**FACTORS AFFECTING THE CUSTOMER DECISION TO USE
THE E-GROCERY DELIVERY MARKET IN THAILAND**

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FACTORS AFFECTING THE CUSTOMER DECISION TO USE THE E-GROCERY DELIVERY MARKET IN THAILAND

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ABSTRACT

Due to the advent of technological innovation, which has significantly changed both consumer lifestyles and business operations, many industries must start adjusting. This includes the retail grocery sector as well, which must change and provide customers services that are more comprehensively beneficial. Undoubtedly, the Covid 19 epidemic has increased the use of the Online Grocery platform, especially when customers felt unsafe going outside. Technology upgrades were used to help retailers maintain sales and to provide grocery delivery services with the possibility to expand their client base. The key components impacting the customer decision to use the E-grocery platforms are current purchasing behavior, application services, delivery services, products offered to the customers, and lastly customer services. Therefore, the objective of this research is to investigate and determine the significant factor that affects the customer's decision to use the E-grocery delivery market in Thailand. To come up with the finding, a total of 111 respondents attempted the survey which was then analyzed by the SPSS program. By using the factor analysis, the result shows that among the five components which are purchasing behavior, application services, delivery services, products offered to the customers, and, customer services, four components have shown a significant impact on customer decisions which are purchasing behavior, application services, delivery services, and products offered.

KEY WORDS: ONLINE GROCERY INDUSTRY IN THAILAND/ CUSTOMER REASON FOR MAKING ONLINE PURCHASE/ SWITCHING TO ONLINE GROCERY/ FACTOR AFFECTING THE ONLINE PURCHASE

35 pages

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CHAPTER I
INTRODUCTION

1.1 Background

In today's business world, changes can happen all the time in order to meet the customer's desire, the current trend and market conditions. Since the emergence of technology advancement that contributes to a big change in both consumer lifestyle and business operation, many industries need to start to adapt to increase their competency and capability to compete in the current market. This also includes the Retail grocery that needs to adapt and add more new value to their service offering to the customers. Instead of focusing on having the physical store containing a variety of fresh and perishable goods where consumers can shop and select the product, an online merchandise platform can be another way to penetrate the market offering the consumer a time-saving and convenience in the lifestyle.

Thus, over the last several years, the number of online grocery purchasing channels has exploded either the online retailers or partnership with delivery platforms. Begin with the grocery delivery platform that partnered with retailers, on the lower scales such as HappyFresh and Freshket and progressing to larger scales such as GrabMart, Lineman Mart, and Panda Mart. Moreover, we can see the adaptation in the big grocery retailers such as Gourmet, Lotus, Big C, Villa Market, and Makro that have established a new business unit such as mobile application to provide online shopping channels. Undeniably, the outbreak of Covid 19 has helped to increase the usage of the Online Grocery platform, particularly when customers thought that walking outside was risky. Technology adaptations were put in place to assist stores in maintaining sales, as well as to provide chances for grocery delivery platforms to maximize their customers base.

In order to compete and stay competitive in today's market, a firm must be able to determine the success element that will enable it to compete and win the competition. Especially now when the purchasing trend is shifting due to the economic situation and the Covid-19 outbreak. The customer searches for the channels that can offer them the

highest quality product, delivery, and service experience without having to interact physically at the store. Hence, customer trust must be built in order to captivate consumers' attention and assure that the quality of the products and services will meet their demands, resulting in long-term growth. The use of big data and technology implementation help a company to attract the proper clients and provide a pleasant service level in terms of both quality and quantity. Also it can be used as a tool to penetrate the market acquiring new and maintaining its customers as well as creating a good brand's reputation to generate loyalty among the customers. The key components that will help to determine customer intention to use the E-grocery service are understanding purchasing behavior, service level, customer experience, product assortment, application journey, Delivery, services and price will have a strong role affecting the success of the online grocery platforms. As a result of this study, service providers will be able to identify consumer demand for grocery delivery services, allowing them to alter or improve their services to fit their customers' demands. Since I currently work in a delivery service provider platform, this training will help me improve my perspective on customer demand and establish a career with a clearer vision.

1.2 Problem Statement

Working at a startup company, HappyFresh, a medium size company competing with major players like Grab, Lineman and Foodpanda in a highly competitive E-grocery market. HappyFresh is an online grocery service provider that dreams to deliver household and grocery products to every household in South-East Asia. HappyFresh partners with well known retailers in Thailand such as Big C, Lotus and Gourmet Market. Being one of the first services that provide personal shopping who can contact and customize customer orders, Happyfresh is able to capture a portion of the customer segment in the industry. After being in Thailand for five years, in January 2022, the company initiated the new business unit by launching its first Darkstores in Thailand limiting its operation to be within the Bangkok area. As a result, the customer can now select to shop from HappyFresh Supermarket where the product will be prepared by our staff and delivered to the customer location from the dark stores.

By building the new business unit we can select and designate everything as desired without high limitations as working with the retailers. We can come up with our own way of inventory management, operating hours and catchment area, marketing plans and additional service provided to the customers. Due to the Covid-19 pandemic, the trend of the E-grocery market in Thailand became highly competitive. Without having as high investment as the other big players, HappyFresh cannot put high investment in every component in order to operate efficiently.

1.3 Research Objective

As a Business Development Manager at HappyFresh, doing this study will allow me to know the customer perspective on each component of the E-grocery delivery platform. By collecting the survey from different customer segments starting from 24 to above 57 will give us the answer on what is needed from different customer backgrounds and age. By building a new business unit like HappyFresh Supermarket, the result from this study can help me prioritize what component I should be highly focused on in terms of both capital and manpower. Also the purchasing behavior of the customer which can help me to identify the new potential customer as well as developing the strategy to maintain the current customers. Furthermore, I am optimistic that the knowledge obtained from this study will help me with my future career when I step into a bigger role in identifying and developing the strategy to ensure sustained growth and profitability for the company.

CHAPTER II
LITERATURE REVIEW

2.1 Online Grocery Industry in Thailand

The value of Thailand's grocery business is predicted to reach $30 billion USD in 2019. Thailand's online grocery market is currently one of the fastest-growing in the country, despite the fact that it took some time for it to gain traction with other e-commerce categories. Between 2017 and 2019, the revenue from food e-commerce increased by 24.7 percent YoY, and in 2020, it is projected to increase by 26 percent. Customers climbed from 6.5 million in 2017 to 8.1 million in 2019, and in the latter year, the market penetration rate rose to 11.7 percent (Asia Perspective. 2021).

Generation Y (aged 21–34) and Generation Z (aged 15–20) will propel the expansion of FMCG items' online sales since they were raised with digital technology, according to a Nielsen worldwide poll. Since they will be the generations that influence the economy in the future, it is crucial to understand how they use technology. Online retailers are expanding, even if traditional grocery stores would continue to dominate the food shopping experience. It's crucial for grocery stores to comprehend their target demographic, make the online platform simple to use, build credibility, and go above and beyond expectations in order to take advantage of this potential.

According to Positioning Magazine (Lertwiram 2016), Nielsen Thailand conducted a market study on the E-Commerce Landscape in 2015, which revealed that Thai consumers primarily learn about digital channels for buying groceries or FMCG products through mass media like Facebook, TV commercials, and magazine advertisements. They consider product variety, ease of transportation, product quality, and the efficiency of delivery services when making their purchase decisions. Therefore, businesses should utilize their offline assets, such as physical stores, offer a variety of products and convenience, use mass media as a tool for marketing communication, and ensure a reliable and prompt delivery in order to successfully capture consumers who shop for groceries or FMCG products via online platform.

According to Ms.Wanna Swuddigul, head of digital and online business at Tesco Lotus, has planned to double its online sales in Thailand every year for the next three to five years (Rungfapaisarn 2016). As one of the first retailers in Thailand who developed its digital platform in 2012, it consists of 2 essential parts. The first is e-commerce, namely Tesco Lotus Shop Online and Tesco Lotus Shop on Lazada, which together offer more than 20,000 goods, including fresh food. The second is Digital Connection, which Tesco built through interacting with its consumers through social media and other online communication channels. Tesco Lotus observes a strong increase in the online sector, despite the fact that the contribution of online sales to total sales is still in the single digits. In comparison to physical businesses, the average size of an online basket is 3.5 times larger. Tesco considers its major success criteria to be consumer intelligence, subject matter knowledge, possible offline channels, supply chain, and logistics. Data gathered by Dunnhumby for Tesco indicates that the majority of its online clients are female and reside in Bangkok or other important cities. The majority of its digital consumers are between the ages of 25 and 44 and have middle- to high-income levels.

2.2 Customers' reason for making online purchases

Online buying has several benefits. Consumers may buy anything at any moment without going to a physical store, and by simultaneously comparing prices on several websites, they can find the same item for a lower price. Sometimes people want to avoid the strain of face-to-face conversations with salespeople; they can also avoid crowds inside businesses, etc. These components can be categorized into four groups based on four factors: convenience, information, available products and services, and cost and time effectiveness.

2.2.1 Convenience

According to empirical study, The ease of using the internet influences consumers' desire to make online purchases (Wang et al., 2005). Customers can make purchases online around the clock. According to study, 61 percent of those surveyed preferred to buy online since they want to avoid crowds and waiting in long, particularly during the holiday season, and 58 percent did so because they could do so after-hours

when the retail stores are closed (The Tech Faq, 2008). Customers look for both products and services online. Some companies provide 24/7 online customer service. Customers can easily request information and get the assistance they require even after business hours (Hermes, 2000). Due to pressure or discomfort and a desire to avoid being influenced and controlled in the marketplace by salespeople, some customers prefer to use online channels. (Goldsmith and Flynn, 2005; Parks, 2008). This is particularly apparent for customers who may have had a disappointment from the salesperson or who personally prefer to be independent and make decisions on their own without the salesperson around.

2.2.2 Information

Data access is now extremely easy due to the internet (Wang et al., 2005). Online retailers frequently provide additional product information which can benefit customers due to the lack of opportunities for online customers to physically touch and feel products and services before making a decision (Lim and Dubinsky, 2004). Furthermore, customers can gain information from product reviews written by other customers on the company's website before decision-making.

2.2.3 Available products and services

E-commerce has simplified payments, and online retailers benefit customers by offering a wider selection of products and services to select from (Lim and Dubinsky, 2004; Prasad and Aryasri, 2009). A wide selection of products from around the world are offered to customers, some of which might only be available online. Regardless of whether they have a physical storefront or not, the majority of companies have their own websites where they may sell products or services online. One of the reasons is to cut down on retail expenses or to offer customers a wider selection of sizes, colors, and features, many traditional retailers sell some products that are only accessible online. For example, Boccia Titanium has locations across many states, but not in Connecticut. To reach and satisfy the desire of Connecticut customers to place online orders, the company provides a website. Similar to this, the French company Yves Rocher does not have a front store in the United States. Customers in the United States can utilize the website to simply add the items they desire to their online shopping basket, and the

products will be delivered to their homes. Additionally, online retailers may offer customers good payment options (Amin, 2009). Customers have the option to choose the date and amount of their payments based on their options and convenience (Anonymous, 2009).

2.2.4 Cost and time efficiency

Since online retailers frequently provide better offers, online customers can purchase the same products in-store at a lower cost (Rox, 2007). Considering that internet retailers provide customers with a selection of products and services. Customers have greater opportunities to compare prices across websites and discover products with lower costs than those offered by neighborhood retail businesses (Lim and Dubinsky, 2004). By using the bidding or best offer tools that some websites, like Ebay, offer, customers can get a fantastic deal for their merchandise. Furthermore, it transforms shopping into a fun and exciting game of chance and treasure hunt (Prasad and Aryasri, 2009). To clarify, customers' lives are made easier by the convenience of online shopping because they no longer have to deal with traffic, parking problems, long checkout lines, or crowded stores (Childers et al., 2001). As a result, customers frequently discover that shopping on a website that offers ease might lower their emotional problems (Prasad and Aryasri, 2009).

2.3 Switching to online grocery delivery

According to the study from (Hui & Wan, 2009), the technology acceptance model has played a vital role in technology adaptation into online grocery shopping. Turning back to when SARS, Severe Acute Respiratory Syndrome, became widespread in 2003, online shopping started to become a trend. The study shows how the rise in online supermarkets during the SARS pandemic was a result of widespread illness concerns using data from the largest online retailer in Hong Kong. Customers who already shop for groceries online and those who would in the future find the activity more convenient and time-saving. Additionally, they believe that purchasing from an offline store is more cost-effective because delivery costs are lower than transportation costs.
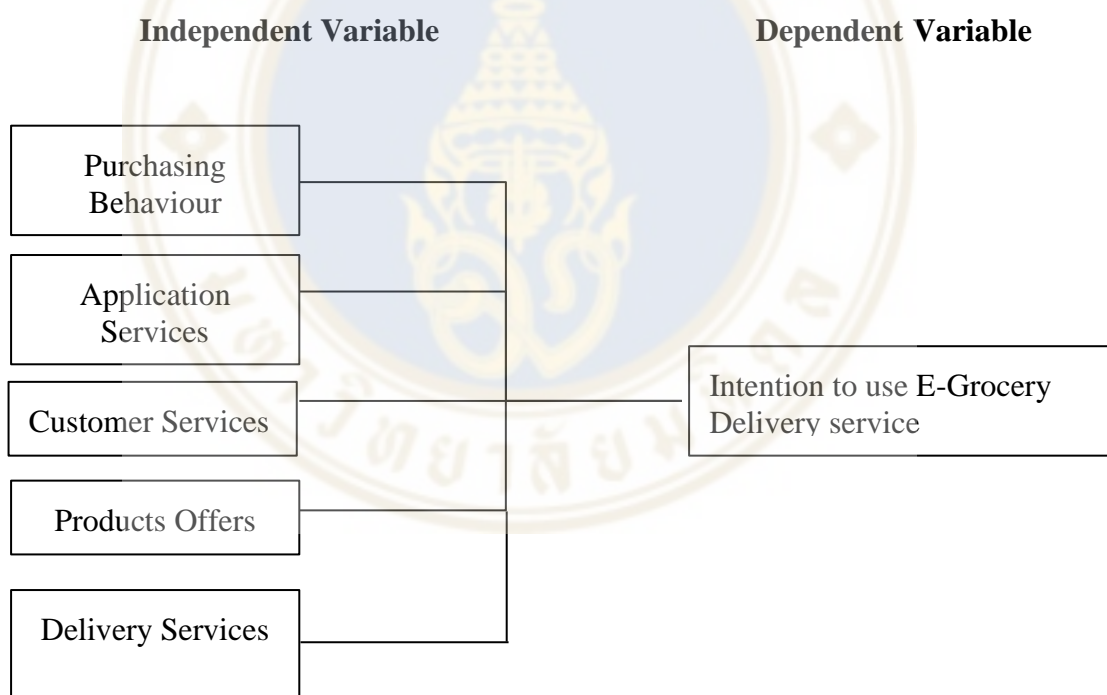
2.4 Factors that affect online purchases

To boost online sales, it may be possible to raise pay-per-click campaign spending, add more marketing channels, and step up promotional activities. There are a few things to keep in mind in order to succeed while investing in such activities (Buchalova 2016). Online retailers need to recognize the value of their consumers. Increasing your company traffic could be pricey. A more profitable substitute would have a higher average order value. This may be accomplished via cross-selling strategies including upselling, free delivery with a higher order value, quantity discounts, and discount vouchers for following transactions. Second, the amount of time it takes from the time an order is placed to the time it is delivered has a significant impact on customer satisfaction. It is essential to guarantee that products are available to customers and delivered on time and according to schedule. Third, be aware of the causes of cancellations. It's possible that the customer and the shop are taking on too much of the blame. Decision-making processes both online and offline are presumably similar. The retail environment and marketing communication, however, differ in a number of important ways (Katawetawaraks & Wang 2011). Many motives are used by online customers to support their purchases. Convenience comes foremost. Customers may shop for goods and services online around-the-clock. Additionally, some customers use online tools to avoid having direct conversations with salespeople. The second is that clients have the option of reading product reviews from other customers in addition to contacting the online customer support center for additional in-depth information about a product. Thirdly, customers may choose from a wider variety of products and services that might not be offered through conventional offline channels. Similar to how online channels sometimes provide customers more payment options than do traditional ones. Fourth, you may save time and money by utilizing online tools. Customers may compare rates, pick the best bargain, and have the items delivered to their homes without having to stand in checkout queues. However, there are a variety of reasons why customers can decide against making online transactions. These factors include unsatisfactory previous online purchasing experiences, late delivery, hazardous online transactions, the immaterial character of the items, a lack of customization, and risky online transactions.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Methodology

In this study, the survey was collected to look at the variable that could impact customer decision to use online grocery delivery services. In concordance, the study investigates the relationship and aspect which service providers need to emphasize and prioritize, which include consumer purchasing behavior, Application service, Customer service, product offer and delivery services.

Independent Variable   **Dependent Variable**

Purchasing Behaviour

Application Services

Customer Services

Products Offers

Delivery Services

Intention to use E-Grocery Delivery service

Figure 3.1 Factors affecting the intention to use E-Grocery Delivery Services

3.2 Data Collection

This investigation made use of a quantitative method. A quantitative research technique uses a large number of samples to gather data and examines the findings from the population being studied. The author utilized a Google Form to distribute a survey that required at least 100 participants in order to collect data. Instagram, Facebook, and Line were the social media channels employed for survey distribution. The elderly generation (those over 50), who make up around 20% of the total respondents, was also included in the study to gain insight into the attitudes of various client categories.

3.3 Survey Questions

The opinions of respondents were gathered through surveys on a variety of subjects, such as purchasing behavior, Application service, Customer service, product offer and delivery services. In order to look at six criteria, respondents must rate their degree of agreement with each question on a scale of strongly disagree, disagree, agree, and Strongly agree. The poll also looks at each respondent's first prioritized reason on why they decide to use online grocery delivery service. To go deeper into the target segment, questions based on demographic research were employed. The surveys gather demographic data on the age, income, and number of members currently living in the same household. The questionnaire is separated into four sections, including screening questions, general questions, identified factors affecting the intention to buy, and demographic questions. The total question is 28 as follows.

3.3.1 Introduction

The introduction of this survey serves the purpose of educating respondents on the context of the survey, including the background of the research, its objectives, and the description of the product.

3.3.2 Screening question

In this section, respondents who exhibit characteristics unsuitable for the research are eliminated. The usable samples for this study only consist of people who have experienced using online grocery delivery services.

3.3.3 Specific question and the intention to use.

On a scale of strongly disagree, disagree, agree, and highly agree, respondents are asked to score their agreement with statements drawn from the study's objectives. Figure 3.1 displays the five structures that were developed for the particular topic. These questions are chosen at random to minimize bias when respondents fill out our questionnaires. Following specific questions, the "intention to use" question is next posed to determine whether respondents are interested in using E-Grocery delivery services.

3.3.4 Demographic question

This section of questionnaire intends to find respondent demographics in terms of age, monthly income and number of family members living in the family. By getting this information, it can be related to the further discovery to determine the customer intention to use with different customer profiles.

3.4 Analysis Method

A method for breaking down a big collection of variables into a smaller set of components is factor analysis. To put it another way, a technique for analyzing a large amount of data that takes into consideration all of the many elements that have an influence on it and how those factors interact with one another (Cambridge University Press, n.d.). The highest common variation among all the variables is found using this approach.

This research focuses on three factors in factor analysis: the total variance explained, the scree plot, and the rotated component matrix. Later, the research will evaluate the components that indicate the highest priority factors that customers consider to use online grocery services.

CHAPTER IV
RESEARCH FINDINGS

A Google form survey using a quantitative technique was chosen for this inquiry. In order to determine the variables influencing the customer's decision to utilize the E-Grocery delivery market in Thailand, 111 samples are gathered. The findings of this survey will be used to evaluate how consumers see the potential of using an online grocery delivery service. When all the information has been gathered, the study will be able to identify the types of aspects that influence customers' decisions to use a service and the critical aspects that service providers need to take into account.

4.1 Descriptive Statistical Findings

4.1.1 Demographic
According to the Table 4.1, for the age of the respondents, majority of the respondents, 31.5 percent, age between 15 and 25 years old, followed by 29.7 percent of those who age between 26 and 41 years old, 24.3 percent of those who age above 57 and lastly 14.4 percent of those who age between 42 and 57years old.

Table 4.1 Demographic (Age)

Age	Frequency	Percent
15-25 years	35	31.5
26-41 years	33	29.7
42-57 years	16	14.4
Above 57	27	24.3
Total	**111**	**100.0**

4.1.2 Range of Monthly Income

According to Table 4.2, 43.2 percent of the respondents have the average monthly income less than THB 30,000 followed by 36 percent of monthly income range more than THB 30,000 but less than THB 50,000. On the third position, monthly income that ranges between THB 50,001 until THB 70,000 contribute around 11.7 percent and the least contribution is those who receive a monthly income of more than THB 70,000.

Table 4.2 Demographic (Monthly Average Income)

Monthly Average Income	Frequency	Percent
Less than THB 30,000	48	43.2
THB 30,001-THB 50,000	40	36.0
THB 50,001-THB 70,000	13	11.7
More than THB 70,001	10	9.0
Total	**111**	**100.0**

4.1.3 Family Members

As displayed in Table 4.3, the majority of the respondents live alone or as a pair sharing around 43.2 percent of the total respondents. This is followed by 36 percent, 11.7 percent and 9 percent of those who live 3-4 members, 4-5 members and more than 6 people respectively.

Table 4.3 Demographic (Family Members)

Family Members	Frequency	Percent
1-2 Members	48	43.2
3-4 Members	40	36.0
4-5 Members	13	11.7
More than 6 people	10	9.0
Total	**111**	**100.0**

4.2 Total Variance Explained

The eigenvalue is a crucial metric that depicts the whole amount of variation when examining the table of total variance explained. As a result, the percentage of variation for each component is shown in the percent of variance column. 22 attributes from 5 constructs make up the result's initial characteristic. The final result of the analysis, which accounts for cross loading, mismatched meaning, and low factor loading, has 9 attributes from 4 constructs.

**Table 4.4 Total Variance Explained**

Total Variance Explained						
Compone nt	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulativ e %	Tota l	% of Varianc e	Cumulative %
1	2.307	25.639	25.639	2.049	22.764	22.764
2	1.991	22.120	47.759	1.682	18.688	41.452
3	1.394	15.487	63.246	1.616	17.959	59.411
4	1.150	12.780	76.026	1.495	16.615	76.026
5	.728	8.093	84.119			
6	.504	5.595	89.715			
7	.352	3.910	93.625			
8	.324	3.599	97.224			
9	.250	2.776	100.000			

4.3 Scree Plot

Looking at the final run of the scree plot graph reveals a clear distinction between the first run and the final run. However, in the long run, the graph line shows a total of 4 component numbers, with a clear separation between (1) Eigenvalue on the Y-axis and (4) X-axis, which we may use to identify our factors. On the other hand,

factor analysis will be used to reduce the multiple variables that describe a complex idea into a manageable number of latent variables if the Eigenvalue on a graph consistently falls below the value of 1.
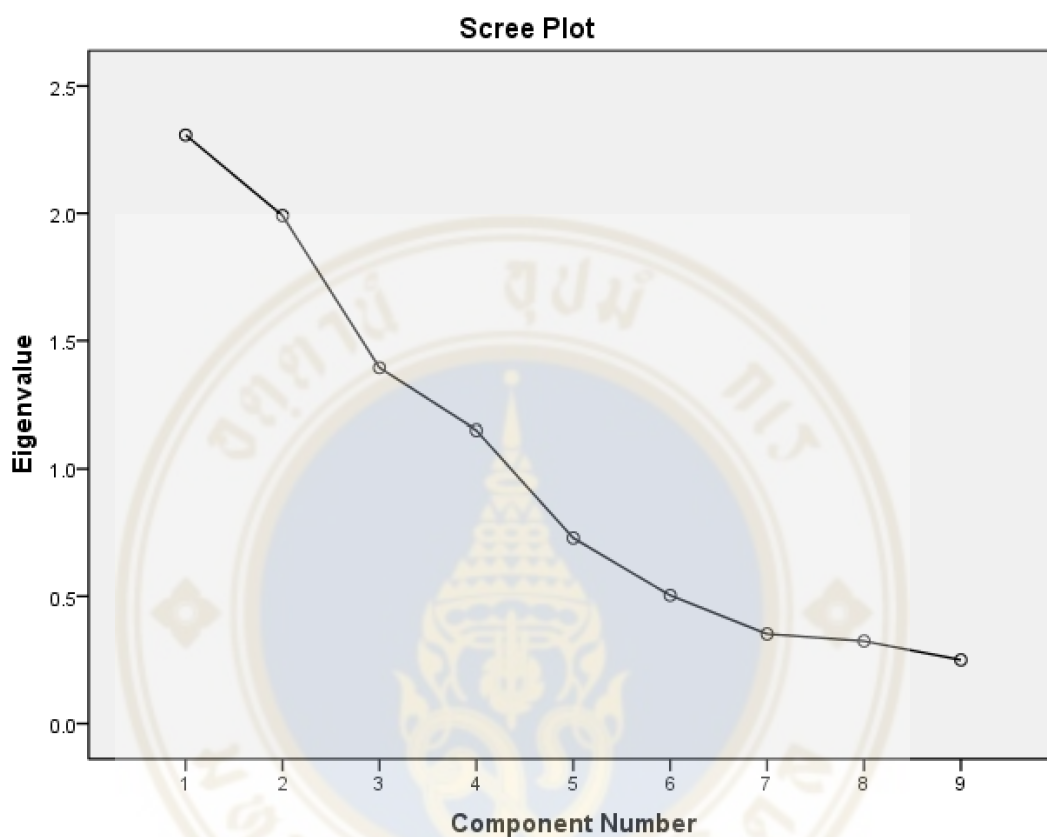
Figure 4.1 Scree Plot

4.4 Rotated Component Matrix

There are four key factors, including the purchasing behavior, Application Service, Product offers, and delivery service, according to the final rotated component matrix in the final run of factor analysis with the cut-off of a multiple cross-loading, mismatch, and low score (in terms of training). In addition, the Scree Plot that we obtained in the last run display a very distinct separation and a total variance table that explains cumulatively 16.65 percent of the variance and 76.02 percent of the variance.

With 4 components and 9 attributes in the rotated component matrix, the variable has been processed into 5 constructs which are Purchasing Behavior, Application Services, Product Offers and Delivery Services.

Table 4.5 Roasted Component Matrix

Rotated Component Matrix				
	Component			
	1	**2**	**3**	**4**
If there is out of stocks items, I am happy to take replacement items if the quality is similar. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากคุณภาพของสินค้าคล้ายกัน)	.871			
If there is out of stocks items, I am happy to take replacement items if the price is cheaper. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากราคาสินค้าถูกกว่า)	.849			
If there is out of stocks items, I am happy to take replacement items if the brand is the same but different in size/package. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากสินค้าเป็นแบรนด์เดียวกันแต่ต่างกันที่ขนาดหรือแพ็คเกจ)	.738			
I want my order to be able to schedule the arrival (ฉันต้องการที่จะกำหนดวันและเวลาจัดส่งของสินค้าได้)		.908		
When I purchase from Online Grocery Shopping, I worry about the correctness of the product that I ordered. (เมื่อฉันสั่งของอุปโภค บริโภคออนไลน์ ฉันมีความกังวลเกี่ยวกับความถูกต้องของสิ่งที่ฉันสั่งไป)		.875		
During the covid-19, I choose to order from delivery applications rather than going to the supermarket even though I cannot select the products by myself (ในช่วงโควิด ฉันเลือกซื้อสินค้าอุปโภคบริโภคจากแอพเดลิเวอรี่มากกว่าไปซื้อที่ซุปเปอร์มาร์เก็ต ถึงแม้ว่าฉันไม่สามารถเลือกสินค้าด้วยตนเอง)			.887	

Table 4.5 Roasted Component Matrix (cont.)

Rotated Component Matrix				
	Component			
	1	**2**	**3**	**4**
I use grocery delivery service more frequent due to the impact of Covid-19 (ฉันใช้แอปพลิเคชัน สั่งสินค้าอุปโภคบริโภคออนไลน์บ่อยขึ้นเนื่องจากผลกระทบของโควิด)			.883	
The payment security features of online grocery shopping worry me. (ฟีเจอร์ความปลอดภัยในการชำระเงินของการซื้อของออนไลน์ทำให้ฉันกังวล)				.865
I concern about my privacy data protection. (ฉันกังวลเกี่ยวกับการปกป้องข้อมูลความเป็นส่วนตัวของฉัน)				.833

4.5 Descriptive Statistics

Descriptive statistics can be used to summarize data samples in order to characterize a data set's properties. It is typically given as a data summary that describes the information included in the data. The measures standard deviation and analysis N are the end result from descriptive statistics which can describe the spread of customer response on each component. The likert scale applied in this study ranges from 1 to 4 referring to a low score as Strongly Disagree, Agree and Strongly Agree. For Standard deviation, we will set 1 as a standard in which the attribute that has SD value equal to 1 will show a strong relationship between the respondent and getting weaker when SD approaches zero. In terms of mean values, the mean value in this likert scale is 2.5. Hence, we can summarize that Purchasing behavior, Application Services, Product offers and Delivery service are the components that the respondent pays attention to before making an online order.

Table 4.6 Descriptive Statistics

Descriptive Statistics			
	Mean	**Std. Deviation**	**Analysis N**
I use grocery delivery service more frequent due to the impact of Covid-19 (ฉันใช้แอปพลิเคชัน สั่งสินค้าอุปโภคบริโภคออนไลน์บ่อยขึ้น เนื่องจากผลกระทบของโควิด)	3.33	.867	111
During the Covid-19, I choose to order from delivery applications rather than going to the supermarket even though I cannot select the products by myself (ในช่วงโควิด ฉันเลือกซื้อสินค้าอุปโภคบริโภคจากแอพเดลิเวอรี่มากกว่าไปซื้อที่ซุปเปอร์มาร์เก็ต ถึงแม้ว่าฉันไม่สามารถเลือกสินค้าด้วยตนเอง)	3.02	.972	111
I concern about my privacy data protection. (ฉันกังวลเกี่ยวกับการปกป้องข้อมูลความเป็นส่วนตัวของฉัน)	3.39	.833	111
The payment security features of online grocery shopping worry me. (ฟีเจอร์ความปลอดภัยในการชำระเงินของการซื้อของออนไลน์ทำให้ฉันกังวล)	3.04	.990	111
If there is out of stocks items, I am happy to take replacement items if the quality is similar. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากคุณภาพของสินค้าคล้ายกัน)	2.79	1.019	111
If there is out of stocks items, I am happy to take replacement items if the price is cheaper. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากราคาสินค้าถูกกว่า)	2.67	1.030	111
If there is out of stocks items, I am happy to take replacement items if the brand is the same but different in size/package. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากสินค้าเป็นแบรนด์เดียวกันแต่ต่างกันที่ขนาดหรือแพ็คเกจ)	2.79	.973	111

Table 4.6 Descriptive Statistics (cont.)

Descriptive Statistics			
	Mean	**Std. Deviation**	**Analysis N**
When I purchase from Online Grocery Shopping, I worry about the correctness of the product that I ordered. (เมื่อฉันสั่งของอุปโภค บริโภคออนไลน์ ฉันมีความกังวลเกี่ยวกับ ความถูกต้องของสิ่งที่ฉันสั่งไป)	3.63	.660	111
I want my order to be able to schedule the arrival (ฉันต้องการที่จะกำหนดวันและเวลาจัดส่งของสินค้าได้)	3.80	.423	111

CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

We can obtain the following conclusions from the SPSS study: of the five components, customers give the following four the most concerns: purchase behavior, application services, product offers, and delivery services. In terms of purchasing behavior, the results suggest that the new customer's decision to buy online groceries may have been influenced by their concern for their health and safety during the COVID-19 epidemic. It also shows that customers think about privacy and security when choosing which platform to put their order on. This relates to the following point, the security of the payment system which the customer feels that there is a high risk of making online payment. The range of products that buyers may pick from is the next factor to be taken into account. The findings show that customers are prepared to accept product substitutions in the event of a stockout as long as their wish list has been satisfied. Last but not least, the ability to arrange the arrival time is a benefit that can increase client convenience for delivery services. The accuracy of the ordered item should be emphasized in the service provided in order to ensure consumer satisfaction with utilizing the service.

5.2 Recommendation

From the conclusion that has been concluded in this study, it provides the knowledge that there are a number of customers that tend to make more online orders due to covid-19 pandemic. Hence the service provider must come up with a way to convert the new or even repeat purchase customer into a loyal customer. This also includes the increment of order frequency which can help the platform to develop their traffic and ensure sustainable growth. Thus, the loyalty program and the use of CRM tools can be helpful for the service provider to gain and maintain their customer base.

Point redemption to discount, promo vouchers to both new and loyalty customers targeting different spend per transaction can provide attractiveness to the customers. A promotion voucher with a lower minimum purchase amount can be used to draw the new customer to the platform whereas the higher minimum purchase with free delivery voucher can be used to target a loyal customer in order to increase the frequency of ordering. Additionally, as a service provider, the E-grocery delivery platform must ensure that the products offered to the customer are similar to the offline store. This also includes the completeness of the product list, correctness of price, sufficiency of supplied quantity and similar product quantity. Hence, the use of inventory management is essential in order to provide the most accurate demand planning to make sure that the out of stock will be as low as possible. Furthermore, the platform should develop the API system to help in creating the seamless process between the offline and online or between the retailers and the service providers. API is an application programming interface (API) that manages communications and ensures uninterrupted operation of business systems. Due to APIs, data, programs, and devices may communicate with one another. It distributes data and offers connectivity between applications and hardware which allows applications to communicate with backend systems. Consequently, the API can help the E-Grocery service platform to have better real-time inventory updates from the retailers, resulting in a more complete product assortment, with correct price display and better accuracy of quantity available. When talking about the application service, the most concerning factor is data privacy and payment system security. Therefore, the platform should develop the PDPA form and distribute it to the customer to sign and acknowledge during the login. Also two-authentication or OTP should be developed to make the customer feel more secure when accessing the application. Lastly, the E-grocery platform should develop multiple delivery options to the customer including on-demand, next hour delivery and scheduled delivery to provide convenience and flexibility. In addition, the feature to track the progress of the order at the item level should be developed as well as having a transparent return policy should be implemented to make the customer get to know that their item has been correctly picked and they can return the items if any mistake occurs. Therefore, trust can be built creating a good reputation which result in high customer satisfaction and positive attitude toward the platform

5.3 Research Limitations

Although this research is carefully investigate the factor affecting the purchase intention to use E-Grocery delivery service platform, however there are some inevitable limitations that can be conclude as followed

1. The research was conducted and analyzed only within the limited group of Thai respondents which are not equally distributed in terms of age, gender, income and frequency of groceries purchasing.

2. Due to the limited time, the research questions do not cover all of the aspects of E-grocery which can be further developed into a more detailed analysis for more accurate feedback.

5.4 Future Research

For the future studies, it would be great to examine the four components, purchasing behavior, Application services, Delivery services, and products separately and at a higher detail. Since different retailers and E-grocery service providers build on the same strategy and have different expertise and resources, therefore it would be beneficial to dive deeper into a detailed analysis of each component in order to initiate its strategy that is suitable to the current mission and vision.

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APPENDICES

Appendix A: Questionnaire

Factor affecting the customer decision to use E-Grocery delivery market in Thailand

I am the Master degree students from College of Management Mahidol University and currently exploring the factors that can help the grocery delivery platform to become succesful. I would like to request 5-10 minutes of your time answering the questionair that I have prepared. The scope of this survey is to understand which factors that the service providers should emphasize in order to meet with customer demand and being success in the highly competitve grocery delivery market.

I am appreciate and thankful for your time spending on this questionair.

(ผมเป็นนักศึกษาระดับปริญญาโทที่วิทยาลัยการจัดการมหาวิทยาลัยมหิดล และกำลังสำรวจปัจจัยที่จะช่วยให้ผู้บริการเข้าใจ เกี่ยวกับความต้องการผู้บริโภคเมื่อสั่งสินค้าออนไลน์ แบบสำรวจนี้ใช้เวลาประมาณ 5-10 นาที เพื่อทำความเข้าใจว่าปัจจัยใด บ้างที่จะมีอิทธิพลต่อการเลือกใช้บริการการแอพพลิเคชั่นจัดส่งสินค้าออนไลน์)

Screening Questions

Description (optional)

Have you ever shopped for groceries online? (คุณเคยมีประสบการณ์สั่งของอุปโภคบริโภคออนไลน์ *
หรือไม่)

○ Yes (เคย)

○ No (ไม่เคย)

General Questions

Description (optional)

In one month, how often you order online grocery ? (ใน 1 เดือน คุณสั่งของอุปโภคบริโภคออนไลน์ *
บ่อยแค่ไหน)

○ less than 1 - seldomly order online grocery (ไม่ได้สั่งสินค้าเป็นประจำทุกเดือน)

○ At least 1 time (อย่างน้อย 1 ครั้ง)

○ 2-3 times (2-3 ครั้ง)

○ More than 4 times (มากกว่า 4 ครั้ง)

What is the factor that affect your decision to select the grocery service application? (อะไรคือ *
ปัจจัยในการเลือกผู้ให้บริการจัดส่งสินค้าอุปโภคบริโภค)

○ I intend to order from the application that offer me more promotions. (ฉันเลือกที่จะสั่งสินค้าจากแอพพลิเคชั่...

○ I intend to order from the application that offers me more product varieties (ฉันเลือกที่จะสั่งสินค้าจากแอพ...

○ I intend to order from an application that is easy to use.(ฉันเลือกที่จะสั่งสินค้าจากแอพพลิเคชั่นหากใช้งานง่าย)

○ I intend to use an application that has good customer service to support my order. (ฉันเลือกที่จะสั่งสินค้าจา...

○ I intend to use the application that has good delivery including on time delivery and polite rider. (ฉันเลือก...

Specific Questions

Description (optional)

Purchasing Behaviour

Description (optional)

*

I use grocery delivery service more frequent due to the impact of Covid-19 (ฉันใช้แอพลิเคชั่น สั่ง
สินค้าอุปโภคบริโภคออนไลน์บ่อยขึ้นเนื่องจากผลกระทบของโควิด)

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

*

During the covid-19, I choose to order from delivery applications rather than going to the
supermarket even though I cannot select the products by myself (ในช่วงโควิด ฉันเลือกซื้อสินค้า
อุปโภคบริโภคจากแอพเดลิเวอรี่มากกว่าไปซื้อที่ซุปเปอร์มาร์เก็ต ถึงแม้ว่าจะไม่ได้เลือกสินค้าด้วยตนเอง)

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

*

When order online grocery, I tend to buy more products within one transaction. (เมื่อสั่งสินค้า
อุปโภคบริโภคผ่านแอพออนไลน์ ฉันมีแนวโน้มที่จะซื้อสินค้ามากขึ้นภายในหนึ่งการซื้อ)

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

When using online grocery, I tend to buy more product if I find the promotion or discount *
voucher (เมื่อสั่งสินค้าอุปโภคบริโภคผ่านแอพออนไลน์ ฉันมีแนวโน้มที่จะซื้อสินค้ามากขึ้นหากมีโปรโม
ชั่นหรือส่วนลด)

	1	2	3	4	
Strongly Diagreee	○	○	○	○	Strongly Agree

Application Services

Description (optional)

I order from the application that can make easy order (easy-to-used and smooth customer journey) (ฉันสั่งสินค้าจากแอพลิเคชั่นที่ใช้งานง่าย สะดวก และ รวดเร็ว) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

I concern about my privacy data protection. (ฉันกังวลเกี่ยวกับการปกป้องข้อมูลความเป็นส่วนตัวของ ฉัน) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

I prefer to have multiple options of the payment. (ฉันชอบที่จะมีตัวเลือกการชำระเงินหลายช่องทาง)

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

The payment security features of online grocery shopping worry me. (ฟีเจอร์ความปลอดภัยในการ ชำระเงินของการซื้อของออนไลน์ทำให้ฉันกังวล) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

Customer Services

Description (optional)

I have concerns about the exchange policy for bad quality products. (ฉันมีความกังวลเกี่ยวกับ นโยบายแลกเปลี่ยนสินค้าที่มีคุณภาพไม่ดี) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

Customer Services
Description (optional)

I have concerns about the exchange policy for bad quality products. (ฉันมีความกังวลเกี่ยวกับ นโยบายแลกเปลี่ยนสินค้าที่มีคุณภาพไม่ดี) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

I expect a redemption coupon for any mistakes in the service. (ฉันคาดหวังคูปอง หรือส่วนลด ชดเชยสำหรับข้อผิดพลาดในการให้บริการ) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

I want an easy contact call center to support my order. (ฉันต้องการติดต่อคอลเซ็นเตอร์เพื่อให้ ความช่วยเหลือการสั่งซื้อของฉัน) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

Product Offers
Description (optional)

I want to have the same products list that offer in the offline store. (ฉันต้องการให้รายการสินค้าเหมือนกับร้านค้าออฟไลน์) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

I want my order to be complete with no out of stock items. (ฉันต้องการให้คำสั่งซื้อของฉันครบถ้วนโดยไม่มีหมดสต๊อก) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

If there is out of stocks items, I am happy to take replacement items if the quality is similar. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากคุณภาพของสินค้าคล้ายกัน) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

If there is out of stocks items, I am happy to take replacement items if the price is cheaper. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากราคาสินค้าถูกกว่า) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

If there is out of stocks items, I am happy to take replacement items if the brand is the same * but different in size/package. (ในกรณีที่สินค้าหมดสต๊อก ฉันพอใจที่จะเปลี่ยนสินค้าหากสินค้าเป็น แบรนด์เดียวกันแต่ต่างกันที่ขนาดหรือแพ็คเกจ)

	1	2	3	4	
Strongly Disagree	◯	◯	◯	◯	Strongly Agree

Delivery Services

Description (optional)

I prefer to order from the nearby supermarket so that the delivery time is lesser and the * delivery cost is cheaper (ฉันชอบสั่งสินค้าจากซุปเปอร์มาร์เก็ตใกล้ฉัน เนื่องจาก ใช้เวลาในการส่ง**สินค้า น้อย**กว่า และค่าส่งถูกกว่า)

	1	2	3	4	
Strongly Disagree	◯	◯	◯	◯	Strongly Agree

When I purchase from Online Grocery Shopping, I worry about the quality of the things that are * delivered. (เมื่อฉันสั่งของอุปโภค บริโภคออนไลน์ ฉันมีความกังวลเกี่ยวกับคุณภาพของสิ่งที่ฉันสั่งไป)

	1	2	3	4	
Strongly Disagree	◯	◯	◯	◯	Strongly Agree

When I purchase from Online Grocery Shopping, I worry about the correctness of the product * that I ordered. (เมื่อฉันสั่งของอุปโภค บริโภคออนไลน์ ฉันมีความกังวลเกี่ยวกับความถูกต้องของสิ่งที่ฉัน สั่งไป)

	1	2	3	4	
Strongly Disagree	◯	◯	◯	◯	Strongly Agree

I want my order to be able to schedule the arrival (ฉันต้องการที่จะกำหนดวันและเวลาจัดส่งของ * สินค้าได้)

	1	2	3	4	
Strongly Disagree	◯	◯	◯	◯	Strongly Agree

I want my order to arrive on time. (ฉันต้องการให้สินค้ามาจัดส่งตรงตามเวลาที่สั่งไป) *

	1	2	3	4	
Strongly Disagree	○	○	○	○	Strongly Agree

Demographic Questions

Description (optional)

What is your age ? (อายุ) *

○ 15-25

○ 26-41

○ 42-57

○ Above 57

What is the range of your monthly income ? (รายได้เฉลี่ยต่อเดือน) *

○ less than THB 30,000

○ THB 30,001-THB 50,000

○ THB 50,001-THB 70,000

○ More than THB 70,001

How many member live with you at present ? (จำนวนสมาชิกที่อาศัยอยู่ในครัวเรือน) *

○ 1-2 members

○ 3-4 members

○ 4-5 members

○ More than 6 people