UNDERSTANDING THE KEY DRIVERS OF CONSUMER ADOPTION OF GROCERY SUBSCRIPTION SERVICES IN THAILAND

BY

MISS MONPANAI SOMSAMAN

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Chairman ______________________________
(Associate Professor Mathupayas Thongmak, Ph.D.)

Member and Advisor ______________________________
(Associate Professor Surat Teerakapibal, Ph.D.)

Dean ______________________________
(Associate Professor Somchai Supattarakul, Ph.D.)

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Author	Miss Monpanai Somsaman
Degree	Master of Business Administration Program in Global Business Management (International Program)
Major Field/Faculty/University	Faculty of Commerce and Accountancy Thammasat University
Independent Study Advisor	Associate Professor Surat Teerakapibal, Ph.D.
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ABSTRACT

This study explores the factors influencing consumers' intention to adopt grocery subscription services in Thailand. With rising competition among grocery retailers, subscription-based models have become a popular strategy for customer retention, particularly used in markets like the US and UK. In Thailand, however, these models are less implemented by grocery retailers, possibly due to Thai consumers' preference for traditional shopping. Nevertheless, a shift toward omnichannel trends has been emerging after Covid pandemic.

This research aims to understand influenced factors such as value of convenience, value for money, trust, grocery providers' brand image, brand reputation, and satisfaction, while also exploring the roles of shopping behavior and perceived risk. A survey of 440 respondents who are the main household grocery purchasers was conducted. Data were analyzed using quantitative methods, including descriptive statistics, reliability testing, correlation analysis, and regression models.

The results reveal that value of convenience, value for money, and trust significantly and positively influence subscription intention. Trust is further shaped by brand image, brand reputation, and customer satisfaction. However, shopping behavior and perceived risk showed no significant impact, contrasting with findings from e-commerce related studies.

These findings suggest that grocery providers could develop this subscription model and should emphasize communications and increase brand awareness of convenience, cost-saving benefits, and trust-building strategies to bridge the gap in subscription adoption particularly among traditional shoppers. Future research should focus on a more diverse sample of Thai consumers groups to better understand shopping behavior and perceived risk across different respondent profiles, preferences, and product categories.

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Miss Monpanai Somsaman

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INTRODUCTION

1.1 Global Industry Landscape Overview

1.1.1 Grocery in the Digital World

Grocery shopping is a fundamental aspect of everyday life for consumer households. The term grocery refers to essential items used in daily routines, including food items, fruits, vegetables, meat, dairy products, beverages, household cleaning products, clothing, and personal care items, all of which can be purchased from traditional grocery stores, supermarkets, convenience store, and local markets (Singh & Patra, 2020). Nowadays, grocery shopping has been evolving from traditional supermarket visits to digital grocery platforms or online grocery stores, driven by advancements in digital transformation. Moreover, according to Grand View Research (2022), the COVID-19 pandemic accelerated the shift to e-commerce leading to the growth of omnichannel grocery stores with key product category trends including fresh and frozen foods, beverages, and household items.

In addition, the report highlights that the global food and grocery retail market was valued at $11.9 trillion in 2023, and it projects a 3.2% CAGR growth from 2024 to 2030, driven by growth opportunities in Asia-Pacific and North America. Emerging trends like sustainability and personalized shopping experiences are expected to shape the grocery market. Major players in the supermarket in the US market such as Walmart, Costco, and Amazon, offer various delivery options for online grocery shopping as consumers increasingly prefer new delivery options like Buy Online Pickup In-Store (BOPIS), curbside pickup, and direct-to-door services. Moreover, faster delivery times, such as same-day or next-day delivery, and subscription-based services are also growing in popularity.

1.1.2 Grocery Business Models

Before diving into the Thai market, it is important to understand the top global grocery delivery business model trends from up-to-date articles as a baseline for research on adapting to new markets. SpreadSimple (2024) highlights successful models, including inventory-based models, where companies stock their products;

hyper-local models, which use local suppliers and stores; and subscription models offering routine grocery deliveries regularly.

Further emphasizing the growth of the subscription model, RapidPricer B.V. (2024) highlights that Subscription box sales are projected to grow from $32.9 billion to $105.4 billion by 2032. Recently, subscription-based grocery models have gained popularity due to their convenience as they provide customers with regular delivery, time-saving, and offer personalization to enhance loyalty. Successful grocery subscription models in the U.S. and European markets attract modern consumers by adapting to changing consumer preferences as mentioned. Key players such as Amazon Fresh, offer everyday groceries and household essentials with personalized options for Prime members. HelloFresh and Blue Apron, lead in ready-to-cook meals and delivering pre-portioned ingredients. Instacart Express provides a subscription service with unlimited free deliveries. In addition, the subscription models also benefit retailers and grocery businesses as they help ensure steady demand, predictable sales, and recurring revenue.

Unlike dry groceries, fresh products such as fruits, vegetables, and dairy are typically not purchased in advance because of their perishable nature. However, many grocery business models now offer convenience for customers by allowing regular delivery of these items, which can be customized to suit customers' purchasing preferences and consumption patterns, which there are studies and articles evidence of how subscription models can effectively serve these needs and address customer pain points in the later section.

1.1.3 Grocery Subscription Features

As reported by WICZ (2023), key grocery subscription services offer personalized features to serve individual preferences and shopping behavior, such as customizable product selections, recommendations based on past orders, automatic renewal options for specific items, and flexible delivery options and subscription plans (e.g., bi-weekly or monthly).

An example of the leading player in grocery e-commerce, Amazon has introduced a new annual grocery subscription plan that provides customers with the flexibility to tailor their service by offering customized delivery schedules and the option to choose between delivery or pickup (Retail Dive, 2023). Moreover, Thrive

Market offers key customizable features for grocery subscriptions, including the ability to set up repeat orders, automatic renewals, and deliveries for specific products on a recurring schedule (NBC News, 2023). This level of customization allows subscribers to adjust their shopping preferences for convenience, offering flexibility where less commitment is required for some specific items if they choose not to renew.

1.2 Thailand Grocery Market Overview

1.2.1 Modern Trade Industry and Challenges in Thailand

According to Krungsri Research (2024), the modern trade or retail sectors, including supermarkets, hypermarkets, and large-format stores, are expected to grow at an annual rate of 5.0-5.5% from 2024 to 2026. The total market value as of 2023 was at THB 2.8 trillion which accounts for 15.7% of Thailand's GDP. The key dominant market players include Central Group (e.g., Tops and Go Wholesale), Charoen Pokphand (CP) Group (e.g., Lotus's, Makro, 7-Eleven, and CP Freshmart), Thai Charoen Corporation Group (e.g., Big C), and The Mall Group (e.g., Gourmet Market). In addition, competition is very high, especially from large retailers and wholesalers, such as the existing players like Makro, and new competitors like Go Wholesale. Not only competition among the traditional retail segments, but there are also players in the e-marketplace services, such as Lazada, Shopee, and Alibaba distributing online groceries.

To compete in the fast-paced market, first, the traditional store retailers are upgrading to alternative premium store formats, such as Big C Food Place, an urban premium healthy food O2O store (TrueID Food, 2023). CP Group also launched a new retail concept called "Hybrid Wholesale," which combines Makro's wholesale expertise with Lotus's mall management (Bangkok Post, 2023). Moreover, retailers have adapted to changing consumer behavior by expanding omnichannel and online distribution channels, building membership such as Makro PRO Point Loyalty Programme, and Lotus's "New SMART Retail," leveraging technology for AI personalization in rewards programs, and personalizing marketing through mobile applications and owned channels, offering easier payment options to enhance customer experience (Krungsri Research, 2024).

1.2.2 Grocery Business Opportunities in Thailand

Similar to global consumers, Thai consumer behavior also shifted towards technology adoption during the pandemic and continues to do so in the post-pandemic period. Retailers have developed omnichannel strategies to connect offline and online platforms, particularly targeting mid to upper-income shoppers. Moreover, based on Krungsri Research (2024), there is an increasing demand for a convenient shopping experience, and on-demand purchases present a significant opportunity to attract new customer segments, including individuals, families, and especially busy professionals who struggle to find time to purchase essential groceries. Grocery businesses can leverage advanced technology to offer personalized promotions tailored to individual consumer preferences and purchasing behaviors, helping to increase sales in a highly competitive environment.

1.3 Problem Statement and Research Objective

Based on the points discussed above, the grocery market in Thailand is currently facing significant challenges due to intense competition, which has made it difficult for retailers to retain customers. A grocery subscription service could address these challenges by offering personalized experiences that enhance customer loyalty and create a sustainable revenue stream for businesses. Although such subscription services have gained popularity in markets like the US and Europe, they are relatively underdeveloped in Thailand.

Therefore, this research aims to understand the key drivers of consumer behavior in the adoption of grocery subscription services specifically within the Thai market. By analyzing consumer behavior and preferences, the study will assess the feasibility for retail or wholesale businesses to adapt subscription models to the Thai online grocery sector to address current gaps in customer retention. The target population will be grocery shoppers in Thailand who are the primary household or individual purchasers who make their own purchasing decisions at least once a month, whether through online retailer platforms or traditional grocery stores.

This study seeks to answer the following research question: *What factors influence customer adoption of grocery subscription services in Thailand?*

CHAPTER 2
REVIEW OF LITERATURE

Key Factors Influencing Adoption of Grocery Subscription Services

This chapter explores the literature regarding the factors influencing the consumer adoption of grocery subscription services with the goal of constructing the hypotheses. Given that grocery subscription services are not common in the Thai market, this study will examine relevant global research on grocery purchase loyalty and subscription behavior to provide insights into the potential for these services in Thailand.

To compare similarities with previous studies in terms of research scope, Shukla & Sharma (2018) investigate factors influencing the adoption of online grocery shopping through subscription models, applying use of the Theory of Planned Behavior (TPB) as well as Technology Acceptance Model (TAM) to assess mobile app usage for grocery shopping in India, highlighting perceived usefulness and ease of use through quantitative methods and behavioral models. Additionally, Habib & Hamadneh (2021) investigated how perceived risk and trust influenced the adoption of online grocery shopping during the COVID-19 pandemic applying use of the Theory of Planned Behavior (TPB) to explore consumer behavior models.

In contrast, there are studies show differences in focus and scope. For example, Wagner, Pinto, and Amorim (2021) analyzed subscription models from a retailer's perspective, emphasizing the operational and cost-efficiency benefits of subscription-based grocery services, which is different with this study's consumer-centered approach. Kuusisto (2018) explored consumer preferences for product-service systems (PSS) across various industries, such as home appliances and clothing, through a qualitative approach, which is a broader perspective compared this study's focus on grocery subscriptions. Additionally, most research examined subscription or technological adoption in other Asian or global, while this study aims to specifically focus grocery subscription services in Thailand.

Therefore, this study intends to adapt the Technology Acceptance Model (TAM), which explains how customers accept technology for grocery shopping using mobile applications, drawing from Shukla and Sharma (2018) and Habib and

Hamadneh (2021), in this case referring to the adoption of grocery subscriptions by Thai consumers. Additionally, it aims to apply the construct such as perceived usefulness and ease of use in technology adoption to explain the factor of the value of convenience from Shukla & Sharma (2018). Moreover, it will explore the role of trust and perceived risk in the adoption of online grocery shopping based on Habib & Hamadneh (2021).

In addition, this research extends these models further to study on consumer satisfaction, brand perceptions (e.g. brand image and brand reputation), economic factors, and shopping behavior for a deeper understanding of localized consumer behavior in adoption of subscription-based services in Thailand. These aspects will be further explained through constructs derived from various past literatures below.

2.1 Customer Satisfaction

Understanding customer satisfaction is crucial for retail businesses, as it significantly influences key outcomes such as sales performance, customer retention, and loyalty (Darian, Tucci, & Wiman, 2001; Gomez, McLaughlin, & Wittink, 2004; Anselmsson, 2006). This construct aims to explore the customer satisfaction as reflection of the overall experience with grocery products and services. Customer satisfaction is measured through two key dimensions, satisfaction towards grocery products quality and variety, and satisfaction with overall platform and staff services. Moreover, Ponnusamy & Chandrashekar (2024) also mentioned that customer satisfaction can be measured through the level of contentment customers feel toward a company's products, services, and capabilities. Therefore, these dimensions will be studied to evaluate how their satisfaction influence on the trust, as referenced in the previous research to be discussed below.

Research on the relationship between customer satisfaction and trust has examined the factors contributing to customer satisfaction within the hypermarket and food retail industries. Bakhtiar, Zahari, and Azhar (2012) explored how the quality and freshness of fresh food products, including vegetables, fruits, meat, frozen items, and pastries, play a pivotal role in overall customer satisfaction. Their study highlights the importance of maintaining high product quality standards to enhance customer satisfaction in the retail food sector. Additionally, interesting findings from the Asian market by Jain and Sharma (2020), investigate the psychology of Indian online shoppers and examine customer satisfaction in the context of supermarket retail shopping. Their study reveals that Indian consumers prioritize the quality of information provided online, the variety of available products (assortment), and express significant concerns about security, as these factors are important in shaping customer satisfaction in the retail environment. Moreover, customer satisfaction is influenced by factors such as the app interface, grocery service quality, on-time delivery, and customer support, all of which play a critical role in driving customer loyalty (Ghosh, Sarkar, & Ganguly, 2023).

Walter, Mueller, and Helfert (2000) explore the role of satisfaction and trust in building commitment, identifying trust as a crucial mediator through which customer satisfaction significantly influences their trust and commitment to a brand or platform service. They measure this relationship in terms of the reliability of supplier products, technical services, and order processes. Understanding these factors can help suppliers identify customer drivers and create competitive advantages. This is consistent with previous research by Anderson and Narus (1990), Ganesan (1994), and Garbarino and Johnson (1999), which also strongly supports the positive influence of customer satisfaction on trust. Their findings suggest that higher levels of past customer satisfaction with a supplier enhance the customer's trust in that supplier in the future.

Most research on satisfaction and trust has focused on markets outside Thailand's retail sector. This study will explore these dynamics within Thai retail grocery shopping. Therefore, the hypothesis will be proposed to test whether customer satisfaction is positively related to brand trust in the Thai grocery market.

2.2 Brand Trust

After understanding customer satisfaction from past experiences, it is important to explore brand trust in the context of customer loyalty. According to Leninkumar (2017), developing a strategy that creates loyal, profitable customers requires exploring the relationship between customer satisfaction and trust. It was found from this research that customer satisfaction is a significant antecedent of trust, and there is a strong positive relationship between trust and loyalty, with trust acting as a mediator in this relationship.

Another research from a neighboring Asian country, Indonesia, by Brilliant and Achyar (2013), explored customer satisfaction and trust in relation to loyalty in e-commerce. Their findings reveal that while satisfaction alone does not directly impact loyalty, perceived trust in the information on product quality sold on marketplace websites influences e-commerce trust significantly, which plays a crucial role in driving customer loyalty and increasing revenue.

According to studies by Habib and Hamadneh (2021) in the e-commerce and grocery industries, trust significantly influences online grocery purchase intentions. The authors identified trust as a key factor positively impacting the acceptance of online grocery shopping. This trust was measured by assessing customer attitudes toward the platform, their perceived trust in the suppliers, and the security of the platform's privacy policy. However, other interesting influencing factors, such as technology acceptance and perceived risk during the pandemic, which will not be the focus of this section yet.

To further examine how trust influences subscription behavior, Kerschbaumer, Kreimer, Foscht, and Eisingerich (2022) provide attachment theory, which suggests that trust and attachment are foundational in shaping customer relationships. They also proposed that brand attachment is positively related to the attitude to subscribe to grocery services. Their hypothesis emphasizes the significance of trust as a determinant in the decision-making process for subscriptions within the context of grocery services, measuring this based on what customers think and feel about the brand and their personal connections to the platform.

Based on the research discussed above, the hypothesis will be proposed to test whether customer trust in the platform positively influences the adoption of grocery subscription services in Thailand.

2.3 Brand Reputation

Consumer behavior is also influenced by external social factors, particularly reference groups such as word of mouth, referrals from family and friends, and social opinion leaders, which in this research will be grouped under brand reputation (Kotler & Keller, 2016, p. 181). Kotler and Keller also discussed the concept of brand equity, where brand image plays a crucial role in establishing consumer trust, which will be another construct to be examined. This section will explore how brand reputation affects brand trustworthiness, leading to the intention to subscribe.

As mentioned by Han, Nguyen, and Lee (2015) in their research on the restaurant industry, brand reputation refers to the overall perception of a brand's reliability, trustworthiness, and ability to deliver consistent value to its consumers especially in the service industry. The hypothesis that brand reputation significantly influences brand trust is supported, as it shapes customers' perceptions of food safety, quality, and hygiene, with trust measured by how trustworthy, reputable, and honest the brand is perceived by respondents.

Ali, Rehman, Yilmaz, Nazir, and Ali (2010) define a brand’s reputation as being shaped by consumers' perceptions of its quality and reliability, often influenced by advertising and public relations efforts. High consumer demand is a key indicator of a strong reputation. Furthermore, a brand's reputation can be assessed through consumer opinions, comments, and beliefs. When people recommend a brand, it serves as a positive sign of its reputation.

To further explore the concept of brand reputation, Kotler and Keller (2016) suggested exploring word of mouth (WOM) which occurs when customers share their experiences about a product, service, or brand. A study by Purnamabroto, Susanti, and Cempena (2022) investigates the factors influencing customer loyalty based on social behavior, finding that WOM significantly contributes to building brand trust. However, they also found that WOM does not have a direct influence on consumer loyalty. Instead, it is the brand trust which influenced by WOM, acts as a mediator, and has a positive impact on consumer loyalty. A relevant variable for measuring WOM based on this study could include assessing how customers rely on information, recommendations, or opinions from another's experience customers shared through WOM to influence their trust behavior.

Brand trust is influenced organically by word of mouth but also by influencer marketing. Almahdi and Alsayed (2022) found a positive relationship between social media influencers and brand trust, demonstrating that the more credible the influencer, the more likely their followers are to trust the brand. Based on the mentioned literature, the hypothesis will be proposed to test whether perceived brand reputation on the platform positively influences brand trust.

2.4 Brand Image

Keller (2016) identifies the brand image as perceptions about the brand, where companies aim to enhance strong brand associations in customer memory, which results in creditability and long-term relationships with customers. According to Ghodeswar (2008), in order to help the company build its brand image, the brand identity needs to align with consumer needs by emphasizing points of differentiation, which provides a sustainable competitive advantage.

Esch, Langner, Schmitt, and Geus (2006) studied the relationship between brand image and consumer behavior. Key attributes of brand image, as stated by Low and Lamb (2000), include consumer attitudes toward brand awareness, brand associations in memory, and brand personality. Aaker (1997) further identified brand personality traits such as sincerity, excitement, competence, sophistication, and ruggedness. While brand image directly influences purchase decisions, it does not necessarily affect future purchasing behavior, thus to encourage future purchases, brand trust is a critical antecedent. Esch et al. (2006) confirmed that brand image directly impacts brand trust and strongly influences brand loyal purchase behavior. Their findings suggest that to ensure future purchases, a familiar brand with a positive image must build strong relationships with consumers, driven by brand satisfaction and trust, which leads to brand attachment—an essential factor in both current and future purchasing decisions.

Furthermore, Bernarto, Berlianto, Meilani, Masman, and Suryawan (2020) explained that brand image is reflected by customers' attitudes toward the perceived functional or symbolic benefits of a product or service. Examples of brand image measurements are how well known the brand is or the prestige image associated with its products or services. Their study demonstrated that an increase in brand image leads to higher brand trust, which in turn enhances brand loyalty, supporting their hypothesis testing. This finding aligns with studies by Chinomona (2016) and Lee and Jee (2016), which measure how consumers perceive products from brands as having higher quality compared to competitors.

According to all the above research, it can be applied to the context of retail grocery brand image, with the hypothesis that a strong brand image is a fundamental element in influencing brand trust.

2.5 Perceived Value-for-Money

Huang, Leu, and Farn (2008) suggested that, beyond psychological and social factors, customer retention can also be understood from an economic perspective. They found that factors such as switching costs and the attractiveness of alternative options play a crucial role in maintaining customer relationships. Additionally, Ramkumar and Woo's (2018) study on modern consumer behavior toward subscriptions highlights that utilitarian motivations drive consumers to seek value-for-money or cost-saving benefits. This section will further explore the impact of customers' perceived value for money on subscription behavior.

Barton, Aibinu, and Oliveros (2019) described value-for-money (VFM) as the relationship between what a customer buys and the price paid, compared to other available options. They also explained it in terms of cost-effectiveness, focusing on how wisely the customer spends their money. In cross-sector retail, including grocery, fashion, DIY, and electronics retailing, price and assortment strongly impact brand associations and retail brand equity, and they also significantly influence intentional loyalty across all retail sectors (Swoboda, Weindel, & Hälsig, 2016). This literature measures how consumers perceive the specific prices are reasonable or whether the special promotions offered are attractive or not, they are more likely to have high intentional loyalty.

Value-for-money includes not only the financial benefits of lower prices but also through promotions like receiving product samples or free trials in subscription boxes (Seliverstova, E. A., 2022). This research on meal delivery subscriptions further supports the hypothesis that price value positively influences the intention to subscribe. It evaluates the importance of having a favorable price for a food subscription and assesses the belief that the price offered is favorable to consumers.

In Ramkumar and Woo (2018) study on modern consumer behavior, it was found that consumers' utilitarian motivations including value-for-money positively influence their attitude toward using fashion/beauty subscription-based online services (SOS). Building on previous research by To, Liao, and Lin (2007), the study specifically measures utilitarian motivations, focusing on value for money by evaluating cost savings for consumers. For example, they explore questions on how subscription-based online services can help consumers reduce their expenses or how the subscription could offer competitive prices. Additionally, Ramkumar and Woo (2018) included other factors in their measurement of utilitarian motives, such as convenience, variety of products, information availability, and customization. This research will select to cover some of the aspects in later sections.

Based on all the research mentioned above, it can be inferred the hypothesis that economic factors in terms of value-for-money, significantly influence the intention to subscribe across various sectors, including retail grocery.

2.6 Perceived Convenience

Technological innovations in e-commerce have simplified our daily lives by transforming grocery shopping through online platforms, delivery services, and mobile devices, reducing the time to commute to physical stores (Taher, 2021). In the digital economy, examining the technological factor is crucial, as many businesses adopt these innovations to enhance convenience. Technological service quality significantly impacts customer intentions to continue using mobile applications and is positively related to customer loyalty (Al-Maamari & Abdulrab, 2017). This section will explore particularly how consumers value convenience derived from technological advancements and its impact on their intention to subscribe further.

Perceived convenience has been identified as a key predictor of consumers' intention to use online platform services and is also recognized as the most crucial factor driving positive purchase decisions (Chowdhury, 2023). Additionally, utilitarian motives such as convenience and ease for purchase also influence on subscription models (Baek & Kim, 2022).

To further understand this relationship, Driediger and Bhatiasevi (2019) study explores factors influencing Thai consumers' adoption of online grocery shopping by identifying perceived convenience, particularly in terms of ‘ease of use’ and ‘usefulness’ as key drivers of behavioral intention to use. The study shows a positive relationship between perceived ease of use, measured by how simple the platform is to navigate, and usefulness, which is linked to how the platform enhances shopping efficiency, saves time from grocery shopping, and helps consumers overcome obstacles associated with physical stores.

Another interesting attribute found to positively influence perceived value, which in turn affects subscription intentions, is platform service differentiation studied by Kim, Y., and Kim, B. (2020). This refers to how digital platform subscription services can be customized based on big data analysis to offer personalized product recommendations, making these intelligent digital platforms stand out from others. Kim et al. (2020) used reference variables and survey items suggested by Tao and Xu (2018) and Noorda (2019) to measure the uniqueness of the services and whether the platform is responsive to customer inquiries and provides effective customization.

The perception of convenience, as mentioned in the attributes of digital innovation technology such as ease of use, usefulness, and service differentiation, leads to behavioral intention to use the service. These factors will be further explored in the context of grocery subscription services further in this research with hypotheses testing whether there is a positive relationship between perceived convenience and subscription behavior.

2.7 Shopping Behavior

Customer shopping behavior, buying patterns, and demographic segment dynamics are important to consider because they help businesses understand and meet the diverse needs of consumers to build a competitive advantage and improve business performance (Madhavan & Kaliyaperumal, 2015).

In the context of the e-grocery industry, Madhavan and Kaliyaperumal (2015) classify customer shopping behavior into four types: routine response behavior, limited decision-making, extensive decision-making, and impulse buying behavior. This scope focuses on routine response behavior, where consumers regularly purchase essential grocery products (e.g., milk, eggs, soft drinks, snacks) and typically spend little time and effort on decision-making for these habitual purchases. Understanding the relationship between repeat purchase behavior and loyalty can help businesses develop personalized products and services to enhance customer retention, shopping experience, and stickiness in e-commerce (Lu, Ye, and Yan, 2023). This empirical research on e-commerce websites (e.g. Taobao, JD, Amazon), found a positive correlation between repeat purchases and platform loyalty, measuring how often customers return to purchase within a given time frame (frequency) and how recently they made their last purchase (recency), which could be applied to specific studies on grocery shopping loyalty subscriptions.

Additionally, habit has been explored as a key moderating factor, influencing the effect of trust on online repeat purchase intention (Chiu, Hsu, Lai, & Chang, 2012). The study found that habit negatively moderated the relationship between trust and repeat purchase intention. In this study, habit was measured using items adapted from the Self-Report Habit Index (SRHI), which assesses habitual behaviors across various contexts. The SRHI includes dimensions such as frequency, automaticity, and the routine nature of the behavior.

No quantitative research has directly examined the impact of habitual grocery purchases as independent variable on subscription behavior. This independent study will adapt from previous researches to explore grocery subscription services by testing hypotheses on the relationship between shopping behaviors and subscription adoption in the Thai market.

2.8 Perceived Risk

In addition to understanding perceived benefits such as value for money and convenience, as mentioned previously, it is also important to consider consumers' perceptions of risks or pain points in shopping. This part will also cover the perceived risk factors as market specific to the retail e-commerce industry and how they influence on grocery subscription adoption can provide insights for companies to customize their subscription services to serve customers and enhance customer loyalty in a competitive market (Coelho & Henseler, 2012).

Risk perception, as defined by Kim, Ferrin, and Rao (2008), occurs when consumers expect potential negative consequences, especially from purchasing products online. These potential risks include financial, performance, physical, psychological, social, time, and opportunity cost risks. Another example is the perception of risk during the COVID-19 pandemic, particularly during lockdowns, facility closures, and safety concerns, influencing consumers to adopt technology and buy groceries online (Habib & Hamadneh, 2021).

Research by Han and Kim (2017) mentions that perceived risk is unavoidable in the e-commerce environment, as consumers perceive online shopping to be riskier than traditional in-store shopping. The study significantly found that product risk was negatively associated with both trust and purchase intention. This means that when consumers perceived a risk regarding product quality or performance, their trust in Taobao decreased, and they were less willing to make a purchase.

The study by Dai, Forsythe, and Kwon (2014) highlights that financial risk—such as the risk of being charged a higher price than available in other retailer or losing money from purchasing an underperforming product—more strongly affects purchase intentions for non-digital products, such as apparel. The results supported the hypothesis that financial risk is negatively associated with online shopping intentions, particularly for non-digital products.

Moreover, research conducted by Kumar and Dange (2014) mentioned that time risk, described as the potential loss of time and effort associated with purchasing a product, is one of major concerns for shoppers that significantly affects their intention to purchase products online.

Although research specifically related to subscription services has not yet been mentioned, but mostly relationship between perceived risk and purchase intention. Therefore, the hypothesis testing in this study aims to further explore whether perceived risks negatively influence subscription behavior.

2.9 Conceptual Model and Conclusion of the Hypotheses

Based on the literature review, the conceptual framework and hypotheses for studying the factors affecting the adoption of grocery subscriptions are proposed as follows:

Figure 2.1

Conceptual Framework of Factors Influencing Grocery Subscription Adoption Intention

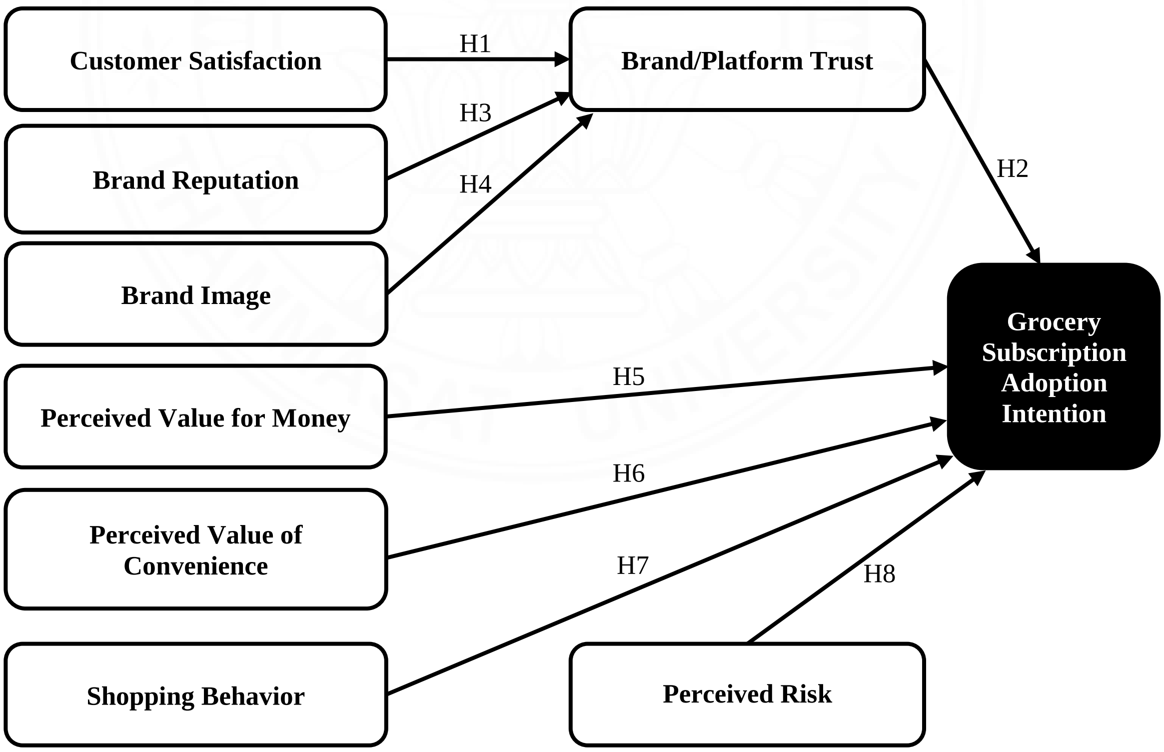


Table 2.1

Summary of the Hypotheses

Constructs	Hypothesis
Satisfaction	H1 (+): Customer satisfaction is positively related to brand trust
Trust	H2 (+): Customer trust positively influences the intention to adopt grocery subscription services
Brand Reputation	H3 (+): Perception of brand reputation positively influences trust
Brand Image	H4 (+): Brand image positively influences brand trust
Value-for-money	H5 (+): Perception of value-for-money positively influences the intention to adopt grocery subscription services
Convenience	H6 (+): Perception of convenience positively influences the intention to adopt grocery subscription services
Shopping Behavior	H7 (+): Shopping behavior positively influences the intention to adopt grocery subscription services
Perceived Risk	H8 (-): Perception of risks negatively influences the intention to adopt grocery subscription services

CHAPTER 3
RESEARCH METHODOLOGY

This chapter aims to explore the methodology to study the behavioral factors influencing grocery subscription adoption, as stated in the literature review and hypotheses in the previous chapter. After identifying the measurement variables for each research construct, the research theoretical philosophy will be applied to suggest appropriate methodology and measurement methods.

3.1 Variables and Measurements Used in Research

3.1.1 Dependent Variable

The dependent variable used in this study is the "Adoption intention of grocery subscription services", which applied measurement items adapted from Saelim (2020), who explores factors influencing consumer subscription intentions in the FMCG sector in Thailand, and Stahuber (2019), who examines the influence of product satisfaction, awareness, and perception on consumers' intention to subscribe to replenishment subscription services.

Table 3.1

Measurement Variables for Intention to Adopt Grocery Subscription Services

Construct	Measurement Variables	References
Intention to Adopt Grocery Subscription	• I would use the subscription service for my grocery needs or shopping routine items in the future • You are likely to sign up for a monthly subscription for the grocery product and continue consuming it in the future • I intend to adopt subscription service to purchase my preferred groceries from this retailer brand	• Saelim (2020) • Stahuber (2019)

3.1.2 Independent Variables

There are eight independent construct variables to observe in this study, the measurements for each are shown in the table below.

Table 3.2

Measurement Variables for Independent Variables

Constructs	Measurement Variables	References
Satisfaction	● I am satisfied with the overall quality and freshness of fresh food, frozen food, and dry food items from this grocery retailer ● I am satisfied with the good variety of grocery assortment provided by this grocery retailer ● I am satisfied with the overall in-store service quality provided by the staff, the online platform ordering process, and the delivery service quality offered by this grocery retailer	● Bakhtiar, Zahari, and Azhar (2012) ● Jain and Sharma (2020) ● Ghosh, Sarkar, & Ganguly (2023) ● Walter, Mueller, and Helfert (2000)
Brand Reputation	● This grocery retailer is reputable ● Word-of-mouth recommendations from this grocery retailer gives me the positive attitude toward the service ● I believe that this grocery products being recommended by social influencer or referral is reliable	● Han, Nguyen, and Lee (2015) ● Purnamabroto, Susanti, and Cempena (2022) ● Almahdi and Alsayed (2022)
Brand Image	● I feel this grocery retailer is very well-known to the public ● I feel this grocery retailer has a prestigious image, and personality that distinguishes itself from competitors	● Bernarto, Berlianto, Meilani, Masman, and Suryawan (2020) ● Chinomona (2016)

Constructs	Measurement Variables	References
	● The grocery products from this grocery retailer have a high quality	
Trust	● I have confidence in this grocery retailer to provide subscription services ● I trust in the brands or suppliers engaged in this grocery retailer subscription ● I feel personally connected to this grocery retailer, and trust in the brand comes to my mind instantly when thinking of grocery subscription	● Habib and Hamadneh (2021) ● Kerschbaumer, Kreimer, Foscht, and Eisingerich (2022)
Value-for-money	● The prices at this grocery retailer are reasonable, and the special offers are very attractive, which makes me want to subscribe ● I could save my money or spend less by shopping at this subscription-based grocery retailer ● This grocery subscription service could offer me competitive prices	● Swoboda, Weindel, & Hälsig (2016) ● Seliverstova (2022) ● Ramkumar & Woo (2018)
Value of Convenience	● Using grocery subscription service can improve my efficiency in purchasing groceries and help save me a lot of time searching for routine groceries ● Using grocery subscription service can make my grocery shopping easier and more convenient in daily life ● I believe that online grocery platform is easy to use through subscribe service	● Driediger and Bhatiasevi's (2019) ● Kim, Y., and Kim, B. (2020)

Constructs	Measurement Variables	References
	• I believer that grocery subscription is responsive to my needs or inquiries to get good customized service with good quality of product	
Shopping Behavior	• Shopping for the essential grocery items (repeated items) is something I do regularly at this grocery retailer • I shop at this grocery retailer frequently for my grocery needs • Shopping at this grocery retailer has become a routine for me	• Chiu, Hsu, Lai, and Chang (2012)
Perceived Risk	• I am concerned that same grocery products can be found at a lower price from another retailer or marketplace • I am concerned with the quality of the products delivered offered by this retailer do not perform as expected • I am concerned that my grocery product may fail to be delivered to me within the promised time frame by retailer	• Dai, Forsythe, and Kwon (2014) • Han and Kim (2017) • Kumar and Dange (2014)

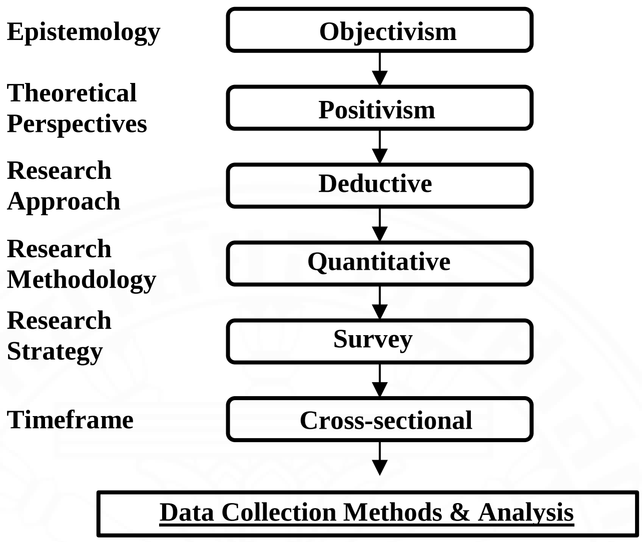
3.2 Research Theoretical Perspectives and Methodology Design

This research adopts a systematic approach adapted from Saunders, Lewis, and Thornhill (2012) and Gray (2018) to design the research process, methodology, and strategy, as shown in the diagram in below figure. Following this, the data collection and analysis methods will be identified.

3.2.1 Background Research Theoretical Perspectives

Figure 3.1

Research Design Framework



According to Crotty (1998), epistemology provides a philosophical background to determine what knowledge is adequate and reliable to justify assumptions. Objectivist epistemology is appropriate for this study as it explains how discovering knowledge in research can be done independently without personal feelings or beliefs, even though consumer values and attitudes or perceptions which are subjective, can still be studied objectively (Bunge, 1993).

Among the five research philosophies—positivism, interpretivism, critical realism, postmodernism, and pragmatism—outlined by Saunders et al. (2019), positivism, as suggested by Gray (2018), has the strongest connection to objectivism. The positivist perspective mentioned that social science behavior can be measured through observation directly and should be studied using scientific observation methods. It also suggests that the human sciences follow similar logical and methodological principles focusing on quantified facts rather than personal values.

To study psychological factors like satisfaction, trust, and other social perceptions, a positivist philosophy can serve as the foundation for understanding consumer behavior and determining the appropriate research methods and measurement approaches.

3.2.2 Designing Research Approach and Methodology

When considering whether to apply a deductive or inductive approach, Bryman (2012) suggests that the deductive approach is useful when you want to validate an existing theoretical framework ideas to identify the relationship between theory and research. Since this study aims to confirm the factors influencing the adoption of grocery subscription behavior from other related industries and markets to the Thai market, it will adopt a deductive approach. This will allow the study to confirm whether existing theories align with hypothesizes and then provide observations or findings to support them accordingly.

To validate existing theories and quantify data collection to measure specific factors, the quantitative research methodology is more appropriate than qualitative research, which typically emphasizes words rather than numerical data (Bryman, 2012). Therefore, this research will employ a quantitative research method.

3.2.3 Selecting Research Strategy and Timeframe

According to Saunders et al. (2012), the research onion framework can be applied to determine the research strategy, which outlined that the survey method is suitable for deductive research. In addition, as noted by Fink (2017), the survey is a method of gathering information from a large number of people to assess their feelings, beliefs, personal attitudes, values, habits, and background characteristics such as age, education, and financial to understand their behavior. The survey can be used to make policy, evaluate programs, and conduct research to collect information. For instance, psychological or social attitudes can be measured through a quantitative survey, where respondents rate their perceptions or attitudes toward the product, service, and platform on a Likert scale rating (Zikmund, Babin, Carr, & Griffin, 2013).

As suggested by Gray (2018), a suitable timeframe for short-term research will be a cross-sectional study, where data or information are collected at one point in time. This reflects on consumer past behavior or a snapshot of the current situation (Zikmund, Babin, Carr, & Griffin, 2013). Most researchers commonly adopted this timeframe because of limited resources and time.

In conclusion, to answer the research question of what are the key factors influencing grocery subscription adoption, as mentioned by the above research philosophy and theory described, a quantitative research method approach will be conducted, using a survey method to gather data through a cross-sectional study.

3.3 Data Collection Methods

As mentioned by Bryman (2012), the survey research method is assigned to research that employs a cross-sectional research design, where the data is gathered through a questionnaire or structured interview at a single point in time. This research aims to use the online self-administrated or self-completion questionnaire to efficiently distribute to respondents to examine the relationship between variables with a large sample of audiences, in which the questionnaires are adapted based on the previous research and literature reviews.

Data will be collected using a snowball sampling method, as referenced to Shukla & Sharma (2018), where sampling was used to ensure that the respondents know about online grocery shopping and capable of evaluating it. In this case, the snowball sampling method is suitable when targeting specific subgroups within a population, which begin with a few initial participants who are known grocery shoppers in Thailand. These participants will then be asked to refer other individuals within their network who also meet the criteria of grocery shoppers. Therefore, in this research, participants will be recruited by targeting grocery shoppers in Thailand through online platforms such as social media networks (e.g., Facebook, Instagram, and Line) or related community groups for household grocery shoppers in Thailand.

3.3.1 Defining Population Characteristics and Selecting Sample Size

Based on Kotler and Keller (2016), to understand consumer behavior, it is important to define the target population segmentation to more precise demographics, psychographics, behavior, or geography. Since this research objective is to study the factors influencing the behavior of grocery subscriptions, the characteristics of the target population in this research will be grocery shoppers in Thailand consisting of individual consumers who regularly purchase groceries at least 1-3 times per month in convenient stores, supermarkets, or hypermarkets, whether from physical stores, online, or through omnichannel. In addition, the focus is on office workers and small to medium-sized families who are the main household purchasers for either themselves or their family members.

The targeted sample from the population is aged between 21 and 65 years old, who are considered likely to engage in this grocery shopping activity and have sufficient income, which is in accordance with the research on Thai consumers' grocery behavior adapted from Issariyapracha (2016) and includes those with prior experience in online internet shopping across any category.

The sample size is determined based on Cochran's method using the formula applied for large and infinite grocery populations. By assuming a confidence level of 95% and a significance level (margin of error) of 0.05, the calculated sample size is approximately 384 respondents (Uakarn, Chaokromthong, & Sintao, 2021). Therefore, to account for potential incomplete response this research aims to select approximately 400 participants to provide a sufficient sample data to explore grocery subscription adoption patterns.

Furthermore, the survey data will be split into two groups: 200 participants will be online grocery frequent shoppers, and another 200 will be offline or traditional grocery frequent shoppers. This approach ensures a broader sample data and more representative sample while minimizing bias. However, all respondents will need to meet the criteria to qualify as grocery shoppers. By using this approach, the research can provide valuable insights and allow for the analysis of various subgroups to better understand grocery shopping habits.

3.3.2 Primary Research Designing Self-completion Questionnaires

The primary research data collection is conducted through online survey questionnaires distributed to targeted sample respondents which are divided into three parts;

Part 1: Screening Questions for Grocery Shoppers Behavior

The purpose of this part is to filter out respondents who do not meet the criteria for this study on grocery subscription adoption. The example screening questionnaire might include:

- Frequency of grocery shopping (e.g., 1-3 times per month)
- Average spending per transaction (e.g., < 500 THB, 501–1,000 THB)

- Most preferred channel of grocery shopping (e.g., in-store, online, omnichannel)
- The main grocery purchaser of the household (e.g. yes, no)
- Which of the following grocery stores or platforms do you most frequently shop at? (e.g., Tops, Lotus’s, Makro, Big C, Gourmet, Local market, etc.)

Part 2: Factors Influencing Grocery Subscription Questionnaire

The third part of the questionnaire focuses on understanding the factors that influence respondents’ decisions regarding grocery subscriptions. The survey questions were developed through a comprehensive literature review to conduct each construct variable and measurement item as summarized in Chapter 3.1.

As suggested by Zikmund, Babin, Carr, and Griffin (2013), a five-point Likert scale is applied to assess the level of perception, opinions, attitude, and behavior to quantify each attribute related to grocery subscription. The scale is as follows: 1 = Strongly Disagree / Not Important, 2 = Disagree / Slightly Important, 3 = Neutral, 4 = Agree / Important, 5 = Strongly Agree / Very Important.

Part 3: General Demographic Questionnaire

The second part aims to collect the demographic information of the grocery shoppers which is relevant to segment the population. Key demographic items include age, gender, income level, household size, and occupation.

3.4 Data Analysis

This section presents the data analysis techniques applied to study the impact of consumer behavior on grocery subscriptions. The primary data gathered from the survey questionnaire will be analyzed and interpreted using SPSS software. The data analysis process is as follows.

3.4.1 Descriptive Statistics

The first part of the analysis aims to summarize the collected data using descriptive statistics in order to understand the grocery shoppers' demographic characteristics, such as age, gender, household size, occupation, and income.

Furthermore, it will also examine the behavior patterns of the respondents, including frequency distribution and regular shopping channels.

3.4.2 Factor Analysis Validity Testing and Reliability Testing

Before conducting the specific hypothesis testing through regression, it is essential to verify the number of the construct variables. Principal Component Analysis (PCA) is the appropriate method to confirm the factor structure using Jamovi software. All variables should have strong loadings above 0.7, ensuring that they contribute substantially to construct validity in social science research (Hair, Black, Babin, Anderson, & Tatham, 2010). Furthermore, to assess the reliability of the construct items further, Cronbach's Alpha Coefficient should exceed a value of 0.7 to confirm the reliability of the constructs, meaning that the questionnaire design is well conducted, as referenced in research related to customer loyalty (Ponnusamy & Chandrashekar, 2024).

3.4.3 Inferential Statistics (Hypothesis Testing)

In this phase, Multiple Linear Regression Analysis method will be selected as the analysis tools for testing.

Firstly, the Multiple Linear Regression will be applied to analyze hypotheses H1 (Satisfaction → Trust), H3 (Brand Reputation → Trust), and H4 (Brand Image → Trust), to test whether these independent variables influence trust simultaneously. Following that, another Multiple Regression Analysis will be employed to test the hypothesized relationships between independent and dependent variables for H2, and H5 to H8. This will determine which factors have a significant impact on the adoption of grocery subscriptions. The hypotheses include: H2 (Trust → Grocery Subscription Adoption), H5 (Perceived Value for Money → Grocery Subscription Adoption), H6 (Perceived Value of Convenience → Grocery Subscription Adoption), H7 (Shopping Behavior → Grocery Subscription Adoption), and H8 (Perceived Risk → Grocery Subscription Adoption). This analysis will identify which factors most significantly influence grocery subscription adoption and determine whether the hypotheses are supported or rejected.

Table 3.3

Summary of the Hypotheses and Analysis Tools

Constructs	Hypothesis	Analysis Tools
Satisfaction	H1 (+): Satisfaction → Trust	1st Multiple Regression Model
Brand Reputation	H3 (+): Brand Reputation → Trust	
Brand Image	H4 (+): Brand Image → Trust	
Trust	H2 (+): Trust → Grocery Subscription Adoption	2nd Multiple Regression Model
Value-for-money	H5 (+): Perceived Value for Money → Grocery Subscription Adoption	
Convenience	H6 (+): Perceived Value of Convenience → Grocery Subscription Adoption	
Shopping Behavior	H7 (+): Shopping Behavior → Grocery Subscription Adoption	
Perceived Risk	H8 (-): Perceived Risk → Grocery Subscription Adoption	

CHAPTER 4
RESULTS AND DISCUSSION

4.1 Respondent Behavior Data and Demographic Profile

4.1.1 Grocery Shopper Behavior

As this research aims to study grocery shoppers who are the main purchasers for their households, the survey was distributed online to a targeted group of family and friends via Google Form using snowball sampling. A total of 440 respondents participated in the survey, with 438 completing the screening questions based on the criteria of being a grocery purchaser, only 2 respondents did not meet the screening criteria. Among the grocery purchasers, the majority of 55% reported purchasing groceries primarily for their family, while 42% purchase groceries mainly for themselves. Around 2% purchase groceries for their businesses as summarized in below table.

Table 4.1

Purpose of Grocery Purchases of Respondents

Grocery Shopper Behavior of Respondents		**N**	**%**
Purpose of Grocery Purchases	Purchase for family	241	55%
	Purchase for self	186	42%
	Purchase for business	11	2%
	Not a grocery purchaser	2	1%
TOTAL		440	100%

Based on Table 4.2, the sample data of 438 grocery purchasers reveals that 57% of respondents prefer shopping at physical stores, supermarkets, or hypermarkets. Around 36% of respondents shop through omnichannel both in-store and online channels, while only 5% shop exclusively online. The remaining 2% either use pick-up services or shop at local markets.

Regarding purchasing frequency, the largest proportion of respondents (30%) shop for groceries once per week, followed by 25% who shop 2 to 3 times per week respectively. In terms of the spending per transaction, most respondents prefer smaller, but more frequent purchases, with 38% spending between 501 – 1,000 THB, followed by 28% who spend 1,001 – 2,000 THB per transaction.

Table 4.2

Grocery Purchase Behavior of Respondents

Grocery Shopper Behavior of Respondents		**N**	**%**
Most Frequent Channels	Physical Stores, Supermarket, or Hypermarket	249	57%
	Both In-store and Online (Omnichannel)	158	36%
	Online Retailer or Application/Website	23	5%
	Other (e.g. Local market)	8	2%
Grocery Shopping Frequency	Daily	35	8%
	2-3 times per week	109	25%
	Once per week	134	30%
	More than 3 times per month	17	4%
	2-3 times per month	78	18%
	Once per month	65	15%
Size of Transactions	Less than 500 THB per transaction	60	14%
	501 – 1,000 THB per transaction	167	38%

Grocery Shopper Behavior of Respondents		N	%
	1,001 – 2,000 THB per transaction	125	29%
	2,001 – 3,000 THB per transaction	50	11%
	More than 3,000 THB per transaction	36	8%
TOTAL		438	100%

4.1.2 Grocery Shopper Demographic Profile

To ensure the survey reached the main grocery purchasers, it was distributed to targeted groups of friends living alone and with family, who were encouraged to share it with family members responsible for purchasing groceries. Table 4.3 summarizes that the majority of grocery shoppers in the survey are older adults aged 55 and above (38%), followed closely by younger adults aged 25-34 (31%), with 64% being female. In terms of occupation, 38% are private employees, while the largest income group earns between 30,001 – 60,000 THB per month (34%). Most respondents live in mid-sized households of 2-3 people (48%), followed by larger households of 4-5 people (33%).

Table 4.3

General Demographic Profile of Respondents

Demographic Profile of Respondents		N	%
Age	18-24	19	4%
	25-34	136	31%
	35-44	69	16%
	45-54	48	11%
	55 and above	166	38%

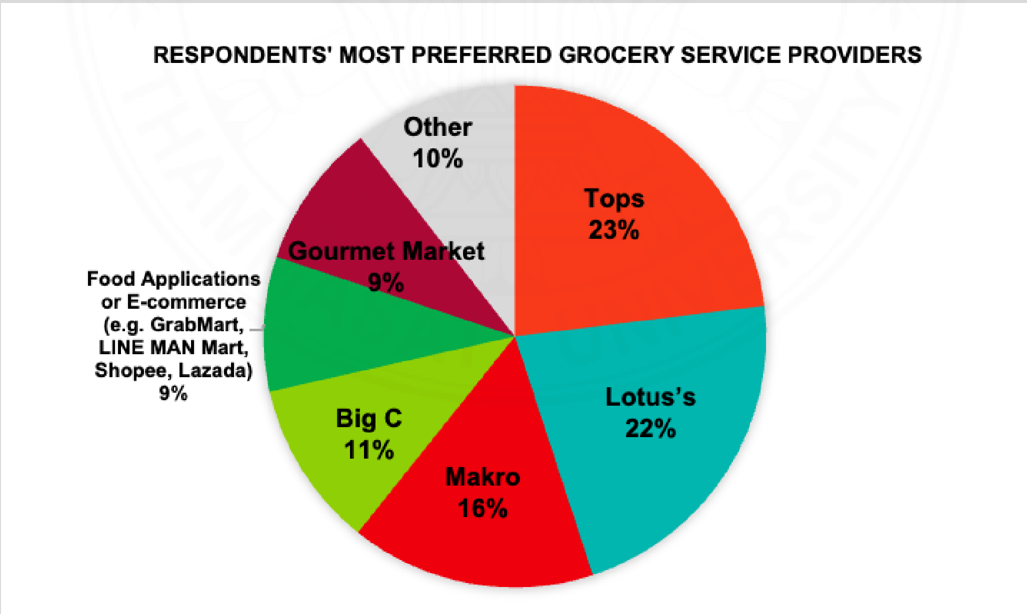
Demographic Profile of Respondents		N	%
Gender	Female	280	64%
	Male	155	35%
	Other	3	1%
Occupation	Private Employee	167	38%
	Retired	93	21%
	Public Employee	63	14%
	Business Owner/Self-employed	62	14%
	Homemaker	25	6%
	Student	19	4%
	Restaurant/Coffee Shop Owner	8	2%
	Unemployed	1	0.2%
Income (THB)	Less than 30,000 THB	117	27%
	30,001 – 60,000 THB	151	34%
	60,001 – 90,000 THB	55	13%
	90,001 – 120,000 THB	46	10%
	More than 120,000 THB	69	16%
Household Size	1 Person	52	12%
	2-3 People	209	48%
	4-5 People	144	33%

Demographic Profile of Respondents		N	%
	More Than 5 people	33	7%
TOTAL		438	100%

According to Table 4.4, the most frequently used grocery service providers among respondents, whether physical or online, are the market leaders Tops (23%) and Lotus's (22%), followed by Makro (16%) and Big C (11%). A smaller share of respondents shop at Gourmet Market (9%) or use food aggregator apps or e-commerce platforms (9%), such as GrabMart, LINE MAN Mart, Shopee, and Lazada. Meanwhile, 10% of respondents prefer other grocery providers, including convenience stores, Go Wholesale, MaxValu, Foodland, Villa Market, and local markets.

Table 4.4

Most Preferred Grocery Service Providers of Respondents



4.2 Descriptive Statistics

As shown in Table 4.5, descriptive statistics were used to measure the 9 constructs: Satisfaction (SAT), Brand Reputation (REP), Brand Image (IMG), Brand Trust (TRUST), Value for Money (VFM), Value of Convenience (VOC), Shopping Behavior (SHOP), Perceived Risk (RISK), and Intention to Adopt Subscription Services (INTSUB). Each construct was grouped by the average of its variables, and Jamovi's statistics tool was used to analyze the mean, median and standard deviation. The ratings were on a scale from 1 to 5, with 1 indicating less agreement and 5 indicating mostly agreement, while Perceived Risk (RISK) included negative items, where lower scores reflect lower perceived risk.

Table 4.5

Description Statistics of Constructs

Constructs	N	Mean	Median	SD	Minimum	Maximum
Satisfaction (SAT)	438	3.86	4.00	0.786	1	5
Brand Reputation (REP)	438	3.65	3.67	0.853	1	5
Brand Image (IMG)	438	3.92	4.00	0.816	1	5
Trust (TRUST)	438	3.58	3.67	0.811	1	5
Value for Money (VFM)	438	3.52	3.67	0.886	1	5
Value of Convenience (VOC)	438	3.43	3.50	0.866	1	5
Shopping Behavior (SHOP)	438	3.92	4.00	0.852	1	5
Perceived Risk (RISK)	438	3.10	3.00	0.858	1	5

Constructs	N	Mean	Median	SD	Minimum	Maximum
Intention to Subscribe (INTSUB)	438	3.17	3.00	1.003	1	5

Mean values ranged from the lowest at 3.10 for Perceived Risk to the highest at 3.92 for Brand Image and Shopping Behavior, showing a general trend toward agreement. Most constructs had medians of 3.67 or 4.00, suggesting a skew toward higher agreement. For the Intention to Subscribe, this is reflected in the average mean value of 3.17, indicating a neutral agreement. Standard deviations (SD) ranged from 0.786 to 1.003, with Intention to Subscribe (SD = 1.003) showing the highest variability, indicating diverse opinion on subscription intent. Satisfaction (SD = 0.786) had the least variability, reflecting more consistent responses. Overall, respondents displayed moderate to high agreement across most constructs, while Perceived Risk remained most neutral.

4.3 Reliability and Principal Component Analysis (Cronbach's Alpha and PCA)

Cronbach's Alpha was calculated to assess the reliability of items within each construct, as shown in Table 4.6. The constructs with the highest reliability are Intention to Subscribe (0.961), Shopping Behavior (0.928), and Value of Convenience (0.918), while Perceived Risk has the lowest reliability score (0.788). With all scores exceeding the 0.7 threshold, these results indicate that each construct is reliable, confirming that the questionnaire is well-designed.

Table 4.6

Cronbach's Alpha Results for Each Construct

Constructs	No. of Items (k)	Cronbach's Alpha
Satisfaction (SAT)	3	0.881
Brand Reputation (REP)	3	0.830

Constructs	No. of Items (k)	Cronbach's Alpha
Brand Image (IMG)	3	0.867
Trust (TRUST)	3	0.863
Value for Money (VFM)	3	0.886
Value of Convenience (VOC)	4	0.918
Shopping Behavior (SHOP)	3	0.928
Perceived Risk (RISK)	3	0.788
Intention to Subscribe (INTSUB)	3	0.961

The next step is to conduct Principal Component Analysis (PCA) to validate the structure of the constructs before proceeding to regression analysis. PCA was performed by grouping the selected variable items under their respective constructs one by one across all 9 constructs, and component scores were calculated to appropriately weight each variable. The PCA was run only once, as all variables met the required threshold, and no items were removed during the process. According to Hair, Black, Babin, and Anderson (2010), all variables should have strong loadings above 0.7 to ensure that they contribute substantially to construct validity in social science or consumer behavior related research.

As shown in Table 4.7, all variables have strong loadings above 0.7, with most exceeding 0.8 and many above 0.9, while only the Perceived Risk construct has a slightly lower loading for one variable (RISK1 = 0.760). Overall, these high loadings confirm that the constructs are valid and the items within each construct are closely related, making them suitable for further analysis.

Table 4.7

Component Loadings Results for Each Construct

Constructs	Variables	Component Loading
Satisfaction (SAT)	SAT1	0.897
	SAT2	0.908
	SAT3	0.891
Brand Reputation (REP)	REP1	0.858
	REP2	0.901
	REP3	0.837
Brand Image (IMG)	IMG1	0.874
	IMG2	0.910
	IMG3	0.882
Brand Trust (TRUST)	TRUST1	0.896
	TRUST2	0.888
	TRUST3	0.878
Value for Money (VFM)	VFM1	0.881
	VFM2	0.908
	VFM3	0.918
Value of Convenience (VOC)	VOC1	0.899
	VOC2	0.913
	VOC3	0.876
	VOC4	0.895

Constructs	Variables	Component Loading
Shopping Behavior (SHOP)	SHOP1	0.936
	SHOP2	0.945
	SHOP3	0.927
Perceived Risk (RISK)	RISK1	0.760
	RISK2	0.897
	RISK3	0.856
Intention to Subscribe (INTSUB)	INTSUB1	0.960
	INTSUB2	0.968
	INTSUB3	0.963

4.4 Correlation Analysis and Multicollinearity Checks

After conducting Principal Component Analysis (PCA), a correlation matrix is used to assess the strength of relationships between the constructs and check for multicollinearity before regression.

Table 4.8

Correlation Matrix Results for Constructs

Correlation Matrix

	SAT	REP	IMG	TRUST	VFM	VOC	SHOP	RISK	INTSUB
SAT	—								
REP	0.607 ***	—							
IMG	0.595 ***	0.642 ***	—						
TRUST	0.528 ***	0.583 ***	0.602 ***	—					
VFM	0.475 ***	0.485 ***	0.468 ***	0.568 ***	—				
VOC	0.443 ***	0.504 ***	0.445 ***	0.549 ***	0.651 ***	—			
SHOP	0.577 ***	0.559 ***	0.641 ***	0.585 ***	0.545 ***	0.491 ***	—		
RISK	0.046	0.173 ***	0.154 **	0.081	0.090	0.179 ***	0.096 *	—	
INTSUB	0.281 ***	0.395 ***	0.303 ***	0.530 ***	0.565 ***	0.577 ***	0.386 ***	0.093	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4.8 presents significant correlations between most constructs. Satisfaction is strongly related to both Brand Reputation (0.607) and Brand Image (0.595) at $p < .001$, indicating that stronger reputation and image lead to higher satisfaction. Trust is also closely linked to Brand Reputation (0.583) and Brand Image (0.602). Moreover, the data show that Brand Image, Reputation, and Satisfaction have strong correlations with Trust (0.602, 0.583, and 0.528, respectively), indicating that these factors are closely linked to building Trust.

Trust (0.530), Value for Money (0.565), and Value of Convenience (0.577) exhibit relatively high correlations with Intention to Subscribe, suggesting these factors are likely to be key drivers of subscription intention. In contrast, Satisfaction (0.281), Brand Image (0.303), and Brand Reputation (0.395) show relatively lower correlations with Intention to Subscribe, indicating these factors might contribute indirectly to subscription intention through Trust rather than directly.

Shopping Behavior shows a moderate correlation with Intention to Subscribe (0.386), making it less influential compared to Value of Convenience, Value for Money, and Trust. However, Shopping Behavior displays strong correlations with several constructs, indicating its significant role in enhancing respondents' engagement with the grocery subscription experience. It is positively correlated with Brand Image

(0.641), Trust (0.585), and Satisfaction (0.577), all at $p < .001$, suggesting that positive shopping experiences contribute to a favorable brand image, higher trust, and increased satisfaction. Additionally, Shopping Behavior is moderately correlated with Value of Convenience (0.491), implying that a good shopping experience aligns with the perception of convenience in the subscription service.

Perceived Risk shows weak correlations with other factors, extremely low correlation with Intention to Subscribe (0.093). This could imply that perceived risk may have limited influence on other constructs within the context of this study.

In summary, the strongest correlations with Intention to Subscribe are observed for Value of Convenience (0.577), Value for Money (0.565), and Trust (0.530), indicating that these factors are key drivers for subscription intent among respondents. Lower correlations for Satisfaction (0.281), Brand Image (0.303), Reputation (0.395), and Shopping Behavior (0.386) imply that these factors are less directly influential but still play supporting roles in the overall model.

In addition, The Variance Inflation Factor (VIF) values for all variables are lower than the threshold of 2 as shown in the assumption checks in Table 4.8.1 below, suggesting no significant multicollinearity issues in this model, which supports the reliability of the regression results. Table 4.8.2 also reports the Variance Inflation Factor (VIF) values for TRUST (1.85), VOC (1.96), SHOP (1.71), and RISK (1.04), indicating low multicollinearity, as all values are relatively below the acceptable threshold of 2. VFM has the highest VIF at 2.06, which remains acceptable as it is below the threshold of 3 as per recommendations by Jeevan, Salleh, and Lee (2020). These values confirm that multicollinearity is not a concern in this model, supporting the reliability of the results.

Table 4.9

Assumption Checks for Predictors of TRUST

Collinearity Statistics

	VIF	Tolerance
SAT	1.79	0.560
REP	1.96	0.510
IMG	1.92	0.522

Table 4.10

Assumption Checks for Predictors of INTSUB

Collinearity Statistics

	VIF	Tolerance
TRUST	1.85	0.541
VFM	2.06	0.484
VOC	1.96	0.510
SHOP	1.71	0.583
RISK	1.04	0.966

4.5 Multiple Linear Regression Analysis and Summary of Hypotheses

To analyze the factors influencing the intention to adopt a subscription service, we divided the analysis into two regression models to test the hypotheses. In the first model, multiple regression is used to examine how Satisfaction, Brand Reputation, and Brand Image contribute to Trust. In the second model will analyze how Trust, Value for Money, Value of Convenience, Shopping Behavior, and Perceived Risk influence the Intention to Subscribe.

4.5.1 Influence of SAT, REP, and IMG on TRUST

According to Table 4.9, the first regression model represents a significant relationship between each independent variables; Satisfaction (SAT), Reputation (REP), and Image (IMG) toward Trust (TRUST) as the dependent variable, with $P < .001$ and R^2 of 0.444. These variables explain 44.4% of the variance in TRUST.

Among each independent variables, Image (IMG) has the strongest effect with an estimate coefficient of 0.330, followed by Reputation (REP) at 0.268, and Satisfaction (SAT) at 0.170.

Table 4.11

Multiple Linear Regression Results for the Factors Influencing TRUST

Model Fit Measures

Model	R	R^2	Adjusted R^2	Overall Model Test			
				F	df1	df2	p
1	0.667	0.444	0.441	116	3	434	< .001

Model Coefficients - TRUST

Predictor	Estimate	SE	t	p
Intercept	-3.03e−16	0.0357	-8.49e−15	1.000
SAT	0.170	0.0478	3.55	< .001
REP	0.268	0.0501	5.35	< .001
IMG	0.330	0.0495	6.65	< .001

The regression result confirms that all three hypotheses H1, H3, and H4 are supported, showing that customer satisfaction (SAT) with the grocery shopping experience, along with the grocery provider's brand reputation (REP) and brand image (IMG), each positively influence customer trust (TRUST) in the brand as outlined below:

Table 4.12

Hypothesis Testing Results Summary for Trust

Hypothesis	Result
H1 (+): Satisfaction (SAT) → Trust (TRUST)	Supported
H3 (+): Brand Reputation (REP) → Trust (TRUST)	Supported
H4 (+): Brand Image (IMG) → Trust (TRUST)	Supported

4.5.2 Influence of TRUST, VFM, VOC, SHOP, and RISK on INTSUB

In the second model, as shown in Table 4.10, the regression analysis examines the influence of independent variables, including Trust (TRUST), Value for Money (VFM), Value of Convenience (VOC), Shopping Behavior (SHOP), and

Perceived Risk (RISK), on Intention to Subscribe (INTSUB) as the dependent variable. The model's R^2 value of 0.429 means these variables explain 42.9% of the variance in INTSUB, showing moderate explanatory power.

Among the independent variables, VOC has the strongest impact on INTSUB, with an estimate coefficient of 0.2958 and a p-value of < .001, identifying it as the most influential factor on the intention to subscribe. While convenience is the primary driver, value for money also plays a critical role. VFM follows with an estimate of 0.2548 (p < .001). TRUST also significantly contributes positively to INTSUB with an estimate of 0.2471 (p < .001).

In contrast, SHOP presents a negative coefficient (-0.0422) but is not statistically significant (p = 0.375), showing no meaningful impact on INTSUB. Similarly, RISK shows an insignificant relationship with INTSUB with an estimate of 0.00088 and p = 0.981, implying that it has a minimal impact on INTSUB in this model.

Table 4.13

Multiple Linear Regression Results for the Factors Influencing INTSUB

Model Fit Measures

				Overall Model Test			
Model	**R**	**R²**	**Adjusted R²**	**F**	**df1**	**df2**	**p**
1	0.655	0.429	0.423	65.0	5	432	< .001

Model Coefficients - INTSUB

Predictor	**Estimate**	**SE**	**t**	**p**
Intercept	3.01e-16	0.0363	8.30e-15	1.000
TRUST	0.2471	0.0494	5.0004	< .001
VFM	0.2548	0.0522	4.8790	< .001
VOC	0.2958	0.0509	5.8118	< .001
SHOP	-0.0422	0.0476	-0.8875	0.375
RISK	8.80e -4	0.0370	0.0238	0.981

In conclusion, the hypothesis testing results indicate that H2, H5, and H6 are supported. suggesting that Trust (TRUST), Value for Money (VFM), and Value of Convenience (VOC) positively influence in respondents' intention to subscribe to grocery services. On the other hand, Shopping Behavior (SHOP) and Perceived Risk (RISK) do not have a significant impact on subscription intention among respondents, therefore, H7 and H8 are not supported as summarized in the table below:

Table 4.14

Hypothesis Testing Results Summary for Intention to Subscribe

Hypothesis	Result
H2 (+): Trust (TRUST) → Grocery Subscription Intention (INTSUB)	Supported
H5 (+): Perceived Value for Money (VFM) → Grocery Subscription Intention (INTSUB)	Supported
H6 (+): Perceived Value of Convenience (VOC) → Grocery Subscription Intention (INTSUB)	Supported
H7 (+): Shopping Behavior (SHOP) → Grocery Subscription Intention (INTSUB)	Not Supported
H8 (-): Perceived Risk (RISK) → Grocery Subscription Intention (INTSUB)	Not Supported

4.6 Result Discussions

Based on the above results, it can be concluded that the key drivers of grocery subscription adoption are convenience, which is the primary motivator, followed by perceived value for money and trust in the brand. In contrast to the hypothesis, shopping behavior and perceived risk do not significant influence subscription intention. Moreover, it was found that trust factor is shaped mostly by brand image, the reputation of that brand, as well as customer satisfaction with the grocery provider's purchasing experience. This section discusses possible reasons behind these significant and non-significant relationships, as outlined below.

4.6.1 Trust in Relation to Brand Image, Reputation, and Satisfaction

Before discussing the main factors influencing grocery subscription, the first model focuses on understanding Trust, which is impacted by three key factors: Brand Image, Brand Reputation, and Satisfaction.

Brand Image is identified as the most significant factor influencing trust. The main reason is that consumers with a positive perception of a grocery brand's reliability and quality are more likely to develop trust through emotional connection. This aligns with findings by Bernarto et al. (2020), who highlighted that a strong brand image enhances trust and loyalty by positively influencing consumers' perceptions of quality. Similarly, Chinomona (2016) found that consumers tend to perceive products from brands with a strong image as higher quality than competitors, reinforcing the link between brand image and trust.

Brand Reputation also plays a significant role in building trust. Consumers tend to trust brands with positive reputation, especially those well known for high standards and receiving positive referrals or recommendations from family and friends. This supports the hypothesis by Han, Nguyen, and Lee (2015) that brand reputation shapes trust by influencing perceptions of safety, quality, and honesty, especially for food products. Additional support comes from Purnamabroto, Susanti, and Cempena (2022), who showed that word-of-mouth (WOM) builds brand trust indirectly through reputation, emphasizing the social influence on trust. Almahdi and Alsayed (2022) also demonstrated that credible social media influencers contribute to trust by enhancing the brand's reputation.

Satisfaction (SAT), while less influential but still has a positive impact on trust. Positive purchase experiences such as product variety, app usability, timely deliveries, and excellent customer support could strengthen satisfaction, which leads to trust. This finding is consistent with Walter, Mueller, and Helfert (2000), who identified customer satisfaction as a precursor to trust in long-term relationships. Jain and Sharma (2020) noted that customer satisfaction in retail is driven by factors such as product variety, information quality, and security, which influence trust. Ghosh, Sarkar, and Ganguly (2023) further noted that grocery service quality, app usability, and on-time delivery shape customer satisfaction, building trust and loyalty in the platform.

While Brand Image, Reputation, and Satisfaction do not directly impact the intention to subscribe to grocery services, they play an indirect role by building Trust, which, in turn, influences subscription intention based on the results in this study.

4.6.2 Grocery Subscription in Relation to Value for Convenience, Value for Money, Trust, Shopping Behavior, and Perceived Risk

The finding aligns with previous studies that show a positive relationship between Grocery Subscription and the three factors: Trust, Perceive Value for Money, and Convenience.

The most significant key driver of Intention to Subscribe based on the results is the Value of Convenience. A major reason for this factor's impact could be because modern consumers prioritize convenience in their busy daily lives where grocery subscription services offer time-saving features, ease of use, and tailored delivery options that resonate with busy individuals or families. This finding aligns with the study by Driediger and Bhatiasevi (2019), which highlights a positive relationship between perceived ease of use in online grocery shopping and convenience in daily life, such as time-saving features. Additionally, the customized features offered by subscription services, which provide personalized responses to customers' unique inquiries, further support this finding. This is consistent with the research by Kim, Y., and Kim, B. (2020), which demonstrated a positive relationship between platform personalized service offerings and the adoption of subscription services.

The next significant factor is Value for Money, which respondents consider a key aspect when deciding to subscribe to grocery services. One explanation is that consumers perceive price fairness and promotions as critical in their decision-making process and browsing for groceries that provide competitive pricing, discounts, or other financial benefits. This finding aligns with research by Swoboda, Weindel, and Hälsig (2016), which found that consumers' perceptions of fair pricing or attractive promotions significantly impact brand loyalty. Additionally, Seliverstova (2022) confirmed that price value positively influences the intention to subscribe to meal delivery services. Similarly, Ramkumar and Woo (2018) observed that utilitarian motivations, such as value-for-money, positively shape consumer attitudes toward subscription-based online services, including those offering competitive pricing in the fashion and beauty industries.

The last significant factor is respondents' trust in the brand, which influences their subscription decisions. Trust is shaped by a combination of positive brand reputation, customer satisfaction, and a strong brand image, as highlighted in earlier findings. The main reason is because a trustworthy grocery provider ensures reliability, quality, and a consistent customer experience, making consumers more comfortable committing to a subscription. This aligns with prior research by Habib and Hamadneh (2021), which identified trust as a key factor significantly influencing online grocery purchase intentions. Similarly, Kerschbaumer, Kreimer, Foscht, and Eisingerich (2022) found that trust positively impacts the attitude toward subscribing to grocery services and plays a critical role in the decision-making process for subscriptions. Strengthening these elements can build trust, ultimately encouraging higher subscription adoption rates.

Nevertheless, Shopping Behavior and perceived risk, in contrast to the hypothesis and are not significant influencers. The underlying explanation for this is to be discussed as follows.

The grocery shopping behavior, such as regularity, frequency, or routine, does not significantly impact subscription intention as shown by the non-significant result in the regression model. While previous research by Lu, Ye, and Yan (2023) found a positive relationship between repeat purchase habits and loyalty, however, this may not apply to the context of grocery subscriptions. Consumers with traditional shopping habits, such as the majority of respondents who are routine physical store shoppers, may be resistant to change or find it challenging to transition to online subscription-based services. They might not see any advantage in subscribing if their current shopping habits already meet their needs. Even if they shop frequently, subscribing may not be perceived as a high-priority need.

The regression results indicate a non-significant outcome for perceived risk. However, this finding contrasts with previous research by Dai, Forsythe, and Kwon (2014), Han and Kim (2017), and Kumar and Dange (2014), which identified a negative relationship between perceived risk and purchase intention in e-commerce or online shopping contexts. One possible reason is that, in grocery shopping, perceived risk factors such as price, product quality, and service time may not be major barriers for customers considering subscription services.

4.7 Research Implications

4.7.1 Theoretical Implication

In terms of the theoretical implications, this research extends the theory of Technology Acceptance Model (TAM) by demonstrating that trust, value of convenience, and value for money are critical drivers of subscription adoption in the grocery industry, with trust being influenced by brand-related constructs. The findings address gaps in literature or challenge prior research, challenging previous findings in e-commerce adoption theories by showing that shopping behavior and perceived risk are less relevant in the subscription model framework specifically in markets with strong traditional physical store preferences like Thailand.

4.7.2 Practical Implication

The significant factors of Value of Convenience, Value for Money, and Trust suggest that grocery service providers should focus on enhancing their offerings to align with customer priorities. Convenience is the primary motivator for subscription adoption, implying the need for time-saving and user-friendly features. For example, services like Amazon Fresh emphasize convenience through benefits such as 1-hour delivery windows and priority access to recurring grocery deliveries (Amazon, 2024). Providers can further enhance appeal by offering customizable features, such as flexible delivery schedules, tailored grocery bundles, and adjustable subscription plans, to meet diverse customer preferences and provide a seamless shopping experience.

In terms of Value for Money, the findings indicate that effective pricing strategies are critical in attracting and retaining subscribers. Competitive pricing, discounts, and promotional campaigns resonate with cost-conscious consumers. For instance, Amazon Fresh offers unlimited free delivery, which reduces delivery costs for frequent shoppers. Grocery providers can also introduce loyalty rewards, bundle deals, or subscription discounts to reinforce the perception of affordability and value, ensuring that customers feel they are making a cost-effective choice.

Lastly, Trust plays a crucial role in encouraging subscriptions, which can be built through a strong brand image, positive reputation, and customer satisfaction. Providers should invest in maintaining reliable services, ensuring product quality, and fostering transparent communication. Highlighting customer reviews, certifications, and responsive customer support can strengthen the perception of trustworthiness. Additionally, leveraging social media, partnering with credible influencers, and promoting word-of-mouth referrals can further enhance brand trust. By consistently delivering on promises, such as timely deliveries and accurate orders, grocery providers can ensure long-term customer confidence and subscription loyalty. Combining these strategies will enable grocery providers to address customer needs effectively and remain competitive in the subscription market.

The non-significant role of shopping behavior and perceived risk suggests grocery providers must better highlight the unique benefits of subscriptions to habitual shoppers. Emphasizing convenience, time-saving features, and cost advantages can help differentiate subscriptions from traditional shopping routines. Given that majority of Thai shoppers still prefer traditional methods, grocery providers could emphasize omnichannel benefits or address this by introducing subscription benefits that extend beyond purely online services, such as in-store subscription promotions like special bundle prices or discounts for their repeated purchases. Moreover, subscriptions could offer features like delivery options for bulky or heavy items which can apply to all channels even for purchases made offline at traditional stores. This approach allows shoppers to see the value of subscription advantages without fully transitioning to online shopping, making the service more flexible and appealing.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The study concludes that value of convenience, value for money, and trust positively influence and are the primary drivers of intention to adopt grocery subscription services in Thailand. Among these, trust is significantly influenced by a brand's positive image, strong reputation, and high levels of customer satisfaction. While these factors do not directly influence subscription intention but instead contribute indirectly through their impact on trust.

In contrast, shopping behavior and perceived risk were not significant influencers in this context, which does not align with prior findings in e-commerce or grocery-related studies. This suggests that while shopping routines and perceived risks may affect general online shopping behavior, they appear to be less impactful for grocery subscription services.

These findings suggest that retail businesses should prioritize enhancing perceived value through convenience, competitive pricing, and trust-building strategies. Additionally, encouraging subscription adoption among grocery consumers requires further research to explore how frequent shoppers can be better informed about the benefits of subscription services, particularly in terms of convenience. Addressing concerns about price and time risks through targeted brand awareness and effective communication strategies may also help shift consumer perceptions and promote adoption.

5.2 Research Limitations

This study has limitations that should be considered when interpreting the results as follows.

Since the study focuses on Thai consumers' grocery shopping behavior, specifically those who are the main purchasers in their households, the respondents primarily represent consumers aged 55 and above who prefer shopping offline or through omnichannel options rather than purely online platforms. This demographic may limit the generalizability of the findings to consumers who primarily engage in online grocery shopping and may exhibit a lower tendency to subscribe due to technological literacy limitations. This is reflected in the moderate mean value for intention to subscribe, indicating only partial agreement among respondents.

Additionally, the results may be influenced by respondents' familiarity with subscription models. Many traditional shoppers may lack prior experience or knowledge with grocery subscription services, potentially leading to an underestimation of the factors influencing adoption intentions. For example, these shoppers may not fully appreciate the convenience and cost-saving benefits of grocery subscriptions, which could affect their responses and overall interest in adopting such services.

5.3 Future Research Recommendations

Based on the limitations identified in this study, the following recommendations are proposed for future research. Future studies should include a more diverse sample of Thai consumers incorporating younger generations, such as Gen X and Gen Y, who are the main purchasers and primarily shop online. This approach would provide a broader understanding of shopping behavior and subscription adoption across different demographic segments including offer insights to address the barriers in behavior resistance or technological literacy which could impact adoption rates.

Research should further explore how shopping behavior and perceived risk influence grocery subscription adoption within different respondent profiles in the Thai market, such as variations in shopping preferences or specific product categories in order to help develop actionable strategies for grocery providers to remain competitive while adopting a more consumer-centric approach.

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APPENDIX A
Questionnaire

Survey Questionnaires on the Key Factors Influencing Consumer Adoption of Grocery Subscription Services in Thailand (แบบสำรวจปัจจัยสำคัญที่ส่งผลต่อการยอมรับบริการสมัครสมาชิกสินค้าอุปโภคบริโภคของผู้บริโภคในประเทศไทย)

Dear Respondents,

This survey is part of an independent study for the Master of Business Administration in Global Business Management at Thammasat University. The purpose is to collect data for academic research, with no information being shared with third parties. This survey will take less than 10 minutes to complete. Your responses will be anonymous and remain confidential, used exclusively for educational purposes.

For any questions or more information needed, please contact me at monpanai-som66@tbs.tu.ac.th.

(เรียนผู้ตอบแบบสอบถาม แบบสอบถามนี้เป็นส่วนหนึ่งของการศึกษาอิสระในหลักสูตรปริญญาโทบริหารธุรกิจด้านการจัดการธุรกิจระหว่างประเทศที่มหาวิทยาลัยธรรมศาสตร์ โดยมีวัตถุประสงค์เพื่อเก็บข้อมูลสำหรับการวิจัยเชิงวิชาการ โดยจะไม่มีการเปิดเผยข้อมูลใดๆ แก่บุคคลภายนอก แบบสอบถามนี้ใช้เวลาน้อยกว่า 10 นาทีในการตอบ และข้อมูลทั้งหมดจะถูกเก็บเป็นความลับ ไม่ระบุตัวตน และใช้เพื่อวัตถุประสงค์ทางการศึกษาเท่านั้นหากมีคำถามหรือข้อมูลเพิ่มเติมกรุณาติดต่อ monpanai-som66@tbs.tu.ac.th)

The survey is divided into 3 parts (แบบสอบถามนี้แบ่งออกเป็น 3 ส่วน)

Part 1: General Questions about Grocery Shopping (ส่วนที่ 1: คำถามทั่วไปเกี่ยวกับการซื้อสินค้าอุปโภคบริโภค)

Part 2: Questions about the factors influencing Grocery Subscription services in Thailand (ส่วนที่ 2: ถามเกี่ยวกับปัจจัยที่ส่งผลต่อบริการสมัครสมาชิกสินค้าอุปโภคบริโภคในประเทศไทย)

Part 3: General Demographic Questions (ส่วนที่ 3: คำถามข้อมูลประชากรทั่วไป)

<u>Part 1: Screening Questions:</u> to filter out respondents who do not meet the criteria for this study on grocery subscription adoption. **/ General Questions about Grocery Shopping** *(ส่วนที่ 1: คำถามทั่วไปเกี่ยวกับการซื้อสินค้าอุปโภคบริโภค)*

1. **Do you usually purchase grocery products mostly for yourself, your family, or your business? (คุณมักจะซื้อสินค้าอุปโภคบริโภค สำหรับตัวเอง สมาชิกในครอบครัวของคุณ หรือ สำหรับธุรกิจของคุณมากที่สุด?)**
    - Yes, for myself *(ใช่ สำหรับตัวคุณเอง)*
    - Yes, for my family *(ใช่ สำหรับครอบครัวของฉัน)*
    - Yes, for my business *(ใช่ สำหรับธุรกิจของฉัน)*
    - No, End of survey *(ไม่เคย จบแบบสอบถาม)*
2. **How often do you purchase groceries?** ***(คุณซื้อสินค้าอุปโภคบริโภคบ่อยแค่ไหน?)***
    - Daily *(ทุกวัน)*
    - 2-3 times per week *(สัปดาห์ละ 2-3 ครั้ง)*
    - Once per week *(สัปดาห์ละ 1 ครั้ง)*
    - Once a month *(เดือนละ 1 ครั้ง)*
    - 2-3 times per month *(เดือนละ 2-3 ครั้ง)*
    - More than 3 times per month *(มากกว่า 3 ครั้งต่อเดือน)*
3. **How much do you normally spend per one transaction?** ***(คุณมักจะใช้จ่ายต่อการซื้อของอุปโภคบริโภคในหนึ่งครั้งเป็นจำนวนเงินเท่าไร?)***
    - Less than 500 THB per time *(น้อยกว่า 500 บาทต่อครั้ง)*
    - 501 – 1,000 THB per time *(501 – 1,000 บาทต่อครั้ง)*
    - 1,001 – 2,000 THB per time *(1,001 – 2,000 บาทต่อครั้ง)*
    - 2,001 – 3,000 THB per time *(2,001 – 3,000 บาทต่อครั้ง)*
    - More than 3,000 THB per time *(มากกว่า 3,000 บาทต่อครั้ง)*
4. **What is your most frequent channel of grocery shopping?** ***(ช่องทางการซื้อของอุปโภคบริโภคที่คุณใช้บริการบ่อยที่สุดคืออะไร?)***

- Physical Stores, Supermarket, or Hypermarket *(ห้างสรรพสินค้า ซูเปอร์มาร์เก็ต หรือ ไฮเปอร์มาร์เก็ต)*
- Online Retailer or Application/Website *(ออนไลน์ เช่น แอปพลิเคชันหรือเว็บไซต์)*
- Both In-store and Online *(ทั้งหน้าร้านและออนไลน์)*
- Pick-up: Online order, pick up at store *(รับสินค้าจากการสั่งออนไลน์และไปรับที่ร้าน)*
- Other, please specify *(อื่น ๆ กรุณาระบุ)*

<u>Part 2: Questions about the factors influencing Grocery Subscription services in Thailand</u> *(ส่วนที่ 2: คำถามเกี่ยวกับปัจจัยที่มีผลต่อบริการสมัครสมาชิกรายเดือนสินค้าอุปโภคบริโภคในประเทศไทย)*

Pre-Read: Overview of Grocery Shopping and Grocery Subscription Services (ข้อมูลทั่วไปของสินค้าอุปโภคบริโภค บริการสมัครสมาชิกรายเดือนเพื่อสั่งสินค้าอุปโภคบริโภค)

Grocery refers to essential items used in daily life, including routine or repeated items such as fresh food, dry food, beverages, household cleaning products, and personal care items.

Grocery subscription services provide **personalized features** tailored to individual preferences and shopping habits. These services allow for **customizable product selections, recommendations based on past orders, automatic renewals for specific items, and flexible delivery options, and promotional or discount prices.** For example, a grocery subscription may offer **flexible delivery schedules,** such as bi-weekly or monthly plans, allowing subscribers to set up repeat orders for frequently purchased items and automatic renewals.

(สินค้าอุปโภคบริโภค หมายถึงสินค้าจำเป็นที่ใช้ในชีวิตประจำวัน รวมถึงสินค้าที่ซื้อเป็นประจำหรือซ้ำๆ เช่น อาหารสด อาหารแห้ง เครื่องดื่ม ผลิตภัณฑ์ทำความสะอาดบ้าน และผลิตภัณฑ์ดูแลส่วนบุคคล

บริการสมัครสมาชิกของอุปโภคบริโภค สามารถออกแบบตามความต้องการปรับให้เข้ากับความชอบและพฤติกรรมการซื้อของแต่ละบุคคล เช่น **การเลือกสินค้าที่สั่งซื้อเป็นประจำ การแนะนำสินค้าจากการสั่งซื้อในอดีต การต่ออายุอัตโนมัติสำหรับสินค้าที่ซื้อซ้ำ ตัวเลือกการจัดส่งที่ยืดหยุ่น และ โปรโมชันพิเศษและส่วนลด**ตัวอย่างเช่น การจัดส่งรายสองสัปดาห์

หรือรายเดือน ซึ่งช่วยให้ผู้ใช้สามารถตั้งค่าการสั่งซื้อซ้ำและต่ออายุอัตโนมัติสำหรับสินค้าที่ซื้อบ่อยครั้งได้ รวมถึงมีข้อเสนอพิเศษหรือสินค้าที่ลดราคาสำหรับผู้ใช้บริการสมัครสมาชิกที่คุ้มค่ากว่า)

- **Which of the following grocery service providers (either physical or online) do you shop at most often? (คุณมักซื้อสินค้าอุปโภคบริโภคจากผู้ให้บริการรายใดบ่อยที่สุด ไม่ว่าจะเป็นหน้าร้านหรือออนไลน์?)**
    - Tops (ท็อปส์) / Tops Online (ท็อปส์ ออนไลน์)
    - Big C (บิ๊กซี) / Big C PLUS App (แอปบิ๊กซีพลัส)
    - Go Wholesale (โกโฮลเซล) / Go Wholesale App (แอปโกโฮลเซล)
    - Makro (แม็คโคร) / Makro PRO App (แอปแม็คโครโปร)
    - Lotus’s (โลตัส) / Lotus's App (โลตัสแอป)
    - Food Aggregator Applications (แอปพลิเคชันสั่งอาหาร) e.g. GrabMart (แกร็บมาร์ท), LINE MAN Mart (ไลน์แมนมาร์ท), pandamart (แพนด้ามาร์ท) etc.
    - Gourmet Market (กูร์เมต์ มาร์เก็ต) / Gourmet Market App (แอปกูร์เมต์มาร์เก็ต)
    - Other, please specify (อื่น ๆ กรุณาระบุ)

Based on your previous purchase experience with the grocery provider you selected earlier, please consider that brand and indicate your level of agreement with each statement regarding the grocery products and services received, on a scale of 1 to 5.

(จากประสบการณ์การซื้อสินค้าของคุณกับผู้ให้บริการสินค้าอุปโภคบริโภคที่คุณเลือกก่อนหน้านี้ โปรดนึกถึงผู้ให้บริการรายนั้นและให้คะแนนความเห็นด้วยของคุณในแต่ละข้อความเกี่ยวกับสินค้าและบริการที่ได้รับ โดยให้คะแนนในระดับ 1 ถึง 5 ดังนี้)

1 = Strongly Disagree (ไม่เห็นด้วยอย่างยิ่ง)

2 = Disagree (ไม่เห็นด้วย)

3 = Neutral (เฉยๆ หรือเป็นกลาง)

4 = Agree (เห็นด้วย)

5 = Strongly Agree (เห็นด้วยอย่างยิ่ง)

Survey Questions *(คำถามแบบสำรวจ)*	**Level**				
1. Satisfaction ***(ความพึงพอใจ)***	**1**	**2**	**3**	**4**	**5**
1.1) I am satisfied with the overall quality and freshness of fresh food, frozen food, or dry food items from this grocery provider. *(ฉันพึงพอใจกับคุณภาพโดยรวม ทั้งความสดใหม่ของอาหารสด อาหารแช่แข็ง หรืออาหารแห้งจากผู้ให้บริการรายนี้)*					
1.2) I am satisfied with the good variety of grocery assortment provided by this grocery provider. *(ฉันพึงพอใจกับความหลากหลายของสินค้าของอุปโภคบริโภคจากผู้ให้บริการรายนี้)*					
1.3) I am satisfied with the overall in-store service quality either provided by the staff, the online ordering process, or the delivery service quality offered by this grocery provider. *(ฉันพึงพอใจกับคุณภาพการบริการโดยรวม ไม่ว่าจะพนักงานที่สาขา ผ่านช่องทางออนไลน์ หรือคุณภาพการจัดส่งจากผู้ให้บริการรายนี้)*					
2. Brand Reputation ***(ชื่อเสียงของแบรนด์)***					
2.1) This grocery provider is reputable. *(ผู้ให้บริการสินค้าอุปโภคบริโภครายนี้มีชื่อเสียงที่ดี)*					
2.2) Word-of-mouth recommendations about this grocery provider give me a positive attitude toward the service. *(คำแนะนำแบบปากต่อปากเกี่ยวกับผู้ให้บริการสินค้าอุปโภคบริโภครายนี้ทำให้ฉันมีทัศนคติที่ดีต่อบริการ)*					
2.3) I believe that this grocery products being recommended by social influencer or referral is reliable. *(ฉันเชื่อว่าสินค้าอุปโภคบริโภคที่ได้รับการแนะนำจากผู้มีอิทธิพลทางสังคมหรือผ่านการบอกต่อ สร้างความน่าเชื่อถือ)*					
3. Brand Image ***(ภาพลักษณ์ของแบรนด์)***	**1**	**2**	**3**	**4**	**5**
3.1) I feel this grocery provider is very well-known to the public. *(ฉันรู้สึกว่าผู้ให้บริการสินค้าอุปโภคบริโภครายนี้เป็นที่รู้จักอย่างแพร่หลายในสาธารณะ)*					

3.2) I feel this grocery provider has a prestigious image, and personality that distinguishes itself from competitors. *(ฉันรู้สึกว่าผู้ให้บริการสินค้าอุปโภคบริโภครายนี้มีภาพลักษณ์ที่ดีและตัวตนของแบรนด์โดดเด่นจากคู่แข่ง)*					
3.3) The grocery products from this grocery provider have a high quality. *(สินค้าของอุปโภคบริโภคจากผู้ให้บริการรายนี้มีคุณภาพสูง)*					
4. Trust *(ความไว้วางใจ)*	**1**	**2**	**3**	**4**	**5**
4.1) I have confidence in this grocery provider to provide subscription services. *(ฉันมีความเชื่อมั่นในผู้ให้บริการสินค้าอุปโภคบริโภครายนี้ในการให้บริการสมัครสมาชิกรายเดือน)*					
4.2) I trust in the brands or suppliers engaged in this grocery provider. *(ฉันไว้วางใจในแบรนด์หรือผู้จัดจำหน่ายสินค้าอุปโภคบริโภคที่เกี่ยวข้องกับผู้ให้บริการรายนี้)*					
4.3) I feel personally connected to this grocery provider, and trust in the brand comes to my mind instantly when thinking of grocery subscription. *(ฉันรู้สึกผูกพันกับผู้ให้บริการสินค้าอุปโภคบริโภครายนี้ และจะนึกถึงแบรนด์นี้ทันทีหากพูดถึงการสมัครสมาชิกรายเดือน)*					
5. Value for Money *(ความคุ้มค่า)*	**1**	**2**	**3**	**4**	**5**
5.1) I think the prices at this grocery provider are reasonable and attractive, which makes me want to subscribe. *(ฉันคิดว่าราคาของสินค้าอุปโภคบริโภคที่นี่มีความสมเหตุสมผลและน่าดึงดูดซึ่งทำให้ฉันต้องการสมัครสมาชิกรายเดือน)*					
5.2) I could save my money or spend less by shopping at this grocery provider as subscription-based. *(ฉันคาดว่าจะสามารถประหยัดเงินหรือใช้จ่ายน้อยลงจากการซื้อสินค้ากับผู้ให้บริการสินค้าอุปโภคบริโภคแบบสมัครสมาชิก)*					
5.3) I think this grocery subscription service could offer me competitive prices. *(ฉันคิดว่าการสมัครสมาชิกรายเดือนกับผู้ให้บริการสินค้าอุปโภคบริโภครายนี้ จะทำให้ฉันได้ราคาสินค้าที่สอดคล้องกับท้องตลาด)*					

6. **Value of Convenient** ***(ความสะดวกสบาย)***	**1**	**2**	**3**	**4**	**5**
6.1) I think using grocery subscription service can improve my efficiency in purchasing groceries and help save me a lot of time searching for routine groceries. *(ฉันคิดว่าการใช้บริการสมัครสมาชิกรายเดือนของอุปโภคบริโภคสามารถช่วยเพิ่มประสิทธิภาพในการซื้อของและช่วยประหยัดเวลาในการค้นหาสินค้าจำเป็นที่ต้องซื้อเป็นประจำ)*					
6.2) I think using grocery subscription service can make my grocery shopping easier and more convenient in daily life. *(ฉันคิดว่าการใช้บริการสมัครสมาชิกของอุปโภคบริโภคทำให้การซื้อของในชีวิตประจำวันของฉันง่ายขึ้นและสะดวกมากยิ่งขึ้น)*					
6.3) I believe that online grocery platform is easy to use through subscribe service. *(ฉันเชื่อว่าแพลตฟอร์มอุปโภคบริโภคออนไลน์นั้นใช้งานง่ายผ่านบริการสมัครสมาชิกรายเดือน)*					
6.4) I believe that grocery subscription is responsive to my needs or inquiries to get good customized service with good quality of product. *(ฉันเชื่อว่าบริการสมัครสมาชิกรายเดือนของอุปโภคบริโภคตอบสนองต่อความต้องการของฉันได้ดี ช่วยให้ได้รับบริการที่ตอบโจทย์ตามความต้องการ และให้คุณภาพสินค้าที่ดีแก่ฉัน)*					
7. **Shopping Behavior** ***(พฤติกรรมการซื้อสินค้า)***	**1**	**2**	**3**	**4**	**5**
7.1) Shopping for the essential grocery items is something I do regularly at this grocery provider. *(ฉันซื้อสินค้าอุปโภคบริโภคที่ใช้เป็นประจำหรือสินค้าที่ซื้อซ้ำบ่อยๆ กับผู้ให้บริการรายนี้)*					
7.2) I shop at this grocery provider frequently for my grocery needs. *(ฉันมักจะซื้อสินค้าจากผู้ให้บริการสินค้าอุปโภคบริโภครายนี้เป็นประจำเพื่อตอบสนองความต้องการของฉัน)*					
7.3) Shopping at this grocery provider has become a routine for me. *(ฉันซื้อสินค้าอุปโภคบริโภคจากผู้ให้บริการแห่งนี้เป็นกิจวัตร)*					
8. **Perceived Risk** ***(ปัจจัยด้านความเสี่ยง)***	**1**	**2**	**3**	**4**	**5**

8.1) I am concerned that same grocery products can be found at a lower price from other providers or marketplaces. *(ฉันกังวลว่าสินค้าอุปโภคบริโภคแบบเดียวกันอาจพบได้ในราคาที่ต่ำกว่าจากผู้ค้ารายอื่นหรือในตลาดออนไลน์ช่องทางอื่น)*					
8.2) I am concerned with the quality of the products delivered offered by this providers do not perform as expected. *(ฉันกังวลว่าคุณภาพของสินค้าที่จัดส่งโดยผู้ให้บริการรายนี้อาจไม่เป็นไปตามที่คาดหวัง)*					
8.3) I am concerned that my grocery product may fail to be delivered to me within the promised time frame by this provider. *(ฉันกังวลว่าสินค้าอุปโภคบริโภคของฉันอาจไม่ได้รับการจัดส่งภายในระยะเวลาที่ผู้ให้บริการรายนี้สัญญาไว้)*					
9. Intention to Adopt Grocery Subscription *(ความตั้งใจที่จะใช้บริการสมัครสมาชิกรายเดือนของอุปโภคบริโภค)*	**1**	**2**	**3**	**4**	**5**
9.1) I would use the subscription service for my grocery needs or shopping routine items in the future. *(ฉันจะใช้บริการสมัครสมาชิกรายเดือนสำหรับสินค้าของอุปโภคบริโภคหรือสินค้าที่ซื้อเป็นประจำในอนาคต)*					
9.2) I am likely to sign up for a subscription for the grocery product and continue consuming it in the future. *(ฉันมีแนวโน้มที่จะสมัครใช้บริการรายเดือนสำหรับสินค้าอุปโภคบริโภคและจะใช้ต่อเนื่องในอนาคต)*					
9.3) I intend to adopt subscription service to purchase my preferred groceries from this provider. *(ฉันตั้งใจที่จะใช้บริการสมัครสมาชิกรายเดือนเพื่อซื้อสินค้าที่ฉันชื่นชอบจากผู้ให้บริการสินค้าอุปโภคบริโภครายนี้)*					

<u>Part 3: General Demographic Questions of Grocery Shoppers</u> *(ส่วนที่ 3: คำถามข้อมูลประชากรทั่วไปของผู้ซื้อของอุปโภคบริโภค)*

1. **How old are you? *(อายุ)***
   - 18-24 *(18-24 ปี)*
   - 25-34 *(25-34 ปี)*
   - 35-44 *(35-44 ปี)*
   - 45-54 *(45-54 ปี)*
   - 55 and above *(55 ปีขึ้นไป)*
2. **What is your gender? *(เพศ)***
   - Male *(ชาย)*
   - Female *(หญิง)*
   - Other *(อื่นๆ)*
3. **What is your occupation? Select all that apply *(อาชีพของคุณ เลือกได้มากกว่า 1 ข้อ)***
   - Student *(นักเรียน/นักศึกษา)*
   - Private Employee *(พนักงานบริษัทเอกชน)*
   - Public Employee *(พนักงานข้าราชการ/รัฐวิสาหกิจ)*
   - Self-employed *(ธุรกิจส่วนตัว)*
   - Restaurant/Coffee Shop Owner *(เจ้าของร้านอาหาร/ร้านกาแฟ)*
   - Wholesale/Retail Grocery Store Owner *(เจ้าของร้านค้าส่ง/ปลีก ของอุปโภคบริโภค)*
   - Homemaker *(แม่บ้าน/พ่อบ้าน)*
   - Retired *(เกษียณอายุ)*
   - Other, please specify *(อื่น ๆ กรุณาระบุ)*
4. **How much do you earn per month? *(รายได้ต่อเดือนของคุณเท่าไหร่?)***
   - Less than 30,000 THB *(น้อยกว่า 30,000 บาท)*
   - 30,001 – 60,000 THB *(30,001 – 60,000 บาท)*

- 60,001 – 90,000 THB *(60,001 – 90,000 บาท)*
- 90,001 – 120,000 THB (90,001 – 120,000 บาท)
- More than 120,000 THB (มากกว่า 120,000 บาท)

5. **How many people live in your household?** ***(มีสมาชิกกี่คนในครัวเรือนของคุณ?)***
    - 1 person *(1 คน)*
    - 2-3 people *(2-3 คน)*
    - 4-5 people *(4-5 คน)*
    - More than 5 people *(มากกว่า 5 คน)*