FACTORS INFLUENCING PURCHASE INTENTION OF FOOD SURPLUS THROUGH THE FOOD SHARING PLATFORM

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ABSTRACT

Food waste issue is serious around the world. To address this issue, food-sharing platforms are developed to distribute food surplus. There is a limited number of empirical studies investigating the drivers to using surplus food-sharing platforms, particularly in developing countries. This paper investigates the impacts and connections between environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, and purchase intention of food surplus through food-sharing platforms in Thailand. A sample of 284 Yindii users was analysed by using factor analysis and regression analysis. Empirical results revealed environmental concern, perceived playfulness, and food waste awareness to be the primary constructs influencing consumers' purchase intention toward food surplus. The results suggest that perceived playfulness is the most crucial determinant affecting purchase intention. Our results also indicated people who obtained a higher education level and the low-income group show a higher purchase intention toward food surplus products. This study contributes to the literature and provides insights for practitioners with several implications. This research is the first attempt to study food surplus redistribution in Thailand. The study identifies environmental concern, perceived playfulness, and food waste awareness as the main determinants of purchase intention to food surplus.

KEY WORDS: Food surplus/ Purchase intention/ Environmental concern/ Perceived playfulness/ Food waste awareness/

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CHAPTER I
INTRODUCTION

1.1 Background

Food is the most essential product in our daily life. Although there was increased food processing and production productivity with developed technologies, a huge number of people still live in hunger and are undernourished internationally. Around 820 million people continue to live in hunger every day (FAO, 2019), 690 million people, or 8.9 percent of the population were undernourished, and the number may surpass 840 million in 2030 if the trend did not change (FAO, 2020). However, a tremendous amount of food was lost daily. Roughly around one-third of the world's food was lost or wasted every year (FAO, 2019). Specifically, approximately 13.3 percent of the world's food was lost after harvesting and before retailing, and around 17 percent of total food is wasted at the consumer level (United Nations, n.d.). The food waste at the consumer level generated by households, retail establishments, and the food service industry is approximately 931 million tons per year. Global average food waste is around 121 kg per capita per year (UNEP, 2021).

As one of the top foodie destinations, Thailand takes a dim view of food loss and waste. Asian countries face severe malnutrition situations. Around 9.8 percent of the population were undernourished in South Eastern Asian countries, the number was slightly lower than average in Thailand, and about 9.3 percent of the population, or 6.5 million Thais lived in malnutrition situation (FAO, 2020). However, ASEAN countries experience a high level of post-harvest losses, with estimated losses in rice of between 10 to 27 percent, and losses in fruit and vegetables of 20 percent (Bennett et al., 2022).

1.2 Impact

Food waste has a significant negative impact on the environment, society,

and economy (Bennett et al., 2022; Huang et al., 2021; Teigiserova et al., 2020). The total cost of food losses and waste is around USD 2.6 trillion per year, which roughly equals the GDP of France (FAO, 2014).

Food loss and waste (FLW) have direct and negative impacts on both food producers and consumers economically (Gustavsson et al., 2011). In low-income countries, the low level of production, processing, and storage stages significantly reduce farmers' income. On the other hand, unconsumed edible food also increases the food expense of consumers. The annual economic costs of food loss and waste are significant and reach around USD 1 trillion (FAO, 2014).

In addition to the economic costs of food losses and waste, the FLW also contributes to broader social costs that have impacts on people's well-being and health. The social costs introduced by FLW are around USD 900 billion (FAO, 2014).

Furthermore, FLW has a severe impact on the environment. Every year, global FLW creates approximately 8 percent of greenhouse gas emissions, which equals around USD 940 billion. After the United States of America and China, Global FLW ranks as the third largest emitter of greenhouse gas (Bennett et al., 2022).

1.3 Needs

1.3.1 Policy

Food-related policies will only be effective when they are beneficial to farmers, consumers, and the environment (Kearney, 2010). In the 2030 Agenda for Sustainable Development, the issue of food loss and waste has received significant international attention. The Sustainable Development Goals (SDGs) 12.3, which represent this agenda, particularly call for the reduction of food losses along the production and supply chains, including post-harvest losses, and the halving of global per capita food waste at the retail and consumer levels by 2030 (United Nations, 2015). Asia Pacific countries initiated policies and campaigns to address food loss and waste by implementing the SDGs. China submitted "China's National Plan on Implementation of the 2030 Agenda for Sustainable Development". Then, the country launched the "Clean your plate campaign" in 2013 and the "anti-food-waste campaign" in 2020.

Australia's National Food Waste Strategy developed a framework to guide collective actions in order to halve food waste by 2030. Thailand put the "Sufficiency Economy" philosophy into the National Economic and Social Development Plan 2017-2021 to pursue the SDGs. The country targeted a five percent decrease in food losses per year from 2020 (Bennett et al., 2022).

1.3.2 Current Research

Food waste is a comprehensive challenge with considerable impacts on planet, people, and profit of the world. Huang et al. (2021) systematically reviewed works between 1998 and 2019 in food waste management and found that the majority of studies focused on food waste reduction and surplus food redistribution. Papargyropoulou et al. (2014) proposed a five-level food waste hierarchy framework and identified that prevention is the most attractive approach, followed by food surplus redistribution, to tackle global food loss and waste problems.

Recently several food-sharing platforms and mobile applications have been used in different countries. Such as Flashfood in Canada (Samuel, 2019), OLIO in Italy (Mazzucchelli et al., 2021), Karma in Nordic countries (IGD, 2017), Too Good To Go in the UK (The Grocer, 2019), Needy Serve in Bangladesh (Prova et al., 2021), and so forth. Specifically, several researchers explored consumer behavioral intention of food surplus on food-sharing platforms. In a study of surplus food blind-box in the context of China, researchers confirmed the associations between perceived playfulness, convenience, and subjective norm with consumer purchase intention. However, the relationship between perceived risk and purchase intention is unclear (Yang et al., 2022). To investigate food surplus sharing platforms in two European countries (Italy and Germany), Pisoni et al. (2022) found that younger people are more likely to use the new digital platform and the economic benefits are more attractive than other concerns. In a case study of OLIO, one of the most popular surplus food-sharing platforms, Mazzucchelli et al. (2021) revealed that consumer familiarity, perception of the environment, and social responsibility positively enhance consumer behavioral response to the use of surplus food-sharing platforms.

1.4 Research Gap

In the last 10 years, there has been a growing interest in studies on food waste management practices (Huang et al., 2021; Papargyropoulou et al., 2014). Yet, research on food waste issues is scarce in developing countries (Aschemann-Witzel et al., 2018). A new market for food surplus redistribution has been created as a result of digital transformation and the emergence of the sharing economy. Although a few studies the consumers' purchase intention of food surplus through food-sharing platforms, our understanding of this topic is still limited (Pisoni et al., 2022), specifically in developing countries (Apostolidis et al., 2021). Empirical studies on drivers using surplus food-sharing platforms are scarce (Mazzucchelli et al., 2021). There is no study about food surplus redistribution and food-sharing platforms in Thailand.

1.5.1 Research Objectives

In order to know how to reduce food waste at the consumer level. The purpose of this study is to explore the impacts and connections between environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, and the purchase intention of food surplus through food-sharing platforms and try to understand their roles in consumers' purchase intention of food surplus through food-sharing platforms in Thailand. In the study, researchers explore whether and to what extent these factors can influence the purchase intention of food surplus through the food-sharing platform in Thailand.

1.5.2 Research Questions

Whether environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, and food neophobia influence consumers' purchase intention of food surplus through the food-sharing platform?

To what extent do environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, and food neophobia influence consumers' purchase intention of food surplus through the food-sharing platform?

1.6 Method

The study employs a quantitative research method with online questionnaires. The respondents are residents of Thailand who are users of Yindii. Yindii is the first food surplus sharing platform in Thailand (Yindii, n.d.). The questionnaires are developed in both English and Thai languages. The online survey will be distributed through online networks (Google Forms) with a convenience sampling approach. In this research, Statistical Package for Social Science (SPSS) version 25 is used for quantitative data analysis. Descriptive analysis and inferential analysis are conducted to describe the demographic information of respondents and compare the differences among groups. Regression analysis is employed to examine causal relationships among factors.

1.7 Significance

This research is the first attempt to study the factors influencing consumers' purchase intention of food surplus through food-sharing platforms in Thailand, an ASEAN country. This study provides valuable theoretical insight into the relationships among major factors and consumers' purchase intention of food surplus through food-sharing platforms from the ASEAN aspect. This is the starting point of food surplus redistribution in ASEAN countries.

Food security is a major issue especially in developing countries (Gustavsson et al., 2011). Policymakers can gain insight from this study to implement the SDGs and increase food security in Thailand. By having a better understanding of the drivers of the food surplus sharing platform, policymakers could share collaborative mechanisms with corporations and formulate suitable regulations to encourage food surplus redistribution platforms.

The results of this study also provide important managerial implications for businesses and managers. The findings offer practical advice on how to develop an attractive food-sharing platform to increase application users. This study provides managers with a better understanding of various determinants that influence consumers to buy redistributed food surplus.

CHAPTER II
LITERATURE REVIEW

2.1 Food Waste and Food Surplus

Food waste issue is one of the biggest challenges in our world. Although modern technology substantially improves food production, around one-third of the food produced worldwide is lost or wasted (FAO, 2019). Researchers and institutions want to estimate the total food waste, however, food waste is not easy to be defined and quantified (Smil, 2004). There is no universally agreed definition of food waste (FAO, 2019). Food waste appears at different stages in the food supply chain, but it is mostly defined at the retail and consumption stages.

Several main definitions of food waste were developed by researchers and institutions. FAO (1981) officially defines food waste as wholesome edible material intended for human consumption, arising at any point in the food supply chain that is instead discarded, lost, degraded, or consumed by pests. Based on FAO's definition, Stuart (2009) adds that food waste should also include edible material that is intentionally fed to animals or is a food processing by-product removed from the human food chain. In addition to the above definitions, from the nutrition aspect, Smil (2004) adds over-nutrition, the energy value gap between consumed food per capita and needed food per capita. Lately, FAO (2019) proposed a new definition for food waste as the decrease in quantity or quality of food at the retail and consumption level. Conversely, UNEP (2021) defines food waste is defined as "food and associated inedible parts removed from the human food supply chain in the following sectors: manufacturing of food products; food/ grocery retail; food service; and households." Similarly, Teigiserova et al. (2020) categorized natural inedibility or inedibility due to the process of food into food waste.

Food surplus covers a narrower scope than food waste. Papargyropoulou et al. (2014) state agricultural output or the amount of food produced exceeded human needs as food surplus. UNEP (2021) refers food surplus as "food that is redistributed

for consumption by people, used for animal feed or used for bio-based materials/ biochemical processing". Facchini et al. (2018) describe food surplus as food that is completely edible and reusable but is discarded by producers and retailers due to aesthetic reasons or low demand. Teigiserova et al. (2020) offer a narrower scope of the term that only includes the nutritional surplus of food that is fit for human consumption. In this research, food surplus is defined as food that can be redistributed for human consumption from the human food supply chain at food retail and food service levels.

2.2 Food Surplus Redistribution and Food-sharing Platform

Food surplus redistribution is promoted as an effective approach and preferred option to reduce food waste (WRAP, 2020). In the five-tier framework of the food waste hierarchy, Papargyropoulou et al. (2014) indicate that food surplus redistribution is the second most attractive option to tackle the food waste issue. The food surplus redistribution increased rapidly in some developed countries. In 2018, food surplus redistribution has increased by 96 percent since 2015, or an extra £81 million worth of food, or an additional 65 million meals annually in the UK (WRAP, 2019). Food surplus redistribution organizations generally can be categorized into two groups: commercial redistribution organizations, businesses that redistribute food surplus for profit; charitable and social redistribution organizations, organizations that redistribute food surplus for social and environmental reasons (WRAP, 2019).

With digital technology and the emergence of sharing economy, several food-sharing or redistribution platforms and applications exist, Papargyropoulou et al. (2022) identify that a technology platform is one of the effective models for food surplus redistribution. Harvey et al. (2020) indicate that food-sharing application is a determining factor for food redistribution to happen. Apostolidis et al. (2021) support that food waste mobile applications allow companies to make money while distributing food surplus to people in need. Michelini et al. (2018) categorized food-sharing platforms into three categories: sharing for money, sharing for charity, and sharing for the community. Several startups have set up food-sharing platforms to address the

global food waste issue, such as Too Good To Go from Denmark, OLIO from the UK (Michelini et al., 2020), Karma from Sweden (IGD, 2017), Loblaw from Canada (Samuel, 2019). Most of the food-sharing platforms are from developed economies. However, some similar businesses were founded in Southeast Asia, for example, Surplus from Indonesia (Suplus, n.d.), and Yindii from Thailand. Yindii is the first food-sharing platform in Thailand, with more than 100,000 users at present (Yindii, n.d.). In this research, Yindii is identified as the selected food-sharing platform to study consumer purchase intention towards food surplus.

2.3 Blind Box

The idea of the blind box was developed in Japan. It refers to the boxes with the same exterior packaging, but contain different styles of build-in products (Zhang & Zhang, 2022). The hedonic benefits of blind box products positively increase customer delight (Mvondo et al., 2023). The perceived uncertainty of randomness has positively influenced consumers' impulsive purchase intention (Zhang et al., 2022). Due to the rising popularity of blind box products, this sales model has been adopted in various industries, including the food industry. The blind box products attracted an increasing number of customers (Yang et al., 2022).

2.4 Purchase Intention

Individual intention is served as an indicator of the degree of effort people are willing to exert in order to carry out the behavior. In general, the more intention to engage in a behavior, the more probability of it will be carried out (Ajzen, 1991). Several determinants were supported to have impacts on the purchase intention of sustainable food products, including certainty of sustainability, perceived availability, social norms, and values (Vermeir & Verbeke, 2006). Schanes and Stagl (2019) identified five categories of participation motives to engage in food-sharing. The motivational categories include emotions and morality, identity and sense of community, reward, social influence, and instrumentality. Coderoni and Perito (2020)

indicated both positive factors (e.g., environmental benefits and nutritional values) and negative factors (e.g., food technology neophobia, food neophobia, and distrust) influence consumers' purchase intention to buy waste-to-value food. A study of Italian and German users shows that economic factors rather than environmental reasons are strong motives for consumers to use food-sharing platforms (Pisoni et al., 2022). In this study, purchase intention is defined as consumers' intention to buy the food surplus.

People have mixed motives to participate the food-sharing activities (Schanes & Stagl, 2019). In this study, researchers explore which factors influence consumers' purchase intention to buy food surplus from Yindii, a food-sharing platform in Thailand, and which factors have a stronger influence on consumers' purchase intention.

2.5 Environmental Concern

Environmental concern encompasses all aspects of an individual's relationship with the environment, including perceptions, emotions, knowledge, attitudes, values, and behaviors. In short, the term is viewed as general attitudes that focus on the goal of environmental protection (Bamberg, 2003). Similarly, environmental concern refers to an individual's overall attitude toward the environment (Kim & Choi, 2005). In this research, environmental concern is defined as individuals' overall attitudes toward the environment when purchasing food surplus from food-sharing platforms.

Using an application to redistribute the food surplus can reduce food waste and improve environmental well-being (Apostolidis et al., 2021). Consumer perception of environmental responsibility positively influences consumer behavioral intention to use food-sharing applications (Mazzucchelli et al., 2021). Similarly, consumers are likely to have a positive purchase intention toward products with more environmental benefits (Coderoni & Perito, 2020). Environmental concern positively influences purchase intention on green energy products (Hartmann & Apaolaza-Ibáñez, 2012) and green products (Kim & Choi, 2005; Paul et al., 2016). However, although

environmental reasons play an important role in decision-making to buy food surplus through a food-sharing platform, people tend to use food-sharing platforms due to financial considerations rather than environmental motives (Pisoni et al., 2022).

Hypothesis 1: Environmental concern positively influences consumers' purchase intention of food surplus through food-sharing platforms

2.6 Perceived Playfulness

Perceived playfulness is widely studied as a factor influencing purchase intention in the online and digital shopping context. Enjoyment is one of the most important aspects of online shopping. The playfulness and the benefits of the online shopping experience might be seen as intrinsic motivation (Lu & Yu-Jen Su, 2009). Users with a higher capability to perceive playfulness tend to experience more favorable emotions and a higher level of satisfaction (Fu & Liang, 2022).

Perceived playfulness is viewed as "the strength of one's belief that interacting with something will fulfill the user's intrinsic motives", and it can be measured from three aspects: concentration, curiosity, and enjoyment (Moon & Kim, 2001). Perceived playfulness also can be defined as the degree of enjoyment which a consumer perceives when purchasing online music (Chu & Lu, 2007), shopping in a 3D VR environment (Kang et al., 2020), and using SNS emojis (Kim & Jun, 2020). Yang et al. (2022) define food surplus blind box as "the degree to which the consumer believes that enjoyment could be derived when shopping for the surplus food blind box". In this study, the operation definition was developed based on this statement. Perceived playfulness is defined as the degree of enjoyment to purchase food surplus through food-sharing platforms. Perceived playfulness, as an intrinsic motivation factor, strongly influences people's behavioral intentions. In addition, perceived playfulness positively directly (Fu & Liang, 2022; Kim & Jun, 2020) and indirectly influence purchase intention (Chu & Lu, 2007).

Hypothesis 2: Perceived playfulness positively influences consumers' purchase intention of food surplus through food-sharing platforms

2.7 Social Norms

Social norms substantially influence human behavior (Cialdini et al., 1990; Goldstein et al., 2008). The use of social norms is a strategy to change behaviors (do Carmo Stangherlin et al., 2020). Equity and social responsibility are two commonly recognized social norms (Schwartz, 1977). Social norms comprise two aspects: descriptive norms refer to commonly accepted behaviors, and injunctive social norms refer to behaviors considered morally correct or what ought to be done (Cialdini et al., 1990; Peattie, 2010). Vermeir and Verbeke (2008) view social norms as "the perceived social pressure to perform or not to perform the behavior". Empirical studies support that social norms positively influence consumers' intention (Joshi & Rahman, 2015) to buy suboptimal food (do Carmo Stangherlin et al., 2020), to reuse hotel towels (Goldstein et al., 2008), to purchase sustainable dairy products (Vermeir & Verbeke, 2006, 2008). In this study, social norms refer to the degree of perceived social pressure of purchasing food surplus through food-sharing platforms.

Hypothesis 3: Social norms positively influence consumers' purchase intention of food surplus through food-sharing platforms

2.8 Food Waste Awareness

In Schwartz's norm activation theory (Schwartz, 1977) and Stern's value-belief-norm theory (Stern, 2000), environmental problem awareness is an important antecedent to pro-environmental behavior. Schwartz (1977) views awareness of consequences as "aware of the consequences of one's behavior for others". Chen (2019) views consumers with food waste awareness as people who recognize the negative impacts of food waste. Food waste awareness positively influences consumers' reducing food waste (Chen, 2019), buying abnormally shaped food (Loebnitz et al., 2015), and reducing personal car use (Nordlund & Garvill, 2003). In this study, food waste awareness is explained as people being aware of the negative impacts of food waste.

Some researchers support that food waste awareness positively influences the purchase intention towards suboptimal food (do Carmo Stangherlin et al., 2020;

Loebnitz et al., 2015). Some scholars found that food waste awareness indirectly influences suboptimal food purchase intention (Jang & Lee, 2022). However, some did not prove the associations (de Hooge et al., 2017).

Hypothesis 4: Food waste awareness positively influences consumers' purchase intention of food surplus through food-sharing platforms

2.9 Price Consciousness

Price has been viewed as a crucial marketing factor that influences consumers' buying behavior (Konuk, 2015; Lichtenstein et al., 1993). The discount rate has a significant impact on consumers' purchase intention toward expiring food (Chang & Su, 2022) and suboptimal food (de Hooge et al., 2017).

Price consciousness refers to an individual characteristic that distinguishes consumers according to the degree of importance they put on price when deciding whether or not to buy products (Hansen, 2013). Or it can be defined as "the degree to which the consumer focuses exclusively on paying low prices" (Lichtenstein et al., 1993, p. 235). In this study, price consciousness refers to the degree of importance they put on price when deciding whether or not to buy food surplus through food-sharing platforms.

Price consciousness influences consumers' purchase intention differently toward different products. Price consciousness positively influences consumers' purchase intention toward expiring dated food (Konuk, 2015) and suboptimal foods (Aschemann-Witzel et al., 2018). On the contrary, some scholars support that price consciousness negatively influences purchase intention on organic food in discounted settings (Katt & Meixner, 2020) and new food products within high knowledge consumers (Hansen, 2013)

Hypothesis 5: Price consciousness positively influences consumers' purchase intention of food surplus through food-sharing platforms

2.10 Food Neophobia

Yindii is a newly founded company that offers food-surplus-sharing services in Thailand. When concerning consumers' acceptance of newly developed food products, individuals generally have an aversion to new foods (Coderoni & Perito, 2020). Researchers view this aversion as food neophobia, which is defined as consumers who show a strong tendency to avoid trying new foods (Ritchey et al., 2003) and unfamiliar food (La Barbera et al., 2018). Arvola et al. (1999) indicate that food neophobia is not just the tendency to novel food avoidance, but also to novel food aversion. Verbeke (2015) found that food neophobia is the most influential factor and a major barrier to consumers' readiness to try novel foods. Food neophobia negatively influences consumers' purchase intention of upcycled food (Coderoni & Perito, 2021), waste-to-value food (Coderoni & Perito, 2020), insects as a meat substitute (Verbeke, 2015), seaweed food products (Losada-Lopez et al., 2021). However, Arvola et al. (1999) indicate that food neophobia is not an effective factor to predict novel food purchase behavior. In this study, food neophobia refers to a strong aversion to trying the food surplus through food-sharing platforms.

Hypothesis 6: Food neophobia negatively influences consumers' purchase intention of food surplus through food-sharing platforms

2.11 Conceptual Framework

The study develops a conceptual framework based on the discussion above. There are several factors, environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, and food neophobia, that influence purchase intention (Figure 2.1). The following hypotheses are developed.

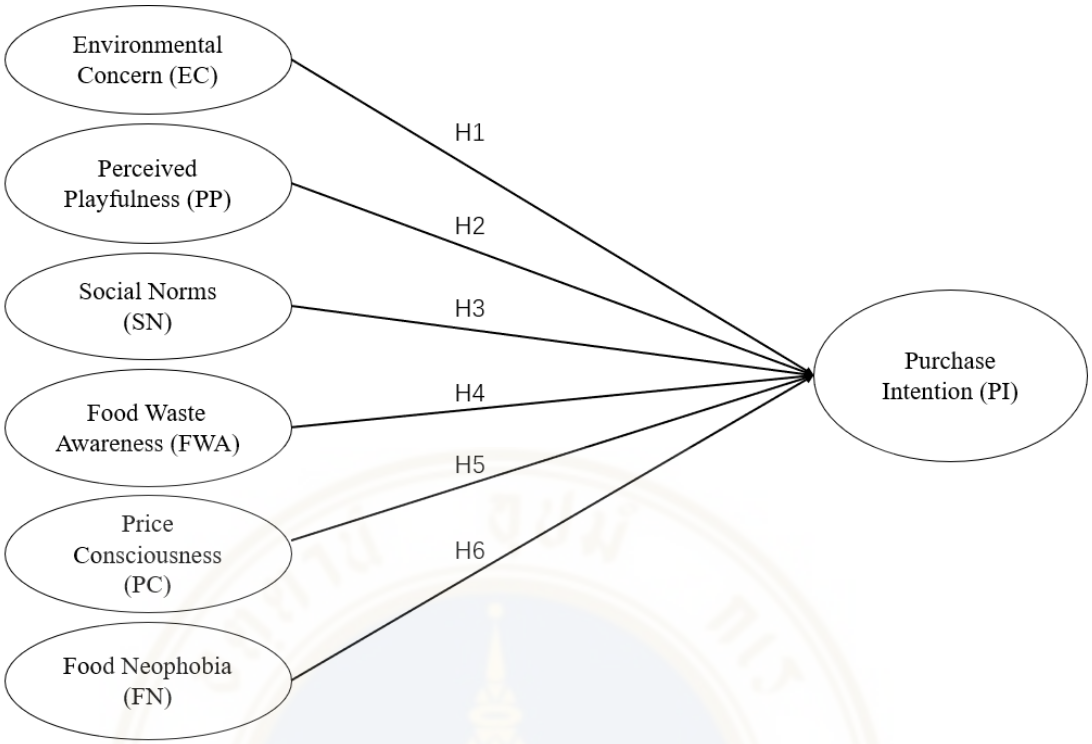

Figure 2.1 Conceptual Framework of the Research

2.12 Hypotheses

H1: Environmental concern positively influence consumers' purchase intention of food surplus through food-sharing platforms

H2: Perceived playfulness positively influences consumers' purchase intention of food surplus through food-sharing platforms

H3: Social norms positively influence consumers' purchase intention of food surplus through food-sharing platforms

H4: Food waste awareness positively influences consumers' purchase intention of food surplus through food-sharing platforms

H5: Price consciousness positively influences consumers' purchase intention of food surplus through food-sharing platforms

H6: Food neophobia negatively influences consumers' purchase intention of food surplus through food-sharing platforms

CHAPTER III
METHODOLOGY

3.1 Identification of Sources

The study employs a quantitative research method with online questionnaires. The respondents are residents of Thailand and are users of Yindii. (Yindii is the first food-sharing platform for food surplus redistribution in Thailand (Yindii, n.d.)). In addition, the sample is consisting of people who have lived in Thailand for the past six months (2022). The respondents are over 18 years old to be considered mature enough as participants. The participants respond to the questions voluntarily, and they are free to withdraw at any time. All respondents participate in this survey on a voluntary and informed basis.

The sample size was set to 200. 200 is a commonly used threshold for major types of market research with a non-probability sampling technique (Malhotra & Dash, 2016). The research gains a moderate precision increase after the sample size of 200 (Fowler Jr, 2013). The desired ratio of observations to variables is 20:1 (Hair, Babin, et al., 2019, p. 280). This research has six independent variables. Therefore, 120 observations are the threshold for data collection.

The online survey was created with the online survey tool Google Forms. The questionnaires were developed in English based on previous studies. Then the English version survey was translated into Thai. Back translation technique (Brislin, 1970) was applied to ensure the clarity and correctness of the survey in this cross-cultural study. Besides the primary researcher, one English native speaker and four bilingual Thai native speakers in the relevant field reviewed and refined questionnaires. Minor revisions were made in the final version of the survey. The questionnaire was answered in a shuffled manner (the questions are sequenced in a random manner) and five reversed questions were among the questions to reduce the respondents' bias. The online survey was distributed through online networks (Google Forms) with a non-probability convenience sampling approach. Convenience sampling was employed

because this technique is a cost-effective approach to collecting a large number of samples (Malhotra & Dash, 2016).

3.2 Design of Questionnaires

In this study, questionnaire items are developed based on the research topic and previous relevant literature. The questionnaire is consisting of three sections. The first section, screening questions includes three questions. The purpose of the screening question is to include targeted samples and filter out invalid respondents.

In the second section, scale questions are the main part of the survey, which reflect each variable including environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, and purchase intention. According to the objective of this research, the constructs were adapted from validated scales of previous studies and measured using a five-point Likert scale. All scale questions are rated on a Likert scale of 1 to 5 (strongly disagree to strongly agree).

Environmental concern (EC) questions have five items that were adapted from Kim and Choi (2005). perceived playfulness (PP) questions were measured with four items derived from Chu and Lu (2007). The scales with five items from Vermeir and Verbeke (2008) were employed to measure the subjects' social norms (SN). The scales with four items submitted by (Loebnitz et al., 2015) were adopted to measure food waste awareness (FWA). For price consciousness (PC) scale, five measurement items were modified from Konuk (2015). Six measurement items developed by Pliner and Hobden (1992) and selected by Verbeke (2015) were used to evaluate food neophobia (FN). The scale of purchase intention (PI) consists of three items developed from Konuk (2015).

In the third section, demographic information was collected at the end of the survey. Gender, age, educational level, monthly income, and nationality were included in the demographic session. Prior to the survey distribution, the English version survey was translated into Thai, then both the English and Thai version survey was reviewed and modified by five native speakers in related fields to ensure clarity and validity. Ethical approval was conducted by IRB from Mahidol University.

3.3 Data Collection

Research data was collected from April 1st,2023 to May 1st, 2023, 30 days in total by Google Forms. The survey was distributed through the email system of Yindii. In total, 11,631 emails were sent out by Yindii, and 406 respondents participated in the survey. In the end, 284 participants passed all three screening questions, they stayed in Thailand in the past six months, were 18 years old or over, and buy food surplus through the food-sharing platform at least once in the past six months. By finishing all questions, 284 questionnaires (70%) are valid for data analysis.

3.4 Data Analysis

This study applies the quantitative research method to gain insights from current food surplus buyers, which answer the two research questions: whether environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, and food neophobia influence consumers' purchase intention of food surplus through the food-sharing platform? To what extent do environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, and food neophobia influence consumers' purchase intention of food surplus through the food-sharing platform?

In this research, Statistical Package for Social Science (SPSS) version 25 is used for quantitative data analysis. Descriptive analysis and inferential analysis, such as T-test and ANOVA are conducted to describe the demographic information of respondents and compare the differences among groups. Factor analysis and Regression analysis are employed to examine causal relationships among factors.

CHAPTER IV
RESULTS

406 respondents participated in the survey, and 284 questionnaires are valid for further data analysis. All 284 respondents were 18 years or older, who lived in Thailand in the past six months and purchased food surplus at least once from Yindii platform within six months. The data was extracted from Google Forms into an Excel file. Then, a coding process was conducted to prepare data analysis by SPSS. Age group and educational background items were regrouped due to low item percentage (less than 10%). After data screening and cleaning, researchers analyzed data by applying descriptive analysis, factor analysis, regression analysis, T-test, and ANOVA to develop sufficient findings to answer the research questions.

4.1 Descriptive Analysis

According to the data, a total of 406 respondents participated in the survey. Then, 284 respondents passed all three screening questions, with a 70% validity rate. Among the 284 valid respondents (Table 4.1), 190 users are female, 82 users are male, and 12 users represent other genders or do not disclose their gender, with percentages of 66.9%, 28.9%, and 4.2% respectively.

Originally, age is divided into five groups. There are 87 respondents aged between 18-30 that represent 30.6% of the respondents. 104 respondents aged between 31-40 represent 36.6% of the respondents. This is the biggest age group in the survey. People who are 41-50 years old (67) represent 23.6% of the respondents. People who are 51-60 years old (19) only represent 6.7% of the respondents. The 61 and above age group has the lowest number, with merely 7 participants (2.5%). Due to the low percentage of groups aged 51-60 and 61 and above (less than 10%), researchers merged two groups into 51 and above for further analysis. Thus, in Table 4.1, the new group (51 and above) accounts for 9.2% (26) of total respondents. Buyers aged 18-30 and 31-

40 are the main groups who purchase food surplus online, representing 30.6% and 36.6% of the platform users.

Table 4.1 Demographic Profiles

Demographic profiles of respondents (n = 284)

Gender	Counts	% of Total	Cumulative %
Female	190	66.9 %	66.9 %
Male	82	28.9 %	95.8 %
Others	12	4.2 %	100.0 %
Age			
18-30	87	30.6 %	30.6 %
31-40	104	36.6 %	67.3 %
41-50	67	23.6 %	90.8 %
51 and above	26	9.2 %	100.0 %
Education Level			
Bachelor's Degree	141	49.6 %	49.6 %
Master's Degree or Above	126	44.4 %	94.0 %
Vocational College/ Diploma and Below	17	6.0 %	100.0 %
Monthly Income			
Lower than 15,000 THB	26	9.2 %	9.2 %
15,001 - 30,000 THB	62	21.8 %	31.0 %
30,001 - 45,000 THB	58	20.4 %	51.4 %
45,001 - 60,000 THB	46	16.2 %	67.6 %
60,001 THB and Above	92	32.4 %	100.0 %
Nationality			
No, I am not Thai	21	7.4 %	7.4 %
Yes, I am Thai.	263	92.6 %	100.0 %

Source: Data adapted from authors, 2023

According to participants' educational backgrounds, respondents are separated into four groups: High School or Below (4), Vocational College/ Diploma (13), Bachelor's Degree (141), and Master's Degree or Above (126). The High School

or Below and Vocational College/ Diploma groups account for only 1.4% and 4.6% of the respondents. Therefore, two groups are merged into Vocational College/ Diploma and Below group for further analysis. The merged group includes 17 respondents which represent 6% of the participants, and is still the minor group among respondents.

Referring to monthly income, respondents are distributed into five groups: lower than 15,000 THB (26), 15,001-30,000 THB (62), 30,001-45,000 THB (58), 45,001-60,000 THB (46), 60,001 THB and Above (92). 60,000 THB and Above group is the biggest group, which accounts for 32.4% of the respondents. By contrast, Lower than 15,000 THB group is the smallest one, which only represents 9.2% of the participants.

Regarding nationalities, 92.6% of the participants are Thai (263) and only 7.4% of the respondents are foreigners (21). Therefore, the main users of Yindii are local Thais.

4.2 Factor Analysis Model 1

To identify groups with similar features and combine variables, exploratory factor analysis is used to summarize the information from a large number of variables into a smaller number of variables (Hair, Page, et al., 2019, p. 395). In this study, researchers employed factor analysis to develop constructs that can explain food-sharing platform users' purchase intention.

Table 4.2 KMO and Bartlett's Test, Model 1

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.875
Bartlett's Test of Sphericity	**Approx. Chi-Square**	3351.072
	df	406
	Sig.	.000

Researchers tested two assumptions before conducting the factor analysis. P-value of the Bartlett's Test of Sphericity is less than .05. Thus, there are correlations among factors. In addition, based on Kaiser-Meyer-Olkin measurement, KMO (.875)

is greater than 0.5, and the model is sufficient to be analyzed (Malhotra & Dash, 2016).

4.2.1 Total Variance Explained

Table 4.3 Eigenvalues, Model 1

Initial Eigenvalues

Component	Eigenvalue	% of Variance	Cumulative %
1	7.548	26.026	26.0
2	2.808	9.682	35.7
3	2.337	8.059	43.8
4	1.871	6.453	50.2
5	1.473	5.078	55.3
6	1.255	4.329	59.6
7	0.979	3.377	63.0

Referring to Table 4.3, there are six factors or six constructs whose Eigenvalues are greater than 1. In total, those six factors can explain 59.6% of the variance in the original data. 60 percent of the total variance is the rule of thumb for this criterion (Hair, Page, et al., 2019). This factor solution, 59.6% is close to this criterion. The six factors can explain 26%, 9.6%, 8.0%, 6.4%, 5.0%, and 4.3% of the total variance respectively.

4.2.2 Scree Plot

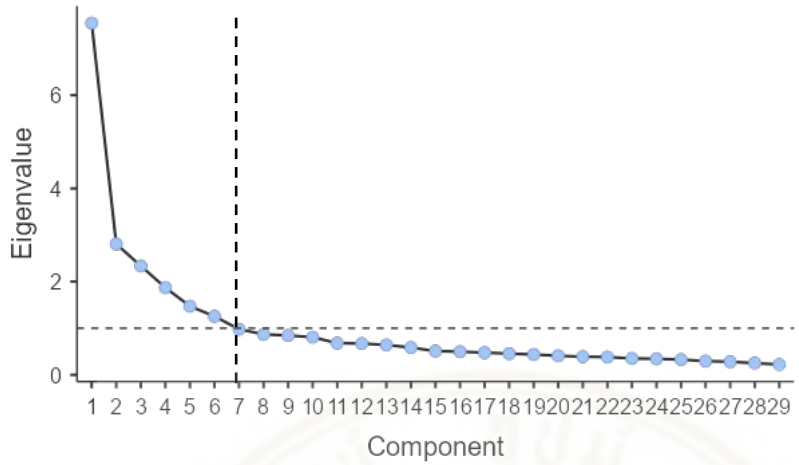

Figure 4.1 Scree Plot, Model 1

According to the Scree Plot, Figure 4.1 shows that six factors are extracted from data with Eigenvalue greater than 1.

4.2.3 Rotation Component Matrix

Table 4.4 shows the factor loadings and the uniqueness of all items. It is clear that all factor loadings are greater than 0.5, no cross-loading existed, and all uniqueness are lower than 0.6. Therefore, no items were removed from the original questionnaire. We can see that there are six groups of items.

In the first group, seven items (EC 1.1, EC 1.2, EC 1.3, EC 1.4, EC 1.5, FWA 4.1, FWA 4.4) are related to environmental concern, which people concern about the environment when they make food purchasing decisions. In the second group, all five items (SN 3.1, SN 3.2, SN 3.3, SN 3.4, SN 3.5) illustrate social norms that influence consumers' decisions. In the third group, five items (PP 2.1, PP 2.2, PP 2.3, PP 2.4, FWA 4.2) explain the perceived playfulness that the food-sharing platforms users are feeling excited and fun when buying food surplus.

Table 4.4 Component Matrix, Model 1

Component Loadings

	Component						
	1	2	3	4	5	6	Uniqueness
EC 1.2	0.753						0.395
EC 1.3	0.716						0.423
EC 1.5	0.710						0.383
EC 1.4	0.691						0.471
EC 1.1	0.680						0.485
FWA 4.1	0.621						0.509
FWA 4.4	0.503						0.599
SN 3.1		0.809					0.259
SN 3.5		0.787					0.313
SN 3.4		0.757					0.347
SN 3.2		0.753					0.321
SN 3.3		0.698					0.410
PP 2.4			0.752				0.269
PP 2.2			0.698				0.378
PP 2.1			0.687				0.377
PP 2.3			0.681				0.455
FWA 4.2			0.632				0.440
PC 5.4				0.839			0.221
PC 5.2				0.816			0.291
PC 5.1				0.755			0.330
PC 5.5				0.510			0.581
FN 6.5					0.753		0.295
FN 6.2					0.751		0.401
FN 6.3					0.744		0.400
PC 5.3					0.584		0.522
FN 6.6						0.691	0.403
FN 6.1						0.651	0.440
FN 6.4						0.632	0.422
FWA 4.3						0.528	0.569

Note. 'varimax' rotation was used
Extraction Method: Principal Component Analysis

The fourth group, consisting of four items (PC 5.1, PC 5.2, PC 5.4, PC 5.5), represents price consciousness of the food-sharing platform users. The construct explains whether consumers consider the price as an important factor influencing their

in-platform purchasing behaviors. The fifth group has four items (FN 6.2, FN 6.3, FN 6.5, PC 5.3). The items indicate food neophobia, an aversion to trying the new flavor or new food on the food-sharing platform. The sixth group consists of four items (FN 6.1, FN 6.4, FN 6.6, FWA 4.3). show positive attitudes of customers when buying new types of food through food-sharing platforms.

In conclusion, based on the latent root criterion, the percentage of the variance criterion, and the factor loadings criterion, there are totally six factors were formed from factor analysis. Those factors are environmental concern, social norms, perceived playfulness, price consciousness, food neophobia, and food neophilia.

4.3 Regression Analysis Model 1

Regression analysis is one of the most used data analysis techniques to determine linear relationships between two or more variables (Hair, Page, et al., 2019). Multiple regression has one dependent variable and several independent variables. In this study, researchers examined the linear relationships between six independent variables, namely environmental concern, social norms, perceived playfulness, price consciousness, food neophobia, and food neophilia, and one dependent variable, purchase intention.

In the original questionnaire, there are three items to evaluate consumers' purchase intention to food surplus, to avoid duplication and simplify the analysis. In this research, researchers pick PI 7.1 with the highest mean score as the item, which tests the scale of purchase intention.

Table 4.5 Mean Score of Items, Purchase Intention

Descriptives

	PI 7.1	PI 7.2	PI 7.3
N	284	284	284
Mean	4.49	4.31	4.08

4.3.1 Mean Score

Table 4.6 Mean Score of Variables, Model 1

Descriptives

	Environmental Concern	Social Norms	Perceived Playfulness	Price Consciousness	Food Neophobia	Food Neophilia	PI 7.1
N	284	284	284	284	284	284	284
Mean	4.37	3.45	4.18	3.90	2.76	3.76	4.49
SD	0.569	0.890	0.640	0.773	0.866	0.768	0.725
α	0.831	0.876	0.832	0.787	0.708	0.613	

Note: α: Cronbach's α, SD: Standard deviation, PI: Purchase intention

It can be seen from Table 4.6 that the mean score for each factor. The mean score ranges from 1 to 5. Mean score of 1 represents totally disagree. By contrast, the mean score of 5 represents totally agree. Respondents have strong positive opinions on environmental concern and perceived playfulness, with a mean score of 4.37 and 4.18 respectively. The mean scores of social norms (3.45), price consciousness (3.9), and food neophilia (3.76) stand at a moderate level. There is only one mean score lower than 3, which means that respondents have a negative view of this factor. The factor is food neophobia (2.76). Overall, the participants show a strongly positive view on purchase intention with a mean score of 4.49.

4.3.2 Reliability

The reliability of some factors is strong with high Cronbach's α, such as environmental concern (.831), social norms (.876), and perceived playfulness (.832). Some factors show acceptable reliability with medium Cronbach's α, such as price consciousness (.787) and food neophobia (.708). While food neophilia has the lowest Cronbach's α (.613), it is still greater than .600, which is an acceptable result (Malhotra & Dash, 2016).

4.3.3 Multiple Regression

Table 4.7 Regression Analysis Model Fit Test, Model 1

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.705	0.498	0.487	45.7	6	277	< .001

According to the model fit test, $p < .05$, this model is sufficient to explain the dependent variable. Adjusted R square = .487 means that 48.7% of the change in the dependent variable (purchase intention) can be explained by this model.

Table 4.8 Model Coefficients, Model 1

Model Coefficients - PI 7.1

			95% Confidence Interval				
Predictor	Estimate	SE	Lower	Upper	t	p	Stand. Estimate
Intercept	0.714	0.300	0.123	1.305	2.378	0.018	
Environmental Concern	0.357	0.065	0.228	0.486	5.456	< .001	0.280
Social Norms	-0.063	0.044	-0.150	0.022	-1.449	0.148	-0.078
Perceived Playfulness	0.630	0.064	0.504	0.757	9.844	< .001	0.556
Price Consciousness	-0.019	0.045	-0.108	0.070	-0.418	0.677	-0.020
Food Neophobia	-0.059	0.037	-0.132	0.013	-1.610	0.109	-0.071
Food Neophilia	0.008	0.045	-0.081	0.097	0.181	0.857	0.008

According to the Model Coefficients Table, environmental concern ($p < .01$) and perceived playfulness ($p < .01$) significantly influence purchase intention. H1 and H2 are supported. Other factors, such as social norms ($p = .148$), price consciousness ($p = .677$), food neophobia ($p = .109$), and food neophilia ($p = .857$) do not significantly influence purchase intention. H3, H5, and H6 are rejected.

Referring to the output of factor analysis, there is no construct explaining the factor food waste awareness. Instead, a new construct, food neophilia is developed. Therefore, we can not test H4 by model 1. Moreover, the authors test a new connection between food neophilia and purchase intention of food surplus.

Two influential factors impact purchase intention of food surplus through food-sharing platforms, environmental concern (standardized coefficient β = .280) and perceived playfulness (standardized coefficient β = .556). Both environmental concern and perceived playfulness positively influence purchase intention. In addition, perceived playfulness is more influential with a greater standardized coefficient β (.556). For each increase in environmental concern by one unit, purchase intention increases by .280. For each increase in perceived playfulness by one unit, purchase intention increases by .556.

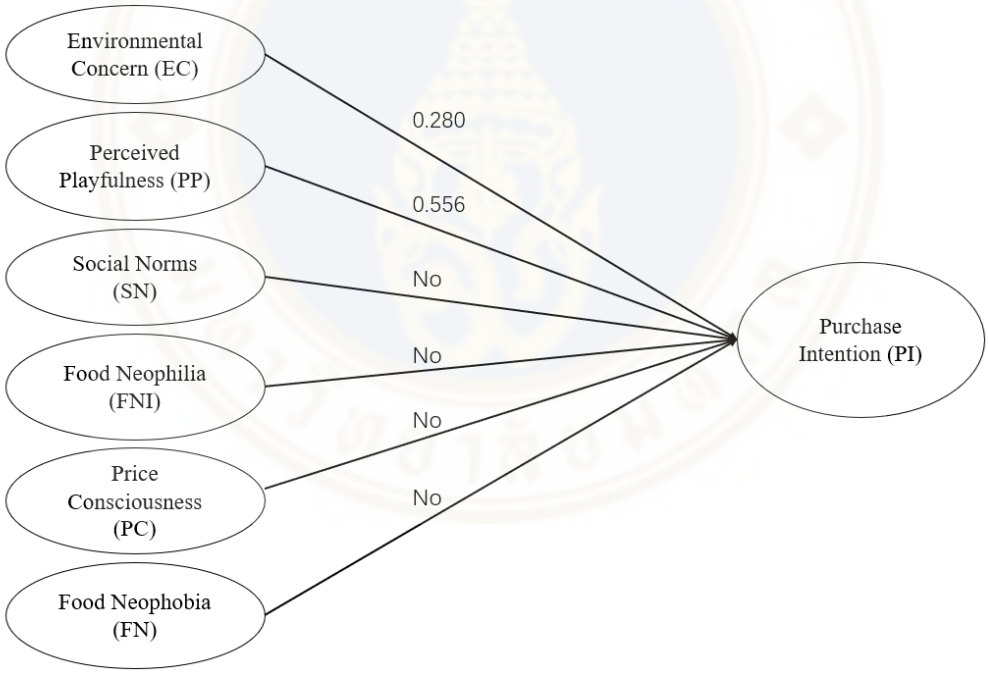

Figure 4.2 Results of Multiple Regression Analysis, Model 1

The results of multiple regression (Figure 4.2) show the relationships between environmental concern, perceived playfulness, social norms, price consciousness, food neophobia, food neophilia, and purchase intention. Only environmental concern (standardized coefficient β = .280) and perceived playfulness

(standardized coefficient β = .556) show positive relations toward purchase intention. Other factors do not show correlations with purchase intention.

4.4 Factor Analysis Model 2

According to model 1, the factor food waste awareness was not shown in the framework. In model 2, researchers extracted one item with the highest mean score from food waste awareness, tested its correlation with purchase intention, and developed a new model with the construct food waste awareness.

4.4.1 Food Waste Awareness

Table 4.9 Descriptives of the Factor Food Waste Awareness

Descriptives

	FWA 4.1	FWA 4.2	FWA 4.3	FWA 4.4
N	284	284	284	284
Missing	122	122	122	122
Mean	4.36	4.37	3.54	4.41

Referring to Table 4.9, we can see that FWA 4.4 has the highest mean score. Mean score (4.41) represents that the respondents have a high level of awareness of food waste when buying food surplus through food-sharing platforms. Therefore, researchers use item FWA 4.4 as an independent variable to test the correlation between food waste awareness and purchase intention.

Table 4.10 Food Waste Awareness Model Fit Test

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.370	0.137	0.134	44.7	1	282	< .001

The model is acceptable ($p < .05$). food waste awareness can explain 13.4%

of the change in purchase intention.

Table 4.11 Food Waste Awareness Model Coefficient

Model Coefficients - PI 7.1

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	3.074	0.2150	14.30	< .001	
FWA 4.4	0.320	0.0479	6.69	< .001	0.370

If we increase one unit of food waste awareness, purchase intention will rise by .37 units (standardized coefficient $\beta = .370$).

Table 4.12 KMO and Bartlett's Test, Model 2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.871
Bartlett's Test of Sphericity	**Approx. Chi-Square**	3230.034
	df	378
	Sig.	.000

Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin test were tested to meet the assumptions prior to doing the multiple regression analysis. In Bartlett's Test of Sphericity P-value is less than .05. Therefore, there are correlations among factors. Furthermore, Kaiser-Meyer-Olkin Test demonstrates KMO (.871) is greater than 0.5, and the model is satisfied for analysis.

4.4.2 Total Variance Explained

FWA 4.4 was removed from conducting the factor analysis in model 2. Referring to Table 4.11, the Eigenvalues of six factors are greater than 1. In total, those six factors can explain 60.6% of the variance in the original data. A commonly used guideline for this criterion is that 60 percent of overall variance should be considered (Hair, Page, et al., 2019). In the factor solution, 60.6% exceeds this criterion. The six factors can explain 26.0%, 10.0%, 8.2%, 6.7%, 5.1%, and 4.4% of the total variance respectively.

Table 4.13 Eigenvalues, Model 2

Initial Eigenvalues

Component	Eigenvalue	% of Variance	Cumulative %
1	7.297	26.062	26.1
2	2.806	10.023	36.1
3	2.303	8.225	44.3
4	1.866	6.666	51.0
5	1.441	5.146	56.1
6	1.253	4.473	60.6
7	0.964	3.442	64.0

Referring to Table 4.13, six factors' Eigenvalues are greater than 1. In total, those six factors can explain 60.6% of the variance in the original data. A commonly used guideline for this criterion is that 60 percent of overall variance should be considered (Hair, Page, et al., 2019). In the factor solution, 60.6% exceeds this criterion. The six factors can explain 26.0%, 10.0%, 8.2%, 6.7%, 5.1%, and 4.4% of the total variance respectively.

4.4.3 Scree Plot

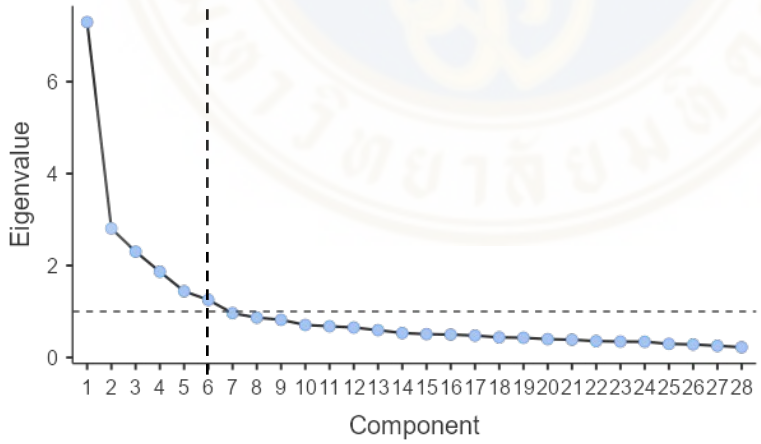

Figure 4.3 Scree Plot, Model 2

According to the Scree Plot, Figure 4.3 illustrates that six factors are shown from data with Eigenvalue greater than 1.

4.4.4 Rotation Component Matrix

Table 4.14 Component Matrix, Model 2

Component Loadings

	Component						
	1	2	3	4	5	6	Uniqueness
SN 3.1	0.810						0.258
SN 3.5	0.789						0.312
SN 3.4	0.758						0.347
SN 3.2	0.755						0.322
SN 3.3	0.701						0.418
EC 1.2		0.751					0.396
EC 1.3		0.732					0.392
EC 1.4		0.699					0.449
EC 1.5		0.694					0.394
EC 1.1		0.691					0.473
FWA 4.1		0.611					0.512
PP 2.4			0.760				0.269
PP 2.2			0.700				0.376
PP 2.1			0.679				0.386
PP 2.3			0.675				0.461
FWA 4.2			0.642				0.439
PC 5.4				0.841			0.220
PC 5.2				0.816			0.291
PC 5.1				0.758			0.331
PC 5.5				0.509			0.584
FN 6.5					0.759		0.291
FN 6.2					0.752		0.398
FN 6.3					0.739		0.406
PC 5.3					0.583		0.523
FN 6.6						0.692	0.400
FN 6.1						0.654	0.436
FN 6.4						0.626	0.425
FWA 4.3						0.555	0.527

Note. 'varimax' rotation was used

Table 4.14 demonstrates the factor loadings and the uniqueness of all items. It is clear that all factor loadings are larger than 0.5, no cross-loading existed, and all uniquenesses are lower than 0.6. Therefore, no items were removed from the original

questionnaire. Six groups of items were presented.

The first group contains six items (SN 3.1, SN 3.2, SN 3.3, SN 3.4, SN 3.5) that illustrate social norms that influence consumers' intention to buy. The second group involves six items (EC 1.1, EC 1.2, EC 1.3, EC 1.4, EC 1.5, FWA 4.1) that are associated with environmental concern, which people concern about the environment when they purchase food. The third group comprises five items (PP 2.1, PP 2.2, PP 2.3, PP 2.4, FWA 4.2) that explain the perceived playfulness that the food-sharing platform users have fun and feel excited when buying through food-sharing platforms.

The fourth group includes four items (PC 5.1, PC 5.2, PC 5.4, PC 5.5) that represent price consciousness of the food surplus buyers. The construct explains whether consumers consider the importance of the price when purchasing food surplus. Four items consisted of the fifth group (FN 6.2, FN 6.3, FN 6.5, PC 5.3). The items explain food neophobia, a reluctance to try the novel flavor or new food on food-sharing platforms. Four items consisting of the sixth group (FN 6.1, FN 6.4, FN 6.6, FWA 4.3), illustrate customers' positive attitudes when purchasing novel food through food-sharing platforms.

In conclusion, based on the latent root criterion, the percentage of the variance criterion, and the factor loadings criterion, six factors were revealed from factor analysis. Those factors are social norms, environmental concern, perceived playfulness, price consciousness, food neophobia, and food neophilia.

4.5 Regression Analysis Model 2

In the second regression test, researchers add FWA 4.4 into model 2 to examine the linear relationships between seven independent variables, namely environmental concern, social norms, perceived playfulness, food waste awareness, price consciousness, food neophobia, and food neophilia, and one dependent variable, purchase intention.

We can see the mean score for each factor in Table 4.15. Mean score of 1 indicates totally disagree. By contrast, the mean score of 5 indicates totally agree. Participants show strong positive opinions on environmental concern, perceived

playfulness, and food waste awareness with a mean score of 4.37, 4.18, and 4.41 respectively. The mean scores of social norms (3.45), price consciousness (3.9), and food neophilia (3.76) illustrate the medium level of agreement. There is only one mean score less than 3, at 2.76 (food neophobia). It means that the respondents have a negative view of this factor.

4.5.1 Mean Score

Table 4.15 Mean Score of Variables, Model 2

Descriptives

	Environmental Concern	Perceived Playfulness	Social Norms	Food Waste Awareness	Price Consciousness	Food Neophobia	Food Neophilia
N	284	284	284	284	284	284	284
Mean	4.37	4.18	3.45	4.41	3.90	2.76	3.76
SD	0.588	0.640	0.890	0.838	0.773	0.866	0.768
α	0.829	0.832	0.876	1.000	0.787	0.708	0.613

SD: Standard Deviation, α = Cronbach's α

4.5.2 Reliability

Environmental concern (.829), social norms (.876), and perceived playfulness (.832) have strong reliability with high Cronbach's α. price consciousness (.787) and food neophobia (.708) have moderate reliability with medium Cronbach's α. While food neophilia has weak reliability with the lowest Cronbach's α (.613), it is still larger than .600, which is acceptable.

4.5.3 Multiple Regression

Table 4.16 Regression Analysis Model Fit Test, Model 2

Model Fit Measures

				Overall Model Test			
Model	R	R^2	Adjusted R^2	F	df1	df2	p
1	0.708	0.501	0.488	39.6	7	276	< .001

Referring to Table 4.16, P < .05, this model is suitable to explain the dependent variable. Adjusted R square = .488 indicates that this model can explain 48.8% of the change in the dependent variable (purchase intention).

According to the Model Coefficients Table, environmental concern (p < .01), perceived playfulness (p < .01), and food waste awareness (p = .012) significantly influence purchase intention. H1, H2, and H4 are supported. Other factors, such as social norms (p = .116), price consciousness (p = .656), food neophobia (p = .083), and food neophilia (p = .985) do not significantly influence purchase intention. H3, H5, and H6 are rejected.

Table 4.17 Model Coefficients, Model 2

Model Coefficients - PI 7.1

			95% Confidence Interval				
Predictor	**Estimate**	**SE**	**Lower**	**Upper**	**t**	**p**	**Stand. Estimate**
Intercept	0.7148	0.2999	0.1244	1.30525	2.3832	0.018	
Environmental Concern	0.2585	0.0658	0.1290	0.38797	3.9302	< .001	0.2096
Perceived Playfulness	0.6353	0.0641	0.5092	0.76140	9.9171	< .001	0.5602
Social Norms	-0.0697	0.0443	-0.1569	0.01742	-1.5751	0.116	-0.0855
Food Waste Awareness	0.1088	0.0429	0.0244	0.19330	2.5371	0.012	0.1257
Price Consciousness	-0.0203	0.0456	-0.1100	0.06942	-0.4454	0.656	-0.0216
Food Neophobia	-0.0646	0.0371	-0.1377	0.00854	-1.7385	0.083	-0.0770
Food Neophilia	8.71e-4	0.0456	-0.0889	0.09069	0.0191	0.985	9.23e-4

According to the output of factor analysis, a new factor, food neophilia is emerged. Thus, in this study, researchers examine a new connection between food neophilia and purchase intention of food surplus.

In model 2, three key factors impact purchase intention of food surplus through food-sharing platforms, environmental concern (standardized coefficient β

= .210), perceived playfulness (standardized coefficient β = .560), and food waste awareness (standardized coefficient β = .126). All three factors positively influence purchase intention. In addition, perceived playfulness is the most influential determinant. For each increase in perceived playfulness, environmental concern, and food waste awareness by one unit each, purchase intention increases by .560 units, .210 units, and .126 units.

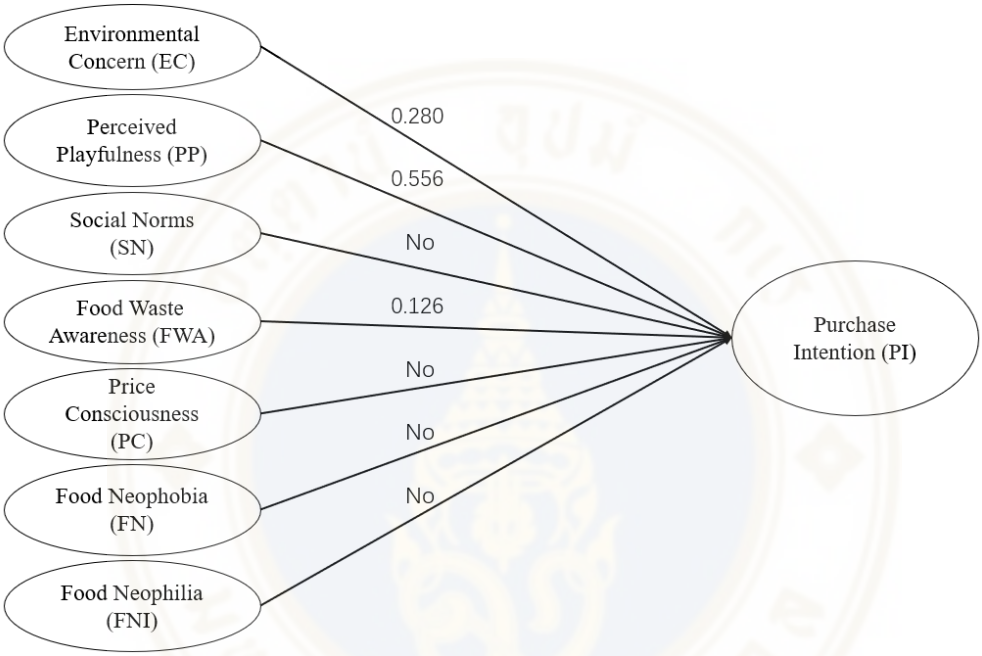

Figure 4.4 Results of Multiple Regression Analysis, Model 2

The results of multiple regression (Figure 4.4) illustrate the relationships between environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, food neophilia, and purchase intention. environmental concern (standardized coefficient β = .280), perceived playfulness (standardized coefficient β = .556), and food waste awareness (standardized coefficient β = .126) positively influence purchase intention. Other factors do not show a relation to purchase intention.

4.6 T-test

T-test can be used to test whether the means from two independent groups

are the same or not (Hair, Page, et al., 2019). In this research, researchers plan to test whether the means of purchase intention of food surplus through food-sharing platforms are the same between Thai and non-Thai respondents.

According to Table 4.18, p = .104 > .05, the figures indicate that there is no significant difference between the means of purchase intention of the two groups. Therefore, there is no significant difference in purchase intention of food surplus through food-sharing platforms between Thai and non-Thai groups. All consumers share similar attitudes toward food surplus purchase intention.

Table 4.18 Independent T-test

Independent Samples T-Test

		Statistic	df	p	Mean difference	SE difference		Effect Size
PI 7.1	Student's t	-1.63	282	0.104	-0.268	0.164	Cohen's d	-0.370

Note. H_a $\mu_{\text{No, I am not Thai}} \neq \mu_{\text{Yes, I am Thai.}}$

4.7 One-Way ANOVA

ANOVA is applied to test the statistical difference between the means of two or more groups (Hair, Page, et al., 2019). In this study, researchers used one-way ANOVA to test whether there is a significant difference among various categorical variables, such as gender, age group, educational background, and monthly income.

4.7.1 Gender

Table 4.19 ANOVA Test for Gender

ANOVA - PI 7.1

	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Gender	2.86	2	1.430	2.75	0.066	0.019	0.012
Residuals	146.08	281	0.520				

The variable gender is consisting of three groups, male (82), female (190), and others (12). Here the researcher examines whether there is a significant difference in purchase intention of food surplus through food-sharing platforms among genders. According to Table 4.19, p = .066 > .05. Thus, there is no statistical difference in purchase intention among different gender groups. Consumers from different gender groups show the same attitudes to food surplus purchase intention.

4.7.2 Age

The variable age is divided into four groups after combining low percentage groups. They are participants aged 18-30 (87), 31-40 (104), 41-50 (67), and 51 and above (26). In this research, scholars test whether there is a significant difference in purchase intention of food surplus through food-sharing platforms among the four age groups. According to Table 4.20, p = .849 > .05. Therefore, there is no statistical difference in purchase intention among different age groups. The age variable is not an important factor influencing consumers' purchase intention of food surplus.

Table 4.20 ANOVA Test for Age

ANOVA - PI 7.1

	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Age	0.424	3	0.141	0.267	0.849	0.003	-0.008
Residuals	148.519	280	0.530				

4.7.3 Educational Background

The variable education level is consisting of three groups after combining low percentage groups. They are participants with Vocational College/ Diploma and Below (17), Bachelor's Degree (141), and Master's Degree or Above (126). In this project, researchers examine whether there is a significant difference in purchase intention of food surplus through food-sharing platforms among the three education levels.

Table 4.21 ANOVA Test for Education Level

ANOVA - PI 7.1

	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Education Level	3.47	2	1.733	3.35	0.037	0.023	0.016
Residuals	145.48	281	0.518				

According to Table 4.21, p = .037 < .05. Thus, there is a statistical difference in purchase intention among different education groups. To discover which two groups are significantly different, the researcher applied a Post Hoc Test with Bonferroni correction.

Table 4.22 Post Hoc Test for Education Level

Post Hoc Comparisons – Education Level

Comparison								
Education Level		Education Level	Mean Difference	SE	df	t	$p_{bonferroni}$	Cohen's d
Bachelor's Degree	-	Master's Degree or Above	-0.050	0.088	281	-0.570	1.000	-0.070
	-	Vocational College/ Diploma and Below	0.431	0.184	281	2.331	0.061	0.598
Master's Degree or Above	-	Vocational College/ Diploma and Below	0.481	0.185	281	2.587	0.031	0.668

Note. Comparisons are based on estimated marginal means

It can be seen that P – value (.031) of the comparison between Master's degree or Above group and Vocational College/ Diploma and Below group is lower than .05. Thus, we can state that there is a significant difference in purchase intention of food surplus through food-sharing platforms between participants with the educational background of Master's degree or Above and Vocational College/ Diploma and Below. In addition, the mean difference is .481, which shows that the participants

with Master's Degree or Above have a higher purchase intention than the respondents with Vocational College/ Diploma and Below. Consumers with higher education levels have a stronger purchase intention for food surplus.

4.7.4 Monthly Income

Table 4.23 ANOVA Test for Monthly Income

ANOVA - PI 7.1

	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Monthly Income	6.63	4	1.657	3.25	0.013	0.045	0.031
Residuals	142.31	279	0.510				

The variable monthly income is separated into five groups. They are respondents with monthly income lower than 15,000 THB (26), 15,001 – 30,000 THB (62), 30,001 – 45,000 THB (58), 45,001 – 60,000 THB (46), and 60,001 THB and above (92). In this study, researchers examine whether there is a significant difference in purchase intention of food surplus through food-sharing platforms among the five monthly income groups. According to Table 4.23, P – value is .013, less than .05. It indicates that there is a significant difference in purchase intention between different participants with different monthly incomes. To discover which two groups are significantly different, the researcher applied Post Hoc Test with Bonferroni correction.

Referring to Table 4.24, two P – values are lower than .05. It indicates that there is a significant difference in purchase intention between monthly income of 15,001-30,000 THB and lower than 15,000 THB (P = 0.035); 60,000 THB and above and lower than 15,000 THB (p = .029). People with lower incomes have relatively higher purchase intention for food surplus. The mean difference between 15,000 - 30,000 THB and lower than 15,000 THB is -0.4913. The mean difference between 60,001 THB and above and lower than 15,000 THB is -0.4766. Furthermore, the mean differences between all income groups and lower than 15,000 THB group are negative. It means that the group with lower than 15,000 THB monthly income has a relatively higher purchase intention of food surplus through food-sharing platforms.

Table 4.24 Post Hoc Test for Monthly Income

Post Hoc Comparisons – Monthly Income

Comparison								
Monthly Income		Monthly Income	Mean Difference	SE	df	t	$p_{bonferroni}$	Cohen's d
15,001 - 30,000 THB	-	30,001 - 45,000 THB	-0.1969	0.130	279	-1.509	1.000	-0.2757
	-	45,001 - 60,000 THB	-0.2539	0.139	279	-1.827	0.688	-0.3554
	-	60,001 THB and Above	-0.0147	0.117	279	-0.125	1.000	-0.0206
	-	lower than 15,000 THB	-0.4913	0.167	279	-2.944	0.035	-0.6879
30,001 - 45,000 THB	-	45,001 - 60,000 THB	-0.0570	0.141	279	-0.404	1.000	-0.0798
	-	60,001 THB and Above	0.1822	0.120	279	1.521	1.000	0.2551
	-	lower than 15,000 THB	-0.2944	0.169	279	-1.747	0.818	-0.4122
45,001 - 60,000 THB	-	60,001 THB and Above	0.2391	0.129	279	1.854	0.648	0.3348
	-	lower than 15,000 THB	-0.2375	0.175	279	-1.355	1.000	-0.3325
60,001 THB and Above	-	lower than 15,000 THB	-0.4766	0.159	279	-3.004	0.029	-0.6673

Note. Comparisons are based on estimated marginal means

CHAPTER V
DISCUSSION

In this chapter, the author interprets the findings from data analysis and compares the findings between current research and the results from previous articles. According to the original conceptual framework, this study plans to test the relationships between six factors and one dependent variable, purchase intention. Two models were developed from factor analysis and regression analysis. To reflect the original conceptual framework, Model 2 was selected, which shows all hypotheses. Beside six factors, a new factor, food neophilia, is added to the framework.

5.1 Environmental Concern

Regarding the multiple regression analysis of the causal relationship between environmental concern and purchase intention, the result indicates that there is a positive relationship (standardized coefficient $\beta = .210$) between environmental concern and purchase intention ($p < .001$). H1 is supported. The attitudes toward the environment when purchasing food surplus through food-sharing platforms positively influence consumers' purchase intention. It means that the more consumers concerned environment the more they are likely to purchase food surplus through food-sharing platforms. The finding is aligned with the previous studies of Hartmann and Apaolaza-Ibáñez (2012) and Kim and Choi (2005), which mentioned that environmental concern positively influences purchase intention on green products. Similarly, products with more environmental benefits positively lead to higher purchase intention (Coderoni & Perito, 2020).

5.2 Perceived Playfulness

Referring to the data analysis, the causal relationship between perceived

playfulness and purchase intention was examined. The result shows that there is a positive correlation (standardized coefficient $\beta = .560$) between perceived playfulness and purchase intention ($p < 0.01$). H2 is supported. The degree of enjoyment to purchase food surplus through food-sharing platforms influences consumers' purchase intention. The more consumers enjoy the shopping experience, the more they are likely to purchase food surplus on the platform. The finding is supported by other researchers. Fu and Liang (2022) and Kim and Jun (2020) also state that perceived playfulness positively influences purchase intention in their findings.

5.3 Social Norms

According to the data from this research ($p = .116 > .05$), there is no causal relationship between social norms and purchase intention. H3 is not supported. It indicates that perceived social pressure of buying food surplus through food-sharing platforms does not show a causal relationship to purchase intention. The result represents that external pressures do not influence consumers' purchase intention in this study. Several studies proved the causal relationship between two variables in the context of buying suboptimal food (do Carmo Stangherlin et al., 2020), reusing hotel towels (Goldstein et al., 2008), and purchasing sustainable dairy products (Vermeir & Verbeke, 2006). However, the correlation is not supported in the context of food surplus purchasing in Thailand.

5.4 Food Waste Awareness

Environmental problem awareness is a vital predictor to pro-environmental behavior. In this study, food waste awareness is viewed as people's consciousness of the adverse impacts of food waste. In the previous studies, do Carmo Stangherlin et al. (2020) and Loebnitz et al. (2015) support that food waste awareness positively influences the purchase intention towards suboptimal food. By contrast, de Hooge et al. (2017) do not prove the associations between the two factors. Based on the results of multiple regression analysis in this research, the causal relationship between food

waste awareness and purchase Intention was examined. The results show that there is a positive correlation (standardized coefficient $\beta = .126$) between food waste awareness and purchase intention ($p = .012 < .05$). H4 is supported. Consumers' awareness of the negative impacts of food waste influences their intention to buy food surplus. Buyers are more likely to buy food surplus if they have a stronger awareness of the adverse impacts of food waste.

5.5 Price Consciousness

Price has been seen as a key marketing element that impacts consumers' buying behavior (Konuk, 2015). Consumers' purchase intention toward expiring food (Chang & Su, 2022) and suboptimal food (de Hooge et al., 2017) are significantly impacted by the discount rate. Several studies support that price consciousness positively influences consumers' purchase intention when buying expiring dated food (Konuk, 2015) and suboptimal foods (Aschemann-Witzel et al., 2018). According to the regression analysis ($p = .656 > .05$), there is no causal relationship between price consciousness and purchase intention in the context of Thailand. H5 is not supported. Some researchers mentioned that people tend to use food-sharing platforms because of the financial benefits rather than environmental motives (Pisoni et al., 2022). However, in this study, consumers' intention to buy food surplus through food-sharing platforms is impacted by environmental concerns instead of price issues. Interestingly, according to the ANOVA analysis, the lower-income group has higher purchase intention to food surplus. Overall, food-sharing platforms users are not seen price as a vital determinants, however, the low income group does pay attention on the price of the products.

5.6 Food Neophobia

Food neophobia is seen as the aversion to trying unfamiliar food from food-sharing platforms. Some studies supported that food neophobia negatively influences purchase intention toward upcycled food (Coderoni & Perito, 2021), waste-to-value food (Coderoni & Perito, 2020), and insects as the meat substitute (Verbeke,

2015). Regarding the findings (p = .083 > .05), there is no causal relationship between food neophobia and purchase intention. H6 is not supported. The finding aligns with results examined by Arvola et al. (1999) that food neophobia is not an effective factor to influence novel food purchase intention. To put it differently, the reluctance to novel foods does not determine consumers' intention to buy food surplus.

5.7 Food Neophilia

Food neophilia is viewed as the opposite concept of food neophobia. It is an attitude that shows great pleasure in having a wide variety of foods. Although food neophobia has been widely examined (Dimitrovski & Crespi-Vallbona, 2017), food neophilia is rarely tested directly. Neophilics are more willing to try and consume novel foods than neophobics (Raudenbush & Frank, 1999). Specifically, Sweden is more likely to choose novel foods than their counterparts from the US and Finland (Ritchey et al., 2003). Food-related personality traits have been seen as a critical factor influencing local food consumption (Mak et al., 2012). Particularly, food neophilia positively influences visitors' purchase of local food (Madaleno et al., 2018) and edible insects (Phonthanukitithaworn et al., 2023). However, according to the finding from this research (p = .985 > .05), there is no causal relationship between food neophilia and purchase intention of food surplus. The personal preference for new types of food does not stimulate people's purchase intention to food surplus.

5.8 Demographic Characteristics

In this study, a total of 284 respondents are valid for data analysis. Their gender, age, education level, monthly income, and nationality were analyzed. According to the demographic data, 66.9% of participants are female and 28.9% of participants are male. Female consumers are considerably more than male consumers. Yet, there is no statistical difference in purchase intention of food surplus between genders (p = .066). It can be seen from the data that people aged 18 – 40 represent 67.3% of the respondents. Only 32.8% of the participants are 41 years old or older. The

statistical difference in purchase intention did not show among different age groups (p =.849). Regarding the education level, 94% of the participants obtain a bachelor's degree or above, and only 6% of the participants are with vocational college/ diploma and below. The statistical results (p = .031) indicate that food surplus buyers with a Master's Degree or Above have a higher (.481) purchase intention toward food surplus than the buyers with Vocational College/ Diploma and Below.

Interestingly, the monthly income of the participants is widely distributed. Participants earn lower than 15,000 THB, 15,001 – 30,000 THB, 30,001 – 45,000 THB, and 45,001 – 60,000 THB account for 9.2%, 21.8%, 20.4%, and 16.2% respectively. The respondents who earn 60,0001 THB and above have a relatively higher proportion among the groups with 32.4%. There is a significant difference in purchase intention between the participants with monthly income lower than 15,000 THB and 15,001-30,000 THB (p = .035); lower than 15,000 THB and 60,001 THB and above (p = .029). The low-income group has the highest mean score of purchase intention, which means that the low-income group shows a higher interest to buy food surplus through food-sharing platforms. Referring to nationality, the majority of the food surplus buyers are Thai (92.6%). Thus, the major market of Yindii is local Thais. For the degree of purchase intention, there is no significant difference between different nationalities (p = .104).

In conclusion, currently, the main consumers of food surplus through Yindii application are local Thais. Female users are noticeably more than male users. People who received higher education (bachelor's degree or above) are major food surplus buyers. While Yindii users are distributed widely into various income segmentations, the low-income group shows a higher purchase intention toward food surplus products. The high income-group who earn more than 60,000 THB accounts for over 30% of the total consumers.

CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Food is the most vital daily product in our life. A large amount of the population still can not access enough food for their living. However, a substantial amount of food was lost or wasted every year. Thailand is a country with having 6.5 million malnutritional population and wasting 20 percent of food every year. To address these issues, food-sharing platforms are developed to redistribute food surplus in many countries. Yet, empirical studies examining consumers' purchase intention of food surplus through food-sharing platforms are limited, particularly in developing countries. Therefore, this paper explored the impacts and associations between environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, and the purchase intention of food surplus through food-sharing platforms. In this study, researchers examined whether and to what extent these factors influence the purchase intention of food surplus through food-sharing platforms in Thailand.

Based on convenience sampling, residents in Thailand who used Yindii, a Thai food-sharing platform, in the past six months, were studied. The data was collected with Google Forms that were distributed by email. A total of 284 valid respondents were analyzed by SPSS 25 with descriptive and inferential analysis techniques. H1, H2, and H4 were supported, which shows that environmental concern, perceived playfulness, and food waste awareness successfully influence consumers' purchase intention toward food surplus. Apart from that, the enjoyment to purchase food surplus is more important than consumers' overall attitudes toward the environment and the awareness of the negative impacts of food waste. All other hypotheses were not supported, which revealed that social norms, price consciousness, food neophobia, and food neophilia might not affect consumers' intention to buy food surplus in Thailand.

Food surplus consumption through Yindii application is preferred by local

Thais and Female users. People who obtained higher education levels are major food surplus buyers. The low-income group shows a higher purchase intention toward food surplus products.

5.2 Limitations

Although the current research was sophisticatedly developed, there are still several limitations. First of all, the researchers collected data from a single food-sharing platform, Yindii, which is the biggest and most successful food-sharing platform in Thailand. Recently, some competitors are existing in the market, such as Oho. The data from users of different platforms may bring more comprehensive findings in the future. Secondly, researchers developed a questionnaire with reversed questions and distributed Google Forms in a shuffled manner to reduce respondents' bias. However, the respondents might give more positive answers by seeing the brand of Yindii in the questions. Thirdly, apart from the primary researcher, one English native speaker and four bilingual Thai native speakers in the relevant field contributed to review and refine questionnaires. The cultural differences and the difficulty of the Thai language may impact respondents' understanding of the questions. Fourthly, Cronbach's Alpha of food neophilia is lower than 0.7 but greater than 0.6. It may be because normally studies test food neophobia and neophilia under one construct. If we separate the construct into two distinct factors, the reliability may go lower. Lastly, researchers only test the factor, food waste awareness, with one item; because all items are merged with other factors by factor analysis. Future studies may apply a different group of questions to test this construct.

5.3 Recommendations

Based on the findings from this paper, the following recommendations are proposed to academics, policymakers, and practitioners in the field of food surplus redistribution not only in Thailand but also in other countries.

5.3.1 Research

In this study, three out of six, environmental concern, perceived playfulness, and food waste awareness significantly influence consumers' purchase intention of food surplus. This is the first attempt to examine the factors influencing the purchase intention of food surplus through food-sharing platforms in the Thai context. The paper shed light on this topic in the Thai context and Southeast Asian countries. Future research is recommended to re-test the model with a bigger sample size or from different food-sharing platforms. In addition, the factors in the model were selected by the primary researcher, a more structured model could be used by connecting theories in this field.

5.3.2 Policy

Policymakers should see the food-sharing platforms as an effective tool to address the food waste issue and identify and help the malnutrition group. Government authorities are suggested to promote the food surplus and food-sharing concept with various stakeholders, such as supermarkets, hotels, bakeries, and restaurants, in order to attract more relevant businesses participating in the program. Governments are also encouraged to develop and implement new rules and regulations in favor of food-sharing platforms. Meanwhile, food surplus consumption is a relatively new concept introduced by developed countries into the Southeast Asia market. Governments have to educate the general public and potential consumers about these newly introduced products. In addition, authorities should promote these new concepts according to the different cultural backgrounds in an Asian context.

5.3.3 Practice

The results of this research have vital managerial implications for managers, marketers, and business owners. The findings provide practitioners with a deeper understanding of key factors that motivate consumers to engage in buying food surplus through food-sharing platforms and propose practical advice to businesses on how to develop a successful food-sharing system that enhances consumers' purchase intention.

The findings of this paper show that several key determinants,

environmental concern, perceived playfulness, and food waste awareness considerably impact consumers' purchase intention. To succeed in the sustainable food consumption context, managers should explore and promote how the food-sharing systems reduce food waste and benefit the environment to attract consumers who concerning our planet. The blind box strategy does play a key role in food-sharing platforms, with its most influential feature: playfulness. The degree of enjoyment substantially encourages consumers' purchasing behavior toward food surplus. Managers should examine how to develop a more joyful and interesting buying experience within the platform and blind box with innovative techniques. In addition, the price element is not a key determinant to consider when buying food surplus. Businesses might not put a big chunk of time and resources on how to offer price discounts. While the low-income group has a higher purchase intention for food surplus, the higher-income group represents the majority of the food surplus consumers. The companies may put more resources to attract and maintain higher-income groups. In the group of food surplus buyers, aversion to trying new food is not an issue. The food-sharing platform users have high tolerance toward unknown foods. The blind box strategy might not be a barrier to the platform users.

5.4 Future Research

Several future research directions are proposed in this paper. First of all, the research test only selected factors influencing food surplus purchase intention. Future research should examine more potential factors. In addition, qualitative studies could be used to explore potential determinants of consumers' intention to buy food surplus through food-sharing platforms. Furthermore, due to the single data source from Yindii being collected for this research, other emerging platforms like Oho can be used for data collection as well. To generalize the findings, replicating the empirical study with multiple cases in different Asian countries is suggested. Lastly, due to the wide cultural gap between Asian and Western nations, a comparative study can be conducted to compare and contrast the similarity and differences between distinct countries.

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APPENDICES

Appendix A: IRB Certificate of Exemption

COE No. MU-CIRB 2023/067.2404

Mahidol University Central Institutional Review Board

Certificate of Exemption

Title of Project: Factors Influencing Purchase Intention of Food Surplus Through Food Sharing Platform

Protocol Number: MU-CIRB 2023/105.2403

Principal Investigator: Mr. Nan Hua

Affiliation: College of Management, Mahidol University

Co- Investigators: Dr. Randall Shannon

The criteria of Exemption: Research involving the use of survey procedures:

- Recorded information CANNOT readily identify the subject (directly or indirectly/linked) OR
- Any disclosure of responses outside of the research would NOT place subject at risk (criminal, civil liability, financial, employability, educational advancement, reputation)

MU-CIRB is in full compliance with International Guidelines for Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

Date of Determination: 24 April 2023

Signature of Chairperson: .....

(Associate Professor Dr. Penchan Pradubmook Sherer)

MU-CIRB Chair

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Appendix B: Questionnaire

Dear Respondents,

My name is …Nan Hua… the principal investigator, *would like to invite you to participate in my* research entitle "Factors influencing purchase intention of food surplus through food sharing platform" . This research project aims to … explore the impacts and connections between environmental concern, perceived playfulness, social norms, food waste awareness, price consciousness, food neophobia, and the purchase intention of food surplus through food-sharing platforms**.**

You are invited to participate in this research project because you … may have insights about this study... There will be approximately 200. participants, and the research project will last for …6…. months.

If you decide to participate in the research project, you will go through these procedures:

You are invited to answer the self-administered questionnaire. The questionnaire consists of …40…. questions and it will take **about …10-15…minutes to complete this questionnaire.** On completion, please return the questionnaire in a box provided.

In filling out questionnaires, the likely risks include uneasiness or discomfort due to some questions and in filling out questionnaires; the likely risks include stress due to some questions. In those cases, you have the right not to reply.

As a participant of this study, there will be no financial compensation given to you or that will require you to pay anything. If relevant information arises about benefits and risks of the research project, I will inform you immediately and without concealment.

If you have any questions about the research procedures, you can contact …Nan Hua… …. Telephone number: …0623499485…….

Your private information will be kept confidential, it will not be subject to an individual disclosure, but will be disseminated as part of the overall results. Individual information may be examined by groups of persons e.g. funding organizations, ethics committee, etc.

You have the right to withdraw from the project at any time without prior notice. And the refusal to participate or the withdrawal from the research project will not at all effect on the treatment that you will receive.

On the condition that you are not treated as indicated in this information sheet, you can contact the Chair of Mahidol University Central Institutional Review Board (MU-CIRB) at the office of MU-CIRB, Research Administration Division, Office of the President, Mahidol University, Tel 66-2-8496224-5 and Fax 66-2-8496224.

Thank you very much for your participation!

Section One: Screening Questions

S1. Have you lived in Thailand in the past six months?

- Yes (please go to S2)
- No (Thank you for your answer, the survey is terminated)

S2. Are you 18 years old or above?

- Yes (please go to S3)
- No (Thank you for your answer, the survey is terminated)

S3. Have you purchased food surplus through Yindii at least once in the past six months?

- Yes (please go to the next question)
- No (Thank you for your answer, the survey is terminated)

Section Two: Scale Questions

Please indicate your level of agreement on each of the following statements:

- 5 means Strongly Agree
- 4 means Agree
- 3 means Neutral
- 2 means Disagree
- 1 means Strongly Disagree

1.Environmental Concern	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
1.1 I am extremely worried about the state of the world's environment and what it will mean for my future.					
1.2 Mankind is severely abusing the environment.					
1.3 When humans interfere with nature it often produces disastrous consequences.					
1.4 The balance of nature is very delicate and easily upset.					
1.5 Humans must live in harmony with nature in order to survive.					

2. Perceived Playfulness	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
2.1 I enjoy the course of purchasing food surplus through Yindii.					
2.2 Purchase food surplus through Yindii makes me feel pleasant.					
2.3 When purchasing food surplus through Yindii, I feel excited.					
2.4 Overall, I found purchasing food surplus through Yindii is interesting.					

3. Social Norms	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
3.1 People who are important to me think I should buy food surplus from Yindii.					
3.2 My family thinks I should buy food surplus from Yindii.					
3.3 Society thinks I should buy food surplus from Yindii.					
3.4 My friends think I should buy food surplus from Yindii.					
3.5 People who influence my buying behavior think I should buy food surplus from Yindii.					

4. Food Waste Awareness	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
4.1 Food waste increases the burden on the environment.					
4.2 We can avoid food waste by buying food surplus through Yindii.					
4.3 It is a good thing that food surplus is not being sold in regular shops.					
4.4 Most food surpluses are wasted.					

5. Price Consciousness	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
5.1 I am willing to go to extra effort to find lower prices.					
5.2 I will grocery shop at more than one store to take advantage of low prices.					
5.3 The money saved by finding low prices is usually not worth the time and effort.					
5.4 I would shop at more than one store to find low prices.					
5.5 The time it takes to find low prices is usually worth the effort.					

6.Food Neophobia	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
6.1 I am constantly sampling new and different foods.					
6.2 I don't trust new foods.					
6.3 If I don't know what is in a food, I won't try it.					
6.4 At dinner parties, I will try a new food.					
6.5 I am afraid to eat things I have never had before.					
6.6 I will eat almost anything.					

7. Purchase Intention	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
7.1 I am willing to buy food surplus through Yindii in the future.					
7.2 I plan to purchase food surplus through Yindii.					
7.3 I will make effort to buy food surplus through Yindii.					

Session Three Demographic Questions

D1. What is your gender?

- Male
- Female
- Others

D2. What is your age (years)?

- 18 – 30
- 31 – 40
- 41 – 50
- 51 – 60
- 61 and above

D3. What is your educational level?

- High School or Below
- Vocational College/ Diploma
- Bachelor's Degree
- Master's Degree or above

D4. What is your monthly income?

- Lower than 15,000 THB
- 15,001 – 30,000 THB
- 30,001 – 45,000 THB
- 45,001 – 60,000 THB
- 60,001 THB and above

D5. Are you Thai?

- Thai
- Non-Thai

Your participation is greatly appreciated! Thank you for your time and response!