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GREEN LAST-MILE DELIVERY APPROACHES IN E-COMMERCE AND GREEN PURCHASE INTENTION WITH GEN Z – CASE STUDY MEKONG DELTA - VIETNAM

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LIST OF ABBREVIATIONS

A	Attitude
AVE	Average Variance Extracted
B2C	Businesses To Consumers
CFA	Confirmatory Factor Analysis
CO	Carbon Monoxide
CR	Composite Reliability
DW	Durbin-Watson
EEA	European Environment Agency
EEAH	Environmental Awareness Affects Health
EFA	Exploratory Factor Analysis
GEN Z	Generation Z
GHG	Greenhouse Gas
GLMD	Green Last-Mile Delivery
GPI	Green Purchase Intention
HOV	High-occupancy vehicle
IEA	International Energy Agency
LMD	Last-mile Delivery
LML	Last Mile Logistics

MI	Modification Indices
MSV	Maximum Shared Variance
NH3	Ammonia
NOX	Nitrogen Oxides
O	Online Review
PE	Perceived Environment
PEOU	Perceived Ease of Use
PH	Perceived Health
PM10	Particulate Matter with a Diameter Of 10 Microns
PM2.5	Particulate Matter with a Diameter Of 2.5 Microns
PP	Perceived Price
PU	Perceived Usefulness
SC	Supply chain
SCM	Supply Chain Management
SEM	Structural Equation Modeling
SO2	Sulfur Dioxide
SQRTAVE	Square Root of Ave
TAM	Technology Acceptance Model
TRA	Theory of Rational Action
UTAUT	Unified Theory of Acceptance and Use of Technology

VOC	Volatile Organic Compounds

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Due to limited theoretical knowledge and practical experience in the field of research, the thesis inevitably has many limitations and shortcomings. Our group is looking forward to receiving comments and advice from teachers and classmates so that we can learn more experiences and improve this thesis better.

Wish all the best will come to everyone.

Can Tho, August 2023

DECLARATION

Our team is committed to the figures analyzed in the article as honest figures, the results of the above research are of the group of authors named in the paper. The data and research results in the thesis "Green Last-Mile Delivery Approaches in E-Commerce and Green Purchase Intention with Gen Z - Case study Mekong Delta - Vietnam" are valid and have never been used to defend any qualifications or certificates. Sincerely thanks for any support for the preparation of this thesis and the information quoted in the thesis has been clearly identified and published in the dissertation.

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EXECUTIVE SUMMARY

In the context of the rapidly evolving e-commerce landscape, the emphasis on sustainable practices has garnered significant attention, particularly in the realm of "Green Last-Mile Delivery." This study explores the concept of "Green Last-Mile Delivery" within the context of e-commerce, specifically targeting the environmentally and health-conscious shopping intentions of Gen Z consumers in the Mekong Delta region - Vietnam. In today's world, as eco-friendly consumption gains widespread acceptance and affordability, to hasten the market adoption of eco-friendly items, having a favorable customer attitude toward green purchasing becomes essential.

Drawing from theories of planned behavior and other relevant theoretical frameworks regarding attitude formation and factors influencing purchasing intentions, this research examines key determinants and associated fundamental mechanisms. We specifically quantify the direct, indirect, and overall effects of health consciousness, environmental concern, and online product evaluation on attitudes and actions toward green purchasing using a combination of qualitative and quantitative data obtained from 502 Vietnamese consumers. The measurement tools are assessed using Cronbach alpha, regression analysis, and SEM … aiming to determine the interrelation between attitude components and their influence on green purchase intentions.

Our results show that environmental awareness and health consciousness represent a substantial internal mechanism that considerably impacts the perceived usefulness and user-friendliness of e-commerce, subsequently shaping attitudes and intentions toward green shopping. Meanwhile, the function of online product evaluation also emerges as a direct social stimulus influencing green shopping intentions but exerts a lesser impact on attitudes. These results furnish valuable insights for burgeoning e-commerce businesses, logistics service providers, enabling decision-makers to adjust to consumer behavior that is environmentally conscious and to support sustainable practices in the last stage of the delivery process.

By striking a harmonious balance between eco-friendly shopping intentions through online product purchases and sustainable delivery solutions, businesses can enhance their competitive edge while generating positive environmental outcomes. Overall, environmental concern not only influences customer interaction with online product

evaluations but also assumes a more pivotal role in shaping attitudes regarding usefulness and user-friendliness through e-commerce, contributing to environmental protection and the formation of green shopping intentions. Our findings offer profound implications for designing green consumer communication strategies. This study provides a fresh and insightful perspective on promoting green shopping intentions, and these discoveries may also aid marketers in developing strategies for future endeavors to enhance consumer green shopping intentions. The findings of this study assist in a deeper understanding of Gen Z's sustainable shopping preferences and provide clarity on the effectiveness of "Green Last-Mile Delivery" initiatives in the Mekong Delta region.

Keywords: E-Commerce, Green Last-Mile Delivery, Last-mile Delivery, Green purchase intention, Online review, Perceived health, Perceived environmental sustainability, Perceived social, Perceived useful, ...

CHAPTER 1: INTRODUCTION

1.1. Introduction

Vietnam's economy relies heavily on the logistics industry, which has grown quickly with an average annual growth rate of 14–16%, despite facing challenges due to the prolonged COVID-19 pandemic (Huong, L.L. *et al.* 2023). However, this situation has boosted the country's import and export activities. With the emergence of new transportation and supply chain trends in the digital economy, Vietnam is considered a potential market in the logistics field (Vinh 2022).

The concept of "Last Mile Logistics" (LML) refers to the final stage in the supply chain of goods. In the case of delivery from businesses to consumers (B2C), LML refers to the process of delivering goods to the recipient's home or pickup point. However, the definition of LML is limited and requires a clearer definition to determine its scope in the supply chain. This definition needs to clarify the starting and ending points of LML to avoid misunderstandings about applying the "final stage" to the transportation from distribution centers to consumers' homes or only between pickup points and consumers' homes. In this research, LML is described as the action of transporting goods from the regional warehouse to the consumer's address.

LML is also noteworthy because it significantly impacts costs in the rapidly growing e-commerce sector. In 2022, there were over 51 million people in Vietnam who would use the Internet for shopping, a 13.5% increase compared to the previous year. Additionally, 73% of surveyed individuals admitted to regularly using online shopping platforms, with 59% mentioning placing multiple orders or purchasing items from international websites (Vinh 2022).

In the context of globalization and technological advancement, the e-commerce industry is becoming a prevalent trend, offering convenience and diversity for shopping. However, the escalation of last-mile transportation poses environmental challenges, especially amid the growing emphasis on environmental consciousness.

Due to the demand for fast delivery from customers and the requirement to comply with Amazon's delivery standards, speed is often prioritized over environmental friendliness (Lawton 2021). However, delivering goods in an environmentally friendly manner needs to be given higher priority to cope with climate change. Creating a greener last-mile delivery

is a challenge (Lawton 2021). The new group of customers entering the market, Gen Z is the most environmentally conscious generation the economy has witnessed (Lawton 2021).

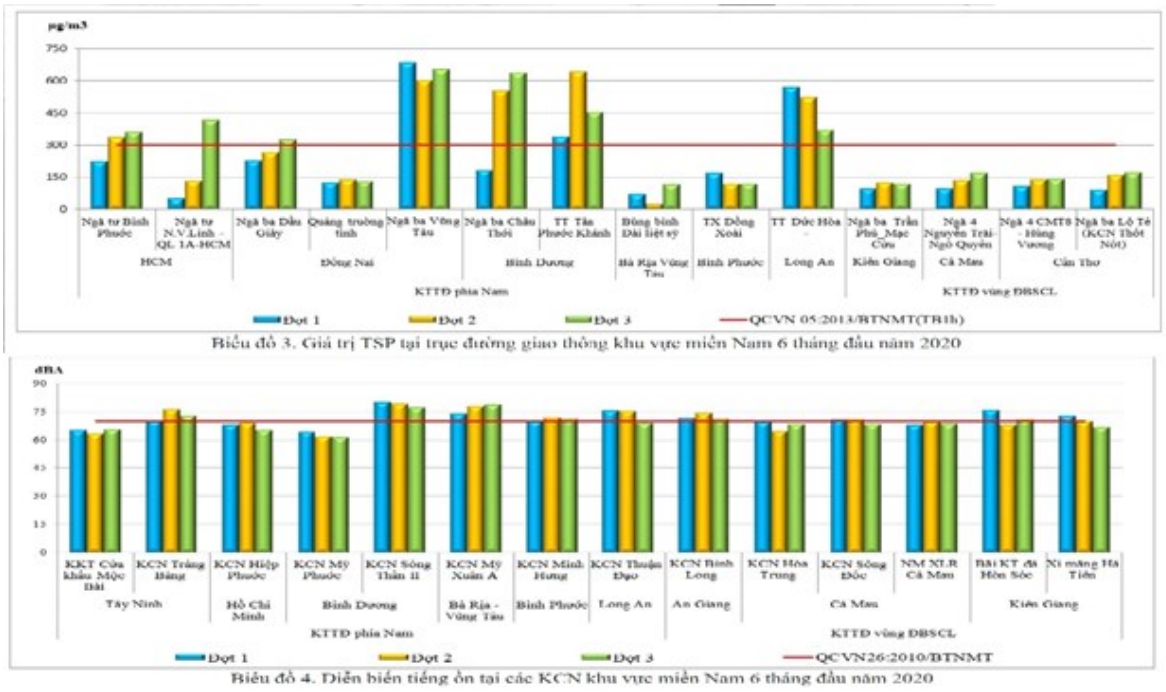
Supply chain management (SCM) plays a crucial role in optimizing the system. Suppliers, manufacturers, distributors, retailers, and end-users all play important roles in the complex SCM system. Packaging and transportation, often referred to as distribution packaging or logistics packaging, are used in supply chain management (SCM) to make it easier for commodities to be transported from their point of origin to their destination. Pallets, crates, boxes, and void-fill materials like expanded polystyrene are just some examples of packaging forms used for transportation. These packaging solutions protect and facilitate the transportation of products across the supply chain from one party to another.

With the increasing focus on the environment and community health, green consumption has caught the public's attention, government, and business community over the years. Awareness of health and the environment can be considered as intrinsic values and beliefs that influence how online products are evaluated, while online product reviews reflect the social factors that consumers can "consider, learn" from and form attitudes towards green shopping, stimulating the intention to purchase green products. From the evidence above, consumer concern for the environment and health is increasing. However, the research group has new findings regarding the current green last-mile topic in Vietnam, especially when it comes to online shopping and the Gen Z population. Therefore, seeking results for these questions is a new aspect of the topic. Additionally, integrating environmental pollution issues in the final mile of delivery, including the use of polluting fuels and non-biodegradable packaging, contributes to air and environmental pollution.

In general, air pollution emissions originate from various sources and have an impact on air quality. The primary sources include stationary fuel combustion from industrial processes like metal smelters, oil refineries, cement kilns, and dry-cleaning facilities as well as stationary fuel combustion from stationary non-road sources like utility electricity and industrial boilers.

The General Department of Environment studied particulate matter variation across regions. Main roads and intersections show high average TSP values with regional fluctuations. Specifically, TSP levels along roadways in the South surpass the Mekong Delta, ranging from 25-687 μg/m3. Some points breach Vietnam's 1-hour TSP limit: Vung Tau junction (Ba Ria-Vung Tau province), Tan Phuoc Khanh town (Binh Duong), and Duc

Hoa town (Long An). 2020's first 6 months saw lowered TSP averages at Bình Phước intersection (Ho Chi Minh City) and Dầu Giây 3-way junction (Đồng Nai), while the Mekong Delta adhered to permissible TSP levels. The average LAeq noise level exceeded Vietnam's 70 dBA limit during 6-21 hours at most points, ranging from 56.7% to 68.5%, particularly along roads and industrial zones.



Biểu đồ 3. Giá trị TSP tại trục đường giao thông khu vực miền Nam 6 tháng đầu năm 2020

Biểu đồ 4. Diễn biến tiếng ồn tại các KCN khu vực miền Nam 6 tháng đầu năm 2020

Figure 1.1: Noise trends in the industrial zones of the Southern region during the first 6 months of 2020. (Source: Environmental Monitoring Department)

Therefore, the Southern region experienced notable TSP and noise impact in the initial half due to industrial and traffic activities, with some points facing localized pollution. The report highlights NO2 and SO2 values within permissible limits.

Vehicles, power plants, industry, forest fires, and wood-burning stoves are all direct sources of fine particle pollution. Additionally, it is created as a result of chemical interactions with other air contaminants. Depending on the region, the amount of fine particle pollution can change throughout the year. In accordance with WHO figures, air pollution causes 7 million deaths annually, with PM2.5 fine particulate matter being the primary factor. According to estimates from health research institutions, 9 out of every 10 people are exposed to air that contains PM2.5 particles at concentrations that are above the legal limit. Many regions and cities in Vietnam have PM2.5 concentrations that are higher than the restrictions imposed by QCVN 05:2021/BTNMT. According to the report on the status of PM2.5 in Vietnam in 2021 (finished in 2022), the Red River Delta

region—particularly the capital city of Hanoi and the neighboring provinces—has the highest concentrations of PM2.5. The levels of PM2.5 in both Hanoi and Ho Chi Minh City are also disturbingly high. Based on data from Vietnam's air quality index (AQI), Bac Ninh comes in second with an average AQI of 171, Ho Chi Minh City comes in at 161, Thái Nguyên comes in at 153, and other provinces and cities are ranked behind Hanoi. According to the environmental status report for the years 2016 to 2020, our nation saw over 20,000 cases of lung cancer and a startling 17,000 deaths from the disease.

This study focuses on optimizing environmentally-friendly last-mile delivery methods and their impact on the green purchasing intention of Gen Z in the Mekong Delta region, Vietnam. By conducting research within this specific context, we aim to provide crucial insights into the significance of eco-friendly last-mile delivery and how it influences the green purchasing intention of Gen Z. The correlation between enhancing last-mile delivery and promoting environmental awareness in shopping can lead to valuable recommendations for fostering sustainable development in the e-commerce and consumer sectors in this region.

To research what influences someone's intention of consumers to apply Green Last Mile Delivery and the green shopping trends of the Gen Z generation, it is necessary to establish and interact with the concerns between the public and businesses and separate the sustainability factors in the system. To direct retailers and logistics service providers in a strategic direction, it is vital to close the research gap on customer acceptability and its connection to delivery methods. This study also provides insights into how customers perceive the delivery system and create sustainable goals in the logistics field, based on previous studies on vehicle-based delivery strategies.

1.2. Research objectives

This study's main goal is to examine the variables influencing Gen Z's intention to buy green products on e-commerce platforms for green last-mile delivery (GLMD) services in the Mekong Delta region - Vietnam. The study aims to clarify the Green Last-Mile Delivery method in E-commerce and Gen Z's green purchase intention with the following specific objectives:

- Determining the elements influencing consumers' propensity to purchase green goods of Gen Z in e-commerce when using GLMD services.

- Proposing solutions to improve Gen Z's green purchase intention and promote the development of Green Last-Mile Delivery in e-commerce in Vietnam.

1.3. Research questions

- What factors affect the purchase of Green Last-Mile Delivery and Gen Z's green purchase intention in e-commerce in the Mekong Delta of Vietnam?

- How is the impact of Gen Z's environmental awareness on Green Last-Mile Delivery in e-commerce?

- Are there any demographic differences among consumer groups in green buying attitudes and intentions?

- What solutions can improve green purchase intentions and promote the development of Green Last-Mile Delivery in e-commerce in Vietnam?

1.4. Research scope and limitations

1.4.1. Research scope

The survey respondents are Gen Z, specifically those who are between the ages of 18 and 24 and are living in the Mekong Delta provinces of Vietnam. Research period from April 2023 to August 2023. In which the data collection time is from 3 to 4 weeks and the maximum time to collect this feedback form is two months. The research object is the factors affecting green purchase intention with Gen Z on e-commerce platforms when using Green Last-Mile Delivery Approaches in E-Commerce and green purchase intention with Gen Z service.

1.4.2. Limitations

The acceptance dynamics examined in this study will alter and vary because of further advancements in digitization and delivery techniques. The use of green transport such as trams or bicycles can limit the range and speed of transportation compared to traditional trucks. This can make it challenging to meet the need for quick delivery in a short time and tight areas. The effects of convenience, sustainability and cost can vary by product category as consumer preferences change. Finally, the survey subjects of this study did not include all ages belonging to Gen Z, this study mainly surveyed Gen Z subjects who are university students, aged between 18 and 24 years old.

1.5. Methodology and data overview

In this research, our team used two research methods, quantitative and qualitative, collected data using both primary and secondary sources of information. The estimated number of surveys is 300, using SPSS 25 and Amos Graphics software to analyze survey results. Secondary information is collected, statistically, analyzed, and synthesized from domestic and foreign research articles, books, and magazines.

1.6. Thesis outline

Chapter 1: Introduction and outline of the thesis

Introduces the research background, research objectives, research questions, research scope, research methods and data overview.

Chapter 2: Document Review

Clarifies the theory of Green Last-Mile Delivery, e-commerce, Gen Z consumer portrait and Gen Z green purchase intention along with the research model of this article.

Chapter 3: Research Methods

Presents research methods, scales and calibration methods. This chapter aims to concretize and implement research methods, and at the same time to test the research model with established theories.

Chapter 4: Results and discussion

Analyzes data from previous research results in Chapter 3 and SPSS. From there, it can be deduced which factors will affect Gen Z customers' purchase intention.

Chapter 5: Conclusion

In this chapter, the research proposes appropriate solutions and recommendations to improve service quality and green consumption intentions of customers, especially Gen Z. At the same time, it helps to find out and provide suggestions for future research.

References & Appendix

This section provides references for the research, with appendices for the research question.

That encompasses all the content when the research team discusses Chapter 1, aiding us in comprehending the discussed points of the Introduction and Thesis Outline and establishing connections for the content of Chapter 2. Subsequently, in the following chapter, the research team will delve into new aspects and contribute to the upcoming main objectives of the research.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL MODELS

2.1. Theoretical model

The Theory of Rational Action (TRA), The Technology Acceptance Model (TAM) and the Theory of Unified Theory of Acceptance and Use of Technology (UTAUT) are two significant theories in explaining human behavior. In this study on green delivery methods in e-commerce for Gen Z's green purchase intention, we combine both theories to have a better understanding of this behavior.

According to TRA theory, attitudes, and subjective norms have a crucial role in predicting behavior (Nguyen and Dung 2023). Positive evaluation of green delivery methods and support from others leads to higher green purchase intention and ability to engage in green purchasing behavior. Studies have confirmed a strong correlation between attitudes with behavioral purpose and conduct, as well as subjective norms (Nguyen and Dung 2023).

Davis developed the Technology Acceptance Model (TAM) in 1986 to predict the adoption of an information system (Nguyen 2023). TAM uses the principle of reasoned action as a foundation (TRA) and focuses on identifying the changes required in the system to make it more acceptable to users. According to TAM, an information system's acceptability is dependent on two crucial factors: perceived usefulness and perceived ease of use. It's important to talk about the "Green Last-mile" in transportation and technology. This concept focuses on finding eco-friendly solutions for delivering goods from distribution centers to their destination. This can impact user acceptance of technology, so it's important to consider it when using the TAM model. Green transportation options are used to reduce pollution and carbon emissions.

The UTAUT model, developed by (Nguyen and Huynh 2022), is a valuable framework for studying technology adoption and usage. In the context of adopting green delivery methods in e-commerce, certain elements, like dependability, effectiveness, usability, and excellence, are very important. individuals' attitudes and intentions to use them (Nguyen and Huynh 2022). Specifically, members of Gen Z are motivated to utilize green delivery methods when they have confidence in their efficiency, ease of use, and associated benefits (Nguyen and Huynh 2022). It has been demonstrated that UTAUT performs better than other rival models (Nguyen and Huynh 2022).

Based on theories from models such as TAM, TRA, UTAUT, and to study the attitudes and intentions of using green last-mile delivery services among Gen Z in the Mekong Delta region, the research team utilized previous studies by authors such as (Mishal et al., 2017; Klein and Popp, 2022; Nguyen and Huynh, 2022; Nguyen and Dung, 2023). Through the synthesis of these models, the research team identified that the factors of "company reputation" and "risk perception" have not been fully examined. Additionally, the current usage of green last-mile delivery services in Vietnam is still relatively new and not widely implemented. Therefore, the research team incorporated these factors into their model.

This research confirms the relevance of ease of use and perceived usefulness in determining the attitudes of Gen Z today. It represents the "overall perception of convenience or inconvenience" (Klein and Popp 2022). The research has additionally proved the beneficial effects of attitudes on the chance of using green products (Klein and Popp 2022). The TAM model has been successfully applied to investigate the acceptance behaviors of unmanned aerial delivery and delivery through autonomous vehicles (Klein and Popp 2022). Furthermore, previous studies emphasized the importance of ease of use, perceived utility, and understandability as well as their relationship to convenience, simplicity, and understandability for the effective application of sustainable distribution techniques for green last-mile delivery (Klein and Popp 2022).

Consumer behavior can be affected by their awareness of sustainability (Klein and Popp 2022). Consumer attitudes and intentions toward green shopping behavior are positively impacted by the environmental aspect of sustainability (Klein and Popp 2022). Numerous research has supported the favorable correlation between environmental factors and attitudes in a variety of settings.

According to Klein and Popp 2022, views toward the rapid fashion sector and green last-mile delivery are predicted by environmental concerns in online buying. These findings are supported by the impact of environmental imagery, which positively affects attitudes and intentions (Klein and Popp 2022). Consumer support for sustainability in both the environmental and economic aspects has been demonstrated through further research on the environmental element of sustainability.

Last but not least, according to Ignat and Chankov (2020), demonstrating the environmental and social implications of green last-mile delivery influences consumer behavior and modifies it favorably to increase the sustainability of the practice. Three

significant theories that describe human behavior are the TAM, TRA, and UTAUT. We incorporate all three theories—TAM, TRA, and UTAUT—in the study of green delivery methods in e-commerce to analyze the green purchasing intentions of Gen Z in order to better understand this behavior.

2.2. Definition

2.2.1. Green Last-Mile Delivery

Pandemic COVID-19 and the rise of remote work have highlighted the significance of efficient goods transportation within cities to promote sustainable societies, as per a study by (Ghaderi et al. 2022). The World Economic Forum's recent report (2021) predicts that the growing e-commerce trend may cause a 36% increase in freight transportation in city centers, leading to congestion and higher emissions. Additionally, urban development and increased B2C market growth will escalate the demand for green last-mile delivery, as reported by Ghaderi et al. (2022).

In particular, the significance of green last mile delivery for developing nations is strongly emphasized in the term of "Green last-mile." In these countries, enhancing green last mile delivery is a crucial factor in ensuring sustainable development and reducing environmental pollution. These countries often face issues such as air pollution, water pollution, and noise pollution due to increased delivery operations in densely populated urban areas the adoption of environmentally friendly transportation methods like e-bikes and electric cars, or even traditional bicycles during the delivery process is an effective way to minimize these negative impacts.

The concept of "Green Last-mile" in transportation and logistics aims to optimize the final delivery of goods from warehouses or distribution centers to the destination without negative environmental impacts. Last-mile transportation typically involves vehicles like trucks, cars, or motorcycles to transport goods from post offices or distribution centers to recipients. However, using these vehicles in urban areas often leads to congestion, fuel consumption, emissions, and noise pollution. Last-Mile Delivery (LMD) encompasses activities and processes for the final delivery of goods to customers' doorsteps. To improve LMD efficiency, innovative solutions have been introduced the utilization of modular freight transportation systems is one of these advancements (Kapser and Abdelrahman 2020), unmanned aerial vehicles for delivery (Ghaderi et al. 2022), integration with public transportation, cargo bikes, self-driving vehicles, and freight lockers (Ghaderi et al. 2022).

Despite numerous initiatives, the LMD continues to be the most expensive and environmentally damaging segment in the supply chain, as reported by (Yuen et al. 2023). There are several reasons for this. Firstly, unattended delivery is a significant challenge for operators as it creates issues with returns, storage, and redelivery, as reported by Ghaderi et al. (2022) and Kapser and Abdelrahman (2020). Secondly, home delivery poses operational difficulties in identifying addresses in large commercial buildings and condominiums, particularly with security cards, as observed by Ghaderi et al. (2022). Lastly, the lack of consolidation in the final distribution process leads to numerous small shipments compared to truckload shipments, according to Ghaderi et al. (2022), which creates operational challenges for transportation companies, as highlighted by.

Green Last-mile is working towards reducing negative impacts by implementing eco-friendly solutions. These solutions may include the use of green vehicles like electric cars, electric bikes, biofuel-powered motorcycles, and unmanned delivery technology. Other measures that can be taken to implement Green Last-mile include optimizing delivery processes, synchronizing routes, and utilizing shared parking or distribution centers that are close to the recipients to reduce transportation distance and fuel consumption (Kapser and Abdelrahman, 2020; Ghaderi et al., 2022; Yuen et al., 2023). Promoting green last mile delivery also creates new business opportunities and generates employment in developing countries. This is a highly potential industry that encompasses the production and supply of environmentally friendly delivery vehicles, as well as the provision of related services and technologies.

2.2.2. E-Commerce

E-commerce is still expanding at an unparalleled rate, and the climate-related commitments made by shipping companies and e-commerce to their customers are at odds with a lack of knowledge of the socio-behavioral components of green last-mile delivery solutions. By examining how socio-behavioral characteristics, personality traits, and e-commerce incentives may affect e-commerce adoption of green last-mile delivery, this study aims to fill in research gaps in the context of e-commerce.

E-commerce has become a vital part of the global economy, playing a crucial role in generating business opportunities, driving economic growth, and enhancing quality of life. In developing countries, e-commerce holds significant importance in fostering economic development and bridging the development gap between regions. Moreover, it also has the

potential to improve environmental conditions through the adoption of the green last mile delivery model.

E-commerce has revolutionized urban product distribution (Mucowska 2021). It refers to all business activities carried out through electronic means, from providing information to product sales (Mucowska 2021). E-commerce is mainly understood as an online transaction between a business and a customer (B2C). The development of e-commerce took off in 1993 following the release of the first browser, which allowed for rapid expansion (Zwass, no date). E-commerce is the practice of purchasing and reselling products or services online. (Mucowska 2021). This type of business has grown significantly as more people and businesses access the internet. By 2020, almost 60% of the world's population is expected to be online (Zhang, Zheng and Wang 2020). The use of electronic devices has made it possible for companies to interact with customers, governments, and other businesses in a variety of ways. E-commerce has become more popular due to the rise of smartphone usage. To keep up with changing consumer behavior and increase e-commerce income, it's important to streamline checkout procedures, improve payment methods, and enhance delivery (Mucowska 2021).

E-commerce not only brings economic benefits but also facilitates progress towards sustainability. A crucial element in achieving this goal is green last mile delivery, which refers to the efficient and environmentally friendly transportation of goods from distribution centers to end consumers. The literature highlights some of the advantages of e-commerce, such as product diversity, competitive pricing, efficient delivery, and convenience (Nogueira, De Assis Rangel and Shimoda 2021). E-commerce is still around, especially when a pandemic like the current Covid-19 is in effect (Kissler et al. 2020). E-commerce, however, affects the ecosystem along the SC (Nogueira, De Assis Rangel and Shimoda, 2021). The highest portion of greenhouse gas (GHG) emissions in B2C e-commerce is caused by transportation (Mucowska 2021).

With 3.47 billion consumers, or roughly 44.5% the population of the planet, composed up purchases online in 2020, according to Report No. 2021: A Global Digital Landscape (Utami and Zanah 2021). The size of the worldwide B2C e-commerce market during the COVID-19 pandemic in 2020 is estimated to be 2.44 trillion USD (Utami and Zanah 2021). The usage of road vehicles for product delivery has expanded along with the growth of B2C E-Commerce globally (Nogueira, De Assis Rangel and Shimoda 2021b). One of

the main causes of the world's carbon dioxide (CO2) emissions is transportation, accounting for 25% of all emissions worldwide (as a percentage of all emissions, transportation was the country that emitted the second-most greenhouse gasses in 2017), according to the International Energy Agency (Nogueira, De Assis Rangel and Shimoda 2021b). Road travel is responsible for 74% of those emissions overall (Nogueira, De Assis Rangel and Shimoda 2021b).

The rise of e-commerce has caused an increase in environmental issues include noise, CO2 emissions, traffic, and traffic congestion. Last-mile delivery has increased due to e-groceries and food delivery services and is expected to rise by 78% globally by 2030 (Veronica 2022). Consumers value fast delivery, putting pressure on the environment (Nogueira, De Assis Rangel and Shimoda 2021b). Studies suggest that minimizing greenhouse gas (GHG) emissions from the supply side is possible by using freight trucks, optimizing routes, and assigning GHG emissions to specific shipments, without a major financial investment (Nogueira, De Assis Rangel and Shimoda 2021b).

Consumer behavior has emerged as a critical component of improving supply chain (SC) sustainability in this context by considering not just economic and financial factors but also how environmental sustainability affects their purchasing choices (Nogueira, De Assis Rangel and Shimoda 2021b). Increasing e-consumer knowledge can be a significant strategy to change customer behavior and improve the sustainability of SC operations (Nogueira, De Assis Rangel and Shimoda 2021b).

Some studies (Morganti et al. 2014; Yuen et al. 2018) indicate that customers prefer home delivery. However, e-commerce customers have started to recognize the environmental impact of last-mile e-commerce deliveries. Despite this, the fastest delivery method remains the most popular. But some customers are opting for less environmentally harmful delivery methods when possible (Theory of Reasoned Action - an overview 2020). Several factors influence environmental sustainability in organizations, such as stakeholder pressure, adherence to environmental legislation, business size, sector, region, place in the value chain, strategic focus, and managerial mindsets. These organizational and environmental factors have been extensively studied to understand what motivates organizations to adopt environmentally sustainable practices (Bansal and Roth 2000).

2.2.3. Green purchase

According to Pham et al. (2020), green products are defined as items that promote the betterment of the environment. Products with eco-friendly materials or packaging as green products. Additionally, identified green products as those that can be recycled or conserved, while also avoiding pollution and damage to natural resources. Green shopping, also known as sustainable or environmentally friendly shopping, refers to the act of purchasing products or services that have a minimal negative impact on the environment and contribute to overall sustainability goals. In the context of a developed country, green shopping involves making conscious consumer choices that prioritize environmentally friendly attributes such as energy efficiency, recyclability, reduced carbon emissions, and the use of renewable resources.

In developed countries, consumers are growing increasingly conscious of the effects on the environment. of their shopping choices and actively seek sustainable options, including supporting green last mile delivery. Green shopping not only meets the demand for eco-friendly products but also encourages businesses to adopt sustainable production methods and improve their environmental performance. Initiatives such as eco-labels, carbon labeling, and sustainable certifications help consumers make informed decisions by providing information on the environmental impact and sustainability credentials of products. Sustainable consumption refers to the responsible use and disposal of products that satisfy personal needs and preferences while causing minimal environmental damage. This includes practices such as green consumption, which enhances the quality of everyday activities like living, eating, and working (Pham et al. 2020). Buying environmentally friendly products is commonly known as green buying behavior, green consumer conduct, or environmentally protective behavior (Pham et al. 2020).

The article's authors state that green consumption refers to purchasing and utilizing products that are both environmentally and health friendly. Essentially, this involves getting the most out of items while minimizing the usage of disposable and harmful products. The study highlights several green products such as reusable cloth bags, bamboo and stainless-steel straws, glass, stainless steel, and plastic containers. These products serve as alternatives to disposable items and encourage sustainable consumption practices. The push for green consumption is fueled by a sense of responsibility for the environment and the severity of environmental issues (Pham et al. 2020).

According to research done by Nguyen et al. (2021), green products usually come with a higher price tag compared to conventional ones. Similarly, (C. Ling 2013), found that the cost of producing and certifying environmentally friendly products is typically higher. However, (Nguyễn et al. 2021b) revealed that even environmentally conscious consumers are deterred from buying green products due to their high prices. Nguyễn et al. (2021b) study in 2021 also showed that while many companies are striving for eco-friendly practices, customers are reluctant to spend more money on green products because of concerns about the cost. As a result, consumers tend to opt for conventional products over green ones due to the higher cost associated with the latter. Kavilanz (2008) states that green products are generally considered more costly than conventional items, leading to a decline in the number of green consumers. In Vietnam, Hồ et al. (2019) have conducted studies on the level of consumer awareness concerning prices. However, there is currently a dearth of study on how price information affects consumers' decisions to buy eco-friendly goods. Therefore, the research model will incorporate price as a factor influencing green consumer behavior and will help to develop a research hypothesis.

The research carried out by (Gayathree 2016) suggests that customers are eager to pay more for environmentally friendly goods and are not particularly concerned about environmental issues. The study further proposes that companies should stress the advantages of buying green products and educate consumers to make eco-friendlier choices.

Research conducted in Malaysia has found that there is no significant correlation between attitudes toward environmental protection and green products. This contradicts previous studies that suggested a positive association between pro-environmental behavior and attitudes toward green products. Additionally, the research highlighted that the government's role has a more substantial link with attitudes toward green products. This finding is consistent with other studies, which indicate that consumers rely on the government to protect the environment.

Furthermore, research has shown that the personal values and beliefs of consumers play a crucial role in their pro-environmental behavior. This result is consistent with earlier research (Gayathree 2016). The attitude towards eco-friendly purchasing is greatly affected by an individual's disposition and collective ideology. Environmental knowledge and impact are also determinants of such an attitude. The inclination towards nature and

collectivism are strong indicators of positive attitudes towards green products, whereas environmental impact and knowledge have a relatively weaker impact Gayathree (2016).

Organizations utilize brand positioning as a strategy to communicate brand characteristics to their customers. This is particularly critical for green products, as failure to convey their unique features and distinguish them from other products can result in failure. Studies have shown that effective green brand positioning has a strong correlation with knowledge of green brands, leading to a positive attitude toward them Gayathree (2016).

According to a research study conducted by Gayathree (2016), the influence of green brand image, satisfaction, trust, and awareness on the preference for green brands was examined. It was found that out of all the factors, awareness of green brands had the weakest association with a preference for green brands.

2.2.4. Gen Z

Researchers will define Gen Z differently, as well as their age range. Some researchers think that Gen Z is a person born in the 90s (Lestari 2019). Generation Z dates back to 1995, living in the age of comprehensive technology, equipped with technology devices from an early age (Berkup 2014). Another researcher said that this generation was born between 1997 and 2012 (Laitkep and Repkova Stofkova 2021). This research pertains to the generation born between 1997 and 2012. They were born into the complete technology generation so they wanted things to happen quickly, instantly, and believed they could do anything with their devices. As consumers, this generation wants a fast response, and fast delivery when ordering products or services.

According to modern technologies, Gen Z is predicted to have a developed, planned education and a higher level of living than prior generations (Berkup 2014). Gen Z workers are demanding, adaptable, and creative with continually shifting perspectives and a strong concern for environmental issues. These people thus desire cutting-edge and contemporary goods that raise their social position and enhance their good reputation (monamedia 2023). According to the Young and Generation Z survey conducted by Deloitte Global 2021, more than 25% of GenZers admit that the environmental effect of particular companies has affected their purchase habits.

They are expected to be the generation that drives e-commerce consumer behavior in the coming years (Vieira et al. 2020). Gen Z consumer behavior will be different from other generations, they like to explore the world of the internet or digital platforms. They are

interested in product reviews and are eager to share their perspectives and experiences of buying products enthusiastically. This generation spends money carefully on their activities, doing thorough research to choose for themselves the best and most worthy products (Vieira et al. 2020).

2.3. Relevant Theoretical Frameworks

In a 2022 study conducted by Patrick Klein and Bastian Popp (Klein and Popp 2022), the factors influencing consumer adoption and usage of sustainable last-mile delivery methods in e-commerce were investigated. The researchers identified several key factors associated with perceived sustainability, including perceived ease of use, perceived usefulness, attitude, perceived economic sustainability, perceived environmental sustainability, perceived social sustainability, and perceived costs. These factors play a critical role in shaping consumers' intentions to adopt and utilize green delivery options.

The findings of Klein and Popp's research indicate that perceived ease of use and perceived usefulness have a positive impact on the acceptance of sustainable distribution methods, while perceived costs act as a limiting factor. The study emphasizes the significant effects of perceived sustainability, encompassing environmental, economic, and social components, on the acceptance of different delivery modalities (Klein and Popp 2022).

When it comes to explaining the intention to use specific delivery methods, perceived usefulness, perceived ease of use, perceived sustainability, and perceived costs prove to be more effective than other determinants. Factors such as convenience, delivery speed, and accessibility tend to outweigh sustainability considerations in consumers' decision-making processes. Perceived usefulness also plays a crucial role in shaping consumer attitudes toward last-mile delivery, aligning with previous research findings (Ho, Wang and Yen 2015).

Among the various dimensions of sustainability, perceived environmental sustainability stands out as the most influential factor in last-mile delivery. Positive attitudes toward environmental sustainability significantly influences consumer perceptions, complementing previous studies highlighting the role of environmental awareness in consumer purchase decisions (Ek Styvén and Mariani, 2020; Milioti, Pramatari and Kelepouri, 2020) These findings support and extend previous work (Ignat and Chankov 2020) and are consistent with the findings of Choi and Ng (2011), who also found a stronger influence of environmental factors than economic sustainability..

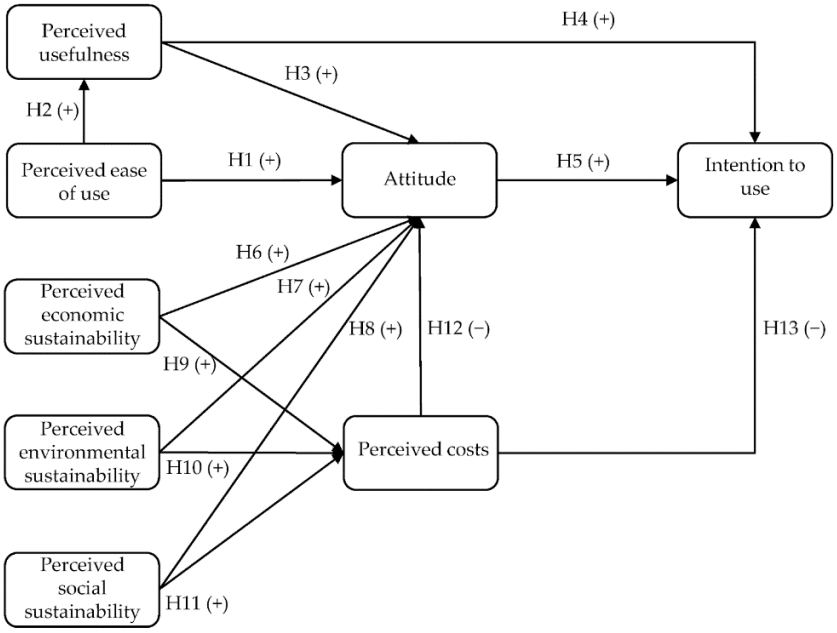


Figure 2. 1. The model proposes factors that influence consumer attitudes and intentions (Patrick Klein & Bastian Popp 2022)

According to (Jacoby and Olson, 1976), there are two types of prices: objective and perceived. Price refers to the cost associated with a purchase transaction. Consumers contrast the objective price with their internal reference price, which represents their own assessment of the true cost of the product (Winer 1986). According to research on purchase intentions like those by Ramadhan and Muthohar (2019), perceived price is a crucial factor. The consumer's prior consumption history determines the reference price that influences the perceived price range. When a consumer believes the price of a product is excessively expensive in comparison to similar items, they are less likely to make a buy. Consumers may feel less ethically motivated if the total benefit and worth of a product are adequate to offset a price difference. When compared to less environmentally friendly items, green products typically have higher perceived pricing and overall values, which may help close the gap between customers' internal reference prices and lessen the likelihood of unethical thoughts (Satriawan 2020).

According to research findings, a consumer's moral intensity and judgment are influenced by perceived price (Tian et al., 2022). Customers typically view green products to be more expensive and valuable overall than non-green ones, which leads to more favorable moral perceptions and higher perceived pricing. Customers see more clear overall advantages and have favorable moral sentiments about the product when the perceived price of green items

is greater, which in turn increases their moral intensity and moral judgment. Customers' consideration of whether there is a quality alternative product also influences the moral intensity of the purchase.

Additionally, the moral identity of customers may be awakened by the environmental moral issues represented by green products, improving the moral intensity and moral judgment. As a result, when consumers perceive a higher price for a green product, they naturally develop a higher moral judgment rating of the product. In direct proportion to how much consumers believe a green product costs more, the moral intensity of the product increases. Based on that data, this study makes the claim that customers' moral intensity and moral judgment will increase with greater perceived prices. As a result, while doing research, we consider perceived pricing to be a hypothesis.

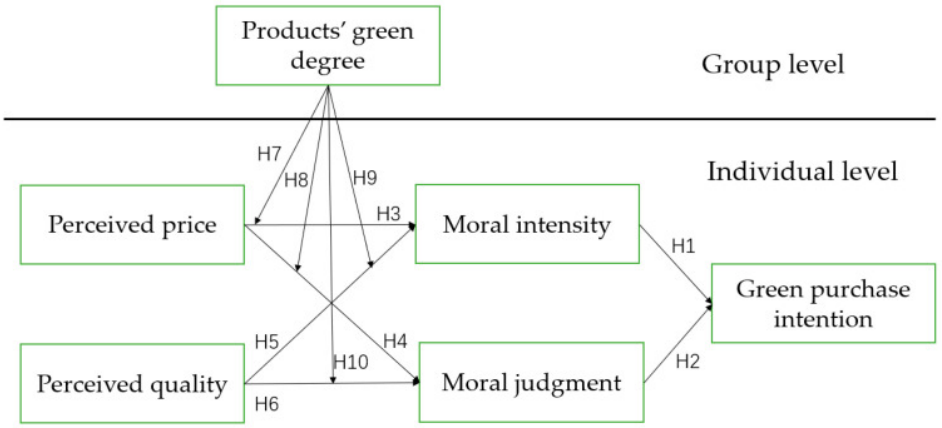


Figure 2. 2. The proposed model factors affecting green purchase intention: a perspective of ethical (Ziyuan Tian & Xixiang Sun, 2022)

A study conducted by Nguyen Thi Hoang Yen and Dung Phuong Hoang in 2023 titled "The Formation of Attitudes and Intention towards Green Purchase: An Analysis of Internal and External Mechanisms" shed light on the significance of the online review factor in influencing attitudes and intentions towards green purchasing (Nguyen and Dung 2023). The researchers found that online product reviews, which represent social stimuli capable of shaping attitudes, do have a positive impact on the attitude and intention to purchase green products. However, it was observed that online product reviews alone may not always generate favorable attitudes toward green options. While positive reviews indicate a high level of interest and concern among customers regarding green products, exposure to negative feedback alone may not be sufficient to alter their attitudes.

Interestingly, individuals who actively seek out and read online product reviews related to green products exhibit a significantly higher inclination towards intending to purchase green products. This finding aligns with a similar study conducted by (Nguyen and Nguyen 2020), which further corroborates the association between online product reviews and green purchase intentions.

In addition to having the greatest favorable influence, health consciousness also acts as a mediator between environmental concern and the intention to buy green products.

Health consciousness entirely controls how the environment has an influence. In other words, the heart of environmental concern is the concern over the negative effects of environmental deterioration on people's health and general well-being (Hopper and Nielsen 1991). Therefore, health consciousness might fully account for the influence of environmental concern on green purchasing intention. The findings of Nguyen and Dung (2023) shed light on the linkages between environmental concern and health consciousness, which have traditionally been treated as two distinct predictors of green purchasing behavior in prior studies.

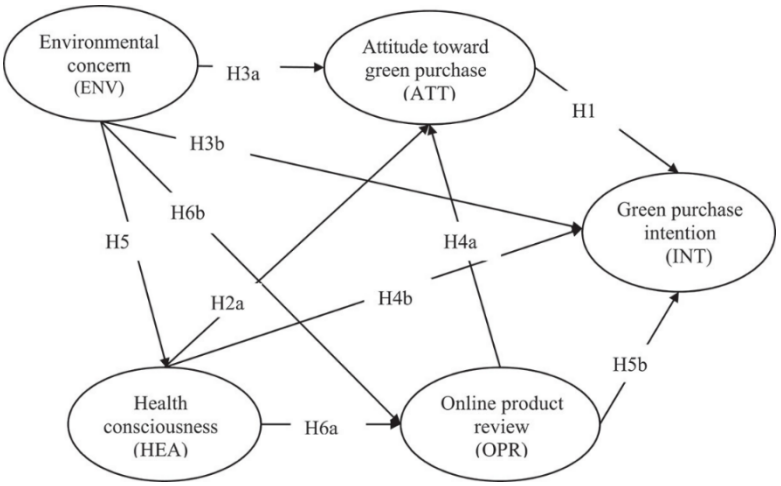


Figure 2. 3. The proposed model of the formation of attitudes and intention towards green purchase (Nguyen Thi Hoang Yen & Dung Phuong Hoang, 2023)

Perceived health refers to an individual's inclination to engage in healthy behaviors (Becker et al. 1977), and those with high health protection consciousness believe that using green products benefits their health, the environment, and the community. Health-conscious consumers are more likely to adopt green products, as they are perceived as healthier than conventional ones (Tan and Hair 2020). Green products use recyclable

materials, minimize waste generation, and emit fewer harmful substances into the environment (Nimse et al. 2007)

The rapid growth of e-commerce has led to challenges in urban areas, particularly last-mile distribution. The increasing volume of parcel deliveries has led to increased demand for delivery vans, causing congestion, pollution, and negative health impacts.

The escalating demand for urban parcel deliveries has burdened existing infrastructure, exacerbating congestion and negatively impacting health, the environment, and safety. This has prompted increased customer awareness and the implementation of new governmental legislation, compelling courier services to prioritize sustainable and environmentally friendly operations (Hu et al. 2019).

Healthcare organizations must prioritize social welfare while protecting and improving the environment, including optimizing medical waste, recycling materials, reducing carbon emissions, implementing green procurement practices, and adopting sustainable packaging design in their supply chain management activities (Carvalho, Vilas-Boas and Neill 2014). Healthcare supply chain management often faces sustainability issues, such as inefficient product and service delivery, increased storage and logistics costs, and environmental concerns related to material handling, energy use, water and air pollution, hazardous waste, high carbon emissions, and health impacts (Martinsen and Huge-Brodin 2014)

We have examined research models that investigate the factors influencing consumers' green purchase intention. Drawing from these models, we aim to identify the appropriate factors to incorporate into our research model, specifically focusing on the purchase intention of Generation Z consumers in Vietnam. By considering these influential factors, we have determined that online reviews and perceived health are two variables that should be included in our research model.

We have leveraged previous studies in the field of sustainable consumption awareness and related concepts to gain valuable insights and address any limitations in our own research. This has allowed us to build upon existing knowledge and ensure the completeness of our study.

In summary, our research model will integrate relevant factors identified in previous studies while emphasizing the variables of online reviews, perceived price and perceived health as key elements affecting the purchase intention of Gen Z consumers in Vietnam. By

incorporating these convincing factors, we aim to contribute to a more comprehensive understanding of sustainable consumption behavior among this specific demographic.

2.4. Hypothesis Development

2.4.1 Perceived usefulness and Perceived ease of use

Due to the advantages and convenience that internet purchasing offers, people in Vietnam have currently come to accept and feel more at ease with it since the Covid 19 epidemic. The convenience, which takes into account the consumer's time and effort, as well as the simplicity of use, is one of the key benefits of online purchasing on e-commerce platforms. Perceived utility and simplicity of use are the two main factors that influence a person's behavioral intention to utilize e-commerce channels for retail buying (Rao et al., 2021). Perceived usefulness is the tendency for people to use or not use an app depending on how much they think it will improve their performance. Even if a potential user thinks a certain application is helpful, they could also think that the system is too challenging to operate and that the performance advantages exceed the challenges. According to Davis (1989), this is known as perceived ease of use.

Perceived ease of use means one's perception of ease of use, which may be based on personal experience or other opinions (Perumal et al. 2019). This convenience means that their work will be easier using technology than manually or without technology (Wafiyyah and Kusumadewi 2021). The application interface can lead to dissatisfaction and disapproval of use by consumers, especially inexperienced consumers. Perceived ease of use reveals a strong correlation between customer purchase behavior and openness to new things (Perumal et al. 2019). In the case of this study, green products and green last-mile delivery will be defaulted as one of the consumers' options when making purchases on e-commerce, the incorporation of these activities into online commerce will give rise to a new type of interaction that not everyone can use quickly and effectively. People will be able to quickly absorb learning and increase their intention to use if this integration into e-commerce is quite simple to utilize. This leads the study to examine the following claim:

Hypothesis (H1): The higher the perception of ease of use, the more positive the attitude toward green shopping.

Hypothesis (H2): The higher the perceived ease of use, the more positively perceived usefulness.

According to Wafiyyah and Kusumadewi 2021, Perceived usefulness measures how much a person believes that implementing a particular system will enhance their quality of life or work performance as compared to doing it without utilizing technology. The E-commerce goal is to make certain that a business is supplying customers with maximum ease by reaching them and satisfying their needs and demands (Perumal et al. 2019). The usefulness is felt when consumers can make purchases quickly, with complete information on the website and easy ordering and payment operations without being limited by distance and time. The consumers' convenience when adjusting their needs, making choices in the process of making transactions so that it is more practical, even when the application has an innovation. The consumer's view of the advantages of green purchases is what is meant by perceived usefulness in the context of this study. Choosing to employ green last-mile delivery for online purchases will benefit the environment and enhance quality of life.

Hypothesis (H3): The higher the perceived usefulness, the more positive the green purchase attitude.

Hypothesis (H4): The higher the perceived usefulness, the more positive the green purchase intention.

Hypothesis (H5): The better the attitude towards green purchase, the greater the green purchase intention.

2.4.2 Perceived Environment

Perceived Environment pertains to individuals' personal perception and interpretation of their physical and social surroundings, encompassing aspects such as traffic congestion, air quality, noise pollution, convenience, and overall sustainability within the last-mile delivery process. Recognizing the significance of environmental consciousness, stakeholders in the e-commerce industry can devise strategies and solutions that align with consumers' environmental concerns while improving their delivery experience. This involves optimizing route planning, introducing eco-friendly vehicles, promoting alternative delivery methods, and utilizing technology to provide real-time delivery updates and minimize disruptions (Mucowska 2021).

The concept of the "green last mile" highlights the final stage of environmental responsibility, which is closely related to the personal commitment of users towards environmental protection. The environment has both positive and negative impacts on humans and other living beings, and individuals can take personal responsibility for

environmental protection if they have a comprehensive understanding and enjoy the benefits it brings (Gadenne et al. 2011).

Promoting environmental responsibility requires the commitment and intention of customers to engage in environmental protection activities and improve environmental quality (Kumar and Ghodeswar 2015). When individuals realize the negative consequences of environmental degradation on human life and other species, they become aware of their responsibility to protect the environment (Gadenne et al. 2011). Furthermore, when customers actively contribute to addressing environmental issues, they experience a sense of awareness (Lee, 2008). They may be motivated by a deep concern for their own environmental well-being and self-preservation. By doing so, they are considered contributors to environmental protection (Griskevicius, Tybur and Van den Bergh 2010).

Environmental sustainability for autonomous cars in last-mile delivery is viewed through decreases in pollutants and fuel consumption, which greatly impacts adoption behavior (Dirsehan and Can 2020). As a last point, Ignat and Chankov (2020) emphasized how focusing on the environmental and social effects of last-mile delivery influences customer behavior and leads to positive improvements toward more sustainable last-mile delivery techniques. In conclusion, all three dimensions of sustainability have been demonstrated to have favorable effects on customer sentiments, which gives rise to the following hypotheses:

Hypothesis (H6): Perceived Environment has a positive impact on attitudes toward green last-mile delivery.

2.4.3 Environmental Awareness Affects Health

Environmental concerns and health awareness could be seen as internal values and beliefs, whereas online product reviews are social cues that consumers may "learn" from as they develop attitudes toward green purchases and, as a result, inspire the intention to buy green products. According to recent studies (Mishal et al. 2017; Vasan M. 2018; Shanawi Abdulsahib, Eneizan and Salman Alabboodi 2019; Xu, Wang and Yu, 2020; Jonathan et al. 2021), the two values that impact attitudes toward green buying are those related to health and the environment.

We propose that environmental concern and health consciousness are related to one another for two main reasons, despite the fact that various pieces of data emphasize them separately as predictors of green purchasing behavior. First, there is a direct connection

between environmental conditions and human health. Clean air and water, as well as suitable natural circumstances for food items that promote healthy living, are all benefits of good environmental quality (Veton Kurteshi 2023). People are concerned about environmental quality mostly because of a fear that environmental deterioration might endanger their health and general well-being. When one considers facts, one's actions, or the behavior of others with implications for the environment, this becomes the primary concern (Hopper and Nielsen 1991). As a result, those who care deeply about the environment become extremely cognizant of factors that might hurt or improve health. Second, health consciousness is a multifaceted idea that denotes one's readiness to seek out and utilize health information, as well as engage in actions that promote good health (Michaelidou and Hassan 2008). According to earlier research, people who are more aware of risk factors are more likely to adopt healthier lives (Iversen and Kraft 2006). As a consequence, those who are concerned about the environment might become informed about its current condition and the dangers it poses to their health and well-being, which may inspire them to engage in health promotion activities as a sort of self-defense. In conclusion, environmental concern may serve as an early indicator of knowledge and health-related action

Hypothesis (H7): Environmental concern has a positive impact on health consciousness.

2.4.4 Perceived Health

Perceived Health is the purchase of a person to engage in healthy behaviors (Becker et al. 1977). Those who have high health consciousness understand that using green products benefits not only their health but also the environment and community. They believe that using eco-friendly last-mile delivery methods like electric vehicles, bicycles, or public transportation can reduce carbon emissions, noise, traffic congestion, and pollution (Newsom et al. 2005).

Health-conscious people have a positive attitude toward green purchasing and support companies that implement such delivery methods (Michaelidou and Hassan 2008). This support depends on their awareness, self-consciousness, and concern for health protection (Schifferstein and Oude Ophuis 1998). Such individuals engage in healthy behaviors to achieve good health. Health-conscious individuals prioritize healthy behaviors and the safety and origin of ingredients in products (Newsom et al. 2005). They view green products as higher quality, nutritious, and sustainable (Alam et al. 2022). Trust in green

promotes a positive attitude towards them and encourages green purchasing (Smith and Paladino 2010). Health consciousness is linked to purchasing organic products, especially those related to health (Li and Jaharuddin 2021; Li et al. 2021). Based on this, our hypothesis is:

Hypothesis (H8): Perceived Health has a positive impact on attitudes toward green last-mile delivery.

2.4.5 Perceived Social

In recent times, there has been a significant shift towards prioritizing environmental protection, making it an integral part of modern living (Grier and Deshpandé 2001). Consequently, consumers now feel compelled to adopt environmentally friendly behaviors in order to avoid being perceived as outdated (Kumar and Ghodeswar 2015). By purchasing green products, individuals can not only showcase their commitment to the environment but also comply with societal expectations (Kim and Park 2012; Oliveira et al. 2017). As a result, consumers recognize that the advantages associated with buying green products have a significant impact on their purchasing decisions (Griskevicius, Tybur and Van den Bergh 2010).

The social factor is a subjective concept that relates to the influence of societal norms on our behavior (Ajzen 2011). It encompasses individuals who share similar habits, desires, and thoughts (Blackwell et al. 2017). When influenced by reference groups like friends, family, the community, or the media, people are more likely to intend to buy eco-friendly products (EricV.Bindah 2013). Among these, the impact of friends and media is particularly notable (Ramayah, Lee and Mohamad 2010). Previous research has shown the significant role of social factors in shaping the intention to purchase eco-friendly products (Fransson and Gärling 1999).

In the context of e-commerce, a study by (Kader et al. 2023) examined the factors influencing the adoption of eco-friendly last-mile delivery among online shoppers. They identified various socio-behavioral factors, personality traits, and motivations for online shopping that can influence consumers' adoption of sustainable delivery practices.

The positive impact of environmental and social activities of companies on consumer attitudes. Engaging in eco-friendly practices and managing hazardous waste, as well as ensuring job security, involving employees, and maintaining regional relationships, contribute to favorable consumer attitudes. Perceived environmental sustainability, such as

emissions and fuel reduction, appears as a crucial element influencing acceptance behavior in the context of autonomous cars used for last-mile delivery. Highlighting the social impacts of last-mile delivery can influence consumer behavior and promote a preference for attitudes towards green last-mile delivery options (Klein and Popp 2022). Based on this, we can formulate the following hypothesis.

Hypothesis (H9): Perceived Social positively influences attitudes towards green last-mile delivery.

2.4.6 Perceived Price

Price is a representation of the costs involved in every purchasing transaction (Raab et al. 2009). Zeithaml (1982) defined price as "what is sacrificed or given up to acquire a product" (quoted in 1988). Prices can be classified as either objective or perceived, according to Jacoby and Olson (Jacoby and Olson 1976). A product's real cost is its objective price, but a consumer's perception of an objective price is its perceived value. When making judgments about what to buy, consumers frequently evaluate internal reference prices with objective pricing. The internal reference price is determined by the perceived price range for the product category among consumers (Winer, 1986). Instead of remembering the real price, consumers encode the cost of a good or service in their thoughts after using it (Zeithaml 1982). For example, even while some customers may not remember a product or service's exact price, they are more likely to recall the pricing as "expensive" or "cheap".

Price is a representation of the cost incurred in every transaction and intended purchase. When the perceived price is the consumer's subjective interpretation of the real price, it may be characterized as the trade-off necessary to acquire a good.

Research has consistently shown that perceived price plays an important role in influencing green consumer purchase intention. Studies have revealed that customers' intention to buy certain products is strongly influenced by their perception of price. Perceived price has been found to have a favorable effect on consumers' green purchase intention towards green products. Perceived prices are shaped by their past consumer experiences, which greatly influences the range of perceived prices.

When consumers perceive the price of a particular product to be higher than for similar products, it can lead to a decrease in their purchase intention. In general, green products tend to have a higher price and overall value proposition than less eco-friendly alternatives.

Building on this understanding, research shows that the overall benefits and value associated with green products can help bridge the gap between consumers' internal reference prices. That way, it can reduce the likelihood of price perception sensations occurring.

In summary, perceived price impacts green consumer attitudes in aspects of sustainability, leading to the following hypotheses:

Hypothesis (H10): Perceived price has a positive effect on attitude towards green purchasing attitude.

2.4.7 Perceived Online Review

Online product reviews are now a frequent and important source of product information (Chen and Xie 2008). When looking for independent and, therefore, unbiased product information, modern consumers, particularly tech-savvy ones, frequently employ this communication channel (Chen and Xie 2008). As a result, they would be able to make purchases with less ambiguity, search expenses, and cognitive dissonance problems (Goldsmith and Horowitz, 2006; Liu, Karahanna and Watson, 2011; Guo, Wang and Wu 2018). Online reviews are said to have a significant influence on consumer's choice of products (Tuten and Solomon 2017). Online product reviews, in contrast to other conventional communication channels, where customers passively obtain product information, need active participation and initiative from the consumer in order to search for and select which evaluations of peers to read. According to Burton and Khammash (2010), consumers take part more in online product reviews for items where there is a higher perceived level of engagement. Additionally, (Nguyen and Nguyen 2020) discovered that consumers are more likely to interact with online product reviews if they have a favorable opinion of their purchase of a green product. In this sense, customers who look for product reviews online are more likely to already have a favorable opinion of the goods. Consumers were more likely to publish favorable than unfavorable product reviews online (Mangold and Smith 2012). The explanation might be that customers who are already interested in a product are more likely to use internet reviews to support their decision after they search for reviews on it. We believe that online reviews of products might strengthen customers' already-positive perceptions, which would subsequently lead to a greater inclination for them to make purchases. The literature also offers empirical evidence that online product reviews have positive effects on purchase intentions across a

range of contexts (Chatterjee 2006; Chen and Xie 2008b; Jalilvand, Ebrahimi and Samiei 2013), and green product purchase decisions in particular (Nguyen and Nguyen 2020). However, other research still shows that customers rely more on the details offered by online evaluations when making purchases of goods (Brodie et al. 2013). The findings of earlier research into the connection between commodity kinds and purchasing intention have been contradictory.

Online product reviews have become a popular and important source of product knowledge. Online reviews help reduce uncertainty, search costs, and cognitive dissonance in the purchasing decision-making process. Consumers actively participate in online reviews and consider them in their final purchasing decisions. Unlike traditional media channels, online product reviews require the active participation of consumers in finding and selecting reviews to read.

Consumers are more likely to participate in online product reviews for products they consider highly relevant, and this engagement may stem from their psychological attachment to the product. Positive reviews about buying green products also get consumers involved in online product reviews. Searching for reviews online helps consumers solidify their choices and maintain a sense of balance and harmony in their interactions.

As a result, consumers tended to post more positive reviews than negative ones, as they were already interested in the product and used online reviews to validate their decision. Online product reviews have been found to have a positive impact on purchase intention in various contexts, especially in green product purchasing decisions. Thus, consumer attitudes were found and online product reviews towards aspects of sustainability, leading to the following hypotheses:

Hypothesis (H11): Online product reviews have a positive impact on green purchasing attitudes.

The research topic on Green Last-Mile Delivery is an important developmental hypothesis in the field of sustainable final-mile delivery. It focuses on reducing emissions and environmental impacts of the last-mile delivery process, while ensuring efficiency and flexibility. It also addresses the use of environmentally protective packaging and explores and compares different countries, both developing and developed, to identify the best hypothesis for this study. Here is a summary of the development of the Green Last-Mile

Delivery hypothesis: Perceived usefulness and Perceived ease of use, Perceived Environmental, Perceived Health, Perceived Social, Perceived Price, Online review. The development of the Green Last-Mile Delivery hypothesis has made significant progress in reducing carbon emissions and environmental impacts of the last-mile delivery process. The utilization of sustainable delivery vehicles, smart technologies, shared transportation and delivery, along with the replacement of traditional last-mile delivery systems, establishes a foundation for a more sustainable and efficient last-mile delivery system in the future.

2.5. Research models

After careful consideration and consultation of the definitions, theories, and related research models discussed earlier, we have formulated the following research model to enhance our understanding of the factors influencing consumers' purchase intention in the context of last-mile delivery in e-commerce in Vietnam. This model incorporates various factors that can impact consumer purchase intention, namely: perceived usefulness, perceived ease of use, perceived environment, perceived health, perceived social, perceived price, and online review. These factors directly influence the attitude variable, which subsequently affects customers' purchase intention.

It is important to highlight that our research model is built upon a thorough review and analysis of existing literature, theoretical models, and empirical findings to ensure the highest level of reliability and validity. The reference and theoretical research models that we have reviewed and applied in developing our model are well-suited to the research context. After careful evaluation, we have determined that the following model is the most suitable for our study:

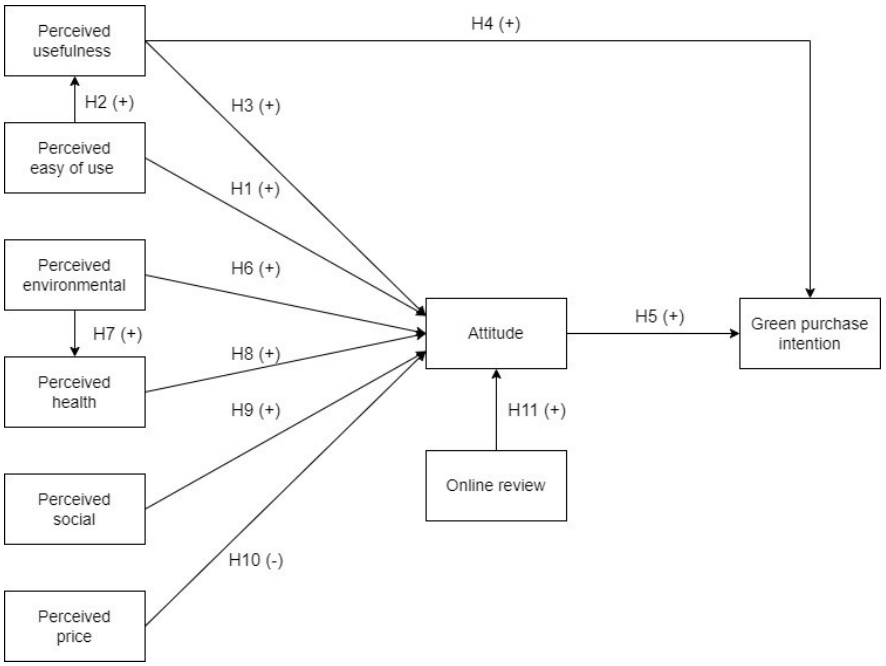


Figure 2. 4. The proposed research model of this study

By employing this research model, we aim to gain valuable insights into the factors that shape consumers' purchase intention in the specific context of last-mile distribution in e-commerce within Vietnam.

This comprises all the content when the research team addresses Chapter 2, aiding us in a comprehensive understanding of the discussed points in the Literature Review and Theoretical Models, and establishing connections for the content of Chapter 3. In the subsequent chapter, the research team will further delve into new facets and contribute to the next main objectives of the study.

CHAPTER 3: METHODOLOGY

In this chapter the research methods we describe include research processes, research approaches, data sources, and data collection and analysis methods. Besides, in this chapter we also want to mention the research ethics and the limitations of this research.

3.1. Samples

In this article, we use quantitative methods to understand the factors of Green Last-Mile Delivery Approaches in E-Commerce and green purchase intention with Gen Z - Case study Mekong Delta - Viet Nam. A survey in Mekong Delta Vietnam was conducted and we collected 668 responses. We do online and offline surveys to get this. Finally, all collected data will be statistical and quantitative data research using IBM SPSS 25 and Amos Graphics software to give the most accurate results.

To conduct research on the factors affecting the purchase intention of consumers through the method of last-mile delivery in e-commerce, our target audience is people who use the internet on mobile devices such as phones, tablets, laptops, etc., from which we will get more accurate results. In Vietnam, students or office workers often spend time during the day on social networks, but because of that, we only target these two objects. The survey we conducted was sent to a diverse audience of different ages and professions so that the research results were as general and objective as possible.

The choice of sample size is an important factor, and it directly affects the results and success of a research paper. The larger the sample size, the more accurate and objective the research results will be, and the lower the error rate in the conclusion process. According to Mulaik *et al.* (1989), if research only has a small sample size, the result is 100 - poor, 200 - average, 300 - good, 500 - very good, and 1000 or more - excellent. Based on that argument, 300 or more samples are appropriate for this research. The sample size is consistent with the theory of Tabachnick and Fidell (2007) on the minimum sample size for multiple regression; the equation for the minimum sample size is 50+ 8m (with m as the number of independent variables). The collected data will be analyzed in this research using SPSS. To collect data for the questionnaire, both offline and online sampling methods can be used.

In summary, we received 668 responses from the online survey. However, only 561 responses were accepted. To make the results of this study as accurate as possible, we had two questions to choose from with poor-quality responses. There are 22/668 responses

(accounting for 3,3%) saying that they have never used E-commerce services or other forms of online shopping. We have removed these comments to improve the quality of the research results. There are 10 responses out of 668 (1,8%) that were not in the Mekong Delta that were also deleted to ensure the accuracy of this research. In addition, we removed 134 invalid responses. That's why we only used 502 out of 668 responses.

Regarding the question "How long do you use the internet in a day", the survey findings indicate that when it comes to the average daily internet usage time for online shopping, the distribution among respondents is as follows: 32,7% spend between 3 and less than 6 hours per day, 29,1% spend between 6 and less than 9 hours per day, and 19,3% spend 9 hours or more per day, 18,9% spend less than 3 hours per day.

Followed by "Your monthly online shopping frequency", the survey findings indicate that when it comes to online shopping, the frequency of purchases for each individual is distributed as follows: 54,2% of individual shop online less than 3 times per month, 31,7% shop online between 3 and 5 times per month, and only 14,1% engage in online shopping more than 5 times per month. These findings provide valuable insights into the online shopping habits of individuals. It is evident that while the majority shop online less frequently, there is a notable segment that engages in more frequent online shopping activities. Understanding these patterns of online purchasing behavior is essential for businesses and e-commerce platforms to tailor their strategies and offerings accordingly.

Regarding "Average monthly spending on your online shopping", the survey reveals that individuals with a monthly expenditure of less than 1 million VND account for 50,6%, while those with an expenditure between 1 million VND and 2 million VND per month make up 24,7%. Furthermore, individuals with an expenditure between 2 million VND and 3 million VND per month represent 13,3%, and only 11,4% of respondents spend more than 3 million VND per month. When it comes to online shopping, it is noteworthy that individuals across all expenditure ranges participate in this activity. From the budget-conscious spenders to those with a higher spending capacity, online shopping has become a popular choice. The convenience, variety, and competitive prices offered by online platforms have attracted individuals from different spending brackets, making it a significant avenue for their shopping needs.

For the other demographic question, there is a difference between the genders of the respondents: 270 (53,8%) for female and 232 (46,2%) for male. These proportions reflect

the gender distribution in the surrounding population in the Mekong Delta region. We conducted both in-person and online consultations to gather diverse opinions on our topic.

In terms of occupation, the survey results show that the majority of respondents, High school accounted for the highest proportion of up to 353 people (70,3%), followed by Workers - Employees with 56 people (11,2%), Trade and Business with 33 people (6,6%), State officials and employees with 33 people (6,6%), and finally Freelancing - Housewives 27 people (5,4%). Those who found this showed a significant High School-High school count among the respondents, reflecting their active participation in the survey. The relatively low percentage of other occupations indicates that there are many occupations and roles represented in the sample survey.

In terms of educational attainment, the proportion of people with University degrees is 349 people (69,5%), followed by High school with 47 people (9,4%), 38 people with College degrees (7,6%), 38 people indicated that they attended Intermediate School (7,2%), and 32 people with indicated that they pursued education Postgraduate (6,4%).

Based on the survey data, the responses regarding the chosen fields of study among individuals are as follows: 227 people are pursuing studies in Economics (45,2%), 90 people are engaged in Technical - Technology fields (17,9%), 54 people are specializing in Graphic Design (10,8%), 51 people are focusing on Language studies (10,2%), 51 people have chosen other fields of study (10,2%) and finally, 29 people are pursuing studies in the Health sector (5,8%).

Based on the survey data, the majority of individuals surveyed hail from the Mekong Delta region. The responses regarding the hometowns of individuals are as follows: 101 people of respondents are from Can Tho (20,1%), 63 are people from Vinh Long (12,5%), 52 people are from Kien Giang (10,4%), 43 people are from An Giang (8,6%), 41 people are from Soc Trang (8,2%), 36 people are from Hau Giang (7,2%), 32 people are from Ca Mau (6,4%), 30 people are from Dong Thap (6%), 30 people are from Tra Vinh (6%), 29 people are from Bac Lieu (5,8%), 24 people are from Tien Giang (4,8%), 12 people are from Ben Tre (2,4%), and 9 people are from Long An (1,8%). These findings shed light on the regional distribution of survey respondents, highlighting the prevalence of individuals originating from the Mekong Delta region, particularly Can Tho, Vinh Long, Kien Giang. Understanding the geographical distribution of respondents helps in gaining insights into the demographic composition of the surveyed population and can assist in tailoring

marketing strategies, resource allocation, and community development initiatives specific to these regions.

Finally, on the question of income, the income distribution among individuals is as follows: 58,6% have a monthly income of less than 5 million VND, 25.1% have an income between 5 million VND and 10 million VND per month, and 16,3% have an income of 10 million VND or more.

Characteristics	**Categories**	**Frequency**	**Valid (%)**	**Accumulative (%)**
Gender	Male	232	46,2	46,2
	Female	270	53,8	100,0
Occupation	High school	353	70,3	70,3
	State officials and Employees	33	6,6	76,9
	Workers - Employees	56	11,2	88,0
	Trade and Business	33	6,6	94,6
	Freelancing - Housewives	27	5,4	100,0
Education	High school	47	9,4	9,4
	Intermediate school	36	7,2	16,5
	College	38	7,6	24,1
	University	349	69,5	93,6
	Postgraduate	32	6,4	100,0
Major	Economics	227	45,2	45,2
	Languages	51	10,2	55,4
	Technical - Technology	90	17,9	73,3

	Graphic design	54	10,8	84,1
	Health	29	5,8	89,8
	Other	51	10,2	100,0
Hometown	Can Tho	101	20,1	20,1
	An Giang	43	8,6	28,7
	Dong Thap	30	6,0	34,7
	Long An	9	1,8	36,5
	Tien Giang	24	4,8	41,2
	Vinh Long	63	12,5	53,8
	Ben Tre	12	2,4	56,2
	Tra Vinh	30	6,0	62,2
	Soc Trang	41	8,2	70,3
	Hau Giang	36	7,2	77,5
	Bac Lieu	29	5,8	83,3
	Ca Mau	32	6,4	89,6
	Kien Giang	52	10,4	100,0
Income per month	Below 5 million	294	58,6	58,6
	5 million - 10 million	126	25,1	83,7
	Above 10 million	82	16,3	100,0

In conclusion, the main subjects participating in this survey are Gen Z in the Mekong Delta, who often use e-commerce services or online shopping in their lives.

3.2. Data Collection Procedures

When designing this questionnaire, our goal was to collect customers' opinions and attitudes through their answers on the factors that affect consumers' purchase intentions through the method of last-mile delivery in e-commerce. All the questions we referenced from previous studies related to this topic made our study more reliable. Our main goal is to find out about consumers' attitudes and purchase intentions through the method of last-mile distribution in e-commerce in Vietnam, so the language of the survey must be Vietnamese so that everyone can understand and answer questions correctly. All questions have been translated from English to Vietnamese as closely as possible. In addition, there are also some words we have edited and replaced to make the question easier to understand.

According to the research, there are four basic types of scales: Nominal Scale, Ordinal Scale, Interval scale, and Ratio Scale (Hair., 2013). In this report, we use two types of scales: the nominal scale and the interval scale, to get the best quality response. A nominal scale is a scale without any quantitative value; it is used to divide the surveyed group into different classifications (Hair., 2013). In addition to the nominal scale, we also use the interval scale to measure and assess the difference between variables in the research.

We divided the survey into three parts to get the most accurate results. In the first part, we collect answers about Vietnamese people's behavior when using e-commerce services or online shopping, such as their average time using the internet per day, the frequency of their monthly online shopping, and the average monthly amount spent on their online shopping. In this section, we use a nominal scale to select quality responses and carry out the next steps of research.

In the second part, we used the Likert scale, which is a kind of interval scale. The Likert scale is commonly used in research papers to measure respondents' awareness, perception, and behavior. The Likert scale is usually designed based on 5 to 7 levels, in which respondents can rate the quality, satisfaction, and agreement from low to high or from poor to good (Resin Likert). In the survey for this research, we applied the Likert scale with 5 levels, which are: Completely disagree, disagree, Normal, agree, and completely agree.

Finally, in the third part, we continue to use the nominal scale to collect the personal information of the survey respondents, such as gender, age, occupation, and income. The reason we ask these questions at the end of the survey is that they don't require much

thought, and often people already have answers, and the questions are directly related to the research results. We include the first section to get the best-quality answers. Given the size and purpose of this study, we decided to conduct an online survey. We did a test and a test run before releasing the official questionnaire for the best accuracy. Surveys are shared by us on social networks to reach the most people. In addition, our survey was published for 15 days, from June 15, 2023, to June 29, 2023, to obtain the required number of responses for this study. Finally, we used the Google Form software to design and create the questionnaire for the survey because of its convenient feature for data collection.

3.3. Data Analysis Methods

3.3.1. Descriptive Statistics

Descriptive statistics is a statistical approach that employs succinct descriptive coefficients to summarize a dataset, which can represent either the entire dataset or a sample from the population. Specifically, it is utilized to condense, organize, simplify, depict, and present data in either numerical or visual chart forms.

- **Frequency Statistics**

Frequency statistics is a widely used technique for categorical variables, aimed at assessing the extent (frequency) of specific occurrences within a sample. Its objective is to provide a summary of data through frequencies, percentage proportions, or graphical representations. Typically, frequency statistics are employed when analyzing demographic attributes like age, gender, occupation, department, experience level, education, income, and so forth.

- **Chi-Square Test**

The Chi-Square Test (specifically, the Chi-Square Test of Independence) is a statistical method used to examine whether there exists a relationship between categorical variables.

- Data Requirements:

Before conducting the Chi-Square test, the data must meet the following requirements:

- Two categorical variables.
- Two or more categories (groups) for each variable.
- Independence of observations. There should be no relationship between subjects in each group. Categorical variables should not be "paired" in any way.

- A relatively large sample size.

- Hypothesis Setup

The research hypothesis for the Chi-Square test is formulated as follows:

- Ho: Variable 1 is independent of Variable 2.
- H1: Variable 1 is not independent of Variable 2.

Test Results:

- Sig < 0.05: Reject Ho, accept H1, indicating a significant relationship between the two variables.
- Sig > 0.05: Accept Ho, reject H1, indicating no significant relationship between the two variables.

- Data Setup

There are two different ways your data can be initially set up. The format of the data will determine how the Chi-Square test of independence is conducted. At a minimum, your data must include two categorical variables (represented by columns) that will be used in the analysis. The categorical variables must have at least two categories.

- If Raw Data:

  + Raw data means each row represents a subject.

  + Cases represent subjects, and each subject appears once in the dataset. This means each row represents an observation from a unique subject.

  + The dataset contains at least two nominal (string or numeric) categorical variables. The categorical variables to be used in the test must have two or more categories.

- If Frequency Data:

  + Each row is a combination of factors.

  + Cases represent combinations of categories for variables.

  + Each row in the dataset represents a distinct combination of categories.

+ The values in the "Frequency" column for a specific row represent the number of unique objects with that specific combination of factors.

+ Three variables are required: one for each category and a third variable representing the count of occurrences of that specific factor combination.

+ Before running the test, you need to activate "Weight Cases" and set the Frequency variable as the weight.

- **Running Custom Table Analysis**

Using combined statistics helps us describe the data characteristics of multiple variables simultaneously, revealing relationships between variables that single statistics like frequencies and means cannot capture. Additionally, combined statistics help researchers identify unreasonable data issues through the logic of behavior, attitude, and characteristics of the study subjects. For instance, when performing a combined analysis between age and education level, researchers might notice a few cases where individuals under 18 have a higher education level than university. Considering logical aspects, the likelihood of such a situation is very rare, so researchers need to verify whether this observation is due to low-quality survey responses or data entry errors.

Custom Tables combined statistics allow researchers to assess respondent behavior more deeply, which is highly supportive for making subsequent managerial implications. For example, by analyzing the combined statistics between age and types of products purchased at a supermarket, researchers can determine the types of products that adults, middle-aged individuals, and teenagers tend to buy at the supermarket. This information can be used to strategically arrange product displays and assistive staff. Products frequently purchased by older individuals can be placed in easily accessible areas with minimal movement required; supportive staff should be caring and have good communication skills, tailored to older customers.

3.3.2. Reliability Analysis

Cronbach Alpha serves as a reliability assessment tool employed to gauge the internal coherence and dependability of a questionnaire. The following chart illustrates the utilization of Cronbach Alpha as a means to examine the questionnaire's consistency::

Table 3. 1. Cronbach's Alpha

Cronbach's Alpha	**Internal Consistency**
$\alpha \geq 0.98$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

According to this table, so $\alpha > 0.6$ will be accepted and more reliable.

3.3.3. Exploratory Factor Analysis (EFA)

The aggregation of jointly run independent and dependent in a factor analysis discovery and then re-examination of dependent relationships is inappropriate. (It is improper to use the results of a single component analysis to support dependence links by combining dependent and independent variables). Explain this word in more detail. This means that when we do an EFA analysis, it is unreasonable to generalize independent variables and depend on the same run. For with a defined subject being independent and dependent, that is, from the beginning we have the default appearance of a relationship of dependence between two groups of variables: one group is influenced by the other variable and one group under the influence of the other.

It is not necessary to categorize the variables into dependent and independent categories when doing exploratory factor analysis. Instead, a comprehensive analysis of all variables is conducted to uncover inherent patterns or influences. This approach can be applied to factor analyze independent or dependent factors that are considered separately. The categories of dependent and independent variables are not used when doing exploration factor analysis. Instead, all the variables are analyzed together to determine the structure of the factors. Techniques performing factor analysis should be considered running separately

between independent and dependent variables. Same as the view above. The variables put together in the EFA analysis must be the same independent type or the same type of dependency. Do not combine these two variables into an EFA analysis once.

Researchers commonly employ exploratory factor analysis (EFA) to evaluate the convergent and discriminant validity of two primary sets of scale values. EFA is employed to streamline a set of variables into a smaller set of essential components. This streamlining aids authors in conserving time, energy, and resources during their research endeavors. The criteria for this reduction are determined by the following guidelines:

KMO (Kaiser-Meyer-Olkin) $0.5 \leq KMO \leq 1$ and $Sig < 0.05$: The variables have a relationship

- Factor Loading at ±0.3: Minimum conditions for observed variables are retained.
- Factor Loading at ± 0.5: Observed variables have good statistical significance.
- Factor Loading at ±0.7: Observed variables are statistically significant.

3.3.4. Pearson Correlation Analysis

In quantitative research utilizing SPSS analysis, one of the steps we undertake is Pearson correlation analysis. This step is typically carried out prior to regression analysis.

The primary aim of conducting Pearson correlation analysis is to evaluate the presence of a robust linear correlation between dependent and independent variables. It also serves to detect potential multicollinearity issues at an early stage, especially when independent variables exhibit high intercorrelation.

The Pearson correlation coefficient, denoted as "r," spans a range from -1 to 1:

- As "r" approaches 1 or -1, the linear correlation strengthens and becomes more pronounced. An approach towards 1 signifies a positive correlation, while approaching -1 indicates a negative correlation.
- As "r" approaches 0, the linear correlation weakens.
- When r = 1, there is an absolute linear correlation. When plotted on a scatter plot, the data points will form a straight line.
- When r = 0, there is no linear correlation. In this case, two situations can occur. One, there is no relationship between the two variables. Two, there is a nonlinear relationship between them.

Andy Field (2009) points out that while the Pearson correlation coefficient allows us to assess the linear connection between two variables, a hypothesis test is essential to ascertain the statistical significance of this correlation. A linear relationship between variables is apparent if the significance (sig) value derived from the test is less than 0.05. Conversely, when the sig value exceeds 0.05, it indicates the absence of a linear relationship between the variables (assuming a significance level of 5% = 0.05).

Upon establishing a linear correlation between two variables (sig < 0.05), the potency of this correlation is further gauged through the absolute value of "r." According to Andy Field (2009):

- $|r| < 0.1$: Indicative of a very weak correlation

- $|r| < 0.3$: Indicative of a weak correlation

- $|r| < 0.5$: Indicative of a moderate correlation

- $|r| \geq 0.5$: Indicative of a strong correlation

3.3.5. Regression Analysis

Regression analysis serves as a tool for assessing the acceptance or rejection of hypotheses, while also delving into the interplay between dependent and independent variables.

It is a statistical technique that illuminates the connections between two or more variables. Often represented graphically, this approach delves into the dynamic between a dependent variable and independent variables. The objective of regression analysis is to pinpoint the independent variables that exert the most pronounced impact on the dependent variable(s). Typically, variations in the independent variable(s) are studied alongside fluctuations in the dependent variable(s).

3.3.6. Confirmatory Factor Analysis (CFA)

Through confirmatory factor analysis (CFA), it is possible to determine whether there is a relationship between the observable variables and the latent construct(s) that underlie them. The projected association pattern is established using theoretical knowledge, empirical research, or a combination of the two. The hypothesis is then statistically tested after that.

The following factors could have an impact on the usage of CFA: the study hypothesis under consideration; the need for an appropriate sample size (e.g., 5–20 instances per

parameter estimate); measurement tools; multivariate normality; parameter identification; outliers; and missing data.

- Model fit indices interpretation (Schumacker & Lomax, 1996).

Cutoff requirements for fit indexes in covariance structure analysis, according to Hu & Bentler (1999) Comparison of old and modern standards, structural equation Model fit is evaluated using the following modeling indicators:

- CMIN/DF ≤ 3 is good, CMIN /df ≤ 5 is acceptable
- CFI ≥ 0.9 is good, CFI (≥ 0.95 is very good) is acceptable (CFA ranges from 0 to 1)
- GFI ≥ 0.9 is good, GFI > 0.95 is very good
- TLI ≥ 0.9 is good
- RMSEA ≤ 0.06 is good, RMSEE ≤ 0,08 is acceptable
- PCLOSE ≥ 0.05 is good, PCLOSSE ≤ 0.01 is acceptable
- The specific case of GFI is larger than 0.8 and smaller than 0.9

With respect to sample size limitations, it may be difficult for some subjects to reach a GFI (Goodness of Fit Index) value of 0.9. This particular statistic is strongly influenced by the scale, the number of variables observed, and the total sample size. It is because of the substantial dependency by the number of observed variables, number of group structures, sample sizes that GFI or less is included in the model suitability assessment in recent years, that it is even recommended not to use (Kline, 2005; Matsunaga et al., 2010).

- Improve the suitability of the MI Modification indices model

For discrepancies between the hypothesized model and the model inferred from data, the Modification Index (MI) offers solutions. Connecting the bidirectional arrows that represent mismatch between the residual components within the same factor is the practical way to use the MI. When the model has the Chi-square as small as possible. The MI column suggests when looking at which two-way arrow should be hooked into the wrong pair in order to improve Chi-square.

3.3.7. Structural Equation Modeling (SEM)

To explore underlying connections, researchers employ structural equation modeling (SEM), a technique in multivariate statistical analysis. By utilizing multiple regression analysis and component analysis, SEM investigates the structural connections between latent constructs and observable variables. Researchers favor this method due to its

capacity to estimate numerous interconnected relationships within a single study. Both exogenous and endogenous variables are integrated into this investigation, where independent and dependent variables are categorized as endogenous variables.

3.4. Measures

In this research, we want to understand in general the factors affecting the purchase intention of consumers through last-mile delivery in e-commerce in Vietnam. Therefore, we have decided to incorporate many elements of sustainable consumption intention from previous related studies into our research model. According to relevant theories, our model has 7 independent variables including: Perceived Usefulness, Perceived Ease of Use, Perceived Environmental, Environmental Awareness Affects Health, Perceived Health, Perceived Social, Perceived Price. Attitude Green is both an intermediate and a dependent variable. Online Review is the control variable, Demographic is the moderator variable. Finally, the dependent variable of this research model is Green Purchase Intention.

There is a table of questionnaires:

Code Measuring Items

Table 3. 2. Scale of Attitude

A1	I am interested in green products and green delivery methods.
A2	I like that the packages delivered to me are tightly packed with eco-friendly packaging.
A3	I am willing to choose green delivery methods as long as they do not cause significant inconvenience compared to regular delivery methods.
A4	I feel better if I use green products and choose green delivery methods in the future.
A5	I wonder if my goods are transported by a green vehicle (e.g., fossil fuel, hybrid, electric vehicle, etc.).
A6	I feel like an eco-conscious customer.

Table 3. 3. Scale of Green Purchase Intention

GPI1	I will choose to purchase environmentally friendly products.
GPI2	My family and friends advised me to consume green products.
GPI3	I often prioritize purchasing green products that have reusable or recyclable packaging.
GPI4	I am willing to pay a slightly higher price when purchasing green products because of the benefits they provide.
GPI5	My life will be better if I consume green products in the future.

Table 3. 4. Scale of Perceived Usefulness

PU1	I get free returns for shopping online.
PU2	I get fast delivery options when I shop online (same-day delivery, 4-hour delivery, next-day delivery, etc.).
PU3	I feel that green delivery methods are environmentally friendly and beneficial.

Table 3. 5. Scale of Perceived Ease of Use

PEOU1	I find E-commerce platforms and online shopping websites easy to use.
PEOU2	I find the online payment channels convenient to use.
PEOU3	I like the flexibility of shopping using any mobile device (such as a smartphone, laptop, or tablet).
PEOU4	I love the flexibility of shopping online at any time of the day or night.

PEOU5	I enjoy the flexibility of shopping from anywhere, regardless of my location, when shopping online.

Table 3. 6. Scale of Perceived Environmental

PE1	I think that protecting the environment is my responsibility.
PE2	I prioritize buying products that are packed in reusable, recyclable, or biodegradable packaging.
PE3	It is essential to raise environmental awareness in the community.
PE4	The green delivery method helps save natural resources.
PE5	Green delivery methods generate less CO2 compared to other delivery methods.
PE6	The carbon emissions from green last-mile delivery in online shopping are lower than the carbon emissions produced by consumers traveling to traditional stores for shopping.
PE7	Using green products in combination with environmentally friendly green delivery methods helps reduce waste and pollution emissions that harm the environment.
PE8	If I understand the potential environmental harm that certain products or services can cause, I will refrain from purchasing or using them.

Table 3. 7. Scale of Environmental Awareness Affects Health

EEAH1	I use green products because I want to protect my own health.
EEAH2	I am well aware of the impact of climate change and the environment on health.

EEAH3	The ingredients and raw materials used to produce environmentally friendly green products that do not harm humans, animals, and nature.
EEAH4	It is necessary to improve the living environment to protect the health and safety of the community.
EEAH5	It is necessary to raise awareness about environmental and health protection.

Table 3. 8. Scale of Environmental Awareness Affects Health

PH1	I am concerned about packaging materials that can affect the quality of food.
PH2	I always consider health aspects in my everyday shopping activities.
PH3	I prioritize selecting products that are beneficial for my health.
PH4	I think of myself as a health-conscious consumer.

Table 3. 9. Scale of Perceived Social

PS1	I may be perceived as outdated by those around me if I do not use environmentally friendly products.
PS2	Environmental advocacy makes my value higher in the eyes of people (friends will see me as great, healthy,... when I use green products)
PS3	The use of green delivery methods contributes to advancing the quality of life of the people in the area.
PS4	The use of green delivery methods improves the quality of life and contributes to economic development in the region.

PS5	Using green delivery methods creates and sustains employment opportunities in the area.
PS6	I prioritize choosing products/manufacturers that have a commitment to social value.

Table 3. 10. Scale of Perceived Price

PP1	I believe that green products combined with green delivery methods are slightly more expensive than other delivery methods.
PP2	I think the running cost of the green delivery method is cheaper than other delivery methods.
PP3	The price of green products must be consistent with the benefits they bring to the environment.
PP4	Consumers in Vietnam are willing to pay more for green products and green delivery methods to protect their health and the environment.

Table 3. 11. Scale of Online Review

O1	If a product has negative reviews after being sold, it may affect my intention to make green purchases.
O2	If a product has positive reviews after being sold, it will influence my intention to make green purchases.
O3	I read online reviews about products before making a purchasing decision.
O4	I consider the information provided by the supplier about the product.

O5	The information from reviews and feedback tends to be accurate.

This encompasses all the content when the research team discusses Chapter 3, aiding us in a thorough understanding of the discussed points in the Methodology and Methods, and creating connections for the content of Chapter 4. In the subsequent chapter, the research team will delve into new aspects and contribute to the upcoming main objectives of the study.

CHAPTER 4: ANALYSIS & FINDING

4.1. Descriptive Statistics

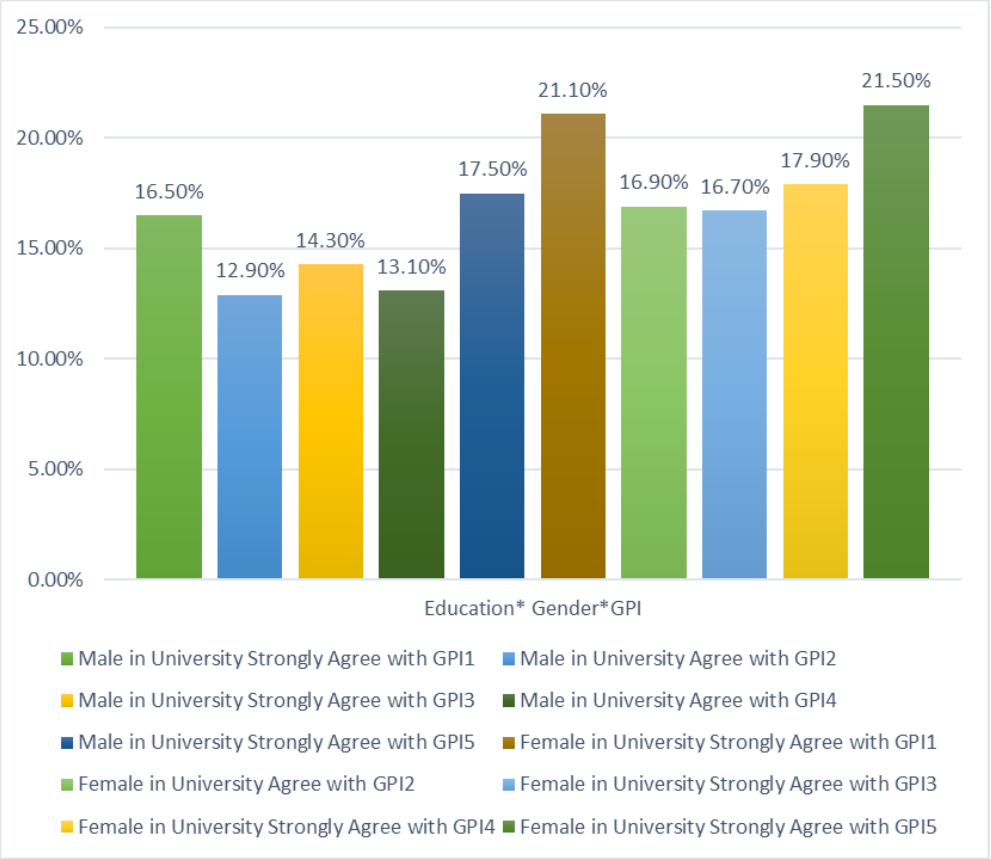


*Figure 4. 1. Statistical Chart Education*Gender*GPI*

"From the Custom table (Appendix 5) we get the statistical graph of Education*Gender*GPI."

Based on the statistical chart, it can be seen that in the male group at the University level, the highest level of full consent is expressed by the GPI1 (16.50%). Similarly, the highest consensus levels were recorded at GPI2 (12.90%), GPI3 (14.30%) and GPI4 (13.10%), and GPI5 (17.50%). In summary, based on statistical chart analysis, the total share of consenting and fully consenting men with University qualifications reached 46.20%.

Similarly, in the women's group also with University qualifications, the highest consensus level appeared at GPI1 (21.10%), the most consensual level at GPII2 (16.90%), the higher level of full agreement in GPI3 (16.70%), the highest level of complete agreement at GIPI4 (17.90%), and the tallest level of fully agreed on GPI5 (21.50%). Overall, based on

statistical chart analysis, the total share of women with University qualifications reached 53.80%.

In summary, through the analysis of data from statistical charts, we can conclude that gender and educational level have an impact on green purchase intentions (GPI).

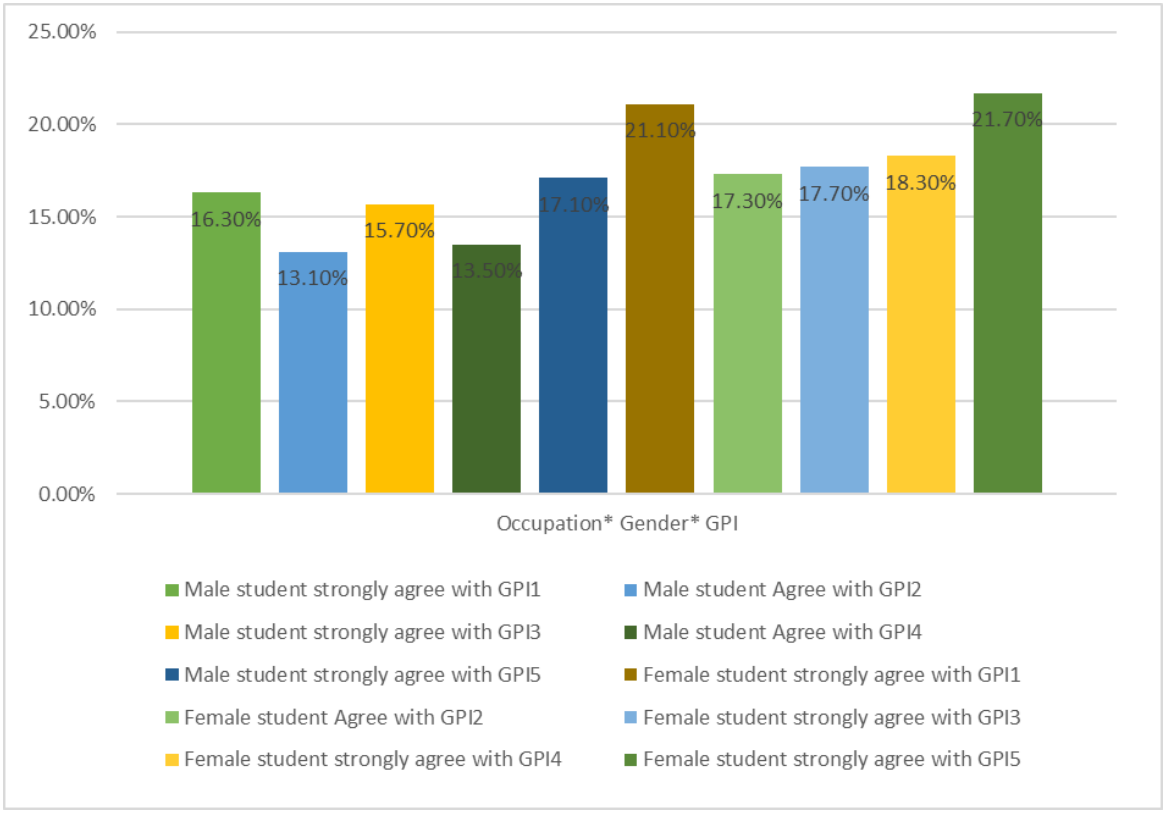


Figure 4. 2. Statistical Chart Occupation Gender* GPI (From Table Appendix 5)*

Based on the statistical chart, it can be seen that in the male group with High school occupation, the highest level of full consent is expressed by the GPI1 (16.30%). Similarly, the highest consensus levels were recorded at GPI2 (13.10%), GPI3 (15.70%) and GPI4 (13.50%), and GPI5 (17.10%). In summary, based on statistical chart analysis, the total percentage of consenting and fully consenting men with the High school profession reached 46.20%.

Similarly, in the female group also with the High school career, the highest consensus level appeared at GPI1 (21.10%), the highest consensus level at GPI2 (17.30%), the most fully agreed level in GPI3 (17.70%), and the most completely agreed rate at GPI4 (18.30%), as well as the most totally agreed levels at GPI5 (21.70%). In total, based on the analysis of

the statistical chart, the total proportion of women agreeing and fully agreeing with the High school profession reached 53.80%.

In short, by analyzing data from statistical charts, we can conclude that gender and occupation have an impact on green purchase intentions (GPI).

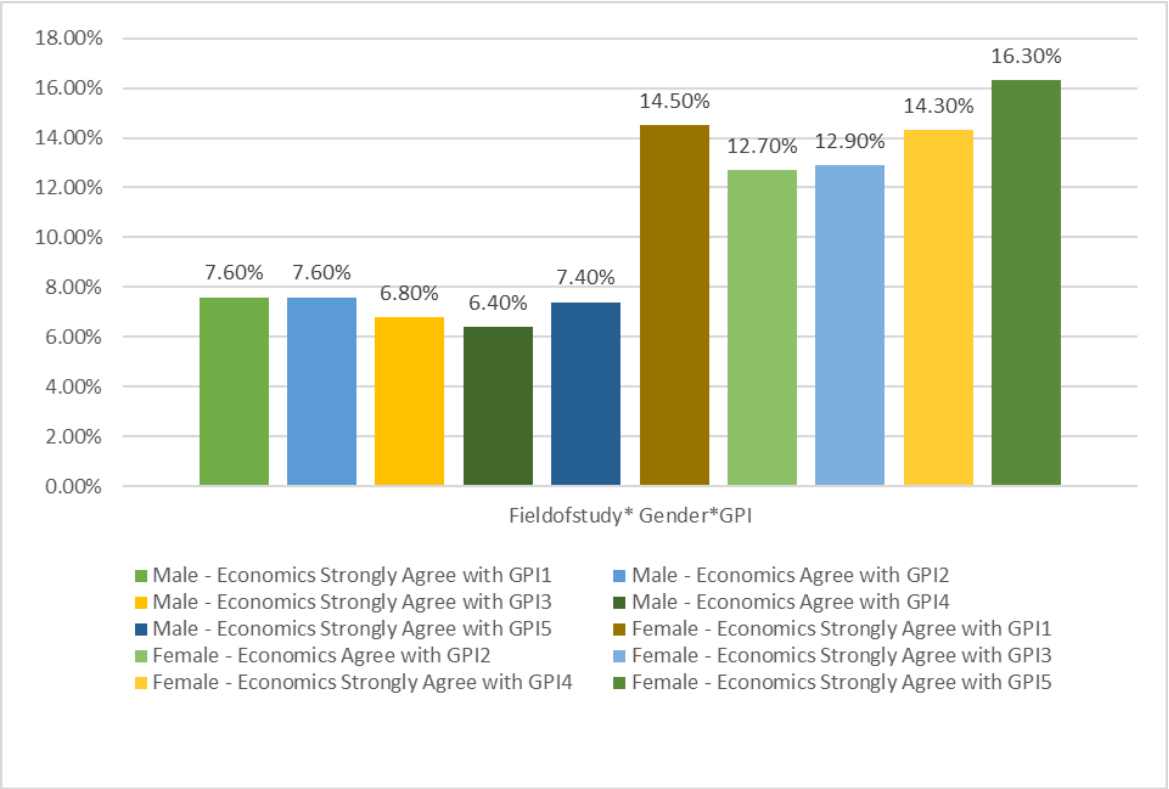


Figure 4. 3. Statistical Chart major of study Gender*GPI (From Table Appendix 5)*

Based on the statistical chart, it can be seen that in the male group with a specialization in Economics, the highest level of full consent is expressed by the GPI1 (7.60%). Similarly, the highest consensus levels were recorded at GPI2 (7.60%), GPI3 (6.80%), GPI4 (6.40%) and GPI5 (7.40%). In summary, based on statistical chart analysis, the total percentage of consenting and fully consenting men with the High school profession reached 46.20%.

Similarly, in the women's group also with a major in Economics, the highest level of complete agreement appeared at GPI1 (14.50%), the higher level of full agreement at the GPI2 (12.70%), the most high level of fully agreed at the GPI3 (12.90%), the highest level of totally agreed on GPI4 (14.30%), and the highest level of completely agreed upon GPI5 (16.30%). Overall, based on the analysis of the statistical chart, the total share of women with an Economics major reached 53.80%.

In summary, through the analysis of data from statistical charts, we can conclude that gender and specialization have an impact on green purchase intentions (GPI).

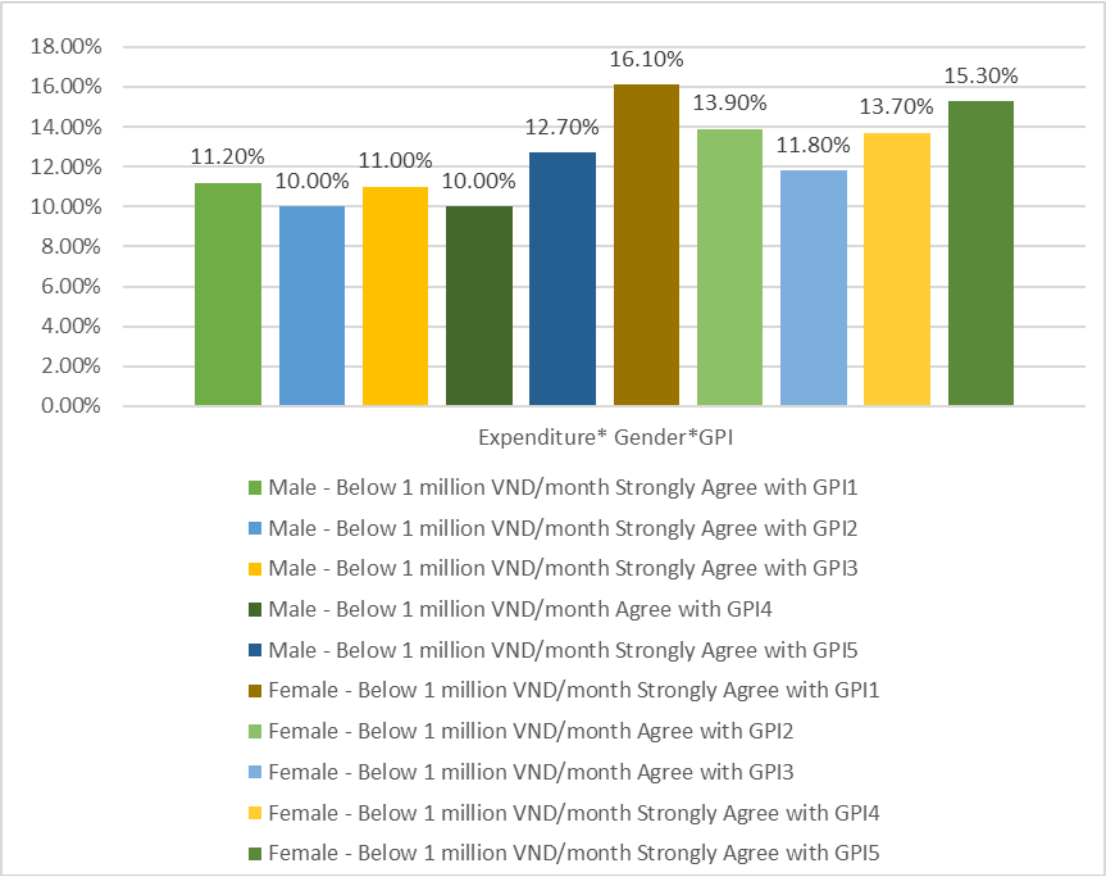


Figure 4. 4. Statistical Chart Expenditure Gender*GPI (From Table Appendix 5)*

Based on the statistical chart, it can be seen that in the male group with spending Below 1 million VND/month, the highest level of complete consent is expressed by the GPI1 (11.20%). Similarly, the highest level of complete agreement was also recorded at GPI2 (10.00%), GPI3 (11.00%), GPA4 (10.00%) and GPI5 (12.70%). To sum up, based on statistical chart analysis, the total agreement and full agreement ratio of men with spending Below 1 million VND/month accounted for 46.20%.

Similarly, in the women's group also spending Below 1 million VND/month, the highest level of complete agreement appeared at GPI1 (16.10%), the higher level of consensus in GPI2 (13.90%), the most high level of agreement in the GPI3 (11.80%), the largest level of fully agreed at GPI4 (13.70%), and the highest level of totally agreed on GPI5 (15.30%). In total, based on statistical chart analysis, the total share of women with Below 1 million VND per month accounted for 53.80%.

In summary, by analyzing data from statistical charts, we can conclude that gender and spending have an impact on green purchase intentions (GPI).

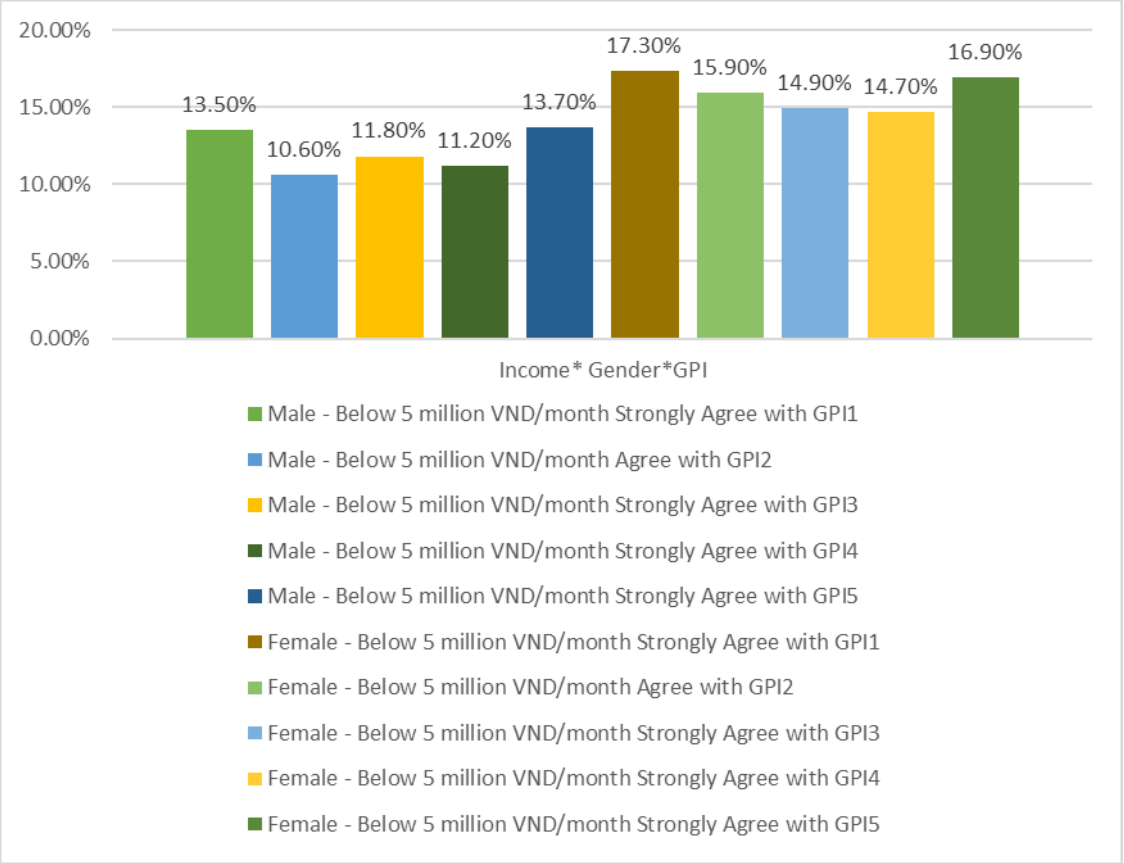


Figure 4. 5. Statistical Chart Income Gender*GPI (From Table Appendix 5)*

Based on the statistical chart, it can be seen that in the male group with spending Below 1 million VND/month, the highest level of complete consent is expressed by the GPI1 (11.20%). Similarly, the highest level of complete agreement was also recorded at GPI2 (10.00%), GPI3 (11.00%), GPI4 (10.00%) and GPI5 (12.70%). To sum up, based on statistical chart analysis, the total agreement and full agreement ratio of men with spending Below 1 million VND/month accounted for 46.20%.

Similarly, in the women's group also spending Below 1 million VND/month, the highest level of complete agreement appeared at GPI1 (16.10%), the higher level of consensus in GPI2 (13.90%), the most high level of agreement in the GPI3 (11.80%), the largest level of fully agreed at GKI4 (13.70%), and the highest level of totally agreed on GPI5 (15.30%). In total, based on statistical chart analysis, the total share of women with Below 1 million VND per month accounted for 58.8%.

In summary, by analyzing data from statistical charts, we can conclude that gender and spending have an impact on green purchase intentions (GPI).

Figure 4. 6. Statistical Chart Income The shopping frequency* GPI (From Table Appendix 5)*

Based on the statistical chart, it can be seen that in "the Less than 3 times per month" group with "Income Below 5 million VND/month", the highest level of complete agreement is expressed by the GPI1 (21.90%). Similarly, the highest consensus levels were recorded at GPI2 (17.90%), GPI3 (17.70%), and GPI4 (16.70%), as well as GPI5 (21.70%). In summary, based on statistical chart analysis, the total agreement and full agreement ratio of "the Less than 3 times per month" group with "Income Below 5 million VND/month" accounted for 54.20%

Subsequently, in the group "From 3 to 5 times per month" also with "Income Below 5 million VND/month" and "From 5 million VND to 10 million VND /month" the highest

level of agreement and fully agreed appeared at GPI1 (6.40%). The highest level of agreement along with “Income Below 5 million VND/month” at GPI2 (6.60%), the highest absolute agreement level in GPI3 (6.40%), the higher level of total agreement in the GPI4 (7.40%), and the highest level of full agreement of “From 5 Million VND to 10 million VNI/months” at GIP5 (7. 40%). Overall, based on statistical chart analysis, the total agreement and full agreement ratio of the “From 3 to 5 times per month” group with income accounted for 31.70%.

Similarly, in the group “5 times or more per month” also with “Income Below 5 million VND/month” fully agreed the highest appeared at GPI1 (2.60%). The highest level of full agreement along with income at GPI2 (2.20%), the highest consensus level in GPI3 (2.60%), the higher level of total agreement at GBI4 (2.80%), and the highest level of consent of GPI5 (2.40%). Overall, based on statistical chart analysis, the total agreement and full agreement rate of the group 5 times or more per month was 14.10%.

4.2. Cronbach’s Alpha

Table 4. 1. Reliability Statistics

Construct/ Items	Item	Description	Corrected item-total correlation
ATTITUDE (Alpha =0.909)	A1	I am interested in green products and green delivery methods.	0.840
	A2	I like that the packages delivered to me are tightly packed with eco-friendly packaging.	0.786
	A3	I will gladly choose the green shipping method if it does not cause too much inconvenience compared to the usual delivery method.	0.780

	A4	I feel better if I use green products and choose green delivery methods in the future.	0.748
	A5	I wonder if my goods are transported by a green vehicle (e.g., fossil fuel, hybrid, electric vehicle, etc.).	0.712
	A6	I feel like an eco-conscious customer.	0.633
GREEN PURCHASE INTENTION (Alpha =0.895)	GP1	I will choose to buy eco-friendly products.	0.688
	GP2	My family and friends advised me to consume green products.	0.756
	GP3	I usually prefer to buy green products whose packaging is reusable.	0.778
	GP4	I am willing to pay a little more when buying green products because of the benefits they bring.	0.756
	GP5	My life will be better if I consume more green products in the future.	0.735
PERCEIVED USEFULNESS (Alpha =0.865)	PU1	I get free returns for shopping online.	0.701
	PU2	I get fast delivery options when I shop online (same-day delivery, 4-hour delivery, next-day delivery, etc.).	0.784
	PU3	Eco-friendly green delivery method.	0.748

PERCEIVED EASE OF USE (Alpha =0.908)	PEOU1	I find online shopping websites easy to use.	0.703
	PEOU2	I find the online payment channels convenient to use.	0.760
	PEOU3	I like the flexibility of shopping using any mobile device (such as a smartphone, laptop, or tablet).	0.807
	PEOU4	I love the flexibility of shopping online at any time of the day or night.	0.799
	PEOU5	I enjoy the flexibility of shopping from anywhere, regardless of my location, when shopping online.	0.771
ONLINE REVIEW (Alpha =0.884)	O1	Products that have been sold have received a negative review, which may affect my green purchase intention.	0.665
	O2	Products that have been sold receive positive reviews, which may affect my green purchase intention.	0.653
	O3	I read online product reviews before making a purchase decision.	0.771
	O4	I reviewed the information provided by the supplier about the product.	0.744
	O5	Information from reviews and feedback tends to be accurate.	0.870

PERCEIVED ENVIRONMENT (Alpha =0.910)	PE1	I think that protecting the environment is my responsibility.	0.757
	PE2	I prefer to buy products that are packed in reusable, recyclable, or biodegradable packaging.	0.690
	PE3	It is necessary to raise environmental awareness in the community.	0.696
	PE4	The green delivery method helps save natural resources.	0.753
	PE5	Green delivery methods produce less CO2 than other delivery methods.	0.698
	PE6	The carbon footprint of green home delivery in online shopping is less than the carbon footprint of consumers going to brick-and-mortar stores to shop.	0.704
	PE7	When using green products in combination with environmentally friendly green delivery methods, will help reduce the amount of waste and emissions that pollute the environment.	0.745
	PE8	If I understand the potential harm to the environment that certain products or services may cause, I will not purchase or use those products or services.	0.634

ENVIRONMENT AWARENESS AFFECTS HEALTH (Alpha =0.888)	EAAH 1	I use green products for health reasons.	0.774
	EAAH 2	I am well aware of the impact of climate change and the environment on health.	0.736
	EAAH 3	Ingredients and raw materials used to produce environmentally friendly green products that do not harm humans, animals, and nature.	0.680
	EAAH 4	It is necessary to improve the living environment to protect the health and safety of the community.	0.727
	EAAH 5	It is necessary to raise awareness about environmental and health protection.	0.727
PERCEIVED HEALTH (Alpha =0.716)	PH1	I am interested in how the packaging material affects the cleanliness of the food.	0.772
	PH2	I always think about health issues when making my daily purchases.	0.726
	PH3	I always choose healthy products.	0.710
	PH4	I think of myself as a health-conscious consumer.	0.727
PERCEIVED SOCIAL (Alpha =0.932)	PS1	I will be judged as backward by those around me if I don't use environmentally friendly products.	0.816

	PS2	Advocating for environmental protection makes my value higher in people's eyes.	0.798
	PS3	The use of green delivery contributes to improving the quality of life of the people in the region.	0.791
	PS4	The use of green delivery improves the quality of life and contributes to economic development in the region.	0.815
	PS5	The use of green delivery creates and maintains jobs in the region.	0.797
	PS6	Prioritize choosing products with a commitment to social values.	0.790
PERCEIVED PRICE **(Alpha =0.892)**	PP1	I think the price of green products and green delivery methods is more expensive than other shipping methods.	0.834
	PP2	I think the running cost of the green delivery method is cheaper than other delivery methods.	0.718
	PP3	The price of green products must be consistent with the benefits they bring to the environment.	0.743
	PP4	Consumers in Vietnam are willing to pay more for green products and delivery methods to protect their health and the environment.	0.754

Prior to conducting Exploratory Factor Analysis (EFA), we performed a Cronbach's alpha test to assess the reliability of the measurement components related to Green Last-Mile

Delivery in the field of e-commerce and Gen Z's intention to purchase green products. According to Hair et al. (1998), a minimum Cronbach's alpha value of 0.6 and a Corrected Item-Total correlation greater than 0.3 are required. The test results revealed that all measurement components met the reliability criteria. Particularly, the "PERCEIVED SOCIAL" component had the highest Cronbach's alpha value of 0.932, indicating a strong impact of perceived social on individuals' perceptions. The remaining components also achieved Cronbach's alpha values above 0.6, ensuring their reliability. Importantly, no observed variables were excluded, and all components were suitable for further analysis. These findings provide a solid foundation for utilizing the research data and conducting EFA to investigate the relationship between Green Last-Mile Delivery and Gen Z's intention to purchase green products.

4.3. Exploratory Factor Analysis (EFA)

Because the study model has both independent variables, intermediate variable, regulatory variable and control variable impact on dependent variables our team will analyze groups of variables by cluster rather than group the measurement scale back into one for analysis. Therefore, the research team wants to get the best results from the EFA analysis so will run each group of variables and then analyze in the direction of running CFA, SEM so the separation into each group is necessary for good results of the study.

Specifically, we will divide each group as follows:

- The variable is both intermediate and dependent – attitude (A) will be analyzed into a group
- The online review (O) control converter will be analyzed into a group.
- The Green Purchase Intention (GPI) variable will be analyzed into a group.
- The remaining variables are independent variables that will be analyzed into a group.

Table 4. 2. Exploratory Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.893
Bartlett's Test of Sphericity	Approx. Chi-Square	1938.215
	df	15

	Sig.	.000

Table 4.2. shows that the KMO value is 0.893, which is quite high, and according to Kaiser (1974) the value between 0.8 and 0.9 is good or "meritorious". So, the KMO value is accepted to implement EFA.

Moreover, the significance value (Sig.) of 0.000, which is less than the threshold of 0.05, allows for the rejection of the null hypothesis (H0) that suggests the correlation matrix is an identity matrix. This rejection signifies a meaningful relationship between the variables. Consequently, the data is deemed appropriate for conducting an exploratory factor analysis (EFA).

Table 4. 3. Analyzing the Investigative Factors

Factor Matrix[a]	
	Factor
	1
A1	.892
A2	.831
A3	.823
A4	.787
A5	.747
A6	.664
Extraction Method: Principal Axis Factoring.	
a. 1 factors extracted. 5 iterations required.	

In this Factor Matrix table, the variables are converged at one factor and are not separated and give a fairly high result. Since the group criticized one factor as attitude (A) for analysis, it would use the results from the Factor Matrix table, so there is no need to look at the Pattern Matrix.

Table 4. 4. Investigative Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.883
Bartlett's Test of Sphericity	Approx. Chi-Square	1273.297
	df	10
	Sig.	.000

Table 4.4. shows that the KMO value is 0.883, which is quite high, and according to Kaiser (1974) the value between 0.8 and 0.9 is good or “meritorious”. So, the KMO value is accepted to implement EFA.

Furthermore, the significance value (Sig.) of 0.000, which is less than the critical threshold of 0.05, allows us to reject the null hypothesis (H0) suggesting that the correlation matrix is an identity matrix. This rejection indicates a significant relationship among the variables. As a result, the dataset is well-suited for the implementation of exploratory factor analysis (EFA).

Table 4. 5. Investigative Factors Analyzed

Factor Matrix[a]	
	Factor
	1
O3	.838
O2	.815
O4	.805
O5	.718
O1	.711
Extraction Method: Principal Axis Factoring.	
a. 1 factors extracted. 5 iterations required.	

In this Factor Matrix table, the variables converge at one factor and are not separated and give a fairly high result. Since the team criticized one factor as an online review (O) for

analysis, it would use the results from the Factor Matrix table, so there is no need to look at the Pattern Matrix.

Table 4. 6. Analysis of Investigative Factors

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.890
Bartlett's Test of Sphericity	Approx. Chi-Square	1382.236
	Df	10
	Sig.	.000

Table 4.6. shows that the KMO value is 0.890, which is quite high, and according to Kaiser (1974) the value between 0.8 and 0.9 is good or "meritorious". So, the KMO value is accepted to implement EFA. Moreover, with a significance value (Sig.) of 0.000, which falls below the threshold of 0.05, the null hypothesis H0 (indicating an identity correlation matrix) can be rejected. This signifies a meaningful interconnectedness among the variables. Consequently, the data is well-suited for the implementation of exploratory factor analysis (EFA).

Table 4. 7. Exploratory Factor Analysis of GPI

Factor Matrix[a]	
	Factor
	1
GPI3	.835
GPI2	.810
GPI4	.810
GPI5	.785
GPI1	.732
Extraction Method: Principal Axis Factoring.	

a. 1 factors extracted. 5 iterations required.

In this Factor Matrix table, the variables converge at one factor and are not separated and give a fairly high result. Since the group criticized one factor as Green Purchase Intention (GPI) for analysis, it would use the results from the Factor Matrix table, so there is no need to look at the Pattern Matrix.

Table 4. 8. Investigational factor analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.920
Bartlett's Test of Sphericity	Approx. Chi-Square	11230.005
	df	595
	Sig.	.000

Table 4.8. shows that the KMO value is 0.920, which is quite high, and according to Kaiser (1974) the value between 0.8 and 0.9 is good or “meritorious”. So, the KMO value is accepted to implement EFA. Furthermore, the significance value (Sig.) of 0.000, which is below the critical threshold of 0.05, provides grounds to reject the null hypothesis (H0) asserting the correlation matrix as an identity matrix. This rejection implies a meaningful interconnectedness among the variables. As a result, the data is well-suited for the application of exploratory factor analysis (EFA).

Table 4. 9. Exploratory Factor Analysis of PU

Pattern Matrix[a]							
	Factor						
	1	2	3	4	5	6	7
PE1	.854						
PE7	.809						
PE4	.799						
PE6	.716						
PE8	.709						
PE3	.688						

PE5	.672						
PE2	.651						
PS4		.852					
PS1		.848					
PS5		.834					
PS2		.831					
PS3		.828					
PS6		.823					
PEOU3			.884				
PEOU4			.870				
PEOU5			.815				
PEOU2			.781				
PEOU1			.719				
EEAH1				.846			
EEAH5				.777			
EEAH4				.773			
EEAH2				.760			
EEAH3				.699			
PP1					.910		
PP4					.815		
PP2					.793		
PP3					.729		
PH1						.818	
PH4						.781	
PH2						.779	
PH3						.690	
PU2							.886
PU3							.816
PU1							.773
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.[a]							
a. Rotation converged in 6 iterations.							

Looking at Table 4.9. we can see all factors' value is better than 0.3. According to the Pattern Matrix of Table 4.9., there are 7 columns which means that there are 7 parts synthesized from 35 items and all factors are suited for the next step. Measures of the variables have sufficient validity.

4.4. Regression

4.4.1. All independent variables affect the GPI

Table 4. 10. Summary of Factors Affecting Green Purchase Intention Model Summaryb

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.552[a]	.305	.292	.56145	1.884
a. Predictors: (Constant), K_PP, K_PEOU, K_O, K_PS, K_PU, K_PH, K_A, K_EEAH, K_PE					
b. Dependent Variable: K_GPI					

The R-value equal to 0.292 shows that the independent variables included in the regression analysis affected 29.2% of the variability of the dependent variable, the remaining 70.8% being due to non-model variables and random number errors.

The result of this table also gives the Durbin-Watson value to assess the strictest chain self-correlation phenomenon. The DW value is 1.884, ranging from 1.5 to 2.5 so the result does not violate the assumption of self-correlation of the most string. (Yahua Qiao, 2011).

- **Sig of the test F**

Table 4. 11. Summary of Factors Affecting Green Purchase Intention ANOVA[a]

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.095	9	7.566	24.002	.000[b]

	Residual	155.093	492	.315		
	Total	223.189	501			
a. Dependent Variable: K_GPI						
b. Predictors: (Constant), K_PP, K_PEOU, K_O, K_PS, K_PU, K_PH, K_A, K_EEAH, K_PE						

As can be seen from the table, the Sig value of F 0,000 < 0.05. Thus, the linear regression model matches the overall.

- **Sig of the test t**

Table 4. 12. Summary of Factors Affecting Green Purchase Coefficientsa

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.146	.356		3.222	.001		
	K_A	.364	.045	.348	8.144	.000	.776	1.289
	K_PU	.190	.036	.220	5.330	.000	.828	1.208
	K_PEOU	.138	.044	.133	3.097	.002	.764	1.310
	K_O	.009	.038	.009	.223	.824	.971	1.030
	K_PE	.071	.053	.069	1.327	.185	.525	1.904

	K_EEAH	-.028	.052	-.027	-.548	.584	.587	1.702
	K_PH	.032	.048	.033	.661	.509	.576	1.735
	K_PS	-.016	.031	-.020	-.519	.604	.981	1.019
	K_PP	-.030	.039	-.033	-.762	.446	.736	1.358

a. Sig. Less than 0.05 is an effect on dependent variables. Specifically, the Sig. of A < 0.05 => impact on dependent variables; the sig. of PU < 0.05 => effect on dependent variable; the Sig., of PEOU < 0.05 => effect upon dependent; the independent variables do not affect dependent O, PE, EEAH, PH, PS, PP.

According to (Hair et al., 1995) the VIF coefficient of independent variables is equally less than 10, in this case even less than 2, so the data does not violate the multi-linear assumption. Standardized coefficients Beta if the '+' mark affects the dependent variable if the'–' mark is the reverse effect on the dependent variable.

From the regression coefficients, we construct two normalized and unnormalized regression equations in the following order:

The system is normalized:

K_GPI = 0.348*K_A + 0.220*K_PU + 0.133* K_PEOU + 0.069*K_PE + 0.33*K_PH + (-0.20*K_PS) + (-0.27*K_EEAH) + (-0.33*K_PP)

According to the above equation, 9 A, PU, PEOU, PE, PH, PS, EEAH, PP variables have a linear relationship with GPI. And:

- For each unit increased in A, the GPI increased by 0.364 units.
- With each unit increased in PU, the GPI will increase by 0.190 units.
- With each unit increased in PEOU, the GPI increased by 0.138 units.
- For each unit increased in PE, the GPI increased by 0.071 units.
- For each unit of increase in PH, the GPI increases by 0.032 units.
- With each unit increasing in PS, the GPI increases by 0.016 units.

- With each unit increasing in EEAH, the GPI - 0.028 units is predicted.
- With each unit increasing in PP, the GPI is expected to be 0.030 units.

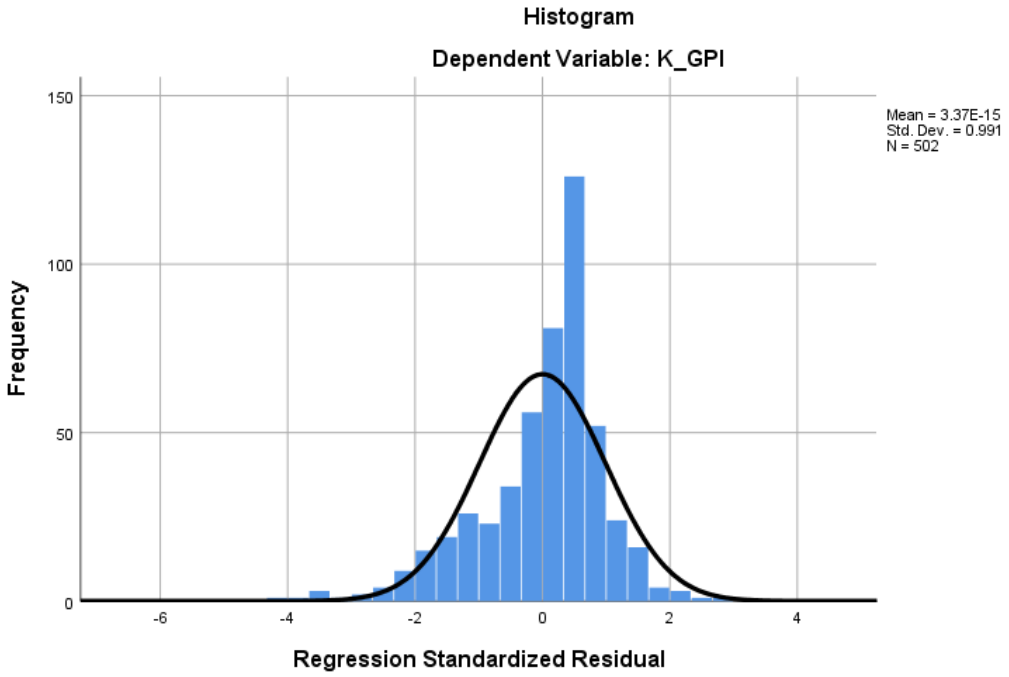


Figure 4. 7. Statistical Chart Histogram & Regression Standardized Residual

For a Histogram chart, if the mean average is close to 0, the standard deviation is Std. Dev is approximately equal to 1, the columns of the surplus value are distributed in the form of a bell, we can assert that the distribution is approximate, assuming the standard distribution of the balance is not violated. Mean = 3.37E-15=3.37 * 10-15 = 0.00000... close to equal to 0, the standard deviation is 0.991 near equivalent to 1. Thus, it can be said, the standard surplus approximate distribution, assuming the standard distribution of the surplus is not violated.

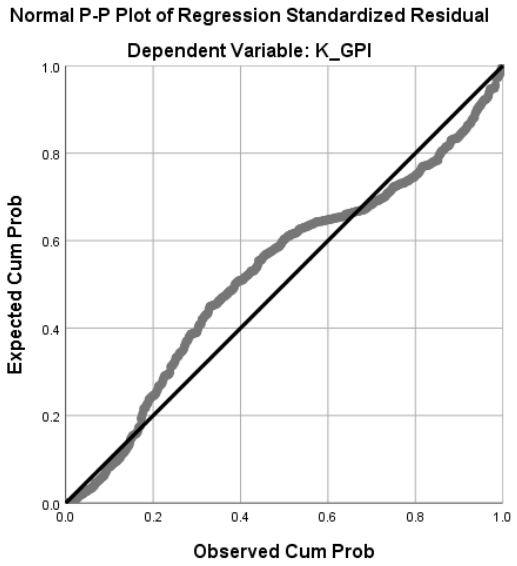


Figure 4. 8. Statistical Chart Dependent Variable: K_GPI & Observed Cun Prob

Diagram Normal P-P Plot the data points of the concentrated surplus are slightly distant from the cross line, thus, the surplus with the approximate distribution is not standardized, assuming the non-standard distribution of the balance will be violated.

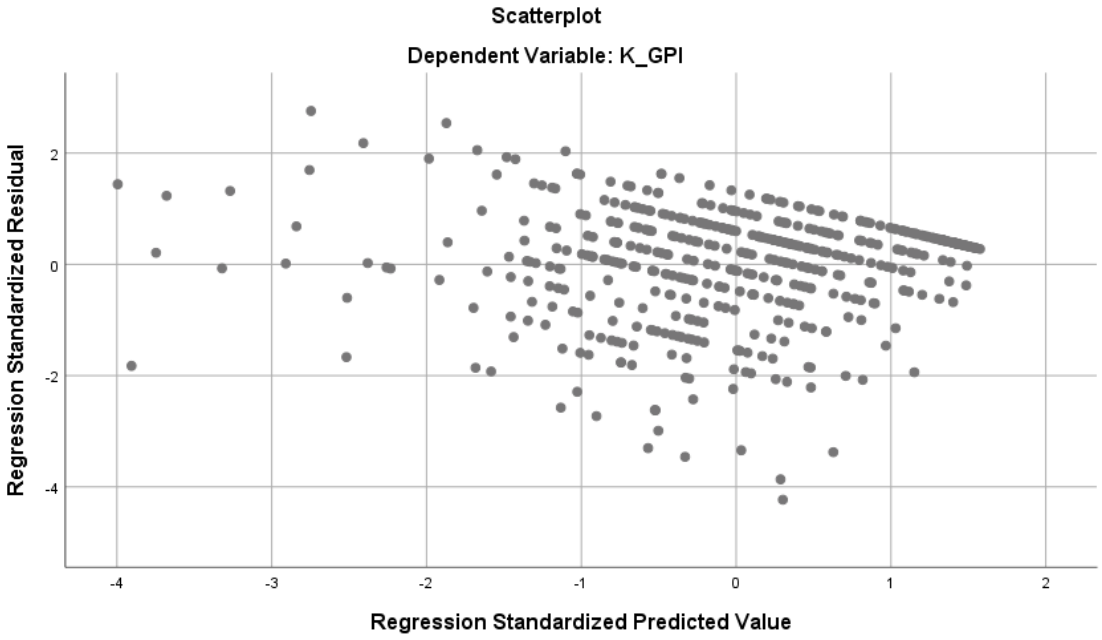


Figure 4. 9. Statistical Chart Dependent Variable: K_GPI & Regression Standardized Predicted Value

The Scatter Plot distribution chart normalizes the distribution surplus not concentrating around the 0, thus assuming the linear relationship is violated

4.4.2. PE, PH, PS, PP, EEAH affect the GPI

Table 4. 13. Summary of Factors PE, PH, PS, PP, EEAH Affecting GPI Model Summaryb

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.126[a]	.016	.006	.66548	1.997
a. Predictors: (Constant), K_EEAH, K_PS, K_PP, K_PH, K_PE					
b. Dependent Variable: K_GPI					

A corrected equal R value of 0.06 shows that the independent variables included in the regression analysis affect 6% of the variability of the dependent variable, the remaining 94% are due to non-model variables and random number errors.

The result of this table also gives the Durbin-Watson value to assess the strictest chain self-correlation phenomenon. The DW value is 1.997, ranging from 1.5 to 2.5 so the result does not violate the assumption of self-correlation of the most string. (Yahua Qiao, 2011).

- **Sig of the test F**

Table 4. 14. Summary of Factors PE, PH, PS, PP, and EEAH Affecting GPI ANOVAa

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.530	5	.706	1.594	.160[b]
	Residual	219.658	496	.443		
	Total	223.189	501			
a. Dependent Variable: K_GPI						
b. Predictors: (Constant), K_EEAH, K_PS, K_PP, K_PH, K_PE						

As can be seen from the table, the Sig value of F 0.160 > 0.05. As such, the linear regression model is not suitable for the population.

- **Sig of the test t**

Table 4. 15. Summary of Factors PE, PH, PS, PP, EEAH Affecting GPI Coefficientsa

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.040	.283		14.266	.000		
	K_PE	.105	.063	.102	1.662	.097	.529	1.892
	K_PH	.038	.057	.039	.669	.504	.584	1.713
	K_PS	-.041	.037	-.050	-1.116	.265	.988	1.012
	K_PP	-.046	.046	-.052	-1.000	.318	.742	1.347
	K_EEAH	-.005	.061	-.005	-.086	.931	.590	1.696
a. Dependent Variable: K_GPI								

When the sig. Less than 0.05 is an impact on the dependent variables that do not affect the dependent variables PE, EEAH, PH, PS, PP

According to (Hair et al., 1995) the VIF coefficient of independent variables is equally less than 10, in this case even less than 2, so the data does not violate the multi-linear assumption. Standardized coefficients Beta if the '+' mark affects a vertical upward variable dependency, if the'–' marker affects an inverse upward dependence variable

From the regression coefficients, we construct two normalized and unnormalized regression equations in the following order:

The system is normalized:

K_GPI = 0.102*K_PE + 0.039*K_PH + (-0.050*K_PS) + (-0.52*K_PP) +(-0.005*K_EEAH)

According to the above equation, 9 A, PU, PEOU, PE, PH, PS, EEAH, PP variables have a linear relationship with GPI. And:

- With each unit increased in PE, the GPI increased by 0.105 units.
- With each unit of increase in PH, the GPI increases by 0.038 units.
- With each unit increasing in PS, the GPI increases -0.41 units is predicted.
- With each unit increasing in PP, the GPI - 0.046 units is predicted.
- With each unit increasing in the EEAH, the GPI - 0.005 units is predicted.

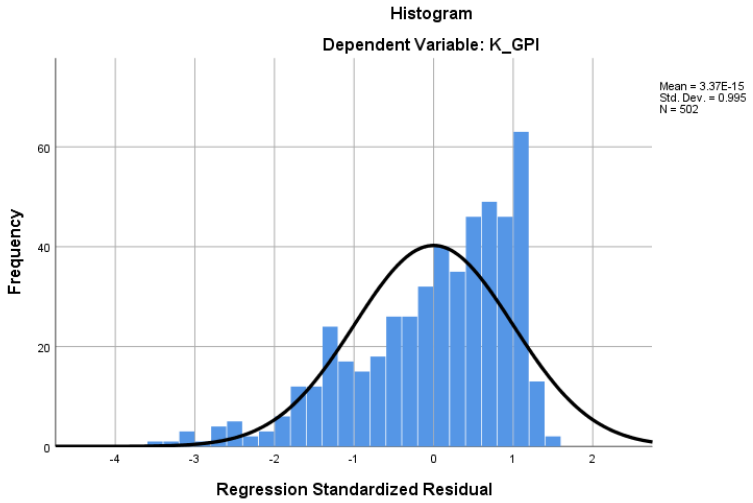


Figure 4. 10. Statistical Chart Dependent Variable: K_GPI & Regression Standardized Residual

For a Histogram chart, if the mean average is close to 0, the standard deviation is Std. Dev is approximately equal to 1, the columns of the surplus value are distributed in the form of a bell, we can assert that the distribution is approximate, assuming the standard distribution of the balance is not violated. Mean = 3.37E-15=3.37 * 10-15 = 0.00000... close to equal to 0, the standard deviation is 0.995 near equivalent to 1. Thus, it can be said, the standard surplus approximate distribution, assuming the standard distribution of the surplus is not violated.

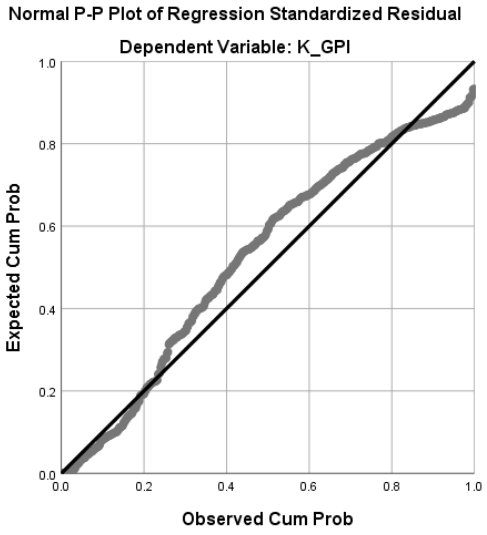


Figure 4. 11. Statistical Chart Dependent Variable: K_GPI & Observed Cum Prob

Diagram Normal P-P Plot the data points of the concentrated surplus are slightly distant from the cross line, thus, the surplus with the approximate distribution is not standardized, assuming the non-standard distribution of the balance will be violated.

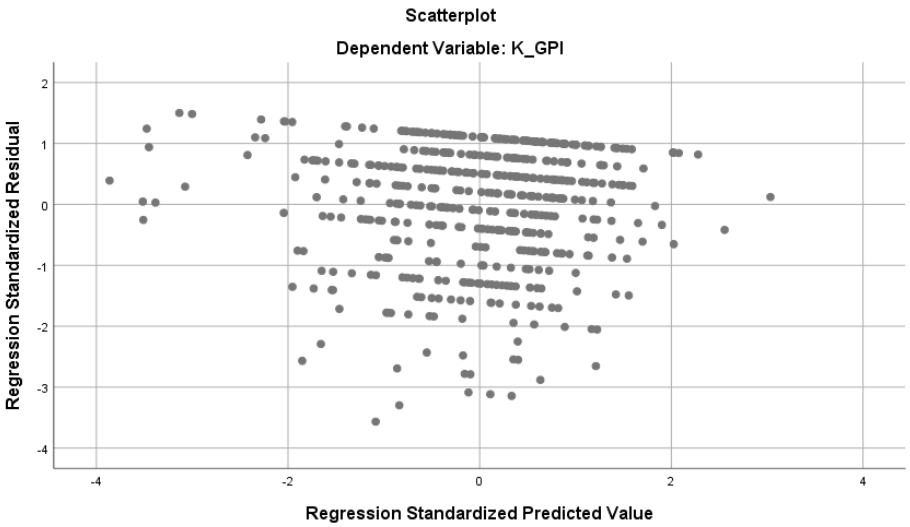


Figure 4. 12. Statistical Chart Dependent Variable: K_GPI & Regression Standardized Predicted Value

The Scatter Plot distribution chart normalizes the distribution surplus not concentrating around the 0, thus assuming the linear relationship is violated.

4.5. Confirmatory Factor Analysis (CFA)

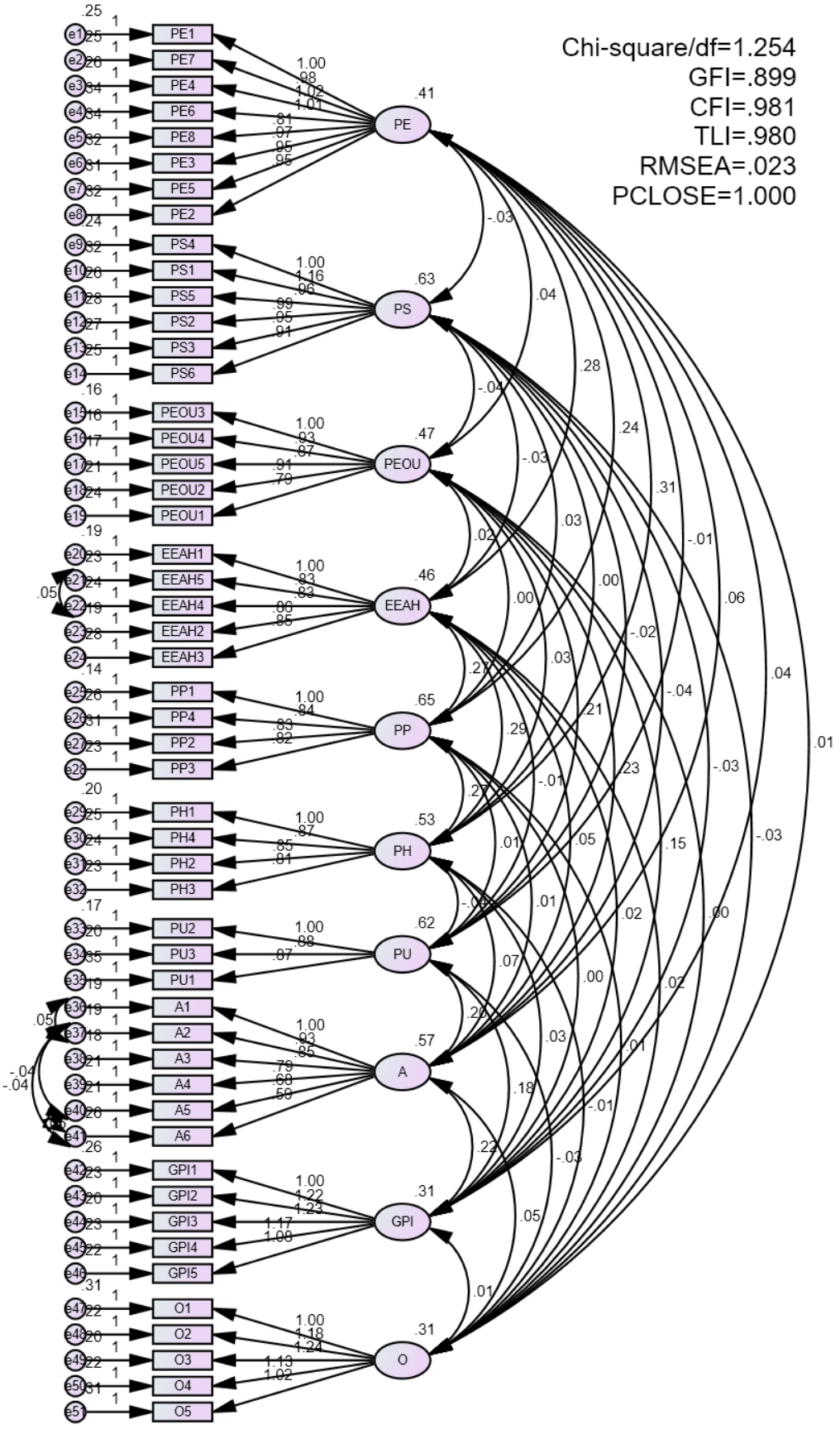


Figure 4. 13. Results of Confirmatory Factor Analysis (CFA)

After reviewing the data and examining the CFA diagram drawn by the team, our research group will quickly assess the model fit by examining key fit indices directly on the diagram representing CFA objects. These indices are considered good before connecting them:

- Chi-square/df 1.325 ≤ 3 => indicating good model fit

- GFI=.893 ≥ 0.9 => indicating good model fit

- TLI=.974 ≥ 0.9 => indicating good model fit

- CFI=.976 ≥ 0.9 => indicating very good model fit

- RMSEA=.025 ≤ 0.06 => indicating good model fit

- PCLOSE=1.000 ≥ 0.05 => indicating good model fit

However, after properly aligning the bidirectional arrows of residual variances within the same latent factor, the model fit indices have improved compared to before:

- Chi-square/df 1.254 ≤ 3 => indicating good model fit

- GFI=.899 ≥ 0.9 => indicating good model fit

- TLI=.980 ≥ 0.9 => indicating good model fit

- CFI=.981 ≥ 0.9 => indicating very good model fit

- RMSEA=.023 ≤ 0.06 => indicating good model fit

- PCLOSE=1.000 ≥ 0.05 => indicating good model fit

- Improving Model Fit Using Modification Indices (MIs)

The MI index suggests measures to rectify discrepancies between the proposed and estimated model. The most appropriate use of MI is to connect bidirectional arrows of covariance between residuals within the same latent factor. A smaller Chi-square value indicates better model fit. The MI column provides guidance on which bidirectional arrows to connect in pairs of errors to improve Chi-square. This action will also improve GFI, TLI, CFI, and other fit indices. Hence, it's advisable to prioritize cases with significant MIs for initial adjustments. Subsequently, the research team will re-run the model and determine which pairs of errors to connect for further improvement. However, excessive connecting of arrows between error pairs should be avoided.

The team suggests connecting error pairs within the same latent factor rather than across different factors. As illustrated in the diagram above, the team has connected the following error pairs: e21-e22, e36-e37, e37-e40, e37-e41, and e40-e41. These pairs exhibit strong correlations, aiding in enhancing Model Fit. Before connecting error pairs, Modification Indices will be displayed in the table below.

Table 4. 16. Model Fit Indices Results

			M.I.	Par Change
e40	<-->	e41	34.797	.069
e37	<-->	e41	16.710	-.046
e37	<-->	e40	21.186	-.048
e36	<-->	e37	18.380	.040
e21	<-->	e22	11.072	.037

- Special Case of GFI between 0.8 and 0.9

Due to limitations in sample size, achieving a GFI value of 0.9 can be challenging as this index depends heavily on scale, observed variables, and sample size. Because of its significant dependence on the number of observed variables, group structures, and sample size, GFI has been given less weight in evaluating model fit in recent years, and it's even recommended not to use it (Kline, 2005; Sharma et al., 2005). However, regarding the GFI value presented in our obtained results, I find it quite suitable based on the conditions specified, despite being higher than 0.8 and lower than 0.9. Moreover, considering the result of GPI= 0.899 when plotted, it can also be regarded as reaching the 0.9 threshold. Therefore, the results we have obtained are appropriate and align well with the conditions set by Hu & Bentler (1999).

4.6. Reliability, convergence, differentiation CFA - Quality variables observed in CFA

When conducting both Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) in AMOS, the assessment of convergent validity and discriminant validity is only permissible in CFA.

According to Hair et al. (2010) and Hair et al. (2016), we employ indicators such as CR, AVE, MSV, and the Fornell and Larcker matrix to evaluate the convergent validity and discriminant validity of the measurement scale.

In this regard, we can export the correlation matrix and the standardized regression coefficients into an Excel file for evaluating convergent and discriminant validity through the Master Validity plugin.

	Estimate		Estimate		Estimate
PE1 <--- PE	.790	PE2 <--- PE	.734	PEOU3 <--- PEOU	.864
PE7 <--- PE	.782	PS4 <--- PS	.851	PEOU4 <--- PEOU	.848
PE4 <--- PE	.792	PS1 <--- PS	.852	PEOU5 <--- PEOU	.820
PE6 <--- PE	.743	PS5 <--- PS	.831	PEOU2 <--- PEOU	.805
PE8 <--- PE	.667	PS2 <--- PS	.831	PEOU1 <--- PEOU	.737
PE3 <--- PE	.740	PS3 <--- PS	.825	EEAH1 <--- EEAH	.838
PE5 <--- PE	.741	PS6 <--- PS	.822	EEAH5 <--- EEAH	.763
A1 <--- A	.865	PH1 <--- PH	.852	EEAH4 <--- EEAH	.757
A2 <--- A	.849	PH4 <--- PH	.783	EEAH2 <--- EEAH	.800
A3 <--- A	.833	PH2 <--- PH	.785	EEAH3 <--- EEAH	.737
A4 <--- A	.790	PH3 <--- PH	.777	PP1 <--- PP	.908
A5 <--- A	.744	PU2 <--- PU	.885	PP4 <--- PP	.801
A6 <--- A	.653	PU3 <--- PU	.839	PP2 <--- PP	.767
GPI1 <--- GPI	.736	PU1 <--- PU	.757	PP3 <--- PP	.810
GPI2 <--- GPI	.815	O4 <--- O	.805		
GPI3 <--- GPI	.833	O5 <--- O	.715		
GPI4 <--- GPI	.802				
GPI5 <--- GPI	.787				
O1 <--- O	.709				
O2 <--- O	.815				
O3 <--- O	.841				

Figure 4. 14. Normalized Regression Results from SEM

- To establish the reliability of the model, our research team also examined the reliability through the following tables:

  + Reliability: As mentioned above, the research team verified the reliability of all variables using the SPSS software, ensuring their consistency.

  + With the standardized regression coefficients, the Estimate values in the table below indicate good quality if they are > 0.5.

Table 4. 17. Convergence and Discriminant Validity Assessment Result

	CR	AVE	MSV	MaxR(H)	PH	PE	PS	PEOU	EEAH	PP	PU	GPI	O	A
PH	0.876	0.640	0.440	0.880	**0.800**									
PE	0.911	0.562	0.440	0.913	0.663	**0.750**								
PS	0.933	0.698	0.005	0.933	-0.006	-0.054	**0.835**							
PEOU	0.909	0.666	0.202	0.914	0.056	0.080	-0.073	**0.816**						
EEAH	0.889	0.615	0.411	0.892	0.594	0.641	-0.061	0.044	**0.784**					
PP	0.893	0.678	0.236	0.908	0.456	0.472	0.048	-0.006	0.486	**0.823**				
PU	0.868	0.687	0.171	0.880	-0.062	-0.026	-0.025	0.394	-0.008	0.021	**0.829**			
GPI	0.896	0.632	0.275	0.899	0.085	0.111	-0.065	0.396	0.062	0.005	0.414	**0.795**		
O	0.885	0.607	0.011	0.892	-0.035	0.031	-0.065	-0.008	0.060	0.015	-0.073	0.031	**0.779**	
A	0.910	0.630	0.275	0.925	0.118	0.120	-0.064	0.449	0.107	0.012	0.338	0.524	0.107	**0.794**

- Convergent Validity:

According to the table below, we can observe that the Composite Reliability (CR) of all Constructs is >= 0.7, ensuring the reliability of the measurement scale. All values in the table representing convergent validity (AVE) are >= 0.5, indicating that convergent validity is assured. As depicted in the table below, both CR and AVE values meet the threshold for evaluation, thereby indicating strong convergent validity.

For all values of discriminant validity from the table below, it is evident that the Maximum Shared Variance (MSV) representing discriminant validity is smaller than AVE. The Square Root of AVE (SQRTAVE) values are greater than all Inter-Construct Correlations and the diagonal values from the table are not marked in red, and there are no errors in the notification section below, ensuring the validity of discriminant measures.

In the Fornell and Larcker matrix for assessing discriminant validity, we compare the bolded square root of AVE values at the top of each column with the correlation values directly below that column. If the square root of AVE is greater than all the values below it, then discriminant validity is established. Specifically, for variable PH, its square root of AVE is 0.800, which is larger than the correlations of PH with PE, PS, PEOU, EEAH, PP, PU, GPI, O, and A, which are 0.663, (-0.006), 0.056, 0.594, 0.456, (-0.062), 0.085, (-0.035), and 0.118, respectively. Similarly, we can read the diagonal values from top to bottom along each diagonal line.

These assessments of the model, as well as the demonstrated robustness and reliability of the model, have been quantified, enhancing confidence in the validity and reliability of the analysis conducted by our research team.

4.7. SEM Analysis Commentary

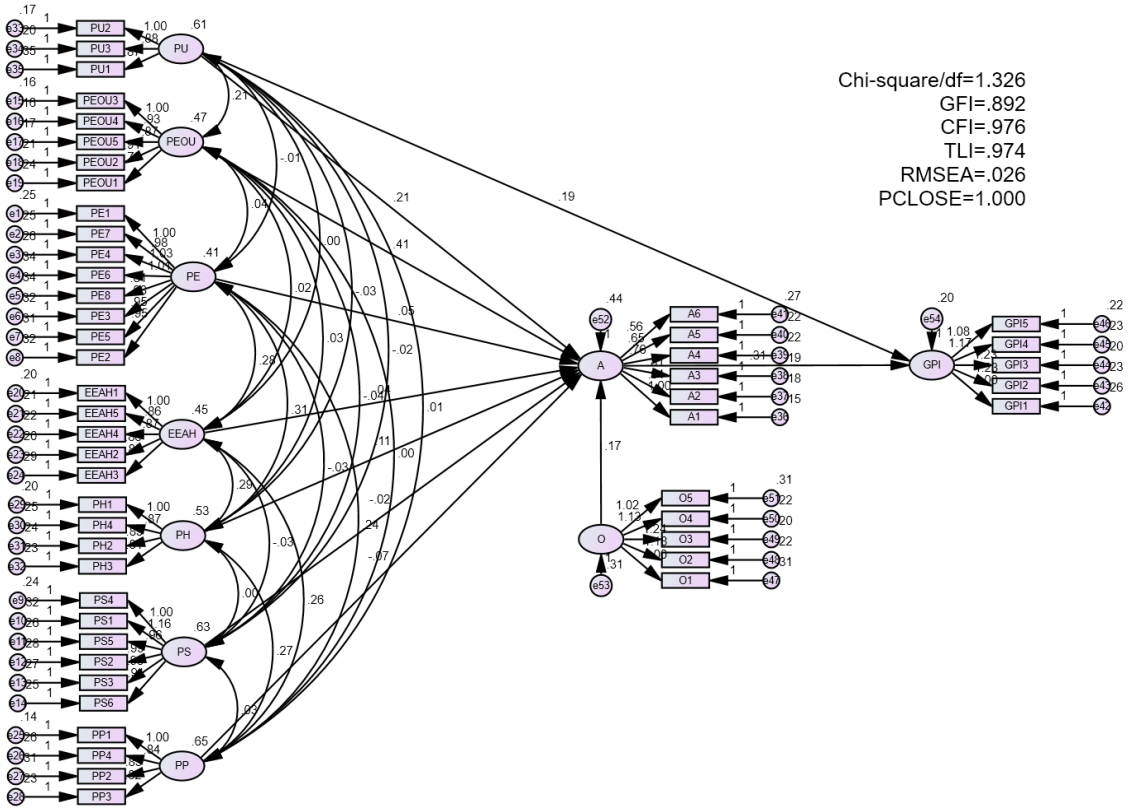


Figure 4. 15. Exploratory Factor Analysis Results (SEM)

There are 10 factors in the model, the hypotheses are set:

- H1: PEOU has an effect on A
- H2: PEOU has an effect on PU
- H3: PU has an effect on A
- H4: PU has an effect on GPI
- H5: A has an effect on GPI
- H6: PE has an effect on A
- H7: PE has an effect on PH
- H8: PH has an effect on A
- H9: PS has an effect on A
- H10: PP has an effect on A
- H11: O has an effect on A
- Particularly with the regulator variable H11, the demographics will have an impact on both A and GPI.

Regression Weights

Table 4. 18. Regression Weights Results

			Estimate	S.E.	C.R.	P	Label
A	<--	PU	.211	.049	4.307	***	
A	<--	PEOU	.408	.056	7.236	***	
A	<--	PE	.045	.084	.541	.588	
A	<--	PH	.112	.072	1.568	.117	
A	<--	PS	-.018	.042	-.429	.668	
A	<--	PP	-.072	.051	-1.400	.162	
A	<--	O	.171	.060	2.821	.005	
A	<--	EEAH	.041	.075	.549	.583	
GPI	<--	A	.310	.035	8.913	***	
GPI	<--	PU	.190	.034	5.652	***	

Using the 95% reliability standard, we will have the results from the Regression Weights table, namely, the Sig. of PE affects A 0.588 > 0.05, the transformed PE has no impact on A; the sig. of PH impacts A 0.117 > 0.05; the variable PH does not affect A; The Sig of PS acts on A 0.668 > 0,05, the Transformed PS doesn't impact A; and the transformation of PP does not impact A 0.162 > 0,05; the transformative PP does NOT affect A. The transformed O has an effect on A.

The other variables have sig equals 0,000 (AMOS symbol *** is sig equal to 0,000), so these relationships are meaningful. Thus, there are three variables affecting A: PU, PEOU, O; there are two variables impacting GPI: A and PU. In the theories, we reject H6a, H6b, H7, H8, H9 and accept the remaining theories.

Therefore, of the 3 attitude-influencing factors (A), the independent PU factor questioning the "Eco-friendly Green Delivery" is given as a highlight, which has a significant link to the green attitude and intention toward sustainable Green last-mile delivery is extremely environmentally friendly to Generation Z in the Mekong Delta.

Standardized Regression Weights

Table 4. 19. Standardized Regression Weights Results

			Estimate
A	<---	PU	.212
A	<---	PEOU	.357
A	<---	PE	.037
A	<---	PH	.105
A	<---	PS	-.018
A	<---	PP	-.074
A	<---	O	.123
A	<---	EEAH	.036
GPI	<---	A	.437
GPI	<---	PU	.269

In the 3 variables impact on A order the impact variables decrease as follows: PEOU, PU, O. With regression coefficients Estimate is: PU = 0.212; PEOU = 0.357; O = 0.123.

For A = 0.437 impact with a GPI stronger than PU = 0.269 impact with GPI. In decreasing order is A, PU.

Squared Multiple Correlations (R value)

Table 4. 20. Squared Multiple Correlations Results

	Estimate
O	.000
A	.272
GPI	.345

The average R value of A is.272 = 27.2%, so independent variables affect 27.2% of A's variability. For the equal R value of the variables A, O is.345 = 34.5%, so the intermediate, both dependent and controlling variables affect 34.5% of the GPI variability.

This encompasses all the content when the research team discusses Chapter 4, aiding us in a comprehensive understanding of the discussed points in the Analyses and Findings, and establishing connections for the content of Chapter 5. In the subsequent chapter, the research team will delve into new facets and contribute to the next main objectives of the study.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

Quantitative methods were carried out in the research and primary data were collected from 502 people in Mekong Delta Vietnam. The study was conducted to test the correlation between Green Last-Mile Delivery Approaches in E-Commerce and green purchase intention with Gen Z. The method of testing the scales including Cronbach alpha, Regression linear, EFA, CFA, SEM, etc., to analyze the above correlation. It is found that there is a positive correlation between the components of attitude towards green purchase intention.

5.1. Discussion & Conclusion

In the present era, enhancing human well-being in relation to the environment has become extremely important. This study was conducted using a quantitative approach, collecting primary data from 502 residents in the Mekong Delta region. The objective of the study was to examine the factors influencing the green purchase intention (GPI) of Gen Z consumers on e-commerce platforms for Green Last Mile Delivery (GLMD) services in the Mekong Delta area, Vietnam. Subsequently, variables were measured and assessed for unidimensionality, reliability, and validity using Cronbach's alpha coefficient, exploratory factor analysis, confirmatory factor analysis, and Structural Equation Modeling (SEM).

Initially, the regression analysis was carried out to determine the correlations and validate the research model, as well as test the hypotheses of the model. Variables influencing green purchase intention (GPI) were identified. The regression results demonstrated that variables like Attitude (A - intermediary variable), Perceived Ease of Use (PEOU), and Perceived Usefulness (PU) had positive impacts on green purchase intention (GPI). Based on these findings, it can be concluded that:

The variable Perceived Ease of Use (PEOU) relates to consumers' perception of the ease and effortlessness of performing a certain action. If consumers find green shopping easy (e.g., conducting online transactions to purchase environmentally friendly products), they are more likely to have a higher green purchase intention. Perceived Usefulness (PU) is associated with consumers' perception that performing a certain action will bring benefits to them. If consumers perceive that green shopping will benefit the environment or their health, they are more likely to have a higher green purchase intention. Attitude (A) is the overall perspective of consumers towards green shopping. If they have a positive attitude towards green shopping, they are more likely to have a higher green purchase intention.

Overall, the positive correlation between variables "PEOU," "PU," and "A" with "GPI" indicates that these factors can positively influence consumers' green purchase decisions. This also contributes to the development of the research model. Nonetheless, there are still some variables with unexpected negative impacts during the study's construction, including perceived environment (PE), perceived health (PH), Environmental awareness affects health (EEAH), perceived price (PP), and online review (O). If consumers perceive that green products do not significantly positively affect the environment or that environmental protection measures are ineffective, they may lack the motivation for green shopping.

Thus, the Structural Equation Modeling (SEM) method has allowed us to delve deeper into the complex relationships among variables in the research model. From this model, we can draw important conclusions about the impact of different factors on consumers' green purchase intentions. The results from SEM demonstrate that support from factors such as usefulness (PU), ease of use (PEOU), and online reviews (O) all have positive impacts on attitude (A) of consumers. Furthermore, attitude (A) and usefulness (PU) also influence green purchase intention (GPI), indicating that these factors not only affect consumers' perceptions but also play a crucial role in their green shopping decisions.

These results have shown that environmentally friendly green delivery methods and the usefulness (PU) of e-commerce have positive effects on consumers' attitudes and green purchase intentions (GPI). The interaction with information through social media based on users' perceptions of ease also plays a significant role in shaping green purchase intentions. This highlights a significant aspect of the study, echoing the statement "I feel that green delivery methods are environmentally friendly and beneficial." However, it is regrettable that certain variables like perceived environment (PE), perceived health (PH), Environmental awareness affects health (EEAH), perceived price (PP) did not have an impact on green purchase intention (GPI). This reveals that the level of influence of these factors on consumers' green purchase intentions is relatively limited in the study's specific context.

In conclusion, the results from both regression analysis and SEM provide a comprehensive insight into the impact of various factors on consumers' green purchase intentions. The congruence and absence of contradictions between these findings make the study intriguing and valuable in better understanding green shopping behavior and the ways in which influencing factors contribute. Moreover, it sets the stage for future research to delve

deeper into unexplored aspects and expand knowledge about sustainable shopping behavior.

5.2. Theoretical Implication

The aim of this research is to extract crucial factors from reputable studies on Green Last-Mile Delivery, construct a comprehensive and reliable research model. This model delineates the influence of environmental, health, social, pricing, and online review factors on the attitudes and intentions of Gen Z consumers toward green shopping in the Mekong Delta Vietnam, while also focusing on their attitudes towards green purchasing intentions.

The research findings indicate that consumer express concerns about the increased costs of green delivery, emphasizing the need for detailed information to enable them to make intelligent and sustainable shopping decisions. The research model further underscores that consumer attitudes toward Green Last-Mile Delivery significantly impact their green purchase intentions.

The study contributes valuable insights into the field of e-commerce and Green Last-Mile Delivery in Vietnam, aiding the development of appropriate solutions and strategies for post-purchase services. Additionally, it provides insights into global knowledge of e-commerce and consumer psychology in Vietnam.

In conclusion, our findings underscore the importance of ease of use and utility in the choice of delivery methods. Retailers and post-service providers should focus on enhancing the structure and smoothness of green last-mile delivery methods. The research proposes improvements to the usability and utility of Green Last-Mile Delivery, which can potentially reshape consumers' attitudes and shopping behaviors, encouraging sustainable utilization of Green Last-Mile Delivery. In summary, this research makes a significant contribution to e-commerce, Green Last-Mile Delivery, and consumer psychology in Vietnam, while also suggesting the subsequent directions for development in this field.

5.3. Practical Implication

The exploration of Last-Mile Green Delivery methods in E-commerce and their impact on Gen Z's green shopping intention, as illustrated through experimental research in the Mekong Delta region of Vietnam, yields significant practical implications for the stakeholders involved. E-commerce platforms should focus on integrating environmentally friendly Last-Mile Green Delivery options into their services. The study underscores the

importance of addressing cost concerns and providing detailed information to empower consumers to make informed decisions, enabling them to engage in sustainable and intelligent green shopping.

Transportation and delivery companies can leverage the research findings to enhance the design and efficiency of their Last-Mile Green Delivery processes. Emphasis should be placed on the user-friendliness and utility of these delivery methods while mitigating cost concerns to encourage higher adoption rates of sustainable delivery approaches. Collaboration with e-commerce platforms becomes a pivotal factor in creating a seamless and environmentally friendly delivery experience.

The study also highlights the significance of consumer attitudes toward Last-Mile Green Delivery. Therefore, marketing campaigns should focus on the positive environmental and social benefits of these methods. By constructing marketing campaigns that promote the value of green shopping based on the values of Gen Z and the tangible benefits of sustainable shopping, we can stimulate interest and encourage sustainable consumer behavior. The research also has implications for policies and regulations. Managers and governmental authorities can employ the research findings to develop policies that promote the adoption of environmentally friendly Last-Mile Green Delivery methods through incentives and regulations. This contributes to the establishment of a greener and more sustainable e-commerce environment.

Lastly, this research holds importance for the academic and research community. It provides valuable reference material for future studies on Last-Mile Green Delivery and consumer behavior, enriching our understanding of sustainable practices within the realm of E-commerce.

In conclusion, the practical impacts derived from this study offer valuable and realistic insights for stakeholders in E-commerce, logistics, and policy sectors to enhance Last-Mile Green Delivery methods and promote sustainable consumer behavior among Gen Z in the Mekong Delta region and beyond.

5.4. Limitations & Recommendations for Future Research

Currently in Vietnam, green last-mile delivery is not popular and there is not much research on this topic, so we don't have many reference sources for this research more deeply and become more objective. The representativeness of the population is somewhat limited because the sample structure is mainly in the Mekong Delta, Vietnam and the

sample size is not large enough so the results may not reflect the reality and there will certainly be errors in the process of collecting the research sample. Objectivity was also affected as the study mainly focused on Gen Z, however, the samples of the research were mainly university students, from 18 to 24 years old, so did not include all ages of Gen Z.

In addition, due to resources, economic constraints, and time, we only conducted online surveys and got a total of 502 responses. Research has not yet examined the impact of workers' behavioral responses, social factors, and economic crisis and market conditions that influence the impact of predictors on the variety of outcomes.

Future research should expand the research area and the research sample should also expand to other age groups than Gen Z. Further research on this topic will clarify the influence of factors on consumers to increase green consumption intentions. Although the term "green last-mile delivery" is quite new to Vietnamese students, this is both a strength and a limitation of the topic, but with the novelty of the topic, it promises to bring new perspectives, the delivery methods will improve, develop and change the dynamics of green consumption adoption.

Green shopping is a growing trend and is becoming increasingly important to many consumers. Making green product purchasing decisions can help reduce your environmental impact and promote sustainable practices.

We think to increase Gen Z's green purchasing intention, we should first raise their awareness of environmental protection and sustainability. We have some recommendations such as using social media platforms and other forms of digital communication to share information and resources. Additionally, partnering with Generation Z influencers and organizations can help promote sustainable practices and encourage green shopping. The creation of educational programs and events that specifically target Generation Z can help increase their understanding and engagement with environmental issues.

According to the results of the study, perceived ease of use and perceived usefulness have a positive effect on Gen Z's green purchase attitude and intention. From here, the group recommends that e-commerce platforms should integrate green delivery methods into options during the ordering process. Incentives are available to carriers with green delivery methods and stores/companies that package goods with eco-friendly packaging such as biodegradable materials and reusable containers.

In addition, it is possible to put green labels on products made with sustainable materials or low impact on the environment, or create a separate space for green products for customers to easily and quickly find. Create promotions on a fixed day of the month for green products to promote consumption and support customers.

In parallel, supporting companies with a commitment to sustainability and environmental stewardship can help encourage more green practices in the industry, and supporting organizations that are investing in sustainable initiatives can helps promote the development of more green products and services.

This encompasses all the content when the research team discusses Chapter 5, aiding us in a comprehensive understanding of the discussed points in the Conclusion and Recommendations, and establishing connections for the content across all chapters as well as summarizing the results pertaining to various aspects and contributions from the research content.

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APPENDIX

1. Appendix 1: Survey Questionnaire

SURVEY QUESTIONNAIRE

"Green Last-Mile Delivery Approaches in E-Commerce and green purchase intention with Gen Z - Case study Mekong Delta - Viet Nam"

Dear, friend

Our group is a student majoring in international business from FPT University Can Tho. We are currently in the process of conducting a survey for the SU23 graduation thesis. Survey to find out factors affecting Gen Z's green consumption intention in e-commerce when using Green Last-mile Delivery service

We hope you will take some time to complete this survey and share objective information to ensure its quality. We will keep your answers confidential and use them only for research purposes. The team sincerely thanks you for taking your valuable time to complete this survey.

To make the survey process as smooth as possible, please review the following concepts:

1. Definition of Green Last-mile

Green Last-mile delivery is an important part of the e-commerce industry, aiming to reduce the negative impact on the environment and increase sustainability by using smart delivery methods, efficient and environmentally friendly. It refers to the final stage in the delivery process from supplier to consumer. The goal is to reduce traffic congestion, carbon emissions, and noise pollution while meeting the growing needs of customers in a sustainable way. This includes the use of trams, bicycles, or public transport. Green Last-mile has become an important and promising area in achieving sustainable development in the e-commerce industry due to the rapid growth of this industry and increasing environmental consciousness.

2. Definition of Green Purchase

Green Purchase, also known as sustainable shopping, refers to choosing products and services that have a positive impact on the environment. When buying green, consumers pay attention to factors such as sustainable resource use, waste reduction, and energy saving, and prioritize the use of recycled products. For example, green shopping can be

choosing to buy organic products, choosing packaging made from paper, cartons, or wood, or buying products with green labels or certifications of sustainability. The goal of green shopping is to make a positive impact on the environment and to explore eco-friendly solutions to promote sustainable development.

SECTION 1 - SCREENING

The purpose of this phase is to screen and select suitable survey participants based on the research topic.

Have you used or are currently using an E-commerce platform or other forms of online shopping?

- o Yes (Great, let's continue the survey.)
- o No (Alright, you will stop the survey here. Thank you for your participation.)

SECTION 2 - GENERAL INFORMATION

We assure you that the information you provide in this survey will be kept confidential and used only for the purpose of this research topic, without any other purposes.

This section consists of 10 questions.

1. Your full name

……

2. What is your gender?

- o Male (0)
- o Female (1)

3. What is your current occupation?

- o Student (1)
- o Government employee (2)
- o Worker or staff (3)
- o Business owner (4)
- o Self-employed or homemaker (5)

4. What is your educational level?

- o Up to high school (1)

- o Intermediate level (Enrolled after middle school) (2)
- o College (3)
- o University (4)
- o Postgraduate (5)

5. What is your major?

- o Economics (Business Administration, International Business, Multimedia Communication, Digital Marketing, Hospitality Management, Travel and Tourism Management, etc.) (1)
- o Languages (English, Korean, Japanese, etc.) (2)
- o Engineering - Technology (Software Engineering, Information Security, etc.) (3)
- o Graphic design (4)
- o Healthcare field (5)
- o Other major (6)

6. Where is your hometown?

- o Can Tho (1)
- o An Giang (2)
- o Dong Thap (3)
- o Long An (4)
- o Tien Giang (5)
- o Vinh Long (6)
- o Ben Tre (7)
- o Tra Vinh (8)
- o Soc Trang (9)
- o Hau Giang (10)
- o Bac Lieu (11)
- o Ca Mau (12)
- o Kien Giang (13)

7. What is your average monthly income?

Including family allowances if applicable

- o Below 5 million VND/month (1)
- o From 5 million VND to 10 million VND/month (2)

- o Above 10 million VND/month (3)

8. How much do you spend on average per month on online shopping?

- o Below 1 million VND/month (1)
- o From 1 million VND to 2 million VND/month (2)
- o From 2 million VND to 3 million VND/month (3)
- o Above 3 million VND/month (4)

9. How frequently do you shop online per month?

- o Less than 3 times in a month (1)
- o From 3 to 5 times in a month (2)
- o More than 5 times in a month (3)

10. What is your average daily internet usage time?

- o Less than 3 hours per day (1)
- o From 3 to less than 6 hours per day (2)
- o From 6 to less than 9 hours per day (3)
- **o** 9 hours per day or more (4)

SECTION 3 - II. ATTITUDE AND GREEN PURCHASE INTENTION (GPI)

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Attitude (A)

Consumer attitudes towards choosing green purchases on the E-commerce platform with regards to Green Last-Mile Delivery service (Green delivery method)

Table 1. Scale of Attitude

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5

A1	I am interested in green products and green delivery methods.					
A2	I like that the packages delivered to me are tightly packed with eco-friendly packaging.					
A3	I am willing to choose green delivery methods as long as they do not cause significant inconvenience compared to regular delivery methods.					
A4	I feel better if I use green products and choose green delivery methods in the future.					
A5	I wonder if my goods are transported by a green vehicle (e.g., fossil fuel, hybrid, electric vehicle, etc.).					
A6	I feel like an eco-conscious customer.					

Green Purchase Intention (GPI)

Green purchase intention of consumers

Table 2. Sacle of Green Purchase Intention (GPI)

Code	**Questions**	**Extent of Disagree/Agree**				
		1	**2**	**3**	**4**	**5**
GPI1	I will choose to purchase environmentally friendly products.					
GPI2	My family and friends advised me to consume green products.					

GPI3	I often prioritize purchasing green products that have reusable or recyclable packaging.					
GPI4	I am willing to pay a slightly higher price when purchasing green products because of the benefits they provide.					
GPI5	My life will be better if I consume green products in the future.					

SECTION 4 - III. Perceived Usefulness (PU), Perceived Ease of Use (PEOU) and Online Review (OR)

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Perceived Usefulness (PU)

Perceived usefulness is the degree to which a person believes that using a particular system will improve his or her job performance.

When consumers perceive the usefulness and convenience of new technology-based services, their intention to use is greater and vice versa.

For example, you have the ability to access virtual stores at any convenient time, while being able to perform other activities such as exercising, cooking, and childcare during the purchase. You can use it even without transportation and avoid crowded parking or bad weather.

Table 3. Scale of Perceived Usefulness (PU)

Code	**Questions**	**Extent of Disagree/Agree**				
		1	**2**	**3**	**4**	**5**
PU1	I am eligible for free returns when shopping online.					

PU2	I have access to fast delivery options when shopping online (same-day delivery, 4-hour delivery, next-day delivery, etc.).					
PU3	I feel that green delivery methods are environmentally friendly and beneficial.					

Perceived Ease of Use (PEOU)

Perceived ease of use is the degree to which a person believes that using a particular IT tool system will be effortless.

Perceived ease of use greatly affects consumers' intention to use new technology services, when a computer user believes in the ability to perform a job (purchase) on the computer. easily depends on a variety of computer interface designs, computer training programs, expression languages, and software installed on the computer.

Table 4. Scale of Perceived Ease of Use (PEOU)

Code	**Questions**	**Extent of Disagree/Agree**				
		1	**2**	**3**	**4**	**5**
PEOU1	I find E-commerce platforms and online shopping websites easy to use.					
PEOU2	I find the online payment channels convenient to use.					
PEOU3	I like the flexibility of shopping using any mobile device (such as a smartphone, laptop, or tablet).					
PEOU4	I love the flexibility of shopping online at any time of the day or night.					
PEOU5	I enjoy the flexibility of shopping from anywhere, regardless of my location, when shopping online.					

Online Review (O)

Reviews of products and services of consumers on E-commerce or other online shopping.

Table 5. Scale of Online Review (O)

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5
O1	If a product has negative reviews after being sold, it may affect my intention to make green purchases.					
O2	If a product has positive reviews after being sold, it will influence my intention to make green purchases.					
O3	I read online reviews about products before making a purchasing decision.					
O4	I consider the information provided by the supplier about the product.					
O5	The information from reviews and feedback tends to be accurate.					

SECTION 5 - IV. Perceived Environmental (PE)

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Perceived Environmental (PE)

Environmental awareness refers to an individual's subjective understanding and interpretation of the physical and social environment around them, this case includes factors such as traffic congestion, air quality, emissions, noise pollution, convenience, and overall sustainability in the delivery process to the consumer.

Table 6. Scale of Perceived Environmental (PE)

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5

PE1	I think that protecting the environment is my responsibility.					
PE2	I prioritize buying products that are packed in reusable, recyclable, or biodegradable packaging.					
PE3	It is essential to raise environmental awareness in the community.					
PE4	The green delivery method helps save natural resources.					
PE5	Green delivery methods generate less CO2 compared to other delivery methods.					
PE6	The carbon emissions from green last-mile delivery in online shopping are lower than the carbon emissions produced by consumers traveling to traditional stores for shopping.					
PE7	Using green products in combination with environmentally friendly green delivery methods helps reduce waste and pollution emissions that harm the environment.					
PE8	If I understand the potential environmental harm that certain products or services can cause, I will refrain from purchasing or using them.					

SECTION 6 - V. Environmental awareness affects health

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Table 7. Scale of Environmental awareness affects health

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5
EEAH1	I use green products because I want to protect my own health.					
EEAH2	I am well aware of the impact of climate change and the environment on health.					
EEAH3	The ingredients and raw materials used to produce environmentally friendly green products that do not harm humans, animals, and nature.					
EEAH4	It is necessary to improve the living environment to protect the health and safety of the community.					
EEAH5	It is necessary to raise awareness about environmental and health protection.					

SECTION 7 - VI. Perceived Health (PH)

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Perceived Health (PH)

The growing concern about health has led consumers to begin to consider and care about the impact of their consumption habits on their health. This means that they will start using or intend to change their consumption behavior in a positive way if they believe that using a certain product will benefit their health and vice versa.

Table 8. Scale of Perceived Health (PH)

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5
PH1	I am concerned about packaging materials that can affect the quality of food.					
PH2	I always consider health aspects in my everyday shopping activities.					
PH3	I prioritize selecting products that are beneficial for my health.					
PH4	I think of myself as a health-conscious consumer.					

SECTION 8 - VII. Perceived Social (PS) and Perceived Price (PP)

Please help the team answer the following questions by reading and indicating your viewpoint on the following scale:

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5 (rongly Agree

Perceived Social (PS)

Consumer perception of society and the impact of society on consumer perception.

Table 9. Scale of Perceived Social (PS)

Code	Questions	Extent of Disagree/Agree				
		1	2	3	4	5
PS1	I may be perceived as outdated by those around me if I do not use environmentally friendly products.					
PS2	Environmental advocacy makes my value higher in the eyes of people (friends will see me as great, healthy,... when I use green products)					
PS3	The use of green delivery methods contributes to advancing the quality of life of the people in the area.					

PS4	The use of green delivery methods improves the quality of life and contributes to economic development in the region.					
PS5	Using green delivery methods creates and sustains employment opportunities in the area.					
PS6	I prioritize choosing products/manufacturers that have a commitment to social value.					

Perceived Price (PP)

Consumers' perception of prices when using and buying goods/services.

A consumer's overall assessment of the utility of a product or service is based on their perception of what is received and what has to be spent. Describe the balance between product quality or benefits they perceive from the product and the cost they pay for it.

Table 10. Scale of Perceived Price (PP)

Code	**Questions**	**Extent of Disagree/Agree**				
		1	**2**	**3**	**4**	**5**
PP1	I believe that green products combined with green delivery methods are slightly more expensive than other delivery methods.					
PP2	I think the running cost of the green delivery method is cheaper than other delivery methods.					
PP3	The price of green products must be consistent with the benefits they bring to the environment.					
PP4	Consumers in Vietnam are willing to pay more for green products and green delivery methods to protect their health and the environment.					

2. Appendix 2: Summary of literature review

Table 11. Summary of literature review

Authors, year	Title	Country	Methodology	Variable identified	Survey subject	Key findings	Limitations
Klein and Popp (2022)	Last-Mile Delivery Methods in E-Commerce: Does Perceived Sustainability Matter for Consumer Acceptance and Usage?	Germany	Qualitative research and quantitative research	Attitude, Intention to use, perceived costs, Perceived ease of use, perceived economic sustainability, perceived	German consumers	For the decision to adopt a specific delivery method, ease, speed of delivery, and accessibility is more crucial than sustainability. For the purpose of influencing customer attitudes toward the last mile, perceived usefulness is equally crucial. The convenience of use and perceived utility are most	Its foundation is a single nation's (Germany) cross-sectional data on Younger customers. Second, as digitalization and improved distribution techniques advance, they will

				environmental sustainability, Perceived social sustainability, Perceived usefulness.		important, even though environmental and social considerations impact the adoption of various delivery systems. Perceived environmental sustainability is the most crucial component of sustainability when it comes to being the drive behind last-mile delivery. This environmental component influences the delivery method's attitude favorably, and the environment positively	change the factors that influence acceptance that was examined in this study. Third, because Customer preferences are fluid, the impact of affordability, sustainability, and convenience might vary depending on the product category.

						influences the choice to buy. Regarding perceived costs, it is important to note that while the perceived social and economic sustainability of parcel lockers and all three delivery methods were associated with perceived higher costs, perceived environmental sustainability was not. Although perceptions were negatively impacted by perceived social	

						sustainability, the purchase process was unaffected by either economic or social sustainability. The analysis of the three delivery methods find no direct effect of perceived cost on intention, which somewhat contradicts earlier results that more environmentally friendly items are not always more expensive to use.	
Tian, Z.,Sun, X.,	Factors Affecting Green	China	Qualitative research and	Perceived price,	Chinese consumers	This study explores the impact of perceived quality	This study used a cross-sectional

Wang, J., Su, W., and Li, G. (2022)	Purchase Intention: A Perspective of Ethical Decision Making.		quantitative research	Perceived quality, Moral judgment, Moral intensity, Green purchase intention, Products' green degree.		and price on moral intensity and judgment in green purchase intention. It found that moral intensity and judgment significantly boost green purchase intention, with perceived quality and price positively affecting moral judgment and intensity. The study also found that products' green degree moderated the relationship between perceived price and moral judgment.	analysis due to time and budget constraints. Although Behavioral intention is one of the direct determinants of behavior, many factors can prevent the implementation of intended behavior.

Nguyen Thi Hoang Yen & Dung Phuong Hoang (2023)	The formation of attitudes and intention towards green purchase: An analysis of internal and external mechanisms	Vietnam	Qualitative research and quantitative research	Green Purchase Intention, Attitude toward green purchase, Online product review, Health consciousness, Environmental concern.	Vietnamese customers	This study examines how attitudes and green buying intention are generated from both the attitude formation and purchase decision-making process perspectives given the major role of attitudes in driving intention to buy environmentally friendly items. According to the empirical findings from an attitude formation perspective, one's self-consciousness and	This research only examines the purchase intention This research did not examine the validity of the research model among various demographic segments This research only takes the sample of Vietnam

						awareness as they relate to the environment and their health makes up the internal mechanism, while online product reviews, a type of social stimuli, make up the external mechanism that determines one's propensity to make green purchases. These connections might also be seen from the viewpoint of the purchasing decision. Online product reviews promote	

						information search and alternative evaluation in the middle phase, which follows the first phase, which is prompted by environmental and health concerns.	

3. Appendix 3: Frequency Statistics

Table 12. Demographic statistics

Characteristics	Categories	Frequency	Valid (%)	Accumulative (%)
Gender	Male	232	46,2	46,2
	Female	270	53,8	100,0
Occupation	High school	353	70,3	70,3
	State officials and Employees	33	6,6	76,9
	Workers - Employees	56	11,2	88,0
	Trade and Business	33	6,6	94,6
	Freelancing - Housewives	27	5,4	100,0
Education	High school	47	9,4	9,4
	Intermediate school	36	7,2	16,5
	College	38	7,6	24,1
	University	349	69,5	93,6
	Postgraduate	32	6,4	100,0
Major	Economics	227	45,2	45,2
	Languages	51	10,2	55,4
	Technical - Technology	90	17,9	73,3
	Graphic design	54	10,8	84,1
	Health	29	5,8	89,8

	Other	51	10,2	100,0
Hometown	Can Tho	101	20,1	20,1
	An Giang	43	8,6	28,7
	Dong Thap	30	6,0	34,7
	Long An	9	1,8	36,5
	Tien Giang	24	4,8	41,2
	Vinh Long	63	12,5	53,8
	Ben Tre	12	2,4	56,2
	Tra Vinh	30	6,0	62,2
	Soc Trang	41	8,2	70,3
	Hau Giang	36	7,2	77,5
	Bac Lieu	29	5,8	83,3
	Ca Mau	32	6,4	89,6
	Kien Giang	52	10,4	100,0
Income per month	Below 5 million	294	58,6	58,6
	5 million - 10 million	126	25,1	83,7
	Above 10 million	82	16,3	100,0

4. Appendix 4: Chi-Square Test - Crosstabs

4.1. Gender * Income

*Table 13. Statistical Gender * Income Cross tabulation*

Gender * Income Cross tabulation		
	Income	**Total**

			Below 5 million VND/month	From 5 million VND to 10 million VND/month	Above 10 million VND/month	
Gender	**Male**	Count	126	59	47	232
		% of Total	25.1%	11.8%	9.4%	46.2%
	Female	Count	168	67	35	270
		% of Total	33.5%	13.3%	7.0%	53.8%
Total		Count	294	126	82	502
		% of Total	58.6%	25.1%	16.3%	100.0%

A Cross Tabulation Table provides an overview of the relationship between two variables from a statistical frequency perspective.

Among males, there is a 25.1% proportion (126 out of a total of 502 survey samples) with an income level below 5 million VND per month; approximately from 5 million to 10 million VND per month accounts for 11.8% (59 out of 502 survey samples); and above 10 million VND per month comprises 9.4% (47 out of 502 survey samples). In total, there are 232 males, making up a percentage of 46.2%, falling into these income levels.

For females, the proportion of income levels below 5 million VND per month is 33.5% (168 out of a total of 502 survey samples); from 5 million to 10 million VND per month constitutes 13.3% (67 out of 502 survey samples); and above 10 million VND per month makes up 7.0% (35 out of 502 survey samples). In total, there are 270 female respondents, accounting for a percentage of 53.8%, within these income levels.

In this manner, we gain a clearer understanding of income distribution by gender and income brackets in the surveyed area of the Mekong Delta.

Table 14. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)

Pearson Chi-Square	5.419[a]	2	.067
Likelihood Ratio	5.412	2	.067
Linear-by-Linear Association	5.047	1	.025
N of Valid Cases	502		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 37.90.			

The Sig value > 0.05, we accept the hypothesis, which is equivalent to saying that gender and income are related to each other.

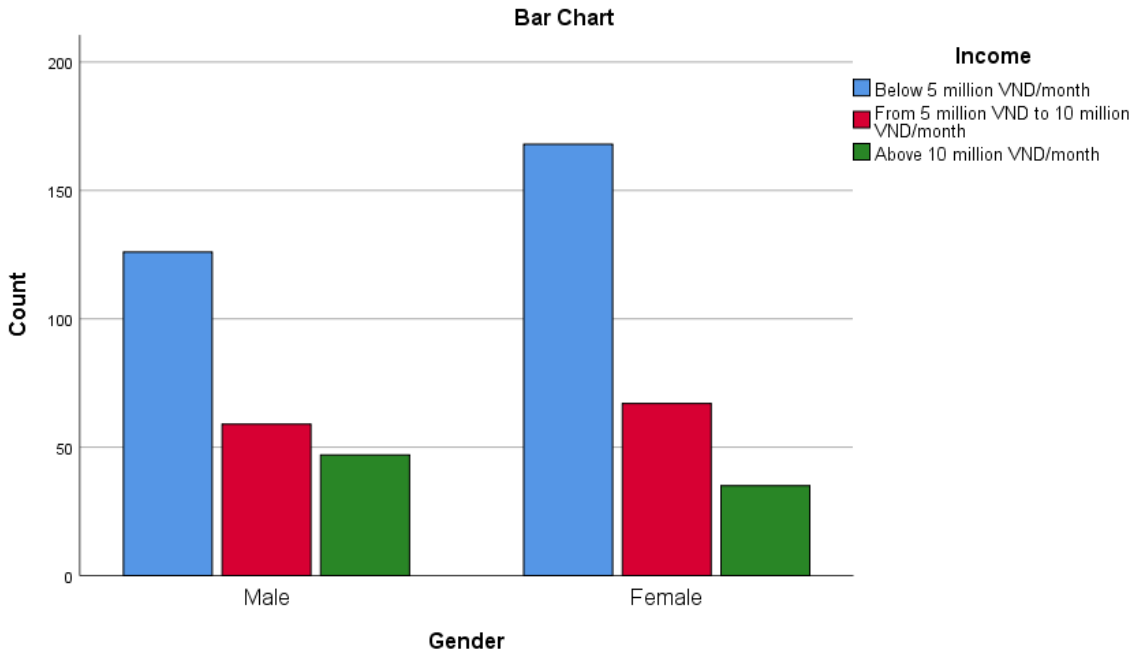

Figure 1. Statistical Chart Income - Gender

A bar graph illustrates the frequency of responses for each value of income, segmented by gender – male and female. Specifically, for males, we observe that the color blue represents 126 individuals; the color red corresponds to 59 individuals; and the color green stands for 47 individuals.

On the other hand, for females, the color blue represents 168 individuals; the color red signifies 67 individuals; and the color green indicates 35 individuals.

Consequently, through the bar graph, we can easily compare the response frequencies of income values between males and females.

4.2. Gender * The shopping frequency

*Table 15. Statistical Gender * The shopping frequency Cross tabulation*

Gender * The shopping frequency Cross tabulation						
			The shopping frequency			Total
			Less than 3 times per month	From 3 to 5 times per month	5 times or more per month	
Gender	Male	Count	129	71	32	232
		% of Total	25.7%	14.1%	6.4%	46.2%
	Female	Count	143	88	39	270
		% of Total	28.5%	17.5%	7.8%	53.8%
Total		Count	272	159	71	502
		% of Total	54.2%	31.7%	14.1%	100.0%

A Cross Tabulation Table provides an overview of the relationship between two variables from a statistical frequency perspective.

Among males, there is a 25.7% proportion (129 out of a total of 502 survey samples) with a shopping frequency categorized as "Less than 3 times per month"; the proportion for "From 3 to 5 times per month" is 14.1% (71 out of 502 survey samples); and the proportion for "5 times or more per month" is 6.4% (32 out of 502 survey samples). In total, there are 232 males, making up a percentage of 46.2%, falling into these shopping frequency categories.

For females, the proportion of shopping frequency "Less than 3 times per month" is 28.5% (143 out of a total of 502 survey samples); for "From 3 to 5 times per month" it is 17.5% (88 out of 502 survey samples); and for "5 times or more per month" it is 7.8% (39 out of 502 survey samples). In total, there are 270 female respondents, accounting for a percentage of 53.8%, within these shopping frequency categories.

In this manner, we gain a clearer understanding of shopping frequency distribution by gender in the surveyed area of the Mekong Delta.

Table 16. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.354[a]	2	.838
Likelihood Ratio	.354	2	.838
Linear-by-Linear Association	.258	1	.611
N of Valid Cases	502		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.81.			

The Sig value being > 0.05, we accept the hypothesis, which is equivalent to stating that gender and shopping frequency are not related to each other.

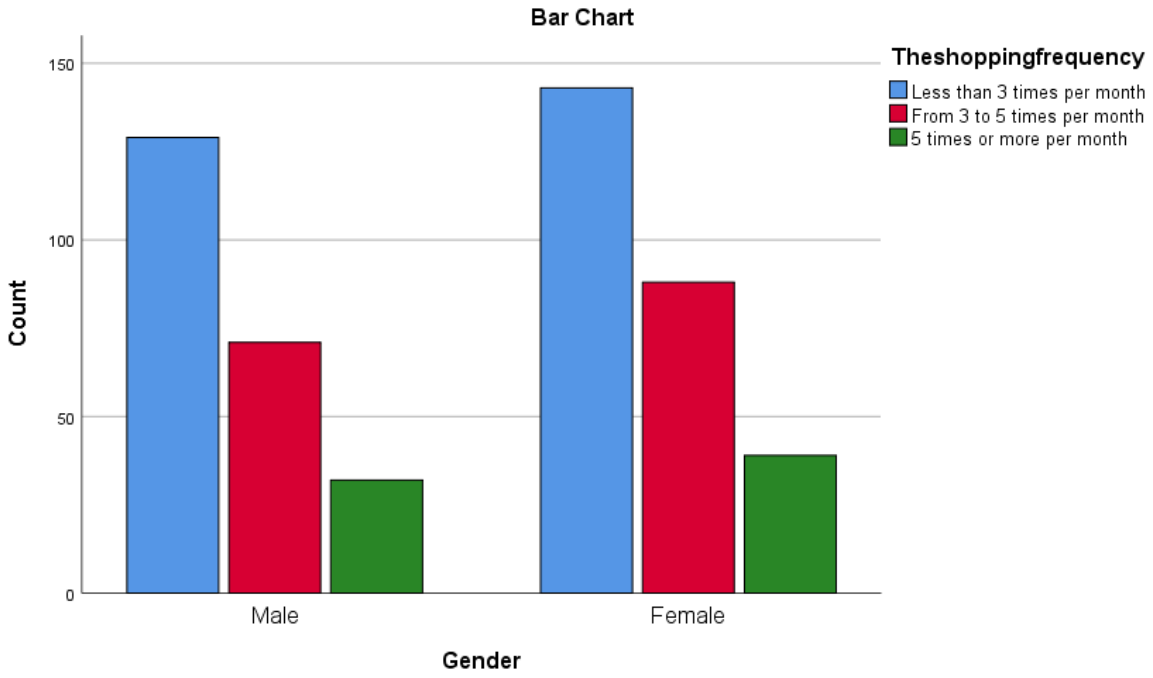

Figure 2. Statistical Chart The shopping frequency - Gender

A bar graph illustrates the frequency of responses for each value of shopping frequency, segmented by gender – male and female. Specifically, for males, we observe that the color blue represents 129 individuals; the color red corresponds to 71 individuals; and the color green stands for 32 individuals.

On the other hand, for females, the color blue represents 143 individuals; the color red signifies 88 individuals; and the color green indicates 39 individuals.

Consequently, through the bar graph, we can easily compare the response frequencies of shopping frequency values between males and females.

4.4. Occupation * Income

*Table 17. Statistical Occupation * Income Cross tabulation*

Occupation * Income Cross tabulation						
			Income			Total
			Below 5 million VND/month	From 5 million VND to 10 million VND/month	Above 10 million VND/month	
Occupation	High school	Count	255	75	23	353
		% of Total	50.8%	14.9%	4.6%	70.3%
	State officials and Employees	Count	8	11	14	33
		% of Total	1.6%	2.2%	2.8%	6.6%
	Workers - Employees	Count	12	26	18	56
		% of Total	2.4%	5.2%	3.6%	11.2%
	Trade and Business	Count	10	9	14	33
		% of Total	2.0%	1.8%	2.8%	6.6%
	Freelancing - Housewives	Count	9	5	13	27
		% of Total	1.8%	1.0%	2.6%	5.4%
Total		Count	294	126	82	502
		% of Total	58.6%	25.1%	16.3%	100.0%

A Cross tabulation Table provides an overview of the relationship between two variables from a statistical frequency perspective.

Among High school, there is a 50.8% proportion (255 out of a total of 502 survey samples) falling into the "Below 5 million VND/month" income bracket; the proportion for "From 5 million VND to 10 million VND/month" is 14.9% (75 out of 502 survey samples); and the proportion for "Above 10 million VND/month" is 4.6% (23 out of 502 survey samples). In total, there are 353 High school, making up a percentage of 70.3%, within these income brackets.

For State officials and Employees, the proportion "Below 5 million VND/month" is 1.6% (8 out of a total of 502 survey samples); "From 5 million VND to 10 million VND/month" accounts for 2.2% (11 out of 502 survey samples); and "Above 10 million VND/month" represents 2.8% (14 out of 502 survey samples). In total, there are 33 State officials and Employees, accounting for a percentage of 6.6%, within these income brackets.

Among Workers - Employees, the proportion "Below 5 million VND/month" is 2.4% (12 out of a total of 502 survey samples); "From 5 million VND to 10 million VND/month" is 5.2% (26 out of 502 survey samples); and "Above 10 million VND/month" represents 3.6% (18 out of 502 survey samples). In total, there are 56 Workers or staff, accounting for a percentage of 11.2%, within these income brackets.

For Trade and Business, the proportion "Below 5 million VND/month" is 2.0% (10 out of a total of 502 survey samples); "From 5 million VND to 10 million VND/month" accounts for 1.8% (9 out of 502 survey samples); and "Above 10 million VND/month" represents 2.8% (14 out of 502 survey samples). In total, there are 33 Trade and Business, accounting for a percentage of 6.6%, within these income brackets.

Among Freelancing - Housewives, the proportion "Below 5 million VND/month" is 1.8% (9 out of a total of 502 survey samples); "From 5 million VND to 10 million VND/month" accounts for 1.0% (5 out of 502 survey samples); and "Above 10 million VND/month" represents 2.6% (13 out of 502 survey samples). In total, there are 27 Freelancing - Housewives, accounting for a percentage of 5.4%, within these income brackets.

In this manner, we gain a clearer understanding of the distribution of occupations based on income levels in the surveyed area of the Mekong Delta.

Table 18. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	125.820[a]	8	.000
Likelihood Ratio	120.764	8	.000
Linear-by-Linear Association	89.646	1	.000
N of Valid Cases	502		
a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 4.41.			

The Sig value < 0.05, we reject the hypothesis, which is equivalent to saying that occupation and income are indeed related to each other.

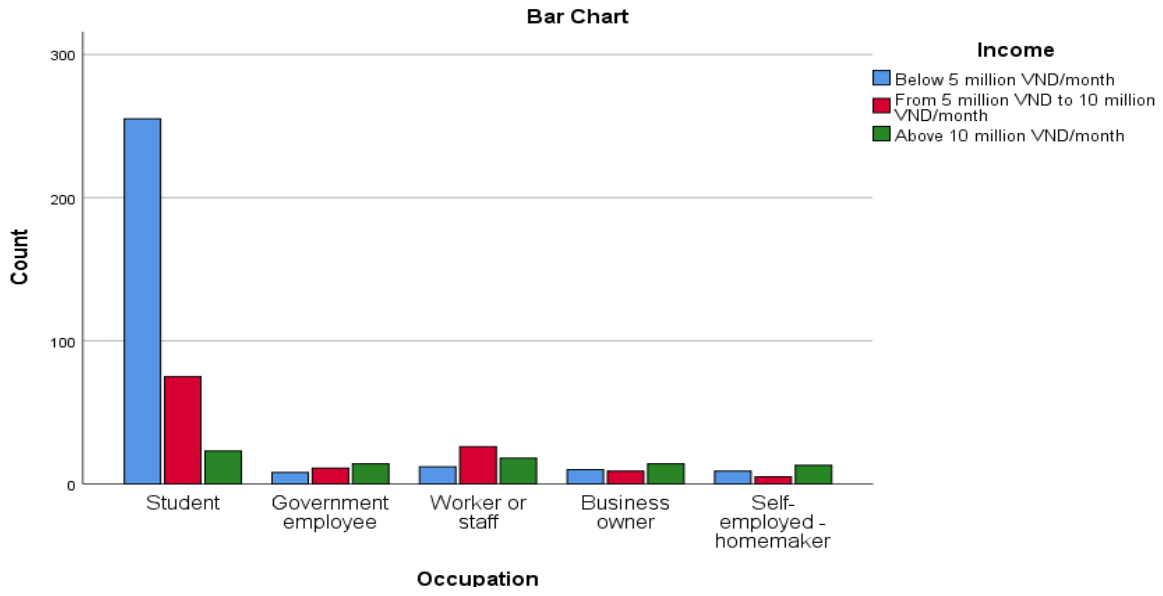

Figure 3. Statistical Chart Income - Occupation

By representing the data in a column chart, we can easily observe the frequency distribution of survey participants for each value of the occupation variable, segmented by income ranges. Specifically:

For the High school group, the color blue represents 255 individuals; the color red signifies 75 individuals; and the color green indicates 23 individuals.

In the case of the State officials and Employees group, the color blue represents 8 individuals; the color red represents 11 individuals; and the color green indicates 14 individuals.

For the Workers - Employees group, the color blue represents 12 individuals; the color red signifies 26 individuals; and the color green indicates 18 individuals.

With the Trade and Business group, the color blue represents 10 individuals; the color red signifies 9 individuals; and the color green indicates 14 individuals.

In the case of the Freelancing - Housewives group, the color blue represents 9 individuals; the color red signifies 5 individuals; and the color green indicates 13 individuals.

From this column chart, we can easily compare the response frequencies of different occupation values across various income ranges.

4.5. Field of study* Income

*Table 19. Statistical Field of Study * Income Crosstabulation*

Field Of Study * Income Crosstabulation						
			Income			**Total**
			Below 5 million VND/month	**From 5 million VND to 10 million VND/month**	**Above 10 million VND/month**	
Field of study	**Economics**	Count	154	55	18	227
		% of Total	30.7%	11.0%	3.6%	45.2%
	Languages (English, Korean, Japanese, etc.)	Count	27	17	7	51
		% of Total	5.4%	3.4%	1.4%	10.2%
	Engineering - Technology (Software Engineering, Information Security, etc.)	Count	56	20	14	90
		% of Total	11.2%	4.0%	2.8%	17.9%
	Graphic design	Count	30	9	15	54

		% of Total	6.0%	1.8%	3.0%	10.8%
	Health	Count	8	9	12	29
		% of Total	1.6%	1.8%	2.4%	5.8%
	Other field	Count	19	16	16	51
		% of Total	3.8%	3.2%	3.2%	10.2%
Total		Count	294	126	82	502
		% of Total	58.6%	25.1%	16.3%	100.0%

The Crosstabulation table provides an overview of the relationship between two variables from a statistical frequency perspective.

For the Economics field, the distribution is as follows: Below 5 million VND/month accounts for 30.7% (154 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 11.0% (55 out of 502 survey samples); and Above 10 million VND/month accounts for 3.6% (18 out of 502 survey samples). In total, there are 227 individuals in the Economics field, representing 45.2% of the sample, across income levels.

In the Languages (English, Korean, Japanese, etc.) field: Below 5 million VND/month accounts for 5.4% (27 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 3.4% (17 out of 502 survey samples); and Above 10 million VND/month accounts for 1.4% (7 out of 502 survey samples). In total, there are 51 individuals in the Languages field, representing 10.2% of the sample, across income levels.

For the Engineering - Technology (Software Engineering, Information Security, etc.) field: Below 5 million VND/month accounts for 11.2% (56 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 4.0% (20 out of 502 survey samples); and Above 10 million VND/month accounts for 2.8% (14 out of 502 survey samples). In total, there are 90 individuals in the Engineering - Technology field, representing 17.9% of the sample, across income levels.

In the Graphic Design field: Below 5 million VND/month accounts for 6.0% (30 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 1.8% (9 out of 502 survey samples); and Above 10 million VND/month accounts for 3.0% (15 out of 502 survey samples). In total, there are 54 individuals in the Graphic Design field, representing 10.8% of the sample, across income levels.

For the Health: Below 5 million VND/month accounts for 1.6% (8 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 1.8% (9 out of 502 survey samples); and Above 10 million VND/month accounts for 2.4% (12 out of 502 survey samples). In total, there are 29 individuals in the health, representing 5.8% of the sample, across income levels.

In the Other field: Below 5 million VND/month accounts for 3.8% (19 out of 502 survey samples); From 5 million VND to 10 million VND/month accounts for 3.2% (16 out of 502 survey samples); and Above 10 million VND/month accounts for 3.2% (16 out of 502 survey samples). In total, there are 51 individuals in the other field, representing 10.2% of the sample, across income levels.

This analysis provides a clearer perspective on the distribution of fields of study based on income levels in the Mekong Delta region that has been studied.

Table 20. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	49.675[a]	10	.000
Likelihood Ratio	47.993	10	.000
Linear-by-Linear Association	36.207	1	.000
N of Valid Cases	502		
a. 1 cells (5.6%) have expected count less than 5. The minimum expected count is 4.74.			

The Sig value < 0.05 indicates that we reject the null hypothesis, implying that there is a statistically significant relationship between fields of study and income.

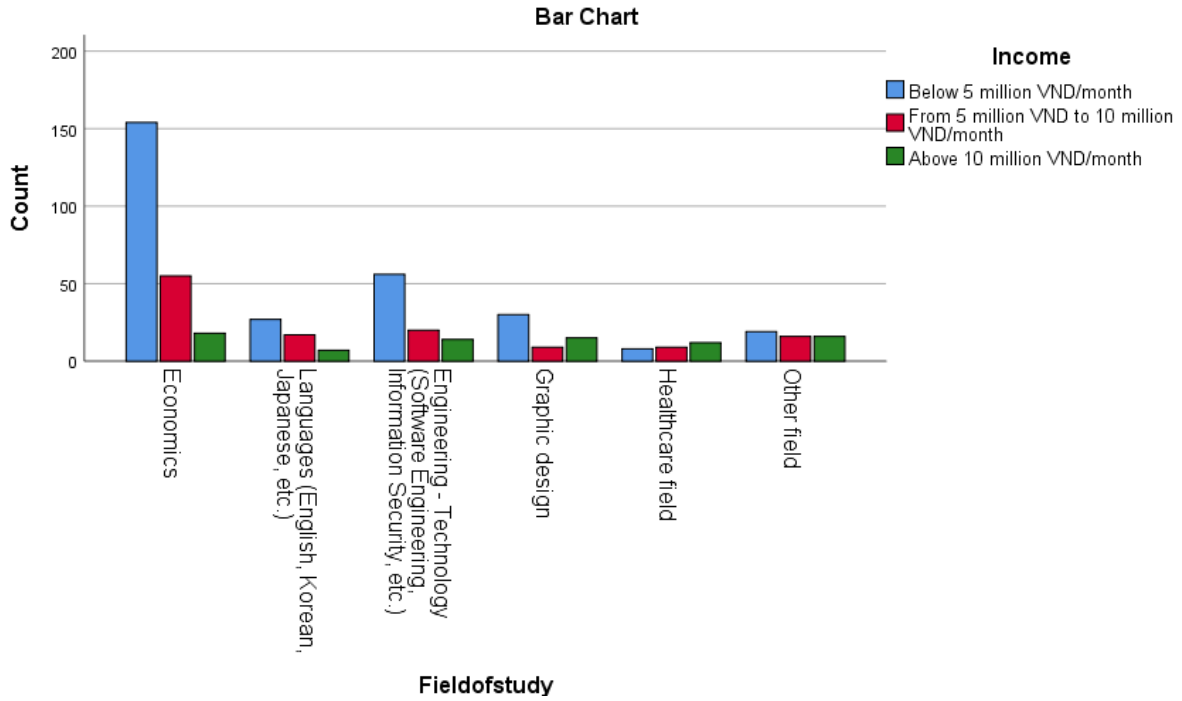

Figure 7. Statistical Chart Field of Study - Income

By representing the data in a column chart, we can easily observe the frequency distribution of survey participants for each value of the field of study variable, segmented by income ranges. Specifically:

For the Economics group, the blue color represents 154 participants, the red color represents 55 participants, and the green color represents 18 participants.

In the case of the Languages (English, Korean, Japanese, etc.) group, the blue color represents 27 participants, the red color represents 17 participants, and the green color represents 7 participants.

For the Graphic design group, the blue color represents 30 participants, the red color represents 9 participants, and the green color represents 15 participants.

For the Health group, the blue color represents 8 participants, the red color represents 9 participants, and the green color represents 12 participants.

In the case of the other field group, the blue color represents 19 participants, the red color represents 16 participants, and the green color represents 16 participants.

From this column chart, we can easily compare the frequency of responses for each value of the field of study variable across different income ranges.

4.6. Income * Expenditure

*Table 21. Statistical Income * Expenditure Crosstabulation*

Income * Expenditure Crosstabulation							
			Expenditure				Total
			Below 1 million VND/month	From 1 million VND to 2 million VND/month	From 2 million VND to 3 million VND/month	Above 3 million VND/month	
Income	Below 5 million VND/month	Count	192	69	18	15	294
		% of Total	38.2%	13.7%	3.6%	3.0%	58.6%
	From 5 million VND to 10 million VND/month	Count	43	35	27	21	126
		% of Total	8.6%	7.0%	5.4%	4.2%	25.1%
	Above 10 million VND/month	Count	19	20	22	21	82
		% of Total	3.8%	4.0%	4.4%	4.2%	16.3%

Total	Count	254	124	67	57	502
	% of Total	50.6%	24.7%	13.3%	11.4%	100.0%

The Crosstabulation table provides an overview of the relationship between two variables from a frequency statistical perspective.

Among those with an expenditure Below 5 million VND/month, the proportion is 38.2% (192 out of the total 502 survey samples) in the Below 1 million VND/month category; 13.7% (69 out of 502) fall within the range From 1 million VND to 2 million VND/month; 3.6% (18 out of 502) fall within the range From 2 million VND to 3 million VND/month; and 3.0% (15 out of 502) have an expenditure Above 3 million VND/month. In total, there are 294 respondents with an expenditure Below 5 million VND/month, accounting for 58.6%, distributed across the expenditure categories.

For those with an expenditure From 5 million VND to 10 million VND/month, the breakdown is as follows: 8.6% (43 out of 502) are in the Below 1 million VND/month category; 7.0% (35 out of 502) fall within the range From 1 million VND to 2 million VND/month; 5.4% (27 out of 502) fall within the range From 2 million VND to 3 million VND/month; and 4.2% (21 out of 502) have an expenditure Above 3 million VND/month. In total, there are 126 respondents with an expenditure from 5 million VND to 10 million VND/month, making up 25.1% of the sample.

Regarding those with an expenditure Above 10 million VND/month, the distribution is as follows: 3.8% (19 out of 502) are in the Below 1 million VND/month category; 4.0% (20 out of 502) fall within the range From 1 million VND to 2 million VND/month; 4.4% (22 out of 502) fall within the range From 2 million VND to 3 million VND/month; and 4.2% (21 out of 502) have an expenditure Above 3 million VND/month. In total, there are 82 respondents with an expenditure Above 10 million VND/month, constituting 16.3% of the sample.

In this way, we gain a clearer understanding of the distribution of income based on expenditure levels in the Mekong Delta region as studied.

Table 22. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)

Pearson Chi-Square	88.944[a]	6	.000
Likelihood Ratio	89.609	6	.000
Linear-by-Linear Association	81.268	1	.000
N of Valid Cases	502		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.31.			

The Sig value < 0.05 indicates that we reject the null hypothesis, implying that there is a significant relationship between income and expenditure.

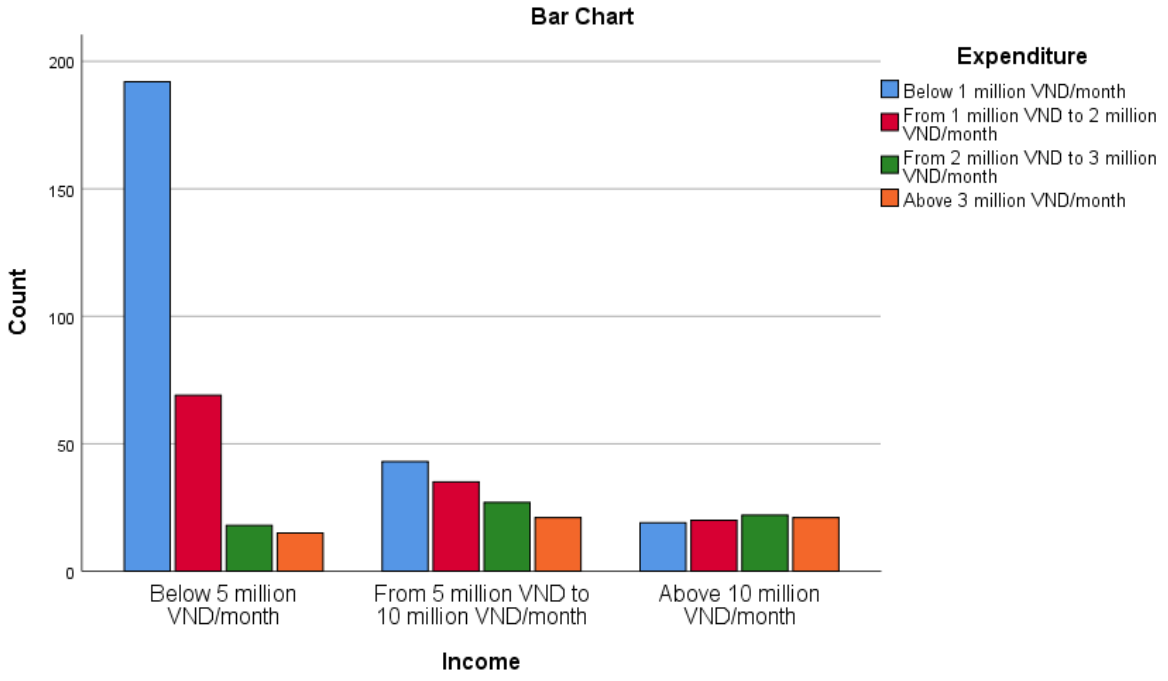

Figure 8. Statistical Chart Expenditure - Income

By representing the data in a bar graph, we can observe the frequency distribution of survey participants for each value of the income variable, divided by expenditure. Specifically, we can observe as follows:

For the group "Below 5 million VND/month," the blue color represents 192 people; the red color represents 69 people; the green color represents 18 people; and the orange color represents 15 people.

In the case of the group "From 5 million VND to 10 million VND/month," the blue color represents 43 people; the red color represents 25 people; the green color represents 27 people; and the orange color represents 21 people.

For the group "Above 10 million VND/month," the blue color represents 19 people; the red color represents 20 people; the green color represents 22 people; and the orange color represents 21 people.

From this bar graph, we can easily compare the frequency of responses for each income value across different expenditure groups.

4.7. Income* The shopping frequency

*Table 23. Statistical Income * The shopping frequency Crosstabulation*

Income * The shopping frequency Crosstabulation						
			The shopping frequency			**Total**
			Less than 3 times per month	**From 3 to 5 times per month**	**5 times or more per month**	
Income	**Below 5 million VND/month**	Count	196	68	30	294
		% of Total	39.0%	13.5%	6.0%	58.6%
	From 5 million VND to 10 million VND/month	Count	54	55	17	126
		% of Total	10.8%	11.0%	3.4%	25.1%
	Above 10 million VND/month	Count	22	36	24	82
		% of Total	4.4%	7.2%	4.8%	16.3%
Total		Count	272	159	71	502
		% of Total	54.2%	31.7%	14.1%	100.0%

The Crosstabulation table provides an overview of the relationship between two variables from a statistical frequency perspective. Among the "Below 5 million VND/month" group,

the distribution is as follows: 39.0% (196 out of 502 survey samples) fall under the category "Less than 3 times per month"; 13.5% (68 out of 502 survey samples) fall under the category "3 - 5 times per month"; and 6.0% (30 out of 502 survey samples) fall under the category "More than 5 times per month." In total, there are 294 respondents in the "Below 5 million VND/month" group, accounting for 58.6% of the total, across different shopping frequency levels.

For the "From 5 million VND to 10 million VND/month" group, the distribution is as follows: 10.8% (54 out of 502 survey samples) fall under the category "Less than 3 times per month"; 11.0% (55 out of 502 survey samples) fall under the category "3 - 5 times per month"; and 3.4% (17 out of 502 survey samples) fall under the category "More than 5 times per month." In total, there are 126 respondents in the "From 5 million VND to 10 million VND/month" group, accounting for 25.1% of the total, across different shopping frequency levels.

Among the "Above 10 million VND/month" group, the distribution is as follows: 4.4% (22 out of 502 survey samples) fall under the category "Less than 3 times per month"; 7.2% (36 out of 502 survey samples) fall under the category "3 - 5 times per month"; and 4.8% (24 out of 502 survey samples) fall under the category "More than 5 times per month." In total, there are 82 respondents in the "Above 10 million VND/month" group, accounting for 16.3% of the total, across different shopping frequency levels.

This approach provides a clearer view of the income distribution based on shopping frequency levels in the Mekong Delta region that have been studied.

Table 24. Result Chi-Square Test

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	55.644[a]	4	.000
Likelihood Ratio	54.774	4	.000
Linear-by-Linear Association	46.021	1	.000
N of Valid Cases	502		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.60.			

The Sig value is < 0.05, which indicates that we reject the null hypothesis, implying a significant relationship between income and shopping frequency.

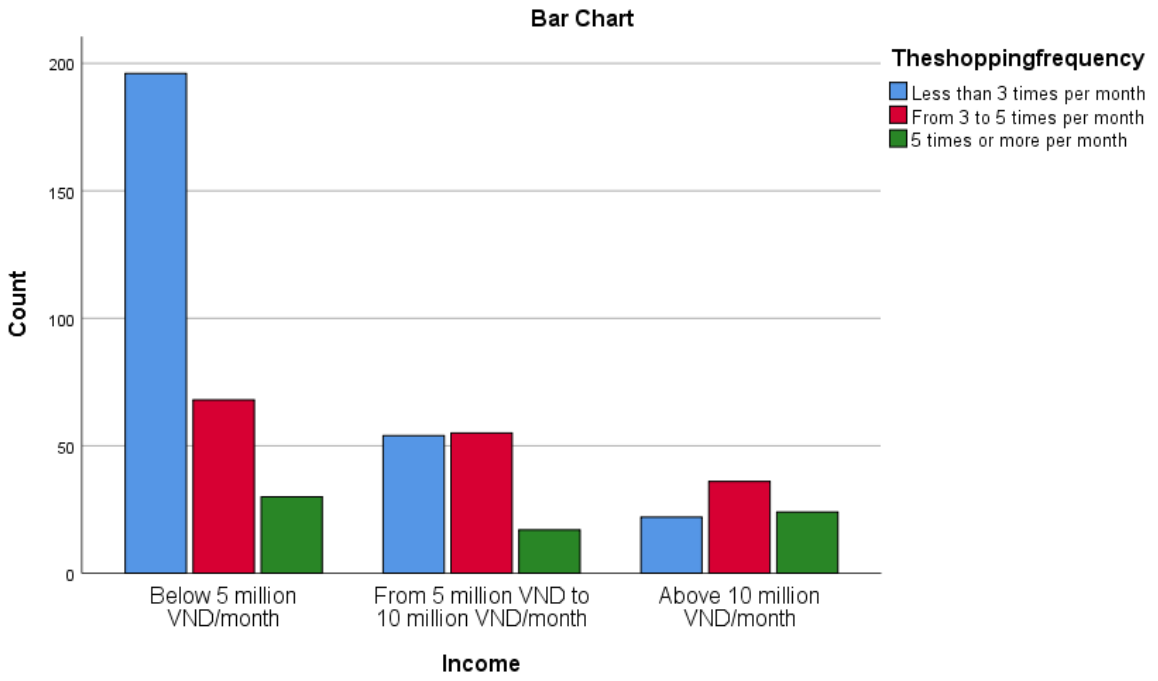

Figure 9. Statistical Chart The shopping frequency - Income

By representing this data in a column graph, we can observe the frequency distribution of survey participants for each value of the income variable, divided according to shopping frequency. Specifically, we can observe as follows:

For the Below 5 million VND/month group, the blue color represents 196 participants; the red color represents 68 participants; and the green color represents 18 participants.

In the case of the from 5 million VND to 10 million VND/month group, the blue color represents 54 participants; the red color represents 55 participants; and the green color represents 17 participants.

For the Above 10 million VND/month group, the blue color represents 22 participants; the red color represents 36 participants; and the green color represents 24 participants.

From this column graph, we have the ability to easily compare the response frequencies of different income values among various shopping frequency groups.

5. Appendix 5: Running Custom Table Analysis

5.1. Gender* GPI

Table 25. Statistical Gender GPI*

		Gender			**Sample**	**502**
		Male	**Female**	**Total**	**Sum (%)-response**	**Sum (%)/sample**
		Count	Count			
GPI1	Strongly Disagree	0	0	0	0.00%	0.00%
	Disagree	5	3	8	1.59%	1.59%
	Neutral	27	33	60	11.95%	11.95%
	Agree	79	97	176	35.06%	35.06%
	Strongly Agree	121	137	258	51.39%	51.39%
GPI2	Strongly Disagree	2	2	4	0.80%	0.80%
	Disagree	6	6	12	2.39%	2.39%
	Neutral	39	45	84	16.73%	16.73%
	Agree	91	123	214	42.63%	42.63%
	Strongly Agree	94	94	188	37.45%	37.45%
GPI3	Strongly Disagree	1	1	2	0.40%	0.40%
	Disagree	7	5	12	2.39%	2.39%

	Neutral	33	43	76	15.14%	15.14%
	Agree	85	112	197	39.24%	39.24%
	Strongly Agree	106	109	215	42.83%	42.83%
GPI4	Strongly Disagree	0	1	1	0.20%	0.20%
	Disagree	7	5	12	2.39%	2.39%
	Neutral	31	46	77	15.34%	15.34%
	Agree	97	95	192	38.25%	38.25%
	Strongly Agree	97	123	220	43.82%	43.82%
GPI5	Strongly Disagree	0	1	1	0.20%	0.20%
	Disagree	4	4	8	1.59%	1.59%
	Neutral	25	32	57	11.35%	11.35%
	Agree	81	90	171	34.06%	34.06%
	Strongly Agree	122	143	265	52.79%	52.79%
	Total	232	270	502	100.00%	

"The majority of survey participants have expressed agreement with the statement 'I will choose to purchase environmentally friendly products,' with a range of 'agree (35.06%) - strongly agree (51.39%)'. Notably, females in Table... have shown a higher level of agreement compared to males. Similarly, for the question 'My family and friends advised me to consume green products,' the agreement rate is (42.63%), and the strongly agree rate is (37.45%). Once again, the number of female participants has responded more than males to this question.

In the case of the question 'I often prioritize purchasing green products that have reusable or recyclable packaging,' agreement (39.24%) and strong agreement (42.83%) are also recorded at a relatively high level compared to other questions. Similarly, for questions such as 'I am willing to pay a slightly higher price when purchasing green products because of the benefits they provide' and 'My life will be better if I consume green products in the future,' the majority of survey participants agree and strongly agree. Furthermore, the number of participants answering these questions is significant, especially among female Gen Z respondents in the Mekong Delta region."

5.2. Education*GPI

Table 26. Statistical Education

		Education						
		High school	**Intermediate school**	**College**	**University**	**Postgraduate**	**Total**	**sum %/Sample**
		Count	Count	Count	Count	Count		
GPI1	Strongly Disagree	0	0	0	0	0	0	0.00%
	Disagree	0	0	0	8	0	8	1.59%
	Neutral	11	6	5	31	7	60	11.95%
	Agree	10	16	16	121	13	176	35.06%
	Strongly Agree	26	14	17	189	12	258	51.39%
GPI2	Strongly Disagree	0	0	0	4	0	4	0.80%

	Disagree	2	0	0	10	0	12	2.39%
	Neutral	10	11	7	47	9	84	16.73%
	Agree	20	14	17	150	13	214	42.63%
	Strongly Agree	15	11	14	138	10	188	37.45%
GPI3	Strongly Disagree	0	0	0	2	0	2	0.40%
	Disagree	2	0	0	10	0	12	2.39%
	Neutral	9	7	7	45	8	76	15.14%
	Agree	12	19	17	136	13	197	39.24%
	Strongly Agree	24	10	14	156	11	215	42.83%
GPI4	Strongly Disagree	0	0	0	1	0	1	0.20%
	Disagree	2	0	0	10	0	12	2.39%
	Neutral	8	6	4	51	8	77	15.34%
	Agree	17	18	15	132	10	192	38.25%
	Strongly Agree	20	12	19	155	14	220	43.82%
GPI5	Strongly Disagree	0	0	0	1	0	1	0.20%
	Disagree	1	0	0	7	0	8	1.59%

	Neutral	9	4	5	34	5	57	11.35%
	Agree	15	18	12	111	15	171	34.06%
	Strongly Agree	22	14	21	196	12	265	52.79%
	Total	47	36	38	349	32	502	100.00%

From the custom table, we can observe that the majority of respondents with surveyed education levels are from the University category. They also provide mostly agree and strongly agree on responses, higher than the other three response options. Specifically, for GPI1, "agree (35.06%) - strongly agree (51.39%)", when prioritizing environmentally friendly products, respondents with a university education level are in agreement with our statement. Similarly, for GPI2, "agree (42.63%) - strongly agree (51.39%)", university-level respondents tend to agree with the idea of family and friends advising them to use environmentally friendly products.

Furthermore, GPI3, GPI4, and GPI5 also receive high agreement from university-level respondents, indicating a preference for using recyclable and reusable green packaging. Additionally, they are willing to pay a higher price for eco-friendly products compared to plastic alternatives. Moreover, they believe that their quality of life will improve through the use of green products..

5.3. Income*Occupation

*Table 27. Statistical Income*Occupation*

	Income				**Sample**	**502**
	Below 5 million VND/ month	**From 5 million VND to 10 million VND/month**	**Above 10 million VND/ month**	Total	**Sum (%)- respon se**	**Sum (%)/ samp le**
	Count	Count	Count			

Occupation	**High school**	255	75	23	353	70.32%	70.32%
	State officials and Employees	8	11	14	33	6.57%	6.57%
	Workers - Employees	12	26	18	56	11.16%	11.16%
	Trade and Business	10	9	14	33	6.57%	6.57%
	Freelancing - Housewives	9	5	13	27	5.38%	5.38%
	Total	294	126	82	502	100.00%	

When examining the relationship between income and occupation, we can observe that the survey samples are predominantly composed of High school (70.32%). Regarding income levels such as "Below 5 million VND/month," "From 5 million VND to 10 million VND/month," and "Above 10 million VND/month," they are also clearly demonstrated in Table..., revealing that "Freelancing - Housewives" individuals have a relatively higher income, with 13 out of 27 people earning over 10 million VND/month. Similarly, we can also notice that High school tends to fall into the "Below 5 million VND/month" income category, comprising the majorit

5.4. Education*Gender*GPI

*Table 28. Statistical Education*Gender*GPI*

				Education											
				High school		Intermediate school		College		University		Postgraduate		Total	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
Gender	Male	GPI 1	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	0	0.0%	0	0.0%	5	1.0%	0	0.0%	5	1.0%
			Neutral	6	1.2%	2	0.4%	3	0.6%	14	2.8%	2	0.4%	27	5.4%
			Agree	3	0.6%	9	1.8%	7	1.4%	55	11.0%	5	1.0%	79	15.7%
			Strongly Agree	13	2.6%	8	1.6%	11	2.2%	83	16.5%	6	1.2%	121	24.1%
			Total	22	4.4%	19	3.8%	21	4.2%	157	31.3%	13	2.6%	232	46.2%
		GPI 2	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	2	0.4%	0	0.0%	2	0.4%
			Disagree	1	0.2%	0	0.0%	0	0.0%	5	1.0%	0	0.0%	6	1.2%
			Neutral	4	0.8%	6	1.2%	5	1.0%	21	4.2%	3	0.6%	39	7.8%
			Agree	9	1.8%	6	1.2%	7	1.4%	65	12.9%	4	0.8%	91	18.1%

			Strongly Agree	8	1.6%	7	1.4%	9	1.8%	64	12.7%	6	1.2%	94	18.7%
			Total	22	4.4%	19	3.8%	21	4.2%	157	31.3%	13	2.6%	232	46.2%
		GPI 3	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	1	0.2%	0	0.0%	0	0.0%	6	1.2%	0	0.0%	7	1.4%
			Neutral	2	0.4%	3	0.6%	4	0.8%	23	4.6%	1	0.2%	33	6.6%
			Agree	7	1.4%	10	2.0%	8	1.6%	55	11.0%	5	1.0%	85	16.9%
			Strongly Agree	12	2.4%	6	1.2%	9	1.8%	72	14.3%	7	1.4%	106	21.1%
			Total	22	4.4%	19	3.8%	21	4.2%	157	31.3%	13	2.6%	232	46.2%
		GPI 4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	1	0.2%	0	0.0%	0	0.0%	6	1.2%	0	0.0%	7	1.4%
			Neutral	3	0.6%	3	0.6%	2	0.4%	20	4.0%	3	0.6%	31	6.2%
			Agree	10	2.0%	8	1.6%	8	1.6%	66	13.1%	5	1.0%	97	19.3%
			Strongly Agree	8	1.6%	8	1.6%	11	2.2%	65	12.9%	5	1.0%	97	19.3%
			Total	22	4.4%	19	3.8%	21	4.2%	157	31.3%	13	2.6%	232	46.2%
		GPI 5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	0	0.0%	0	0.0%	4	0.8%	0	0.0%	4	0.8%
			Neutral	4	0.8%	2	0.4%	2	0.4%	14	2.8%	3	0.6%	25	5.0%

			Agree	9	1.8%	9	1.8%	7	1.4%	51	10.2%	5	1.0%	81	16.1%
			Strongly Agree	9	1.8%	8	1.6%	12	2.4%	88	17.5%	5	1.0%	122	24.3%
			Total	22	4.4%	19	3.8%	21	4.2%	157	31.3%	13	2.6%	232	46.2%
Gender	**Female**	**GPI 1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	0	0.0%	0	0.0%	3	0.6%	0	0.0%	3	0.6%
			Neutral	5	1.0%	4	0.8%	2	0.4%	17	3.4%	5	1.0%	33	6.6%
			Agree	7	1.4%	7	1.4%	9	1.8%	66	13.1%	8	1.6%	97	19.3%
			Strongly Agree	13	2.6%	6	1.2%	6	1.2%	106	21.1%	6	1.2%	137	27.3%
			Total	25	5.0%	17	3.4%	17	3.4%	192	38.2%	19	3.8%	270	53.8%
		GPI 2	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	2	0.4%	0	0.0%	2	0.4%
			Disagree	1	0.2%	0	0.0%	0	0.0%	5	1.0%	0	0.0%	6	1.2%
			Neutral	6	1.2%	5	1.0%	2	0.4%	26	5.2%	6	1.2%	45	9.0%
			Agree	11	2.2%	8	1.6%	10	2.0%	85	16.9%	9	1.8%	123	24.5%
			Strongly Agree	7	1.4%	4	0.8%	5	1.0%	74	14.7%	4	0.8%	94	18.7%
			Total	25	5.0%	17	3.4%	17	3.4%	192	38.2%	19	3.8%	270	53.8%
		GPI 3	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	1	0.2%	0	0.0%	0	0.0%	4	0.8%	0	0.0%	5	1.0%

			Neutral	7	1.4%	4	0.8%	3	0.6%	22	4.4%	7	1.4%	43	8.6%
			Agree	5	1.0%	9	1.8%	9	1.8%	81	16.1%	8	1.6%	112	22.3%
			Strongly Agree	12	2.4%	4	0.8%	5	1.0%	84	16.7%	4	0.8%	109	21.7%
			Total	25	5.0%	17	3.4%	17	3.4%	192	38.2%	19	3.8%	270	53.8%
		GPI 4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	1	0.2%	0	0.0%	0	0.0%	4	0.8%	0	0.0%	5	1.0%
			Neutral	5	1.0%	3	0.6%	2	0.4%	31	6.2%	5	1.0%	46	9.2%
			Agree	7	1.4%	10	2.0%	7	1.4%	66	13.1%	5	1.0%	95	18.9%
			Strongly Agree	12	2.4%	4	0.8%	8	1.6%	90	17.9%	9	1.8%	123	24.5%
			Total	25	5.0%	17	3.4%	17	3.4%	192	38.2%	19	3.8%	270	53.8%
		GPI 5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	1	0.2%	0	0.0%	0	0.0%	3	0.6%	0	0.0%	4	0.8%
			Neutral	5	1.0%	2	0.4%	3	0.6%	20	4.0%	2	0.4%	32	6.4%
			Agree	6	1.2%	9	1.8%	5	1.0%	60	12.0%	10	2.0%	90	17.9%
			Strongly Agree	13	2.6%	6	1.2%	9	1.8%	108	21.5%	7	1.4%	143	28.5%
			Total	25	5.0%	17	3.4%	17	3.4%	192	38.2%	19	3.8%	270	53.8%

Based on GPI1, GPI2, GPI3, GPI4, GPI5, we can find that the total number of males with educational qualifications in high school is 22 people, accounting for 4.4%. The number of people in intermediate school (studying after completion of undergraduate education) was 19

people, a rate of 3.8%. At the college level, there were 21 people, a rate of 4.2%. The number of people who obtained university degrees was 157 people, accounting for 31.3%. Finally, there were 13 people who completed postgraduate courses, a rate of 2.6%. From these figures, we can infer that the total number of male surveyed and educated to give opinions with GPI1, GPI2, GPI3, GPI4, GPI5 was 232, representing 46.2%.

Similarly, GPI1, GPI2, GPI3, GPI4, and GPI5 we can see that the total number of females with education high school is 25 people, accounting for 5.0%. The number of people with intermediate school (studying after completion of undergraduate education) was 17 people, a rate of 3.4%. At the college level, there were 17 people, a rate of 3.4%. The number of university graduates was 192, accounting for 38.2 percent. Eventually, there were 19 people who completed postgraduate courses, a rate of 3.8%. From these figures, we can infer that the total number of male surveyed and educated to give opinions with GPI1, GPI2, GPI3, GPI4, GPI5 was 270 people, accounting for 53.8%.

5.5. Occupation* Gender* GPI

Table 29. Statistical Occupation Gender* GPI*

				Occupation											
				Student		**State officials - Employees**		**Workers - Employees**		**Trade and Business**		**Freelancing - Housewives**		**Total**	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
Gender	**Male**	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

			Disagree	5	1.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	1.0%
			Neutral	16	3.2%	3	0.6%	3	0.6%	1	0.2%	4	0.8%	27	5.4%
			Agree	51	10.2%	4	0.8%	15	3.0%	7	1.4%	2	0.4%	79	15.7%
			Strongly Agree	82	16.3%	8	1.6%	12	2.4%	9	1.8%	10	2.0%	121	24.1%
			Total	154	30.7%	15	3.0%	30	6.0%	17	3.4%	16	3.2%	232	46.2%
		GPI 2	Strongly Disagree	2	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.4%
			Disagree	5	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%	6	1.2%
			Neutral	20	4.0%	5	1.0%	5	1.0%	5	1.0%	4	0.8%	39	7.8%
			Agree	66	13.1%	2	0.4%	13	2.6%	5	1.0%	5	1.0%	91	18.1%
			Strongly Agree	61	12.2%	8	1.6%	12	2.4%	7	1.4%	6	1.2%	94	18.7%
			Total	154	30.7%	15	3.0%	30	6.0%	17	3.4%	16	3.2%	232	46.2%
		GPI 3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	6	1.2%	0	0.0%	0	0.0%	0	0.0%	1	0.2%	7	1.4%

			Neutral	22	4.4%	3	0.6%	5	1.0%	0	0.0%	3	0.6%	33	6.6%
			Agree	46	9.2%	6	1.2%	14	2.8%	11	2.2%	8	1.6%	85	16.9%
			Strongly Agree	79	15.7%	6	1.2%	11	2.2%	6	1.2%	4	0.8%	106	21.1%
			Total	154	30.7%	15	3.0%	30	6.0%	17	3.4%	16	3.2%	232	46.2%
		GPI 4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	6	1.2%	0	0.0%	0	0.0%	0	0.0%	1	0.2%	7	1.4%
			Neutral	19	3.8%	1	0.2%	6	1.2%	3	0.6%	2	0.4%	31	6.2%
			Agree	68	13.5%	7	1.4%	12	2.4%	4	0.8%	6	1.2%	97	19.3%
			Strongly Agree	61	12.2%	7	1.4%	12	2.4%	10	2.0%	7	1.4%	97	19.3%
			Total	154	30.7%	15	3.0%	30	6.0%	17	3.4%	16	3.2%	232	46.2%
		GPI 5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	4	0.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.8%
			Neutral	15	3.0%	2	0.4%	4	0.8%	1	0.2%	3	0.6%	25	5.0%

			Agree	49	9.8%	2	0.4%	12	2.4%	12	2.4%	6	1.2%	81	16.1%
			Strongly Agree	86	17.1%	11	2.2%	14	2.8%	4	0.8%	7	1.4%	122	24.3%
			Total	154	30.7%	15	3.0%	30	6.0%	17	3.4%	16	3.2%	232	46.2%
Gender	**Female**	**GPI 1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.6%
			Neutral	19	3.8%	5	1.0%	4	0.8%	2	0.4%	3	0.6%	33	6.6%
			Agree	71	14.1%	6	1.2%	6	1.2%	10	2.0%	4	0.8%	97	19.3%
			Strongly Agree	106	21.1%	7	1.4%	16	3.2%	4	0.8%	4	0.8%	137	27.3%
			Total	199	39.6%	18	3.6%	26	5.2%	16	3.2%	11	2.2%	270	53.8%
		GPI 2	Strongly Disagree	2	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.4%
			Disagree	5	1.0%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	6	1.2%
			Neutral	29	5.8%	3	0.6%	3	0.6%	5	1.0%	5	1.0%	45	9.0%
			Agree	87	17.3%	12	2.4%	16	3.2%	6	1.2%	2	0.4%	123	24.5%

			Strongly Agree	76	15.1%	3	0.6%	6	1.2%	5	1.0%	4	0.8%	94	18.7%
			Total	199	39.6%	18	3.6%	26	5.2%	16	3.2%	11	2.2%	270	53.8%
		GPI 3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	4	0.8%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	5	1.0%
			Neutral	25	5.0%	4	0.8%	6	1.2%	3	0.6%	5	1.0%	43	8.6%
			Agree	80	15.9%	9	1.8%	11	2.2%	8	1.6%	4	0.8%	112	22.3%
			Strongly Agree	89	17.7%	5	1.0%	8	1.6%	5	1.0%	2	0.4%	109	21.7%
			Total	199	39.6%	18	3.6%	26	5.2%	16	3.2%	11	2.2%	270	53.8%
		GPI 4	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	4	0.8%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	5	1.0%
			Neutral	33	6.6%	3	0.6%	4	0.8%	4	0.8%	2	0.4%	46	9.2%
			Agree	69	13.7%	8	1.6%	8	1.6%	5	1.0%	5	1.0%	95	18.9%

			Strongly A gree	92	18.3%	7	1.4%	13	2.6%	7	1.4%	4	0.8%	123	24.5%
			Total	199	39.6%	18	3.6%	26	5.2%	16	3.2%	11	2.2%	270	53.8%
		GPI 5	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	3	0.6%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	4	0.8%
			Neutral	21	4.2%	5	1.0%	5	1.0%	0	0.0%	1	0.2%	32	6.4%
			Agree	65	12.9%	5	1.0%	5	1.0%	9	1.8%	6	1.2%	90	17.9%
			Strongly A gree	109	21.7%	8	1.6%	15	3.0%	7	1.4%	4	0.8%	143	28.5%
			Total	199	39.6%	18	3.6%	26	5.2%	16	3.2%	11	2.2%	270	53.8%

Based on GPI1, GPI2, GPI3, GPI4, GPI5 we can see that the occupation of the total male specific: Student was 154 people, accounting for a 30.7% percentage. The number of people with state officials and employees is 15 people, a rate of 3.0%. Workers - Employees, there are 30 people, the rate is 6.0%. The number of trade and business is 17 people, accounting for 3.4%. Finally, there were 16 freelancing - housewives, a rate of 3.2%. From these figures, we can infer that the total number of males who participated in the survey and have professions that gave opinions with GPI1, GPI2, GPI3, GPI4, and GPI5 was 232 people, accounting for 46.2%.

Similarly, GPI1, GPI2, GPI3, GPI4, and GPI5 we can see that the total number of female with professions as Student is 199 people, accounting for 39.6%. The number of people with state officials and employees was 18 people, a rate of 3.6%. Workers - Employees, there are 26 people, a rate of 5.2%. The number of trade and business is 16 people, accounting for 3.2%. Finally, there were 11 freelancing -

housewives, a ratio of 2.2%. From these figures, we can infer that the total number of female who participated in the survey and whose professions gave opinions with GPI1, GPI2, GPI3, GPI4, GPI5 was 270 people, accounting for a percentage of 53.8%.

5.6. Field of study* Gender*GPI

Table 30. Statistical Field of study Gender*GPI*

				Field of study													
				Economics		**Languages**		**Engineering - Technology**		**Graphic design**		**Health**		**Other**		**Total**	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
Gender	**Male**	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	2	0.4%	1	0.2%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	5	1.0%
			Neutral	10	2.0%	2	0.4%	8	1.6%	4	0.8%	2	0.4%	1	0.2%	27	5.4%
			Agree	30	6.0%	10	2.0%	13	2.6%	10	2.0%	0	0.0%	16	3.2%	79	15.7%

			Strongly Agree	38	7.6%	9	1.8%	35	7.0%	17	3.4%	13	2.6%	9	1.8%	121	24.1%
			Total	80	15.9%	22	4.4%	57	11.4%	32	6.4%	15	3.0%	26	5.2%	232	46.2%
		GPI2	Strongly Disagree	1	0.2%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	0	0.0%	2	0.4%
			Disagree	3	0.6%	0	0.0%	2	0.4%	1	0.2%	0	0.0%	0	0.0%	6	1.2%
			Neutral	13	2.6%	7	1.4%	7	1.4%	5	1.0%	1	0.2%	6	1.2%	39	7.8%
			Agree	38	7.6%	8	1.6%	21	4.2%	9	1.8%	7	1.4%	8	1.6%	91	18.1%
			Strongly Agree	25	5.0%	7	1.4%	26	5.2%	17	3.4%	7	1.4%	12	2.4%	94	18.7%
			Total	80	15.9%	22	4.4%	57	11.4%	32	6.4%	15	3.0%	26	5.2%	232	46.2%
		GPI3	Strongly Disagree	0	0.0%	0	0.0%	1	0.2%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	4	0.8%	1	0.2%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	7	1.4%
			Neutral	13	2.6%	5	1.0%	9	1.8%	1	0.2%	2	0.4%	3	0.6%	33	6.6%
			Agree	29	5.8%	8	1.6%	17	3.4%	8	1.6%	7	1.4%	16	3.2%	85	16.9%

			Strongly Agree	34	6.8%	8	1.6%	29	5.8%	22	4.4%	6	1.2%	7	1.4%	106	21.1%
			Total	80	15.9%	22	4.4%	57	11.4%	32	6.4%	15	3.0%	26	5.2%	232	46.2%
		GPI 4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	2	0.4%	1	0.2%	3	0.6%	1	0.2%	0	0.0%	0	0.0%	7	1.4%
			Neutral	15	3.0%	4	0.8%	5	1.0%	3	0.6%	1	0.2%	3	0.6%	31	6.2%
			Agree	32	6.4%	9	1.8%	24	4.8%	15	3.0%	4	0.8%	13	2.6%	97	19.3%
			Strongly Agree	31	6.2%	8	1.6%	25	5.0%	13	2.6%	10	2.0%	10	2.0%	97	19.3%
			Total	80	15.9%	22	4.4%	57	11.4%	32	6.4%	15	3.0%	26	5.2%	232	46.2%
		GPI 5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	2	0.4%	0	0.0%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	4	0.8%
			Neutral	8	1.6%	2	0.4%	8	1.6%	5	1.0%	1	0.2%	1	0.2%	25	5.0%
			Agree	33	6.6%	11	2.2%	15	3.0%	9	1.8%	3	0.6%	10	2.0%	81	16.1%

			Strongly Agree	37	7.4%	9	1.8%	33	6.6%	17	3.4%	11	2.2%	15	3.0%	122	24.3%
			Total	80	15.9%	22	4.4%	57	11.4%	32	6.4%	15	3.0%	26	5.2%	232	46.2%
	Female	**GPI 1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.6%
			Neutral	16	3.2%	1	0.2%	5	1.0%	5	1.0%	5	1.0%	1	0.2%	33	6.6%
			Agree	55	11.0%	9	1.8%	13	2.6%	6	1.2%	5	1.0%	9	1.8%	97	19.3%
			Strongly Agree	73	14.5%	19	3.8%	15	3.0%	11	2.2%	4	0.8%	15	3.0%	137	27.3%
			Total	147	29.3%	29	5.8%	33	6.6%	22	4.4%	14	2.8%	25	5.0%	270	53.8%
		GPI 2	Strongly Disagree	2	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.4%
			Disagree	3	0.6%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	1	0.2%	6	1.2%
			Neutral	19	3.8%	4	0.8%	7	1.4%	9	1.8%	5	1.0%	1	0.2%	45	9.0%
			Agree	64	12.7%	13	2.6%	21	4.2%	6	1.2%	5	1.0%	14	2.8%	123	24.5%

			Strongly Agree	59	11.8%	11	2.2%	4	0.8%	7	1.4%	4	0.8%	9	1.8%	94	18.7%
			Total	147	29.3%	29	5.8%	33	6.6%	22	4.4%	14	2.8%	25	5.0%	270	53.8%
		GPI 3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	2	0.4%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	1	0.2%	5	1.0%
			Neutral	19	3.8%	2	0.4%	9	1.8%	6	1.2%	5	1.0%	2	0.4%	43	8.6%
			Agree	60	12.0%	16	3.2%	11	2.2%	7	1.4%	6	1.2%	12	2.4%	112	22.3%
			Strongly Agree	65	12.9%	10	2.0%	12	2.4%	9	1.8%	3	0.6%	10	2.0%	109	21.7%
			Total	147	29.3%	29	5.8%	33	6.6%	22	4.4%	14	2.8%	25	5.0%	270	53.8%
		GPI 4	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	2	0.4%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	1	0.2%	5	1.0%
			Neutral	23	4.6%	2	0.4%	8	1.6%	6	1.2%	5	1.0%	2	0.4%	46	9.2%
			Agree	49	9.8%	13	2.6%	13	2.6%	9	1.8%	3	0.6%	8	1.6%	95	18.9%

			Strongly Agree	72	14.3%	13	2.6%	11	2.2%	7	1.4%	6	1.2%	14	2.8%	123	24.5%
			Total	147	29.3%	29	5.8%	33	6.6%	22	4.4%	14	2.8%	25	5.0%	270	53.8%
		GPI5	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	1	0.2%	1	0.2%	1	0.2%	0	0.0%	0	0.0%	1	0.2%	4	0.8%
			Neutral	19	3.8%	3	0.6%	2	0.4%	3	0.6%	4	0.8%	1	0.2%	32	6.4%
			Agree	44	8.8%	7	1.4%	15	3.0%	9	1.8%	6	1.2%	9	1.8%	90	17.9%
			Strongly Agree	82	16.3%	18	3.6%	15	3.0%	10	2.0%	4	0.8%	14	2.8%	143	28.5%
			Total	147	29.3%	29	5.8%	33	6.6%	22	4.4%	14	2.8%	25	5.0%	270	53.8%

Based on GPI1, GPI2, GPI3, GPI4, GPI5 we can note that the specialization of the total male specific: Economics is 80 people, accounting for 15.9%. The number of people with specialization in Languages (English, Korean, Japanese, etc.) was 22 people, a proportion of 4.4%. Engineering - Technology (Software Engineering, Information Security, etc.), had 57 people, a rate of 11.4%. The number of people with a Graphic Design specialization is 32 people, accounting for 6.4%. And the Health field has 15 people accounting for 3.0%. Finally, there were 26 other fields, a rate of 5.2%. From these figures, we can infer that the total number of males who participated in the survey and specialized in giving opinions with GPI1, GPI2, GPI3, GPI4, GPI5 was 232, representing 46.2%.

Similarly, GPI1, GPI2, GPI3, GPI4, and GPI5 we can see that the total number of females with a specialization in Economics is 147 people, accounting for 29.3%. The number of people with specialization in Languages (English, Korean, Japanese, etc.) was 29 people, a rate of 5.8%. Engineering - Technology (Software Engineering, Information Security, etc.), had 33 people, a rate of 6.6%. The number of people with a Graphic Design specialization is 22 people, accounting for 4.4%. And the Health field 14 people account for 2.8 percent. Finally, there were 25 other fields, a rate of 5.0%. From these figures, we can infer that the total number of females who participated in the survey and whose professions gave opinions with GPI1, GPI2, GPI3, GPI4, and GPI5 was 270 people, accounting for a percentage of 53.8%.

5.7. Expenditure* Gender*GPI

Table 31. Statistical Expenditure Gender*GPI*

				Expenditure									
				Below 1 million VND/month		**From 1 million VND to 2 million VND/month**		**From 2 million VND to 3 million VND/month**		**Above 3 million VND/month**		**Total**	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
Gender	**Male**	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	4	0.8%	0	0.0%	0	0.0%	1	0.2%	5	1.0%

			Neutral	11	2.2%	6	1.2%	2	0.4%	8	1.6%	27	5.4%
			Agree	45	9.0%	13	2.6%	9	1.8%	12	2.4%	79	15.7%
			Strongly Agree	56	11.2%	31	6.2%	20	4.0%	14	2.8%	121	24.1%
			Total	116	23.1%	50	10.0%	31	6.2%	35	7.0%	232	46.2%
		GPI2	Strongly Disagree	2	0.4%	0	0.0%	0	0.0%	0	0.0%	2	0.4%
			Disagree	4	0.8%	1	0.2%	1	0.2%	0	0.0%	6	1.2%
			Neutral	16	3.2%	6	1.2%	6	1.2%	11	2.2%	39	7.8%
			Agree	44	8.8%	22	4.4%	14	2.8%	11	2.2%	91	18.1%
			Strongly Agree	50	10.0%	21	4.2%	10	2.0%	13	2.6%	94	18.7%
			Total	116	23.1%	50	10.0%	31	6.2%	35	7.0%	232	46.2%
		GPI3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	0	0.0%	1	0.2%
			Disagree	4	0.8%	1	0.2%	1	0.2%	1	0.2%	7	1.4%
			Neutral	16	3.2%	7	1.4%	4	0.8%	6	1.2%	33	6.6%

			Agree	40	8.0%	17	3.4%	15	3.0%	13	2.6%	85	16.9%
			Strongly Agree	55	11.0%	25	5.0%	11	2.2%	15	3.0%	106	21.1%
			Total	116	23.1%	50	10.0%	31	6.2%	35	7.0%	232	46.2%
		GP I4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	4	0.8%	1	0.2%	1	0.2%	1	0.2%	7	1.4%
			Neutral	16	3.2%	6	1.2%	3	0.6%	6	1.2%	31	6.2%
			Agree	50	10.0%	22	4.4%	11	2.2%	14	2.8%	97	19.3%
			Strongly Agree	46	9.2%	21	4.2%	16	3.2%	14	2.8%	97	19.3%
			Total	116	23.1%	50	10.0%	31	6.2%	35	7.0%	232	46.2%
		GP I5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	1	0.2%	0	0.0%	0	0.0%	4	0.8%
			Neutral	16	3.2%	1	0.2%	1	0.2%	7	1.4%	25	5.0%
			Agree	33	6.6%	21	4.2%	14	2.8%	13	2.6%	81	16.1%

			Strongly Agree	64	12.7%	27	5.4%	16	3.2%	15	3.0%	122	24.3%
			Total	116	23.1%	50	10.0%	31	6.2%	35	7.0%	232	46.2%
	Female	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	2	0.4%	1	0.2%	0	0.0%	0	0.0%	3	0.6%
			Neutral	11	2.2%	12	2.4%	7	1.4%	3	0.6%	33	6.6%
			Agree	44	8.8%	28	5.6%	16	3.2%	9	1.8%	97	19.3%
			Strongly Agree	81	16.1%	33	6.6%	13	2.6%	10	2.0%	137	27.3%
			Total	138	27.5%	74	14.7%	36	7.2%	22	4.4%	270	53.8%
		GPI2	Strongly Disagree	1	0.2%	0	0.0%	1	0.2%	0	0.0%	2	0.4%
			Disagree	3	0.6%	3	0.6%	0	0.0%	0	0.0%	6	1.2%
			Neutral	14	2.8%	15	3.0%	14	2.8%	2	0.4%	45	9.0%
			Agree	70	13.9%	31	6.2%	11	2.2%	11	2.2%	123	24.5%

			Strongly Agree	50	10.0%	25	5.0%	10	2.0%	9	1.8%	94	18.7%
			Total	138	27.5%	74	14.7%	36	7.2%	22	4.4%	270	53.8%
		GP I3	Strongly Disagree	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	3	0.6%	2	0.4%	0	0.0%	0	0.0%	5	1.0%
			Neutral	19	3.8%	12	2.4%	10	2.0%	2	0.4%	43	8.6%
			Agree	59	11.8%	27	5.4%	14	2.8%	12	2.4%	112	22.3%
			Strongly Agree	57	11.4%	33	6.6%	11	2.2%	8	1.6%	109	21.7%
			Total	138	27.5%	74	14.7%	36	7.2%	22	4.4%	270	53.8%
		GP I4	Strongly Disagree	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	3	0.6%	2	0.4%	0	0.0%	0	0.0%	5	1.0%
			Neutral	19	3.8%	18	3.6%	7	1.4%	2	0.4%	46	9.2%
			Agree	47	9.4%	27	5.4%	12	2.4%	9	1.8%	95	18.9%

			Strongly Agree	69	13.7%	27	5.4%	16	3.2%	11	2.2%	123	24.5%
			Total	138	27.5%	74	14.7%	36	7.2%	22	4.4%	270	53.8%
		GPI5	Strongly Disagree	0	0.0%	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	2	0.4%	2	0.4%	0	0.0%	0	0.0%	4	0.8%
			Neutral	12	2.4%	12	2.4%	7	1.4%	1	0.2%	32	6.4%
			Agree	47	9.4%	21	4.2%	15	3.0%	7	1.4%	90	17.9%
			Strongly Agree	77	15.3%	39	7.8%	13	2.6%	14	2.8%	143	28.5%
			Total	138	27.5%	74	14.7%	36	7.2%	22	4.4%	270	53.8%

Based on GPI1, GPI2, GPI3, GPI4, and GPI5 we can see that spending of the total males specifically: Below 1 million VND/month is 116 people, accounting for 23.1%. The number of people spending from 1 million to 2 million VND/month is 50 people, a rate of 10.0%. From 2 million to 3 million VND/month, there are 31 people, a rate of 6.2%. Finally, there are 35 people Above 3 million VND/month, a rate of 7.0%. From these figures, we can infer that the total number of males who participated in the survey and spent on giving opinions with GPI1, GPI2, GPI3, GPI4, and GPI5 was 232, representing 46.2%.

Similarly, GPI1, GPI2, GPI3, GPI4, GPI5 we can see that the total number of female spending is Below 1 million VND/month is 138 people, accounting for 27.5%. The number of people spending from 1 million to 2 million VND/month is 74 people, a rate of 14.7%. From 2 million to 3 million VND/month, there are 36 people, a rate of 7.2%. Finally, there were 22 people Above 3 million VND/month, a rate of 4.4%. From

these figures, we can infer that the total number of females who participated in the survey and whose professions gave opinions with GPI1, GPI2, GPI3, GPI4, GPI5 was 270 people, accounting for a percentage of 53.8%.

5.8. Income* Gender*GPI

Table 32. Statistical Income Gender*GPI*

				Income							
				Below 5 million VND/month		**From 5 million VND to 10 million VND/month**		**Above 10 million VND/month**		**Total**	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
Gender	**Male**	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	1	0.2%	1	0.2%	5	1.0%
			Neutral	17	3.4%	3	0.6%	7	1.4%	27	5.4%
			Agree	38	7.6%	27	5.4%	14	2.8%	79	15.7%
			Strongly Agree	68	13.5%	28	5.6%	25	5.0%	121	24.1%
			Total	126	25.1%	59	11.8%	47	9.4%	232	46.2%

		GPI2	Strongly Disagree	2	0.4%	0	0.0%	0	0.0%	2	0.4%
			Disagree	3	0.6%	1	0.2%	2	0.4%	6	1.2%
			Neutral	17	3.4%	10	2.0%	12	2.4%	39	7.8%
			Agree	53	10.6%	23	4.6%	15	3.0%	91	18.1%
			Strongly Agree	51	10.2%	25	5.0%	18	3.6%	94	18.7%
			Total	126	25.1%	59	11.8%	47	9.4%	232	46.2%
		GPI3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	1	0.2%
			Disagree	3	0.6%	1	0.2%	3	0.6%	7	1.4%
			Neutral	18	3.6%	11	2.2%	4	0.8%	33	6.6%
			Agree	45	9.0%	18	3.6%	22	4.4%	85	16.9%
			Strongly Agree	59	11.8%	29	5.8%	18	3.6%	106	21.1%
			Total	126	25.1%	59	11.8%	47	9.4%	232	46.2%

		GPI4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	1	0.2%	3	0.6%	7	1.4%
			Neutral	20	4.0%	4	0.8%	7	1.4%	31	6.2%
			Agree	47	9.4%	31	6.2%	19	3.8%	97	19.3%
			Strongly Agree	56	11.2%	23	4.6%	18	3.6%	97	19.3%
			Total	126	25.1%	59	11.8%	47	9.4%	232	46.2%
		GPI5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	2	0.4%	1	0.2%	1	0.2%	4	0.8%
			Neutral	16	3.2%	2	0.4%	7	1.4%	25	5.0%
			Agree	39	7.8%	24	4.8%	18	3.6%	81	16.1%
			Strongly Agree	69	13.7%	32	6.4%	21	4.2%	122	24.3%
			Total	126	25.1%	59	11.8%	47	9.4%	232	46.2%

	Female	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	3	0.6%	0	0.0%	0	0.0%	3	0.6%
			Neutral	17	3.4%	9	1.8%	7	1.4%	33	6.6%
			Agree	61	12.2%	26	5.2%	10	2.0%	97	19.3%
			Strongly Agree	87	17.3%	32	6.4%	18	3.6%	137	27.3%
			Total	168	33.5%	67	13.3%	35	7.0%	270	53.8%
		GPI2	Strongly Disagree	1	0.2%	1	0.2%	0	0.0%	2	0.4%
			Disagree	4	0.8%	2	0.4%	0	0.0%	6	1.2%
			Neutral	26	5.2%	10	2.0%	9	1.8%	45	9.0%
			Agree	80	15.9%	29	5.8%	14	2.8%	123	24.5%
			Strongly Agree	57	11.4%	25	5.0%	12	2.4%	94	18.7%
			Total	168	33.5%	67	13.3%	35	7.0%	270	53.8%

		GPI3	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	3	0.6%	2	0.4%	0	0.0%	5	1.0%
			Neutral	27	5.4%	10	2.0%	6	1.2%	43	8.6%
			Agree	63	12.5%	28	5.6%	21	4.2%	112	22.3%
			Strongly Agree	75	14.9%	26	5.2%	8	1.6%	109	21.7%
			Total	168	33.5%	67	13.3%	35	7.0%	270	53.8%
		GPI4	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	3	0.6%	2	0.4%	0	0.0%	5	1.0%
			Neutral	29	5.8%	9	1.8%	8	1.6%	46	9.2%
			Agree	62	12.4%	21	4.2%	12	2.4%	95	18.9%
			Strongly Agree	74	14.7%	34	6.8%	15	3.0%	123	24.5%
			Total	168	33.5%	67	13.3%	35	7.0%	270	53.8%

		GPI5	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	2	0.4%	2	0.4%	0	0.0%	4	0.8%
			Neutral	19	3.8%	8	1.6%	5	1.0%	32	6.4%
			Agree	62	12.4%	16	3.2%	12	2.4%	90	17.9%
			Strongly Agree	85	16.9%	40	8.0%	18	3.6%	143	28.5%
			Total	168	33.5%	67	13.3%	35	7.0%	270	53.8%

Based on GPI1, GPI2, GPI3, GPI4, and GPI5 we can see that the income of the total male specific: Below 5 million VND/month is 126 people, accounting for a rate of 25.1%. The number of people spending from VND 5 million to VND 10 million per month was 59 people, a rate of 11.8%. Finally, there were 47 people Above 10 million VND/month, a rate of 9.4%. From these figures, we can infer that the total number of males who participated in the survey and had an income gave an opinion with GPI1, GPI2, GPI3, GPI4, and GPI5 was 232 people, accounting for a 46.2% share.

Similarly, GPI1, GPI2, GPI3, GPI4, GPI5 we can see that the total number of females with income is Below 5 million VND/month is 168 people, accounting for 33.5%. From VND 5 million to VND 10 million/month is 67 people, 13.3%. Finally, there are 35 people Above 10 million VND/month, a rate of 7.0%. From these figures, we can infer that the total number of females who participated in the survey and had an income gave an opinion with GPI1, GPI2, GPI3, GPI4, GPI5 was 270 people, accounting for 53.8%.

5.9. Income* The shopping frequency* GPI

Table 33. Statistical Income The shopping frequency* GPI*

				Income							
				Below 5 million VND/month		From 5 million VND to 10 million VND/month		Above 10 million VND/month		Total	
				Count	Table N %	Count	Table N %	Count	Table N %	Count	Table N %
The shopping frequency	**Less than 3 times per month**	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	5	1.0%	0	0.0%	0	0.0%	5	1.0%
			Neutral	17	3.4%	5	1.0%	3	0.6%	25	5.0%
			Agree	64	12.7%	28	5.6%	8	1.6%	100	19.9%
			Strongly Agree	110	21.9%	21	4.2%	11	2.2%	142	28.3%
			Total	196	39.0%	54	10.8%	22	4.4%	272	54.2%

		GPI2	Strongly Disagree	3	0.6%	0	0.0%	0	0.0%	3	0.6%
			Disagree	6	1.2%	0	0.0%	0	0.0%	6	1.2%
			Neutral	25	5.0%	6	1.2%	5	1.0%	36	7.2%
			Agree	90	17.9%	25	5.0%	10	2.0%	125	24.9%
			Strongly Agree	72	14.3%	23	4.6%	7	1.4%	102	20.3%
			Total	196	39.0%	54	10.8%	22	4.4%	272	54.2%
		GPI3	Strongly Disagree	1	0.2%	0	0.0%	0	0.0%	1	0.2%
			Disagree	6	1.2%	0	0.0%	0	0.0%	6	1.2%
			Neutral	27	5.4%	13	2.6%	1	0.2%	41	8.2%
			Agree	73	14.5%	16	3.2%	15	3.0%	104	20.7%
			Strongly Agree	89	17.7%	25	5.0%	6	1.2%	120	23.9%
			Total	196	39.0%	54	10.8%	22	4.4%	272	54.2%

		GPI4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	6	1.2%	0	0.0%	0	0.0%	6	1.2%
			Neutral	32	6.4%	8	1.6%	2	0.4%	42	8.4%
			Agree	74	14.7%	21	4.2%	9	1.8%	104	20.7%
			Strongly Agree	84	16.7%	25	5.0%	11	2.2%	120	23.9%
			Total	196	39.0%	54	10.8%	22	4.4%	272	54.2%
		GPI5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	4	0.8%	0	0.0%	0	0.0%	4	0.8%
			Neutral	21	4.2%	6	1.2%	2	0.4%	29	5.8%
			Agree	62	12.4%	22	4.4%	8	1.6%	92	18.3%
			Strongly Agree	109	21.7%	26	5.2%	12	2.4%	147	29.3%
			Total	196	39.0%	54	10.8%	22	4.4%	272	54.2%

	From 3 to 5 times per month	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	1	0.2%	1	0.2%	0	0.0%	2	0.4%
			Neutral	10	2.0%	4	0.8%	7	1.4%	21	4.2%
			Agree	25	5.0%	18	3.6%	9	1.8%	52	10.4%
			Strongly Agree	32	6.4%	32	6.4%	20	4.0%	84	16.7%
			Total	68	13.5%	55	11.0%	36	7.2%	159	31.7%
		GPI2	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	1	0.2%	2	0.4%	2	0.4%	5	1.0%
			Neutral	9	1.8%	9	1.8%	9	1.8%	27	5.4%
			Agree	33	6.6%	22	4.4%	10	2.0%	65	12.9%
			Strongly Agree	25	5.0%	21	4.2%	15	3.0%	61	12.2%
			Total	68	13.5%	55	11.0%	36	7.2%	159	31.7%

		GPI3	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	0	0.0%	2	0.4%	2	0.4%	4	0.8%
			Neutral	13	2.6%	5	1.0%	5	1.0%	23	4.6%
			Agree	23	4.6%	23	4.6%	16	3.2%	62	12.4%
			Strongly Agree	32	6.4%	24	4.8%	13	2.6%	69	13.7%
			Total	68	13.5%	55	11.0%	36	7.2%	159	31.7%
		GPI4	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	0	0.0%	2	0.4%	2	0.4%	4	0.8%
			Neutral	12	2.4%	4	0.8%	9	1.8%	25	5.0%
			Agree	24	4.8%	22	4.4%	12	2.4%	58	11.6%
			Strongly Agree	32	6.4%	26	5.2%	13	2.6%	71	14.1%
			Total	68	13.5%	55	11.0%	36	7.2%	159	31.7%

		GPI5	Strongly Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Disagree	0	0.0%	2	0.4%	1	0.2%	3	0.6%
			Neutral	7	1.4%	3	0.6%	5	1.0%	15	3.0%
			Agree	27	5.4%	12	2.4%	12	2.4%	51	10.2%
			Strongly Agree	34	6.8%	37	7.4%	18	3.6%	89	17.7%
			Total	68	13.5%	55	11.0%	36	7.2%	159	31.7%
	5 times or more per month	**GPI1**	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	0	0.0%	1	0.2%	1	0.2%
			Neutral	7	1.4%	3	0.6%	4	0.8%	14	2.8%
			Agree	10	2.0%	7	1.4%	7	1.4%	24	4.8%
			Strongly Agree	13	2.6%	7	1.4%	12	2.4%	32	6.4%
			Total	30	6.0%	17	3.4%	24	4.8%	71	14.1%

		GPI2	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Neutral	9	1.8%	5	1.0%	7	1.4%	21	4.2%
			Agree	10	2.0%	5	1.0%	9	1.8%	24	4.8%
			Strongly Agree	11	2.2%	6	1.2%	8	1.6%	25	5.0%
			Total	30	6.0%	17	3.4%	24	4.8%	71	14.1%
		GPI3	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	1	0.2%	1	0.2%	2	0.4%
			Neutral	5	1.0%	3	0.6%	4	0.8%	12	2.4%
			Agree	12	2.4%	7	1.4%	12	2.4%	31	6.2%
			Strongly Agree	13	2.6%	6	1.2%	7	1.4%	26	5.2%
			Total	30	6.0%	17	3.4%	24	4.8%	71	14.1%

		GPI4	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	1	0.2%	1	0.2%	2	0.4%
			Neutral	5	1.0%	1	0.2%	4	0.8%	10	2.0%
			Agree	11	2.2%	9	1.8%	10	2.0%	30	6.0%
			Strongly Agree	14	2.8%	6	1.2%	9	1.8%	29	5.8%
			Total	30	6.0%	17	3.4%	24	4.8%	71	14.1%
		GPI5	Strongly Disagree	0	0.0%	0	0.0%	0	0.0%	0	0.0%
			Disagree	0	0.0%	1	0.2%	0	0.0%	1	0.2%
			Neutral	7	1.4%	1	0.2%	5	1.0%	13	2.6%
			Agree	12	2.4%	6	1.2%	10	2.0%	28	5.6%
			Strongly Agree	11	2.2%	9	1.8%	9	1.8%	29	5.8%
			Total	30	6.0%	17	3.4%	24	4.8%	71	14.1%

Based on GPI1, GPI2, GPI3, GPI4, GPI5 we can see that income of total shopping frequency Less than 3 times per month, namely: Below 5 million VND/month is 196 people, accounting for a rate of 39.0%. The number of people spending from VND 5 million to VND 10 million

per month was 54 people, a rate of 10.8%. Finally, there were 22 people Above 10 million VND/month, a rate of 4.4%. From these figures, we can infer that the total income of the total shopping frequency Less than 3 times per month gave comments with GPI1, GPI2, GPI3, GPI4, GPI5 was 272 people, accounting for a ratio of 54.2%.

Then we can see that GPI1, GPI2, GPI3, GPI4, GPI5 we can notice that income of total shopping frequency from 3 to 5 times per month, specifically, is Below 5 million VND/month is 68 people, accounting for the proportion of 13.5%. From VND 5 million to VND 10 million/month is 55 people, a rate of 11.0%. Finally, there are 36 people Above 10 million VND/month, a rate of 7.2%. From these figures, we can infer that the total income of the total shopping frequency from 3 to 5 times per month gave comments with GPI1, GPI2, GPI3, GPI4, GPI5 was 159 people, accounting for a 31.7% ratio.

Similarly, for GPI1, GPI2, GPI3, GPI4, and GPI5 we can notice that income of the total frequency of shopping 5 times or more per month, namely, is Below 5 million VND/month is 30 people, accounting for a rate of 6.0%. The number of people spending from 5 million to 10 million VND/month is 17 people, a rate of 3.4%. Finally, there are 24 people Above 10 million VND/month, a rate of 4.8%. From these figures, we can infer that the total income of the total shopping frequency from 3 to 5 times per month gave comments with GPI1, GPI2, GPI3, GPI4, GPI5 was 71 people, accounting for a 14.1% ratio.

6. Appendix 6: The correlation between the independent variables

Table 34. Pearson Correlation Analysis Result

Correlations									
		K_PU	**K_PEOU**	**K_O**	**K_PE**	**K_EEAH**	**K_PH**	**K_PS**	**K_PP**
K_PU	Pearson Correlation	1	.355**	-.064	-.022	-.005	-.047	-.017	.018

	Sig. (2-tailed)		.000	.155	.626	.909	.291	.709	.681
	N	502	502	502	502	502	502	502	502
K_PEOU	Pearson Correlation	.355**	1	-.014	.079	.045	.054	-.066	-.002
	Sig. (2-tailed)	.000		.760	.076	.317	.228	.139	.965
	N	502	502	502	502	502	502	502	502
K_O	Pearson Correlation	-.064	-.014	1	.017	.037	-.036	-.059	.010
	Sig. (2-tailed)	.155	.760		.711	.413	.424	.185	.828
	N	502	502	502	502	502	502	502	502
K_PE	Pearson Correlation	-.022	.079	.017	1	.580**	.596**	-.049	.432**
	Sig. (2-tailed)	.626	.076	.711		.000	.000	.270	.000
	N	502	502	502	502	502	502	502	502
K_EEAH	Pearson Correlation	-.005	.045	.037	.580**	1	.522**	-.053	.429**
	Sig. (2-tailed)	.909	.317	.413	.000		.000	.234	.000
	N	502	502	502	502	502	502	502	502
K_PH	Pearson Correlation	-.047	.054	-.036	.596**	.522**	1	-.006	.408**
	Sig. (2-tailed)	.291	.228	.424	.000	.000		.898	.000

	N	502	502	502	502	502	502	502	502
K_PS	Pearson Correlation	-.017	-.066	-.059	-.049	-.053	-.006	1	.049
	Sig. (2-tailed)	.709	.139	.185	.270	.234	.898		.270
	N	502	502	502	502	502	502	502	502
K_PP	Pearson Correlation	.018	-.002	.010	.432**	.429**	.408**	.049	1
	Sig. (2-tailed)	.681	.965	.828	.000	.000	.000	.270	
	N	502	502	502	502	502	502	502	502
**. Correlation is significant at the 0.01 level (2-tailed).									

A pair of variables with a sig. a value smaller than 0.05 has a linear correlation with each other, and if that relationship is large, it will occur multi-linear.

The independent couples have sig. <.05 and Pearson from.4 and above are likely to occur multi-linear

Between independent variable pairs, only the pairs of variables with sig. smaller than 0.05 are concerned if there is a linear correlation between each other, but if the relationship is large, a multi-linear relationship occurs.

The independent couples have sig. <.05 and Pearson from.4 and above are likely to occur multi-linear (Carsten F. Dormann and colleagues, 2013), specifically, the pair of variables K_PU - K_PEOU has sig. <.05 and Pearson.355 => does not occur multi-line, has a 99% reliability; the pair of variables K_PE - K_EEAH has sig. <.05 and Pearson.580 => are likely to occur multi-linear, but have a 99% reliability; the pair of variables K_PE - K_PH has sig. <.05 and Pearson.596 => are likely to occur multi-line, but have a 99% reliability; the pair of variables K_PE - K_PP has sig. <.05 and Pearson.432 => are likely to occur multi-linear, but have a 99% reliability; the pair of variables K_EEAH - K_PH has sig. <.05 and Pearson.522 => are likely to occur multi-line, but have a 99% reliability; the pair of variables K_EEAH - K_PP has sig. <.05

and Pearson.429 => are likely to occur multi-line, but have a 99% reliability; the pair of variables K_PH – K_PP has sig. <.05 and Pearson.408 => are likely to occur multi-line, but have a 99% reliability.

After implementing and reviewing the VIF results from the regression analysis table, the pairs of potentially multi-linear variables did not occur multi- linearly because the VIF coefficients of the independent variables were all smaller than 10, in this case in the Coefficient table the coefficients were even smaller as 2, so that the data did not violate the multicollinear assumption.

The symbol ** in the table... indicates that this pair of variables has a linear correlation at a confidence level of up to 99% (1% significance = 0.01).