0.000	0.000	0.000
OFFLB	2.089	0.333	0.000	0.610	0.000	0.000	0.000
SEn	1.525	0.243	0.210	0.265	0.843	0.435	0.000
SSo	1.907	0.304	0.263	0.332	1.054	0.544	0.000
SEc	1.360	0.217	0.187	0.237	0.752	0.388	0.000
SQL	1.100	0.175	0.152	0.192	0.608	0.314	0.000

Standardized Indirect Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.901	0.176	0.000	0.400	0.000	0.000	0.000
Offline Loyalty	0.863	0.000	0.000	0.000	0.000	0.000	0.000
Sustainability	0.848	0.278	0.258	0.376	0.000	0.585	0.000
PSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.659	0.000	0.000	0.000	0.000	0.000	0.000
SOI	0.720	0.000	0.000	0.000	0.000	0.000	0.000
SCE	0.677	0.000	0.000	0.000	0.000	0.000	0.000
SBE	0.713	0.000	0.000	0.000	0.000	0.000	0.000
ONTT	0.788	0.000	0.000	0.000	0.000	0.000	0.000
ONTB	0.772	0.000	0.000	0.000	0.000	0.000	0.000
OFFT	0.813	0.000	0.000	0.000	0.000	0.000	0.000
OFFTB	0.916	0.000	0.000	0.000	0.000	0.000	0.000
ONLL	0.821	0.270	0.250	0.365	0.000	0.567	0.000
ONLB	0.796	0.262	0.242	0.354	0.000	0.550	0.000
OFFL	0.744	0.245	0.000	0.555	0.000	0.000	0.000
OFFLB	0.733	0.241	0.000	0.546	0.000	0.000	0.000

SEn	0.513	0.168	0.156	0.228	0.569	0.354	0.000
SSo	0.720	0.237	0.219	0.320	0.800	0.497	0.000
SEc	0.598	0.197	0.182	0.266	0.664	0.413	0.000
SQL	0.496	0.163	0.151	0.220	0.551	0.342	0.000

Total Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	1.655	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	2.160	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	2.519	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	1.809	0.288	0.249	0.315	0.000	0.516	0.000
Offline Loyalty	2.089	0.333	0.000	0.610	0.000	0.000	0.000
Sustainability	1.525	0.243	0.210	0.265	0.843	0.435	0.000
PSA	1.152	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.979	0.000	0.000	0.000	0.000	0.000	0.000
PI	1.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	1.655	1.000	0.000	0.000	0.000	0.000	0.000
SOI	1.880	1.136	0.000	0.000	0.000	0.000	0.000
SCE	1.437	0.868	0.000	0.000	0.000	0.000	0.000
SBE	1.650	0.997	0.000	0.000	0.000	0.000	0.000
ONTT	1.864	0.000	0.863	0.000	0.000	0.000	0.000
ONTB	2.160	0.000	1.000	0.000	0.000	0.000	0.000
OFFT	2.062	0.000	0.000	0.819	0.000	0.000	0.000

OFFTB	2.519	0.000	0.000	1.000	0.000	0.000	0.000
ONLL	1.809	0.288	0.249	0.315	1.000	0.516	0.000
ONLB	2.093	0.334	0.288	0.364	1.157	0.597	0.000
OFFL	1.690	0.270	0.000	0.494	0.000	0.809	0.000
OFFLB	2.089	0.333	0.000	0.610	0.000	1.000	0.000
SEn	1.525	0.243	0.210	0.265	0.843	0.435	1.000
SSo	1.907	0.304	0.263	0.332	1.054	0.544	1.250
SEc	1.360	0.217	0.187	0.237	0.752	0.388	0.892
SQL	1.100	0.175	0.152	0.192	0.608	0.314	0.721

Standardized Total Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	0.803	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	0.978	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	0.987	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.901	0.296	0.274	0.400	0.000	0.621	0.000
Offline Loyalty	0.863	0.284	0.000	0.643	0.000	0.000	0.000
Sustainability	0.848	0.278	0.258	0.376	0.941	0.585	0.000
PSA	0.559	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.452	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.412	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.659	0.820	0.000	0.000	0.000	0.000	0.000
SOI	0.720	0.897	0.000	0.000	0.000	0.000	0.000

SCE	0.677	0.842	0.000	0.000	0.000	0.000	0.000
SBE	0.713	0.888	0.000	0.000	0.000	0.000	0.000
ONTT	0.788	0.000	0.807	0.000	0.000	0.000	0.000
ONTB	0.772	0.000	0.789	0.000	0.000	0.000	0.000
OFFT	0.813	0.000	0.000	0.824	0.000	0.000	0.000
OFFTB	0.916	0.000	0.000	0.928	0.000	0.000	0.000
ONLL	0.821	0.270	0.250	0.365	0.912	0.567	0.000
ONLB	0.796	0.262	0.242	0.354	0.884	0.550	0.000
OFFL	0.744	0.245	0.000	0.555	0.000	0.862	0.000
OFFLB	0.733	0.241	0.000	0.546	0.000	0.849	0.000
SEn	0.513	0.168	0.156	0.228	0.569	0.354	0.605
SSo	0.720	0.237	0.219	0.320	0.800	0.497	0.850
SEc	0.598	0.197	0.182	0.266	0.664	0.413	0.706
SQL	0.496	0.163	0.151	0.220	0.551	0.342	0.585

THE MODEL OF LARGE APPLIANCE

Direct Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	1.385	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	2.398	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	2.200	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.000	0.083	0.139	0.000	0.000	0.644	0.000
Offline Loyalty	0.000	0.048	0.000	0.817	0.000	0.000	0.000
Sustainability	0.000	0.000	0.000	0.000	0.972	0.000	0.000
PSA	0.580	0.000	0.000	0.000	0.000	0.000	0.000
PQ	1.253	0.000	0.000	0.000	0.000	0.000	0.000
PI	1.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.000	1.000	0.000	0.000	0.000	0.000	0.000
SOI	0.000	1.169	0.000	0.000	0.000	0.000	0.000
SCE	0.000	0.871	0.000	0.000	0.000	0.000	0.000
SBE	0.000	1.030	0.000	0.000	0.000	0.000	0.000
ONTT	0.000	0.000	0.784	0.000	0.000	0.000	0.000
ONTB	0.000	0.000	1.000	0.000	0.000	0.000	0.000
OFFT	0.000	0.000	0.000	0.989	0.000	0.000	0.000
OFFTB	0.000	0.000	0.000	1.000	0.000	0.000	0.000
ONLL	0.000	0.000	0.000	0.000	1.000	0.000	0.000
ONLB	0.000	0.000	0.000	0.000	1.119	0.000	0.000

OFFL	0.000	0.000	0.000	0.000	0.000	0.848	0.000
OFFLB	0.000	0.000	0.000	0.000	0.000	1.000	0.000
SEn	0.000	0.000	0.000	0.000	0.000	0.000	1.000
SSo	0.000	0.000	0.000	0.000	0.000	0.000	1.025
SEc	0.000	0.000	0.000	0.000	0.000	0.000	0.717
SQL	0.000	0.000	0.000	0.000	0.000	0.000	0.803

Standardized Direct Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	0.747	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	0.998	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	0.991	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.000	0.082	0.179	0.000	0.000	0.793	0.000
Offline Loyalty	0.000	0.038	0.000	0.788	0.000	0.000	0.000
Sustainability	0.000	0.000	0.000	0.000	0.812	0.000	0.000
PSA	0.327	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.543	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.440	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.000	0.802	0.000	0.000	0.000	0.000	0.000
SOI	0.000	0.905	0.000	0.000	0.000	0.000	0.000
SCE	0.000	0.814	0.000	0.000	0.000	0.000	0.000
SBE	0.000	0.820	0.000	0.000	0.000	0.000	0.000
ONTT	0.000	0.000	0.907	0.000	0.000	0.000	0.000

SBA	1.385	0.000	0.000	0.000	0.000	0.000	0.000
SOI	1.620	0.000	0.000	0.000	0.000	0.000	0.000
SCE	1.207	0.000	0.000	0.000	0.000	0.000	0.000
SBE	1.428	0.000	0.000	0.000	0.000	0.000	0.000
ONTT	1.879	0.000	0.000	0.000	0.000	0.000	0.000
ONTB	2.398	0.000	0.000	0.000	0.000	0.000	0.000
OFFT	2.176	0.000	0.000	0.000	0.000	0.000	0.000
OFFTB	2.200	0.000	0.000	0.000	0.000	0.000	0.000
ONLL	1.647	0.113	0.139	0.526	0.000	0.644	0.000
ONLB	1.843	0.127	0.155	0.588	0.000	0.720	0.000
OFFL	1.580	0.040	0.000	0.693	0.000	0.000	0.000
OFFLB	1.863	0.048	0.000	0.817	0.000	0.000	0.000
SEn	1.600	0.110	0.135	0.511	0.972	0.625	0.000
SSo	1.640	0.113	0.138	0.524	0.996	0.641	0.000
SEc	1.147	0.079	0.097	0.366	0.696	0.448	0.000
SQL	1.285	0.089	0.108	0.410	0.781	0.502	0.000

Standardized Indirect Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.881	0.030	0.000	0.624	0.000	0.000	0.000

Offline Loyalty	0.809	0.000	0.000	0.000	0.000	0.000	0.000
Sustainability	0.715	0.091	0.145	0.507	0.000	0.644	0.000
PSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.600	0.000	0.000	0.000	0.000	0.000	0.000
SOI	0.677	0.000	0.000	0.000	0.000	0.000	0.000
SCE	0.608	0.000	0.000	0.000	0.000	0.000	0.000
SBE	0.613	0.000	0.000	0.000	0.000	0.000	0.000
ONTT	0.905	0.000	0.000	0.000	0.000	0.000	0.000
ONTB	0.887	0.000	0.000	0.000	0.000	0.000	0.000
OFFT	0.910	0.000	0.000	0.000	0.000	0.000	0.000
OFFTB	0.871	0.000	0.000	0.000	0.000	0.000	0.000
ONLL	0.791	0.101	0.160	0.561	0.000	0.712	0.000
ONLB	0.768	0.098	0.156	0.545	0.000	0.692	0.000
OFFL	0.754	0.036	0.000	0.734	0.000	0.000	0.000
OFFLB	0.730	0.035	0.000	0.711	0.000	0.000	0.000
SEn	0.578	0.074	0.117	0.410	0.657	0.521	0.000
SSo	0.625	0.080	0.127	0.443	0.709	0.562	0.000
SEc	0.517	0.066	0.105	0.367	0.587	0.466	0.000
SQL	0.596	0.076	0.121	0.422	0.676	0.536	0.000

Total Effects (Group number 1 - Default model)

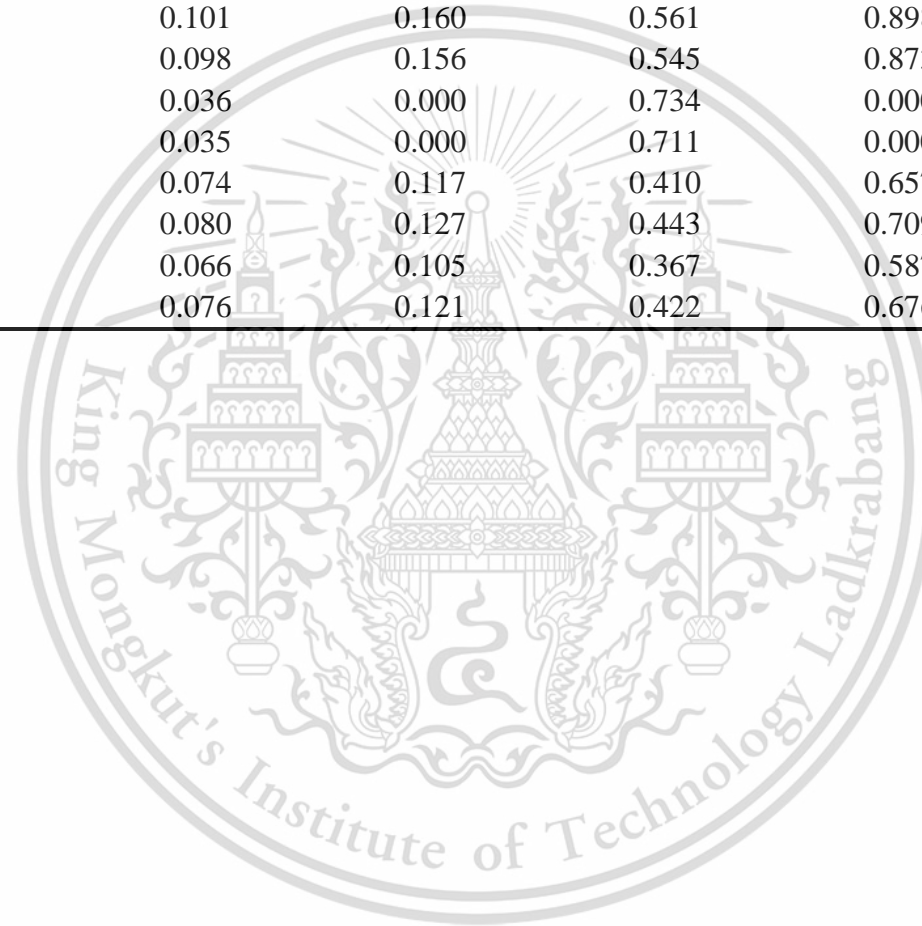
	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	1.385	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	2.398	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	2.200	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	1.647	0.113	0.139	0.526	0.000	0.644	0.000
Offline Loyalty	1.863	0.048	0.000	0.817	0.000	0.000	0.000
Sustainability	1.600	0.110	0.135	0.511	0.972	0.625	0.000
PSA	0.580	0.000	0.000	0.000	0.000	0.000	0.000
PQ	1.253	0.000	0.000	0.000	0.000	0.000	0.000
PI	1.000	0.000	0.000	0.000	0.000	0.000	0.000
SBA	1.385	1.000	0.000	0.000	0.000	0.000	0.000
SOI	1.620	1.169	0.000	0.000	0.000	0.000	0.000
SCE	1.207	0.871	0.000	0.000	0.000	0.000	0.000
SBE	1.428	1.030	0.000	0.000	0.000	0.000	0.000
ONTT	1.879	0.000	0.784	0.000	0.000	0.000	0.000
ONTB	2.398	0.000	1.000	0.000	0.000	0.000	0.000
OFFT	2.176	0.000	0.000	0.989	0.000	0.000	0.000
OFFTB	2.200	0.000	0.000	1.000	0.000	0.000	0.000
ONLL	1.647	0.113	0.139	0.526	1.000	0.644	0.000
ONLB	1.843	0.127	0.155	0.588	1.119	0.720	0.000
OFFL	1.580	0.040	0.000	0.693	0.000	0.848	0.000
OFFLB	1.863	0.048	0.000	0.817	0.000	1.000	0.000

SEn	1.600	0.110	0.135	0.511	0.972	0.625	1.000
SSo	1.640	0.113	0.138	0.524	0.996	0.641	1.025
SEc	1.147	0.079	0.097	0.366	0.696	0.448	0.717
SQL	1.285	0.089	0.108	0.410	0.781	0.502	0.803

Standardized Total Effects (Group number 1 - Default model)

	Product	Satisfaction	Online Trust	Offline Trust	Online Loyalty	Offline Loyalty	Sustainability
Satisfaction	0.747	0.000	0.000	0.000	0.000	0.000	0.000
Online Trust	0.998	0.000	0.000	0.000	0.000	0.000	0.000
Offline Trust	0.991	0.000	0.000	0.000	0.000	0.000	0.000
Online Loyalty	0.881	0.112	0.179	0.624	0.000	0.793	0.000
Offline Loyalty	0.809	0.038	0.000	0.788	0.000	0.000	0.000
Sustainability	0.715	0.091	0.145	0.507	0.812	0.644	0.000
PSA	0.327	0.000	0.000	0.000	0.000	0.000	0.000
PQ	0.543	0.000	0.000	0.000	0.000	0.000	0.000
PI	0.440	0.000	0.000	0.000	0.000	0.000	0.000
SBA	0.600	0.802	0.000	0.000	0.000	0.000	0.000
SOI	0.677	0.905	0.000	0.000	0.000	0.000	0.000
SCE	0.608	0.814	0.000	0.000	0.000	0.000	0.000
SBE	0.613	0.820	0.000	0.000	0.000	0.000	0.000
ONTT	0.905	0.000	0.907	0.000	0.000	0.000	0.000
ONTB	0.887	0.000	0.889	0.000	0.000	0.000	0.000
OFFT	0.910	0.000	0.000	0.918	0.000	0.000	0.000

OFFTB	0.871	0.000	0.000	0.879	0.000	0.000	0.000
ONLL	0.791	0.101	0.160	0.561	0.898	0.712	0.000
ONLB	0.768	0.098	0.156	0.545	0.873	0.692	0.000
OFFL	0.754	0.036	0.000	0.734	0.000	0.932	0.000
OFFLB	0.730	0.035	0.000	0.711	0.000	0.902	0.000
SEn	0.578	0.074	0.117	0.410	0.657	0.521	0.809
SSo	0.625	0.080	0.127	0.443	0.709	0.562	0.874
SEc	0.517	0.066	0.105	0.367	0.587	0.466	0.723
SQL	0.596	0.076	0.121	0.422	0.676	0.536	0.833



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