

Driving factors of online consumers of household appliances

An empirical study of consumers in Ho Chi Minh City, Vietnam

LAB University of Applied Sciences
Bachelor of Business Administration, International Business

Quoc Toan Tran

Thi Bich Hoa Nguyen

Abstract

Author(s) Tran Quoc Toan Nguyen Thi Bich Hoa	Publication type Thesis, UAS Number of pages 80	Published 2022
Title of Publication Driving factors of online consumers of household appliances An empirical study of consumers in Ho Chi Minh City, Vietnam		
Degree and field of study Bachelor of Business Administration, International Business		
Abstract <p>The current study aimed at examining the factors determining consumer's online buying decisions of household appliances of consumers in Ho Chi Minh City in Vietnam and their degree of influence. In order to obtain research objectives, five hypotheses were proposed to test how five factors, including quality, price sensitivity, internet security, convenience, and social media influenced the consumers' decision to buy household appliances online. The authors employed the quantitative research method with the use of a close-ended questionnaire to collect data. All questionnaire items were designed in the form of Five-points Likert scale. A sample size of 370 consumers in Ho Chi Minh City was selected by the researchers. The analysis of research results revealed the following findings: 1) quality influenced online buying decisions of household appliances of consumers; 2) price sensitivity influenced online buying decisions of household appliances of consumers; 3) internet security influenced online buying decisions of household appliances of consumers; 4) convenience influenced online buying decisions of household appliances of consumers; and 5) social media influenced online buying decisions of household appliances of consumers. Additionally, among five factors quality and convenience were perceived as the factors with the greatest impacts while social media was the factor with the least effect. Based on research findings, implications are generated to the marketers to generate the impacts on consumers' intention to buy household appliances online.</p>		
Keywords Online buying decision, household appliances, internet security, convenience, social media, price sensitivity, product quality.		

Table of Contents

1	Introduction.....	1
1.1	Background.....	1
1.2	Aims and objectives of the study.....	2
1.3	Delimitation	2
1.4	Limitations.....	3
1.5	Research questions.....	3
1.6	Research method	4
1.7	Thesis structure	5
2	Theoretical framework.....	7
2.1	Model of factors affecting online shopping intention.....	7
2.1.1	Theory of Reasoned Actions (TRA)	7
2.1.2	The theory of Planned Behavior (TPB).....	9
2.2	The 4Ps of marketing	10
2.3	Quality and online buying decision.....	12
2.4	Price sensitivity and online buying decision.....	14
2.5	Internet security and online buying decision.....	15
2.6	Convenience and online buying decision.....	18
2.7	Social media and online buying decision	19
2.8	Conceptual framework.....	21
3	Empirical research and data analysis	23
3.1	Data collection	23
3.2	Data analysis	24
3.3	Reliability and Validity.....	24
4	RESULT AND ANALYSIS OF THE RESEARCH	26
4.1	General information	26
4.2	Analysis of the adapted hypotheses	31
4.2.1	Hypothesis 1: Influence of quality on online buying of household appliances.....	31
4.2.2	Hypothesis 2: Influence of price sensitivity on online buying of household appliances	35
4.2.3	Hypothesis 3: Influence of internet security on online buying of household appliances	38
4.2.4	Hypothesis 4: Influence of convenience on online buying of household appliances	42
4.2.5	Hypothesis 5: Influence of social media on online buying of household appliances	44

5	Discussions	48
6	Conclusion.....	52
6.1	A summary of key findings	52
6.2	Implications.....	52
6.3	Suggestions for further studies	53
	References	55
	Appendix 1. Questionnaire (English version).....	1
	Appendix 1. Questionnaire (Vietnamese version)	1

1 Introduction

1.1 Background

E-commerce has become one of the most prevalent trends in the business landscape in recent years owing to its benefits and changes in consumer behavior (Nguyen et al., 2018, 255; Phaneuf, 2022). A report by E-Marketer (2021) reveals that the total value of E-commerce reached \$4.921 trillion in 2021 with the spread to all industries worldwide. It is expected that the value will increase to \$5.55 trillion by the end of 2022, representing the borderless power of E-commerce. As reported by Keenan (2022), online purchases accounted for 17.8% in 2019 that increased to 19.2% in 2020. (Keenan, 2022.) E-Marketer (2021) provides information that online purchases will surge to 24.5% in 2025, indicating a compound annual growth rate (CAGR) of 6.7% during 2021-2025 (E-marketer, 2021).

Vietnam has experienced a dramatic growth in E-commerce business in recent years. The report by NDO (2021) shows that E-commerce market value of Vietnam is calculated at \$21 billion in 2021, representing a 31% increase in comparison to that of 2020. The report also shows high expectations of the prospect of E-commerce market in Vietnam when forecasting that the market will amount to \$57 billion in 2025, showing a CAGR increase of 29%. This growth implies the great potential of E-commerce in Vietnam. In particular, under the effects of the COVID-19 pandemic in Vietnam, the Vietnamese E-commerce market has experienced 8 million new online consumers in 2021. Among 8 million new online consumers, 45% of them live in urban areas. (NDO, 2021.)

In terms of the household appliance market in Vietnam, it is defined in CollinsDictionary (n.d.) a household appliance is defined as an electrical device, machine, or piece of equipment that is used to support people perform household functions of cooking, cleaning, or food preservation. Some examples of household appliances include vacuum cleaners, toasters, coffee makers, ovens, etc. The report by Statista (2022) found that the market value of Vietnam will increase to \$632.5 million in 2022. Notably, the report also predicts that in the online selling sector household appliance will reach \$36.4 million users by 2025 with a rate of penetration of 36.0%. In particular, the amount of the average revenue per user (ARPU) is calculated at \$22.64 by 2025. (Statista, 2022.)

Furthermore, consumers in Ho Chi Minh City who had experienced the COVID-19 impact in 2021 have changed their consumer behavior, including a shift to online purchases of almost all product categories (Vietnamnews, 2020). In terms of online purchase of household appliances, previous studies (Imelia & Ruswanti, 2017, 39; Luong et al., 2021, 627) reveal that consumer's decision-making is driven by a number of factors such as

perceived quality, price sensitivity, convenience, internet security, the reputation of application or business, etc. Gu et al. (2021, 2277) particularly emphasizes the impacts of the COVID-19 on changes in influential factors on consumers' buying decisions. Therefore, the current study attempts to explore the driving factors of buying decisions of online consumers of household appliances from the perspective of consumers in Ho Chi Minh City, Vietnam to obtain an understanding of factors determining consumers' buying decisions of household appliances in Vietnam online.

1.2 Aims and objectives of the study

This study aims at investigating the factors determining consumer's online buying decisions of household appliances of consumers in Ho Chi Minh City in Vietnam. The objectives of the current study include

- 1) To explore the influential factors driving consumer's online buying decisions of household appliances
- 2) To investigate the extent to which the influence factors determine consumer's online buying decisions of household appliances

1.3 Delimitation

This study focuses only on examining the major factors influencing consumers' online buying decisions of household appliances. The selection of studied influencing factors is based on the review of both foreign and Vietnamese studies on the subject of consumer behavior toward household appliances (Jiang, Yang, & Jun, 2013, 195-198; Fortes & Rita, 2016, 168-174; Laskowski, 2017, 240; Uslu & Buseynli, 2018, 516-518; Hanslim et al., 2020, 125; Kwarteng et al., 2020, 219; Luong et al., 2021, 627; Tran & Nguyen, 2022, 3-4). In addition, the selection of these factors also relied on the influence of 4Ps (Product, Price, Place, and Promotion) on consumer behavior (Singh, 2012, 40). In the following study, quality acts as the product factor while price sensitivity represents the price factors. Convenience and Internet security are used as place factors. Finally, social media represents a promotion factor.

Consumers in Ho Chi Minh City are selected as research participants through convenience sampling. Those consumers have experienced the most severe consequences of COVID-19, leading to the changes in their perceptions of which factors may influence their online buying decisions. The questionnaire was administered to the participants online through Google Forms and then delivered to consumers in Ho Chi Minh through Facebook and Zalo.

In terms of theoretical limitation, the current study is focusing on the following aspects:

- 1) Model of factors affecting online shopping intention
 - Theory of Reasoned Action
 - Theory of Planed Behavior
- 2) The 4Ps of marketing
- 3) Quality and online buying decision
- 4) Price sensitivity and online buying decision
- 5) Internet security and online buying decision
- 6) Convenience and online buying decision
- 7) Social media and online buying decision

1.4 Limitations

There are two major limitations existing in the current study. Firstly, the current study only adopted the quantitative research method with the use of questionnaire for data collection. The use of single quantitative research method led to the lack of triangulation of research findings. If the research employed the qualitative research method with the use of other research instruments such as interview or observations, the triangulation of data would be obtained.

Secondly, the current study only approached 370 respondents for collecting data for the analysis which accounted for a very small proportion of Ho Chi Minh City's population. The small sample sized significantly influenced the reliability of data and generalization of research findings. Research findings would be generalized to a larger population if the current study employed a larger sample size.

1.5 Research questions

The following research question is derived in response to research aims and objectives:

How do the major drivers determine online buying decisions of household appliances of consumers in Ho Chi Minh City, Vietnam?

Accordingly, five sub-questions are also formulated:

- Sub question 1: How does quality influence online buying decisions of household appliances of consumers?
- Sub question 2: How does price sensitivity influence online buying decisions of household appliances of consumers?
- Sub question 3: How does internet security influence online buying decisions of household appliances of consumers?
- Sub question 4: How does convenience influence online buying decisions of household appliances of consumers?
- Sub question 5: How does social media influence online buying decisions of household appliances of consumers?

1.6 Research method

In order to obtain research objectives, the research employs a quantitative research method that utilizes numerical information to answer research questions (Creswell & Creswell, 2018, 41). Convenience sampling is also used to select the samples for the study. The population of the study involves customers living in Ho Chi Minh City who are interested in buying household appliances. The research focuses on age groups ranging from 16 to 65. According to Top 10 HCM, there are almost 6.38 million people who qualify for the requirement (top10hcm, 2022). Z-score sampling size formulation will be employed for the sample size determination: $[(Z\text{-score})^2 * SD * (1-SD)]/ME^2 = \text{Sample Size}$. With the selection of Z-scores of 1.96 in alignment with a 95% of confidence level and 0.5 SD, the sample size is calculated at 385.

In order to collect data for the analysis, a questionnaire was adopted and designed by the authors and from the questionnaire used in the studies by Jiang, Yang, and Jun (2013, 213), Fortes and Rita (2016, 174) and Tran and Nguyen (2022, 10-13). There are two sections included in the questionnaire. In the first section, eight terms are used to identify the respondents' age, gender, employment background, monthly income, and their experiences of online buying of household appliances. In the second section, 5 terms are designed in the format of Likert questions to obtain the respondents' perceptions towards how their online buying decisions of household appliances are influenced by quality (term 9), price sensitivity (term 10), internet security (term 11), convenience (term 12), and social media (term 13). The questionnaire is included Appendix 1.

1.7 Thesis structure

The current study was organized into six main sections as follows.

The first section – Introduction - explained the thesis's background and problems that motivating the researchers to perform the current study concerning driving factors of online consumers of household appliances in Ho Chi Minh City, Vietnam. Based on the background and rationale explanations, the research aims, objectives and questions were defined by the researchers. Accordingly, the research delimitations were established to define the scope of the study and theoretical delimitations. The next part is about research limitation. Particularly, this section also provided a summary of research method covering research design, sampling and the questionnaire as research instrument. Finally, the researchers described the structure of the thesis.

The second section – Theoretical framework – established theoretical foundation for the current study. Two models used as the foundation for the current study, including Theory of Reasoned Actions and the theory of Planned Behavior (TPB) were presented. Then, 4Ps of marketing were explained to build the correlation between factors influencing the consumers' buying behaviors and marketing. In particular, this section critically reviewed previous studies concerning the relationship between quality, price sensitivity, internet security, convenience, social media and online buying decision to propose five hypotheses testing the influence of different factors on consumers' purchase decision of household appliances online. Finally, the conceptual framework was formulated with reference to five hypotheses.

In the third section - Empirical research and data analysis – described how data was collected from the questionnaire with the selected samples. Details of data collection procedures were explained in detail. Then, the process of data analysis was defined by the researchers. At the end of this section, how the researchers ensured validity and reliability was presented.

Next, in the section of Result and analysis of the research, the researchers started to analyze demographics information of the research respondents. Then, data, including percentage and descriptive statistics, were analyzed to generate the findings concerning the five proposed hypotheses.

The Discussions section focused on interpreting the data concerning how quality, price sensitivity, internet security, convenience, social media influenced the respondents' online buying decision of household appliances. The researchers also discussed research findings in alignment with previous studies.

The last section – Conclusion – provided a summary of key findings in the current study. The researchers also discussed research implications, and suggestions for further studies.

2 Theoretical framework

2.1 Model of factors affecting online shopping intention

2.1.1 Theory of Reasoned Actions (TRA)

It is stated by Zeren (2021) that behavior of the consumer is influenced by a variety of the environmental factors due to the dynamic nature of the consumer behaviour. The study also affirms that when explaining consumer behavior there are many theories and models, however, the theory of reasoned action is one of the most popular models. (Zeren, 2021, 69.) According to Liu and Tsaur (2020,3), the theory of reasoned actions (TRA) is one of the most commonly used theories of consumer behavior, including buying intentions and decisions. The study used the model of TRA with different factors to explain the consumers' green purchase intention and actual buying behavior of smartphone products. Liu and Tsaur (2020,2) assumed that beliefs and evaluations of consumers towards the brands and products influenced their attitude towards the products; accordingly, normative belief and motivation impact the consumers' compliance with subjective norms. As a result, their attitudes and compliance with subjective norms affect the consumers' intention to buy and actual buy. (Liu & Tsaur, 2020, 2.)

This theory was initially introduced by Martin Fishbein and Icek Ajzen (Paul, Modi, & Patel, 2016, 124-125) focusing on the correlation between factors driving consumers to their buying decisions. Figure 1 illustrates the theory of reason action.

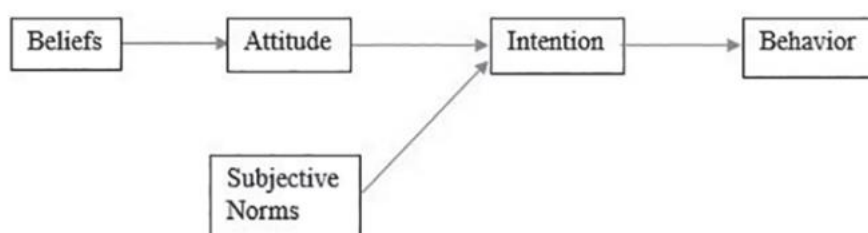


Figure 1: Theory of Reasoned Actions (Zeren, 2021, 71)

As shown in Figure 1, TRA is mainly used to explain consumers' future behavior which focuses on their beliefs, attitudes, and intentions. Within the TRA, consumer intention was the major determinant of consumers' conscious behavior. The study argues that consumer intention refers to a consumer's planned action in their purchasing journey of products and services constituted by two factors, including attitudes and subjective norms. Attitudes indicate a person's point of view, regardless of whether it is positive or negative, towards a future behavior meanwhile subjective norms involve the desires and expectations of others in the society for a person's behavior. Additionally, Zeren affirms that attitudes and

subjective norms are changeable over time, leading to changes in consumer intentions. (Zeren, 2021,70.)

Furthermore, Fishbein and Ajzen in Paul et al. (2016, 124-125) explain that consumers' behavior is generated based on their perceptions of what are the outcomes and benefits of their actions. In other words, they use rational decision-making to decide on whether they should buy a particular product/service or not. Gill, Ansari, and Tufail (2021) also argue that consumers tend to assert a particular action, for example buying a product, when there are reasons making them believe that they will obtain their expected results. Before their actions are finished, they can change their mind under the effects of other reasons. (Gill et al., 2021, 66.) Thus, this theory is useful to explain consumer buying decision that supports the marketers to move consumers to purchase decisions.

Regarding online consumer behavior, Bhattacharjee and Chetty (2019) point out that TRA is a theory which can be used by marketers to generate impacts on online consumer behavior through changing consumers' attitudes towards products/services and brands. The researchers explain that consumers belief in how online shopping saves their time and money determines their attitude towards online shopping. As a result, the consumers' actual online buying behavior is driven by their attitudes toward online shopping. In addition, they state that online shopping subjective norms involve the expectations and pressures created by the marketers of brands to influence consumers' online buying intentions, including buying or not buying products/services. (Bhattacharjee & Chetty, 2019.) Owing to the aforementioned discussions, the theory of reasoned action is employed as the background theory because factors including quality, internet security, convenience, social media, and price sensitivity are examined as the reasons explaining the decision to buy household appliances online.

2.1.2 The theory of Planned Behavior (TPB)

The theory of planned behavior (Ajzen, 1991) is an improved development of the theory of reasoned actions. Moreover, it is designed to forecast and expound on human behavior. Ajzen (1991) proposes that at the core of the theory of planned behavior lies in the idea that the individual has very limited control over his or her behavior even though his or her attitude and personal standards are influencing the motivation of an individual. However, an individual might not behave in a particular way due to the outside influence or the personal intentions. Later the researcher would add the Perceived Behavioural Control into his TPB. Ajzen (1991) provides an explanation for the idea of Perceived Behavioural Control: *its is about how difficult it is for a person to perform a specific behaviour and the degree to which he or she is capable of controlling it*. TPB model shows how the personal motivations as well as the intentions act as a base for the motivation of the consumption behaviour of an individual. (Ajzen, 1991, 181.)

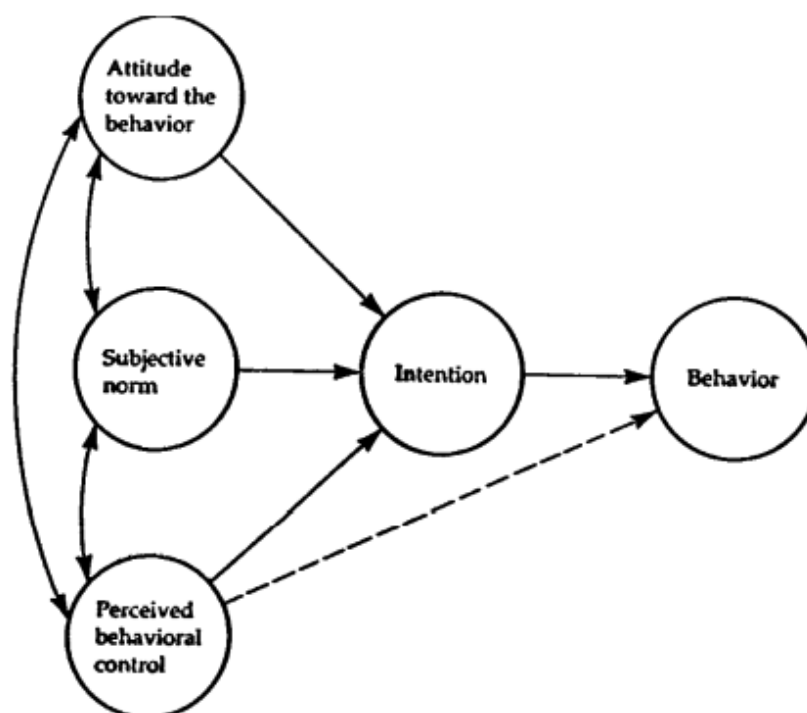


Figure 2: Theory of planned behavior (Ajzen, 1991, 182)

According to Ajzen (1991) the theory of planned behavior consists of three parts with each one of them being connected to the intention of a person. The first part refers to the person's attitude towards the behavior of another person both in a positive and negative light. Another part focuses on the social pressure that a person can experience which can, in turn, change his or her behavior. The final third part is about the degree of personal control that an individual possesses over his or her behavior as well as his or her reflection on his

past mistakes and other situations. The more positive the society's view is on a behavior in a specific situation, the more a person will be inclined to act accordingly, however, his or her control and perception of behavior is also an important factor that is influencing his behavior. Thus, depending on a situation and behavior the impact of the aforementioned parts on the person's decision-making process can vary as well. (Ajzen, 1991, 182.)

There are many different fields which have applied the theory of planned behavior as a base for research and development. Firstly, with health applications, Elisabeth (2021) states that TPB is the model which has been used most in health psychology field. Especially, Penny in Elisabeth (2021) found that the smokers believe of self-quitting smoke is less, therefore they were less likely to try. As a result, the less they try, the more they have failed to stop smoking previously. Besides, it was also used widely in campaigns of health education. (Elisabeth, 2021.) Furthermore, Luanle (2017) indicates Ajzen and Beck were able to predict dishonest actions of college students with a high degree of accuracy as well as to identifying the actual behaviour of students by using TPB in psychology field. (Luanle, 2017, 14). Next, according to Martin (2019), TPB also approved by businesses and organizations by accepting its input in decision-making and organizational processes. Indeed, TPB has been found as a useful tool to predict market consumption, as well as customers' and competitors' behavior. (Martin, 2019.)

2.2 The 4Ps of marketing

According to Singh (2012, 40), a marketing mix refers to a collection of tools used by the business to intervene in the market. The marketing mix consists of different components that are implemented simultaneously for the achievement of positive marketing objectives (Luenendonk, 2022). Singh argues that 4Ps (Product, Price, Place, and Promotion) is an effective marketing tool that is used by businesses to generate the impacts on consumer behavior and competitive advantages (Singh, 2012, 40). Specifically, product refers to goods or services that customers are willing to pay for; some attributes of the product include design, functions, size, packaging and customer service. Price is defined as the amount of money paid by customers for their purchase of goods or services. Promotion involves the use of tools to deliver the businesses' messages to the customer while place indicates the delivery of products and services to the customers. (Gilaninia et al., 2013, 54-55.)

Looking back to the history of 4Ps, Ray (2021) states that the concept of 4Ps was firstly introduced in the marketing landscape by E. Jerome McCarthy in the 1960s. It was then become popularized by Phillip Kotler. (Ray, 2021.) According to Kotler et al. (1999, 561), product refers to any physical objects or intangible services that are offered by the

marketers to satisfy the consumers' demands. The researcher also listed "product attributes, branding, packaging, labeling, mid-product-support services" as the factors determining the individuals' decisions of a product (Kotler et al., 1999, 566). In terms of price, it is defined as the number of values used to pay for the benefits of products and services by the consumers (Kotler et al., 1999, 681). Price is also considered as one of the marketing mix tools utilized by the marketers for the achievement of marketing objectives (Kotler et al., 1999, 684). The third marketing mix component, promotion, involves the use of different marketing tools such as *advertising, personal setting, sales promotion and public relations* to obtain predefined marketing goals (Kotler et al., 1999, 756). Finally, Kotler et al. (1999, 895) refer to place as distribution channels that are the entities involving the process of making goods and services available to the customers.

Later, Dang (2014, 11) specifies the factors of each element in the 4Ps enable the brands to generate values for the customers that influence their consumer behavior.

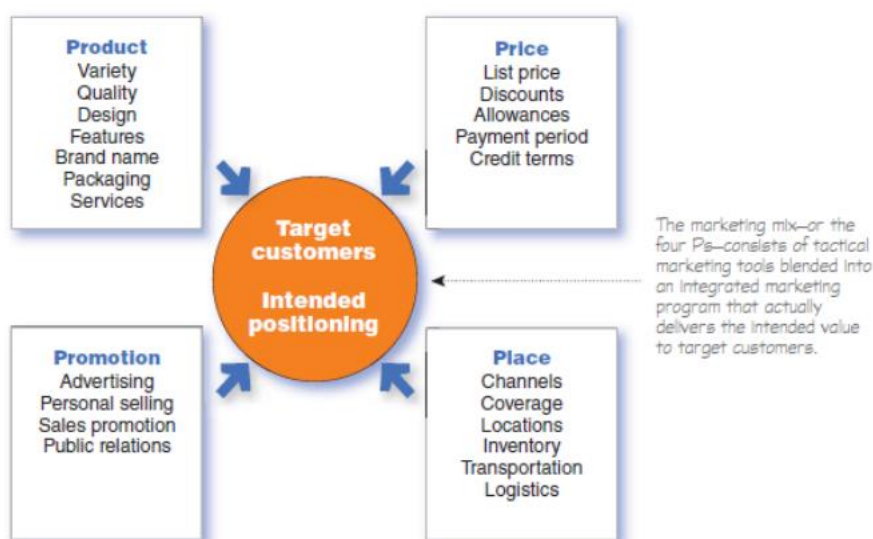


Figure 3: 4Ps marketing mix (Dang, 2014, 11)

As shown in Figure 3, the product element covers seven aspects, including *product variety, quality, design, product features, packaging, brand name, and services*. While the first four aspects are tangible aspects of the product element, the last two aspects are intangible ones. Dang (2014) also states product element decision is constituted by *individual product decisions, product line decisions, and product mix decisions*. Dang (2014) explains that individual product decisions are determined by *product quality, branding, packaging and labeling, and product support services*. In addition, the business's decisions on product line and product mix also formulate the product aspect in the marketing mix. Among the aspects

embraced in the product element, product quality representing the ability to meet customers' needs and requirements is selected in the current study. (Dang, 2014, 12, 13.)

The second element of 4Ps – Price – is constituted by *list price, discounts, allowances, payment period, and credit terms*. The researcher indicates that although the most influential power of price on consumer behavior has reduced over time, this element is crucial to generating value for the customers, resulting in the customer-brand relationship (Dang, 2014, 15). When determining the price element in the marketing mix, the business considers different constituents, including *pricing objectives, pricing strategies, and additional pricing considerations* (Dang, 2014, 16, 17).

Place – as the third element of 4Ps – consists of the decisions of *distribution channels, coverage, location, inventory, transportation, and logistics* (Dang, 2014, 11). All these aspects of place elements enable the company to deliver products from the manufacturers to the end-users. Referring to distribution channels, direct and indirect distribution that deliver products to the customers without and with the intermediaries respectively can be selected by the businesses. The intermediaries can be the retailers or wholesalers that are selected based on the company's channel design decisions covering *consumer needs, channel objectives, and alternatives*. (Dang, 2014, 20.)

Finally, Promotion as the last element of 4Ps refers to the way brands use *advertising, personal selling, sales promotion, and public relations to influence their customers*. The use of an appropriate promotion strategy contributes to the enhancement of customer awareness, resulting in consumers' engagement with the brand and sales generation. (Dang, 2014, 11-22.) Furthermore, Dang (2014, 23) indicates that similar to other elements of 4Ps, the aspect of promotion can significantly influence consumer purchase behavior.

To sum up, previous studies emphasize that if the businesses manage to generate appropriate 4Ps strategies, they can generate significant impacts on consumer behavior (Dang, 2014, 10; Gilaninia et al., 2013, 57; Singh, 2012, 45).

2.3 Quality and online buying decision

According to Hanslim, Jaya, and Prasetyawati (2020) quality refer to the values of products and services that are delivered to the customers. The researchers also affirm that quality is the most important concern of customers when purchasing any product. (Hanslim et al., 2020, 125.) Dang affirms that product quality is the driving force behind the way products and services perform, contributing to the customers' perceptions of the values they received and their satisfaction. The researcher also states that to ensure product quality businesses should focus on two requirements, quality level and quality consistency. Quality level of

products should be determined in alignment with the target customers' requirements and that is of the rivals' competing products meanwhile the company must ensure the consistency of quality for products' performance. (Dang (2014, 13.)

Concerning the quality attributes, there are some attributes of quality are listed by Hanslim et al. (2020, 125) including *product functions, traceable sources of materials, durability, packaging, and service*. Shagerdi (2013, 2180) also revealed that by understanding the importance of quality and how it influences the customers' purchase intention and decisions, the company emphasizes product attributes in their marketing plan to motivate their customers. Investigating the factors influencing the purchase of home appliances, Shagerdi (2013, 2181) indicates that quality as a component of value perception has a positive relationship with the purchase intention of customers toward home appliances.

Specifically, Hanslim et al. (2020, 125) performed a study measuring the influence of product quality on the home appliances purchase intention of consumers, with the stove as a chosen research object. Besides, Keller in Hanslim assumed that if the brand would want to impact the consumers' perceptions of quality, it must offer the customers' superior quality over its alternatives (Hanslim et al. 2020, 125.). Through analyzing the responses from 90 research participants who were randomly selected from an event on home appliances, the researchers concluded that the consumers' buying interest and intention were influenced by their perceptions of the quality of products (Hanslim et al., 2020, 127, 131). Research findings implied that to generate an influence on consumer buying behaviors the brands should improve the consumers' positive perception towards product quality.

Notably, a study by Anwar and Andrian (2021) attempts to find how perceived quality, brand image, and price perception influence consumers' buying decisions. It is indicated that product is the core of any marketing campaign that is launched by the business to influence its customers. Moreover, the researchers affirm that building products and services with quality that meets the customers' value expectations can generate the company's competitive edge. In particular, the researchers critically review previous empirical studies concerning the link between product quality and consumers' buying intention and decisions then they point out that there is a statistical, positive correlation between product quality and consumer buying decisions. (Anwar & Andrian, 2021, 79.)

Furthermore, with regard to consumer behaviour of household appliances, Tezi argues that products quality is the major drive behind long-term relationship between the consumers and brands. However, unlike the experiences with fast-moving consumer goods that enable the consumers to give a quick, contemporary judgment on product quality, consumers' perception of the quality of household products requires the customers' comparisons and

research of product reviews. (Tezi, 2019, 79.) Notably, Tezi (2019, 81) draws the conclusion that among the factors influencing consumers' buying decisions of household appliances examined in his study, quality is the most dominant factor. In other words, quality is the most important determinant for the success of household appliance companies. Because of the importance of quality, the following study also addressed quality as one of the variables influencing consumers' online buying decisions of household appliances.

2.4 Price sensitivity and online buying decision

The second variable influencing online buying decisions of household appliances that were investigated in the current study is price sensitivity. Uslu and Buseynli (2018) appreciate the importance of price sensitivity by stating that when evaluating the potential profitability of the market segment, the marketers selected price sensitivity as a critical factor. This is explained by the determination effect of price sensitivity on the company's income. The researchers also emphasize the significance of price sensitivity when mentioning it as a component of Porter's generic strategies that are used to create competitive advantages for the company. (Uslu & Buseynli, 2018, 516-518.)

Concerning the definition of price sensitivity, this concept was defined by several scholars in the field of marketing and consumer behavior. Tellis in Uslu and Buseynli (2018, 517) referred to price sensitivity as the extent to which consumers' purchases change in alignment with the price change. In other words, it implies the way how the consumers responded to the price change of a product/service. Another definition is also depicted by Kumar and Mohan (2021, 153) which states that price sensitivity refers to the consumers' potential reactions to the price of a particular product or service and the level of effects of price on consumer behavior.

Measuring the influence of price changes on consumer buying decisions, previous studies reveal that consumers are willing to pay different prices offered by different businesses on a specific product because of individuals' price sensitivity (Goldsmith, Flynn, & Kim, 2010, 328; Kumar & Mohan, 2021, 157). Tulwin also affirms that a consumer's buying decision of a specific product/service is driven by price-related factors (Tulwin, 2014, 20). Particularly, the report by McKinsey (2020) affirms that due to the effects of COVID-19, consumers become more demanding of price-downing, resulting in heightened price sensitivity. Kwarteng et al. (2020, 219) empirically conclude that consumers constantly sought and compared prices offered by online retailers to make their buying decisions. Additionally, consumers often show their concerns about the value of products over the price and are willing to spend more money on their purchases (Ogiemwonyi, 2022, 5). Lee examines how price sensitivity can generate the impacts on the intention of repurchasing and switching

online consumers from the perspective of online consumers. The researcher find out that there is a positive correlation between price sensitivity and online fashion consumers' repurchasing intention. Moreover, the researcher concludes the negative relationship between the importance of price to online fashion consumers and their intention of switching. (Lee, 2015, 106.) In the same line, Shankar, Rangaswamy, and Pusateri (2001) focus on exploring the link between the internet and indicated the assumption that the price sensitivity of consumers can be lowered by the internet because the consumers who were allowed to search can approach products/services matching their needs and requirements. Moreover, the researchers show that when purchasing online the consumers became more engaged in searching for better prices, implying their increasing price sensitivity. (Shankar et al., 2001, 1.) However, it is also assumed that the companies can reduce the value of the price by providing in-depth information, enhanced interactivity, and a wide range of a product/service in their online channels (Shankar et al., 2001, 25). A recent study by Ali et al. (2021, 1) explored the influence of different drivers influencing consumers' buying intention of appliances with the use of TPB in the Pakistan market, including *consumer attitude, subjective norms, perceived behavioral control, policy information, moral norms, and previous purchasing experience*. Price was investigated by the researchers as one of the constituents of perceived behavioral control. It was explained that there was a close correlation between "perceived inconvenience" and "economic benefits" and consumers' buying behaviors toward electric appliances. (Ali et al., 2021, 4.) Price was related to economic benefits perceived by the customers. Research findings reveal the significant influence of perceived behavioral control on consumers' buying intention of electric appliances. The study affirms the role of price in consumer intention; in other words, high prices over the customers' price expectations can prevent consumers to buy electric appliances (Ali et al., 2021, 9,10).

In addition, in the study by Luong et al. (2021, 620) the researchers found price sensitivity as one of the most powerful drivers of online purchases of household appliances. Because of the importance of price sensitivity on consumer behavior, the current study supposed price sensitivity as an influencing factor in consumers' online buying decisions of household appliances.

2.5 Internet security and online buying decision

Internet security has been widely perceived as one of the major concerns of online consumers (Hsu et al., 2014, 346; Fortes & Rita, 2016, 168; Ha et al., 2021, 1259). Furthermore, Bourn (2018) affirms that internet users should not underestimate its significance. A large quantity of valuable information about individuals and organizations is

stored online; it is dangerous if a security breach happens. As a consequence of an internet breach, information is stolen, and privacy is invaded. Bourn (2018) also emphasized that people tend to depict a sense of urgency related to Internet security because this risk was posed in every aspect of the life of any individual. (Bourn, 2018.) As the importance of internet security, Laskowski (2017) states that internet security and privacy have become important concerns of individuals in their daily lives because of their deep level of engagement in the activities on the internet from using social media platforms, sending instant messages, sending and receiving emails, to buying online. It is revealed that with the deep level of engagement with the internet, it is easy to see the reason behind the threat of internet attacks. Internet users increasingly encountered the threats of leaking identity information, losing privacy, and transmitting secured information. Particularly, the researcher affirms that the awareness and concerns of privacy, Internet security, and data protection are more commonly considered by users of online applications and platforms in various domains from communication to online shopping. (Laskowski, 2017, 240.)

A study performed by Gurung and Raja (2016) identifies the importance of security and privacy concerns as the motivations or hindrances to a consumer purchase behavior. Four components of internet security and privacy examined in the current study included *privacy, security, risk, and trust* (Gurung & Raja, 2016, 349). A research model was depicted in the aforementioned study that explores how privacy, security concerns, and trust beliefs on consumers' intention to make purchase transactions (Gurung & Raja, 2016, 353). Data collected from 273 respondents was used to prove the hypotheses that concern the influence of privacy, security, and trust beliefs on consumers' perception of online businesses (Gurung & Raja, 2016, 358). It was concluded by the researchers that there was a statistically significant relationship between the consumer perception of any online business and their concern for their own privacy and security. The consumers' risk perception directly affected their intention to engage with E-commerce, resulting in their purchase decisions online. (Gurung & Raja, 2016, 354.)

Aseri (2021) also states that the insufficient understanding of threats of cyber-attack when buying online influenced the consumers' perception of online shopping. Five major risks of internet security were also listed by Aseri (2021) including *phishing, fake online stores, data theft, adware, and theft of identity*. Firstly, phishing is one of the most common security breaches that impact online buyers. A click-bait, as the name implies, is used to entice a user into providing vital information such as passwords and credit card numbers. Phishing's primary weapon is fake emails: their main objective is to scam a user with an urgent message, such as a request from the user's bank needing the user to download a form. The second threat to Internet security mentioned by Aseri (2021) is fake online stores that stole

the identity of the official stores and offered fake products to the customers. Theft of data was also identified as one of the most prevalent Internet security risks to online customers. Aseri (2021) specifies that online stores tend to collect and store information from their customers to build up their sales databases. System administrators and IT managers are examples of groups that can access the databases to manage the information without the consumers' awareness. Consequently, online customers may encounter the threat of data thieving from system administrators and responsible staff. The researcher shows the results of a survey with online retailers revealed that the threat of data theft conducted by system administrators and the responsible staff was acknowledged by the survey participants. The fourth threat to internet security described in Aseri (2021) is adware covering illegitimate online advertisements delivered to customers online. If online consumers click on illegitimate ads, their personal information can be stolen and used for illegal intentions. The final threat of internet security to online consumers was a theft of identity. Aseri (2021) argues that the criminals meticulously monitored the behavior of consumers when they connected with businesses through online shops in order to put themselves in a position where they may successfully pretend to the merchants or online shoppers. (Aseri, 2021, 113.)

Concerns of loss of personal data reduce consumers' trust in online businesses, leading to their reluctance to buy online (Riquelme & Román, 2014, 137). There are a number of studies affirming the relationship between consumers' perception of internet security and their online purchase decisions (Hsu et al., 2014, 346; Fortes & Rita, 2016, 168; Ha et al., 2021, 1259). Notably, Jenyo and Soyoye (2015) perform a study to measure the correlation between consumer buying decisions and internet security with 30 selected companies in Nigeria. The analysis of empirical data reveals that it existed a statistically significant correlation between consumers' concerns about Internet security and their buying decision. The researchers also list the major concerns about Internet security identified in their study, including transaction security, the safety of fulfillment procedures, and defrauding threats. (Jenyo & Soyoye, 2015, 6-8.) In addition, Dharmajaya et al. (2020) mention that the consumers' intention of online transactions was significantly impacted by internet security issues that cover *privacy threats, website trust, and security*. The central concern of every online transaction was security; therefore, there is a significant relationship between consumers' concerns about internet security and their online buying decisions. (Dharmajaya et al., 2020, 42.) Particularly, the study by Tran and Nguyen (2022, 16) that attempts to check the relationship between security and online purchase intention reveals that there is a statistically significant correlation between online security and online purchase decisions.

The investigation into the above previous studies encouraged the authors to select internet security as one influencing factor in the current study.

2.6 Convenience and online buying decision

Jiang et al. (2013, 191) affirm that among various factors convenience of online shopping is one of the most powerful influential factors in online buying decisions. According to Saha et al., (2021) in comparison to offline shopping, the primary factor determining the consumers' adoption of online shopping was convenience; as a result, many online merchants paid their efforts and investments to maximize different aspects constituting online convenience for their consumers. The researcher also considered online convenience as a criterion that measures the time and effort paid by the consumers to buy products/services. Therefore, the consumers with a higher level of time and financial constraints paid more attention to convenience in their buying decisions. (Saha et al., 2021, 7752-7753.)

It is reported by Smart Insights (2020) that online consumers require easy access to online channels offered by the businesses when buying online; 52% of online customers state that the convenience of the purchasing process influences half or more of their purchases. The report explained that consumers decide not to buy a particular product or service if they encounter difficulties in accessing the company's website. (Smart Insights, 2020.) Furthermore, the convenience of information searching can boost sales of the businesses by generating the effects on consumers' behavior (Jiang et al., 2013, 195). The internet is a perfect source of information that provides a large amount alternative for purchases; hence, if the businesses can create convenience for online consumers, they can have a more loyal customer base (Nurdianasari & Indriani, 2021, 400). Additionally, Jiang et al. (2013, 206-208) argued that the flexibility and availability of different payment methods by online sellers can positively influence consumers' buying decisions.

There are five aspects of online convenience: access, search, evaluation, transaction, and possession convenience were identified in previous studies (Gautam, 2018, 6; Jiang et al., 2013, 198). Moreover, Duarte et al. (2018) lately use these categories to research the role of online conveniences among Portuguese young customers in online consumer behavior (Duarte, 2018, 165). To be specified with each dimension, firstly, access convenience is described concluding *time flexibility, space flexibility, energy used, accessibility of websites, and availability of products and brands* (Jiang et al., 2013, 198). Besides, Saha et al. (2021, 7753) proposes that accessing convenience represents a degree of control offered by online merchants to their customers, enabling them to save time and effort to buy products/services. The researchers also point out that although convenience was not the

only facet of the online shopping experience it was the first and foremost one because without it the consumers cannot obtain access to the online merchants for their purchases. The second aspect referred to, is search convenience. Similar to access convenience, search convenience is defined as online consumers' evaluation of their time and efforts paid off to find and make purchase decisions. Through examining the previous studies, the researchers conclude that the search efficiency provided by online suppliers can promote the customers' journey with them. In other words, if online stores can provide easy, friendly online search processes for their customers, they generate an impact on customers' shaping of purchasing decisions. (Saha et al., 2021, 7754.) At this dimension, Gautam (2018) assumes that this aspect comes from ease in finding desired products with the minimum time spent on searching (Gautam, 2018, 7). The third component is all about product information, standardized and branded products, the presence of price information in product listings, and product categorization (Jiang et al., 2013, 198). Jiang in Saha et al. (2021) defines evaluation convenience as the easiness degree to which the consumers understand product descriptions provided by online sellers. To understand product descriptions, the consumers utilize different techniques to obtain information about products as well as to clarify and evaluate that information. The researchers also affirm the significant relationship between evaluation convenience on consumer satisfaction. (Saha et al., 2021, 7754.) Relating to the transaction convenience, it is demonstrated as an evident impact in online shopping because customers find the paying process offline unpleasant. Moreover, online purchasing does not take a lot of time to complete as the entire process can be done in no more than one minute. (Duarte, 2018, 167.) Saha et al. (2021) refers to transaction convenience as consumers' time and effort paid for concluding the purchase of goods/services. The researchers point out that when the customers bought products online, they could make the payments themselves. However, if the payment process is too complex, the consumers can simply cancel their purchase. Finally, possession convenience refers to the possibility to receive products with a minimal amount of time and effort put into it; and post-possession convenience involves the consumers' experience with the access the online sellers for claiming were identified to be related to customers' behavior. (Saha et al., 2021, 7754.) As convenience is important to the consumer's online buying experience, the current study employs this factor as an influencing factor in the current study.

2.7 Social media and online buying decision

There is a skyrocketing increase in the number of social media users with a 115.59% increase. Social media users use these platforms not only for personal purposes such as making friends or communicating but for advertising activities as well. Organizations,

including the giants, have created their social media pages for maintaining the interactions with the consumers, providing customer services to consumers, launching their promotional campaigns, and selling products/services to customers (Chivandi, Samuel & Muchie, 2019, 1-2). The study by Carah and Shaul (2016, 2-5) provides empirical findings that successful social media promotional campaigns can allow companies to capture customers' attention. Barysevich lists *Facebook, Instagram, Tiktok, Twitter, and Youtube* as the most popular social media platforms used by the business. Particularly, it was reported by Barysevich that "54% of social media users use social media to research products and 71% are more likely to utilize referrals from social media for their buying decisions. The researcher also points out five ways by which the consumers' buying decisions were impacted by social media, including the modern customer journey, the power of social proof, the effects of influencer marketing, and the influence of stories. (Barysevich, 2020.)

A survey by Nosto (2021) revealed the findings concerning how social media content employed by brands can generate impacts on online consumers' buying behaviors. It is revealed that 81% of consumers affirmed the influence of posts by their friends on their social media networks on their buying intentions. Reviews with images from consumers in social media networks can inspire 66% of online consumers. Additionally, referrals in social media platforms are the influential force for 71% of online consumers, and posts generated companies can significantly influence 78% of online consumers. In particular, after the expansion of the COVID-19 pandemic 56% of online consumers were more impacted by social media content with their online purchases. (Nosto, 2021.)

Helversen et al. (2018) look into how different types of online consumer reviews influenced consumer buying decisions of younger adults' and older adults' customers. Research findings show that purchasing decisions of younger adults were influenced by all three types of online consumer reviews, including *reviews of product attributes, consumer ratings of products and negative comments*. The consumer group aged 40-60 years old prioritized analyzing negative reviews of product attributes during their purchasing process, rather than a positive rating. (Helversen et al., 2018, 1.)

Notably, influencer marketing was identified as a prevalent trend in online shopping. Croes and Bartelsa (2021, 1) note that positive reviews from Key Opinion Leaders (KOLs) and the community of users can promote consumers' buying decisions. Similarly, Heinonen (2021) performs a study with the Millennial age group in Finland in order to examine the relationship between influencers' reviews and their decision-making. The researcher identifies that the participants consider the influencers as the people in a close circle, such as family and friends, on social media platforms; therefore, if the influencers promote any product or

service on the social media, their promotion would influence the decision-making process of the millennial age group. (Heinonen, 2021, 32.) Investigating the literature on social media and consumer behavior, Pütter (2017, 12) affirms that if the company can improve its interactivity with the consumers online to generate the rapport and brand interactions through social media platforms such as *Facebook, YouTube, and Twitter*, they can significantly impact their consumers' buying decision. Accordingly, Manzoor et al. (2020, 42) conclude the significant relationship between social media platforms and consumer buying intentions. For the discussions above, the authors examined social media as an influencing factor on online consumers' buying decisions of household appliances.

2.8 Conceptual framework

Based on the investigation into the aforementioned studies, the initial conceptual framework (Figure 4) is to explore how online buying decision of household appliances is influenced by quality, internet security, convenience, social media, and price sensitivity.

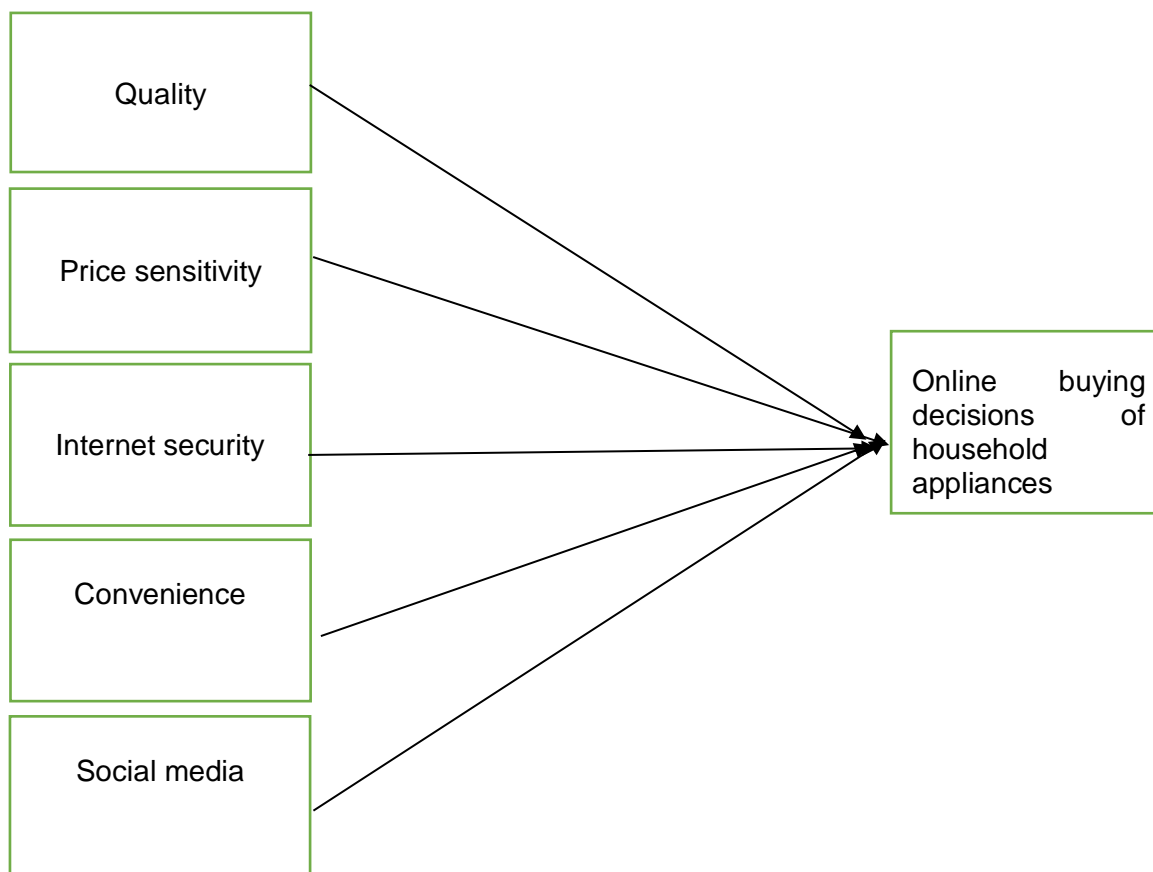


Figure 4. The initial conceptual framework (Authors, 2022)

As shown in Figure 4, the conceptual framework consists of two major parts. The first part involves the influencing factors that potentially explain online buying decisions of household appliances, including internet security, convenience, social media, and price sensitivity. The second part refers to online buying decisions of household appliances as a reasoned action that can be driven by the five mentioned factors.

Based on the conceptual framework and literature review, following hypotheses can be developed.

Hypothesis 1: Quality effect on online buying decisions of household appliances

Hypothesis 2: Price sensitivity effect on online buying decisions of household appliances

Hypothesis 3: Internet security effect on online buying decisions of household appliances

Hypothesis 4: Convenience effect on online buying decisions of household appliances

Hypothesis 5: Social media effect on online buying decisions of household appliances

3 Empirical research and data analysis

3.1 Data collection

As stated previously, the quantitative method is used as the main form of information gathering and is carried out in a form of an online survey. According to Sandra (2018), there are many advantages of using an online survey that bring benefits to a business, including

Cost-efficiency: Due to the physical nature of paper surveys they require additional cost compared to the online version. An organizer can simply create and spread it to the participants through free online channels making its cost significantly less than paper surveys.

Time-saving: Online surveys allow for the organizer to significantly reduce time associated with obtaining, organizing, and analysing of the data gathered from the participants. Through the usage of Google Docs and other survey tools the researcher can see the results seconds after a participant would submit it, making it a perfect solution for obtaining real-time data.

Convenience: Online surveys and interviews allow for the easier time management. In order to get a significant number of participants for both interviews and the surveys, it is important to arrange it. By doing it online it makes it significantly easier to fit into different time zones and schedules of a large number of participants as well as allowing to get results on a large scale.

Accessibility: Managing surveys via a web machine increases accessibility. A hyperlink can be sent to the survey thru email, social media or embedded in the survey on the website. Respondents have an extensive variety of methods to get entry to the questionnaire via a variety of devices.

Accuracy: Online surveys are processed by the computer making the margin of error that is usually associated with the human typed data, much smaller. Online databases are also capable of precise calculation which in turn allows for a more precise data analysis for any research.

Quick results: Using online surveys could help to attain real-time results. As quickly as contributors have responded to the questionnaire, surveyors can get the responses and examine them faster than in traditional paper surveys. This allows the surveyors to deal with any problems or concerns if such would arise.

More flexible: Online surveys offer greater flexibility in the layout and content material of the survey. There is a high level of flexibility in phrases of the sort varieties of questions that may be accepted.

The Data for the following research was collected anonymously through May 2022 by using a Google Forms survey that was conducted via Facebook and Zalo. Firstly, with Facebook platform, the survey was posted as a link to groups and pages of which Ho Chi Minh's residents are members of. The group name is "Tôì Là Dân Sài Gòn" which consists of up to 937.000 followers. Members of the group are people who live, work and study in Ho Chi Minh city. The authors contacted admin of this group to pin a post which included the form and the description. On the post, the authors solely asked for the household customers who is staying in Ho Chi Minh city. Secondly, Zalo is a Vietnam-based social network similar to WhatsApp which helped to gather a significant number of participants. The form delivered to the participants through authors contact and the authors asked them to send it to others who are the potential customers of household appliances. The survey questions are divided into two sections. The first section begins with demographic questions (e.g., personal information and the frequency of purchase) to identify the target audiences and map them into 2 groups: one only buys household appliances at store and the others with consumers who buy products online or both online and at store. The second section focuses on examining the driving factors that influence online buying behavior of the consumers of household appliances.

3.2 Data analysis

After collecting enough data (the number of respondents must be over the minimum sample size), the data would be thoroughly analyzed utilizing Excel tools. Google Forms generates an Excel report for the research. The acquired data is then systematized and translated into percentages to construct charts and tables to support the author's objective. All the data would be analyzed to generate conclusion that support to answer the research question. The recommendations for further research would be generated based on results from the discussion.

3.3 Reliability and Validity

In order to ensure the reliability and validity of research, the researchers employed different measures. Firstly, the researchers employed both primary and secondary data for the thesis. While secondary data gathered from previous studies related to the research issues was used to build up the hypotheses and conceptual framework, primary data collected from the questionnaire was employed to test the hypotheses. Secondly, the researchers

had applied every theory presented in written research to the research question of this study. If a theory or another information had only a passing connection to the research question, then it was not used unless as a connection to another data which was more connected. Thirdly, online questionnaire was performed online through Google Forms to minimize the researchers' biases and impacts on the respondents' answers to the questionnaire items. Online questionnaire ensured that the participants of the survey had no or little connection to the surveyors in order to minimize any personal bias from the participants answers. Accordingly, online survey allowed the research to include as many participants as it was possible to gather of different age groups, gender and social status making it more diverse. This diversity enabled the researchers to reach a wide arrangement of outlooks to be presented allowing it to be more valid. Finally, the development of research questionnaire was based on the investigation into previous studies and rechecked by research supervisors; the questionnaire was valid and reliable enough to collect data in response to research questions.

4 RESULT AND ANALYSIS OF THE RESEARCH

4.1 General information

There was a total of 387 responses to the questionnaire administered by the authors through Google Forms; however, there were ten respondents who only buy household appliances at stores and seven respondents did not respond properly to the other questionnaire items. Hence, there were 370 proper responses used for the analysis.

There were eight questionnaire items used by the authors to explore the respondents' general information, including age, gender, employment status, monthly income, experiences of buying goods online, frequency of buying household appliances, location of buying household appliances, and types of devices used for buying household appliances online.

Firstly, age of the respondents was shown in Figure 5.

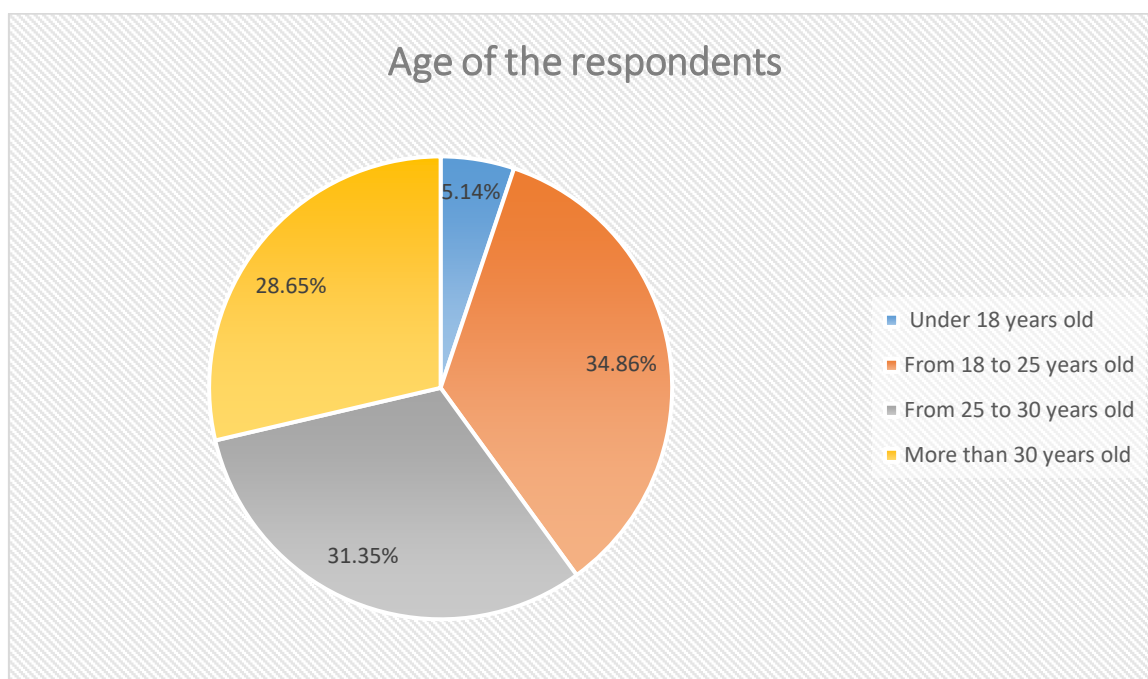


Figure 5. Age of the respondents (Authors, 2022)

As shown in Figure 5, among 370 respondents there were 129 respondents, representing 34.86%, aged from 18-25 years old. The second largest group of age range was 25-30 years old with 116 respondents, accounting for 31.35%. Accordingly, there were 106 (28.65%) and 19 (5.14%) respondents who were aged more than 30 years old and less than 18 years old respectively.

The second demographic information explored in the current study is gender of the respondents. Results of the respondents' gender were presented in Figure 6.

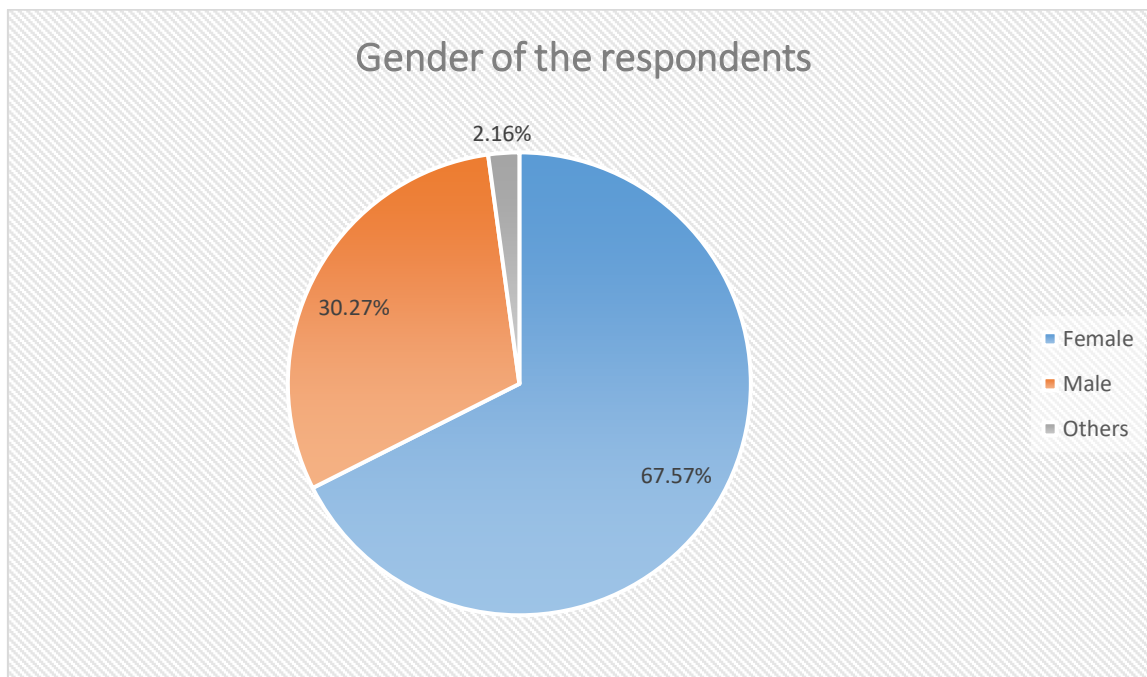


Figure 6. Gender of the respondents (Authors, 2022)

It is revealed in Figure 6 that more than a half of the respondents were female (67.57%) while 30.27% of the respondents were male. Only 8 respondents, accounting for 2.16%, answered with the "Others" response.

Accordingly, the respondents' current employment status was also explored in the current study. The majority of the respondents' current employment status was "Employed" (59.19%), followed by "Self-employed" (19.19%), "Students" (17.03%), and "Unemployment and currently looking for job" (4.59%). Details of the employment status of the respondents were shown in the Figure 7.

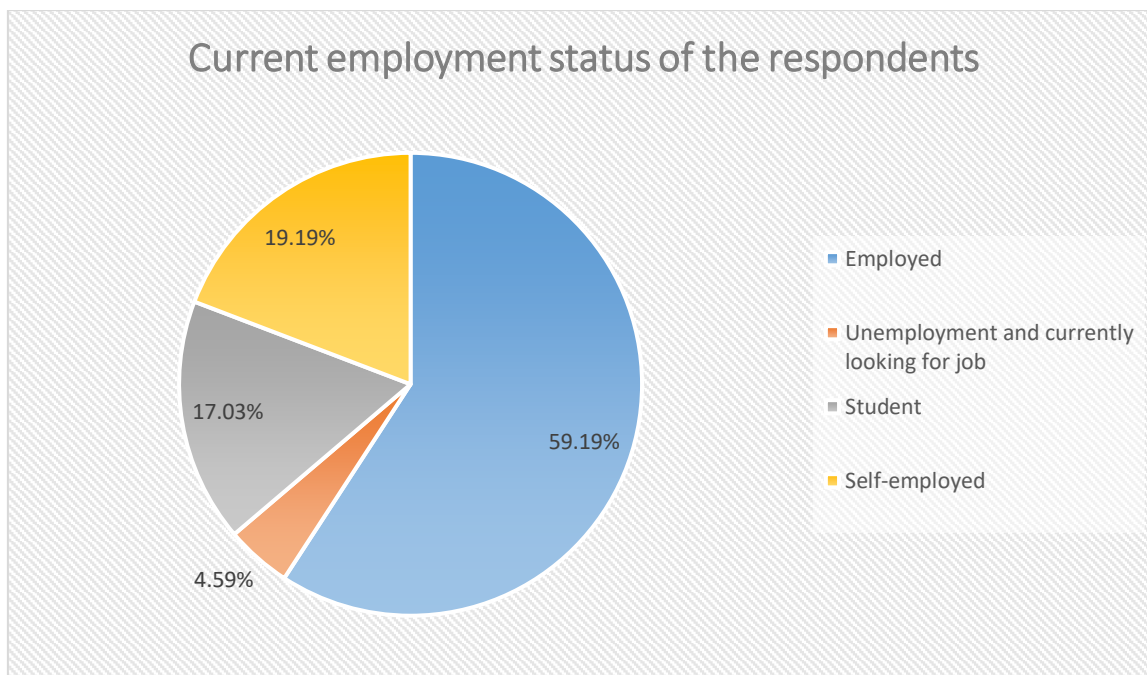


Figure 7. Current employment status of the respondents (Authors, 2022)

Because the respondent's income significantly determined the buying decision, the researcher also explored the respondents' monthly income. As reported by the respondents, there were 74 respondents, representing 20.00%, earning 10-15 VND million per month. The number of respondents with a monthly income of less than VND 5 million, VND 5-10 million, and more than VND 15 million was 19.73%, 21.89%, and 38.38% respectively. Results are presented in Figure 8.

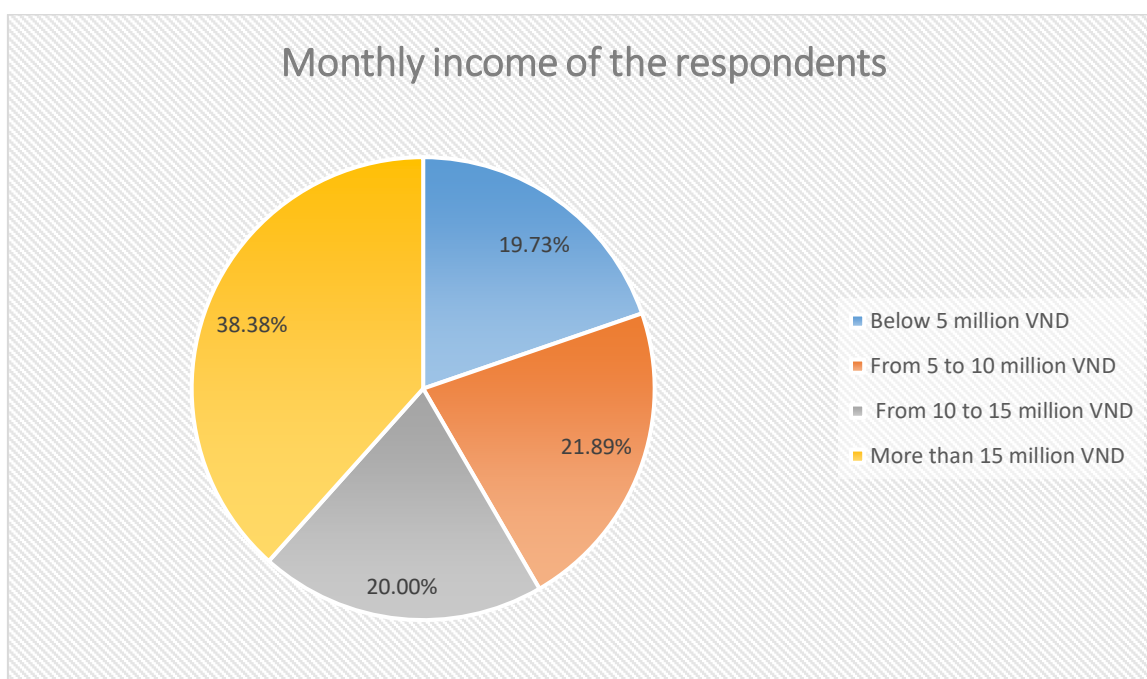


Figure 8. Monthly income of the respondents (Authors, 2022)

Furthermore, because the study attempts to explore the consumers' online behaviors, the Authors also explored whether the respondents often buy products online or not. Interestingly, more than two thirds of the respondents (72.97%) admitted that they often buy products online. Figure 9 demonstrates that the respondents' answers to the question concerning their online buying of products or not.

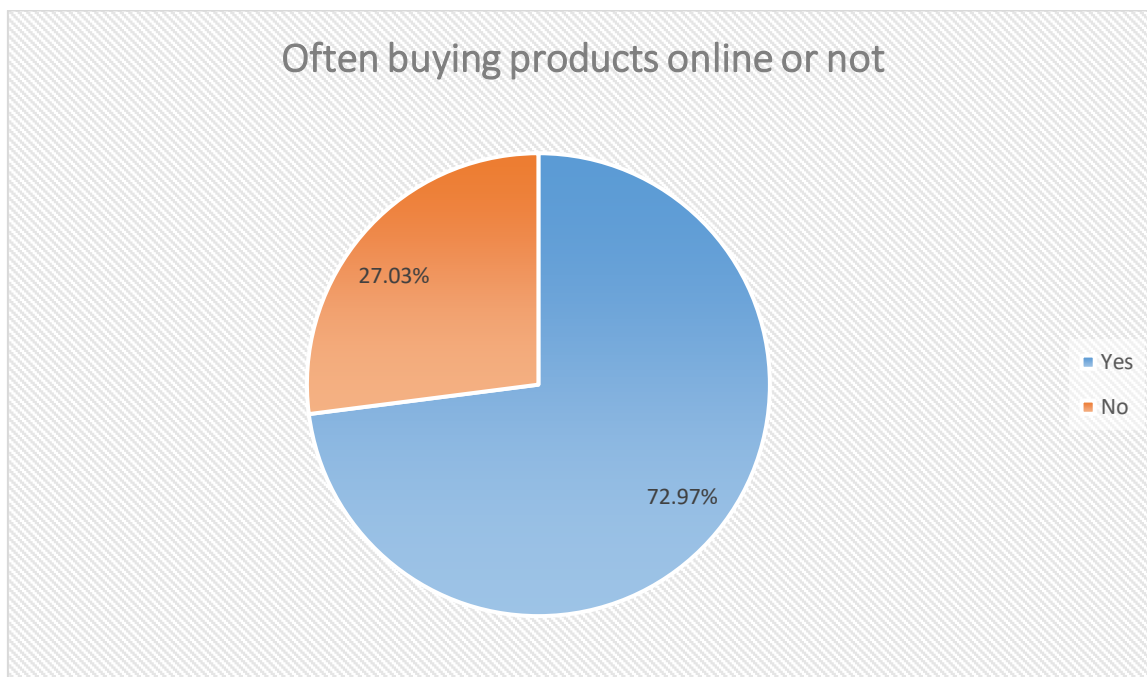


Figure 9. Buying products online or not (Authors, 2022)

Another important general information examined in the current study referred to the frequency of buying household appliances per year. The respondents were categorized into four groups, including 1 to 5 times a year, 5 to 10 times a year, more than 10 a year, and Never. There were 214 respondents reporting their frequency of buying household appliances at 1 to 5 times per year, accounting for 57.84%. The frequency of other groups was 22.16%, 17.57%, and 2.43% respectively. Figure 10 shows results of frequency of buying household appliances.

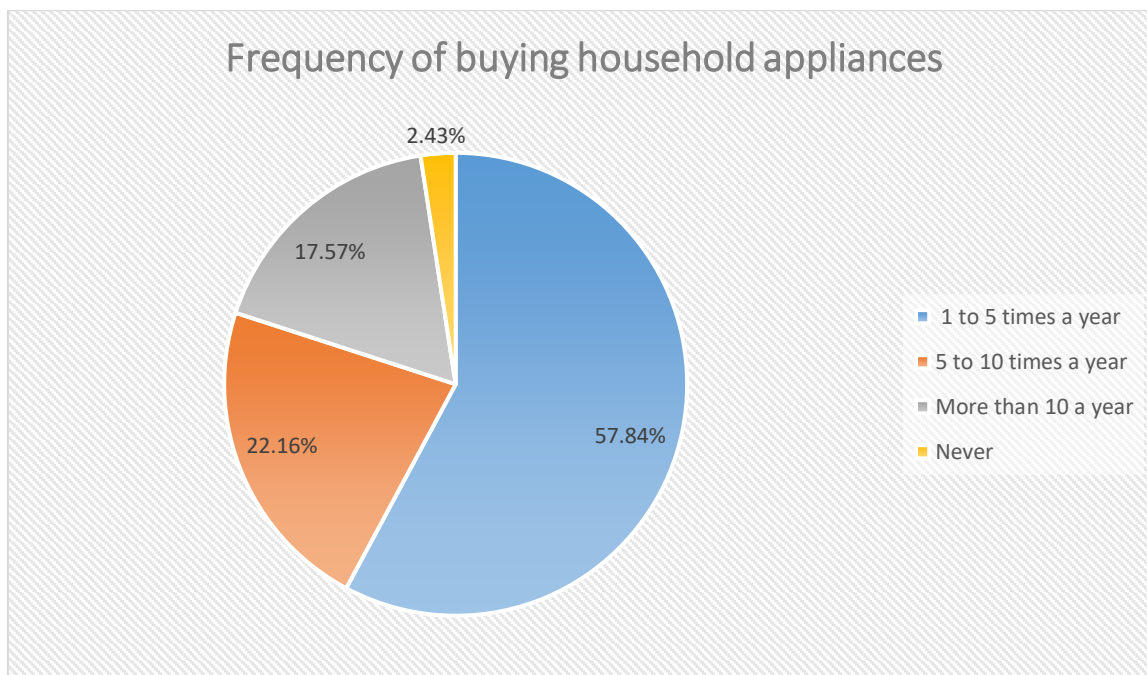


Figure 10. Frequency of buying household appliances (Authors, 2022)

The next question focused on the place that respondents buy household appliances. There was nearly three fourth of the respondents expressed that they buy household appliances through online and at store (71.35%). Only 28.65% respondents buy their needs through online channels. Figure 11 provides information about the place where respondents buy household appliances.

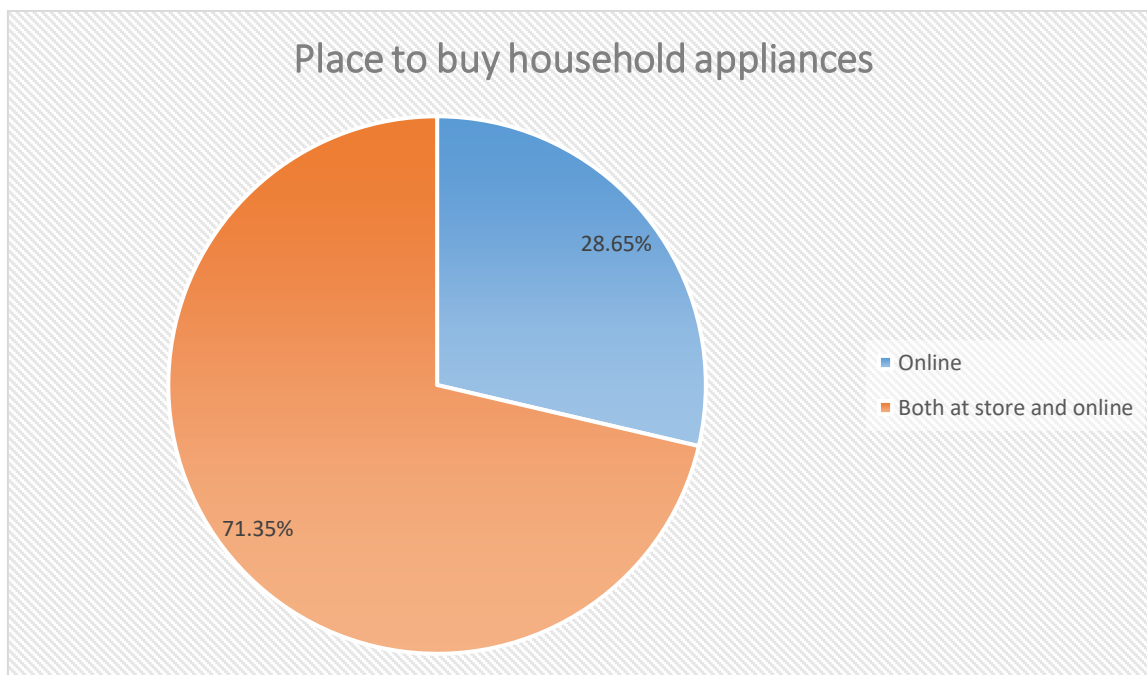


Figure 11. Place to buy household appliances (Authors, 2022)

Finally, the respondents disclosed the device they used for their online purchase (Figure 12). Mobile phone was the major device used by the respondents to buy products online with 67.84% of the respondents, followed by tablet (10.00%), laptop (16.22%), and computer (5.95%).

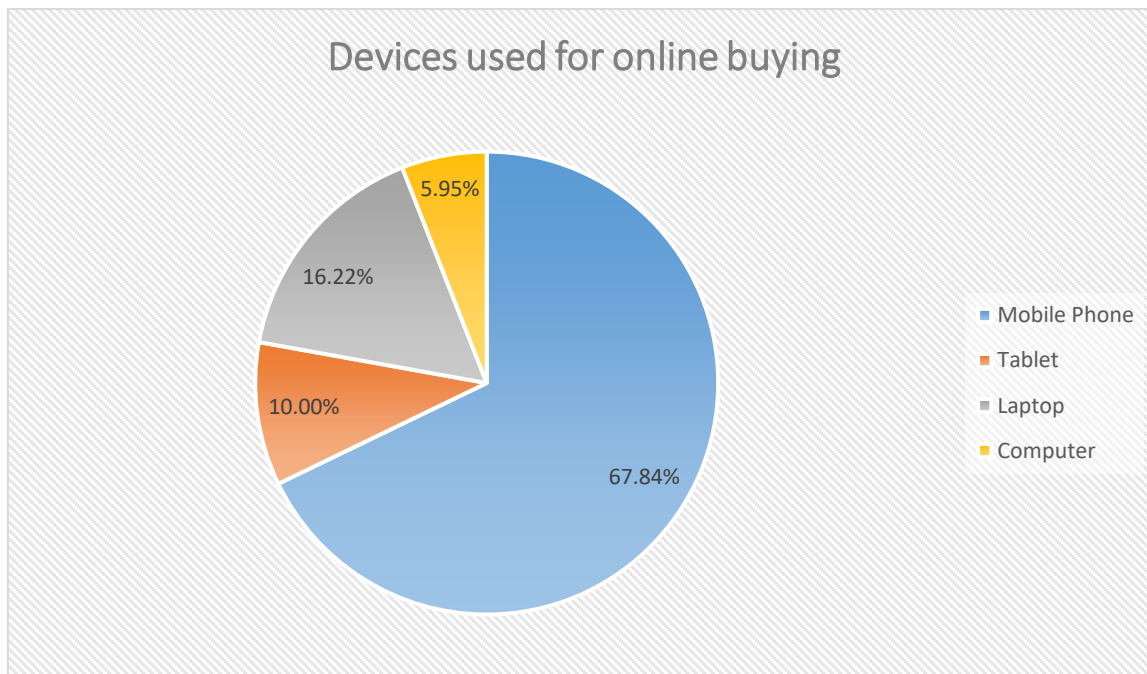


Figure 12. Devices used for online buying (Authors, 2022)

4.2 Analysis of the adapted hypotheses

4.2.1 Hypothesis 1: Influence of quality on online buying of household appliances

In order to measure the influence of service quality on the respondents' online buying decision of household appliances, the survey had adopted five aspects of quality, including high and guaranteed quality, design specifications, durability, product features, and good reputable serviceability. The respondents' answers are shown in Table 1.

Items	Product quality	Strong disagree	Disagree	Neutral	Agree	Strong agree
Item 1	I tend to buy household products which have high and guaranteed quality.	2,16 %	0,81 %	10,54 %	49,73 %	36,76 %

Item 2	I tend to buy household products if its design specifications correctly interpret what I want.	1,35 %	1,89 %	14,32 %	39,73 %	42,70 %
Item 3	I tend to buy a product having long durable time.	1,89 %	0,27 %	12,16 %	41,89 %	43,78 %
Item 4	Features are one of the most important factors for me to decide to buy one product quickly.	2,43 %	2,16 %	12,43 %	43,51 %	39,46 %
Item 5	I choose a product having good reputable serviceability.	1,62 %	0,54 %	10,81 %	40,54 %	46,49 %

Table 1. Influence of quality on online buying of household appliances (Authors, 2022)

Firstly, the respondents expressed their opinion towards how the high and guaranteed quality of household appliances influences their online purchase of this product type. Nearly half of respondents (49.73%) agreed with the statement concerning the impacts of household appliances' guaranteed quality. 36.76% of the respondents strongly agree with the role of household appliances' guaranteed quality in their buying decision. 10.54%, 0.81%, and 2.16% respectively selected "Neutral", "Disagree" and "Strongly disagree" as their answer to the impacts of household appliances' guaranteed quality on their online purchase. These results imply that the respondents agree with the significant influence of household appliances' guaranteed quality on their online purchase decision.

The second aspect of quality measured in the current study is product specifications. Positive results were reported with the statement concerning the respondents' perceptions towards how their intention to buy household appliances was influenced by product specification. 42.70% and 39.73% of the respondents expressed their strongly agreement and agreement towards the impacts of household appliances' design specifications on their purchase intention. Accordingly, 14.32% of respondents selected the "Neutral" response to express their opinion. Only a small number of respondents (1.89% and 1.35%) with the "Disagree" and "Strongly disagree" responses deny the impacts of the presentation of product specifications on their intention to buy household appliances online. Overall, the

small proportion of respondents disagreeing with the second statement indicated the influence of presentation of product specifications on the respondents' purchase decision of household appliances online.

As it was mentioned previously in the research, product durability is one of the most important concern of consumers regarding the product; hence, the research uses the third statement in the questionnaire to examine how durability of household appliances impacted the research participants' buying intention. Research results show that the majority of the respondents that household appliances with long durability period have a strong influence on their online buying decision (43.78% and 41.89% for "Strongly agree" and "Agree" responses). The high percentage of respondents agreeing with the role of household appliances' durability showed that durability as an attribute of product had the impact on the respondents' intention to buy household appliances online. The rest of respondents (12.16%, 0.27%, and 1.89%) selected "Neutral", "Disagree" and "Strongly disagree" for this statement.

The fourth aspect of product investigated in the current study was product features which was measured by the statement "Features are one of the most important factors for me to decide to buy one product quickly." Because features of household appliances serve the respondents' demands, there is no doubt that product features act as the major driver of buying intention. In the current study, 39.46% and 43.51% of the respondents who selecting "Strongly agree" and "Agree" responses admitted that their decision to buy household appliances online was strongly impacted by the product features. A relatively similar number of respondents (2.43% and 2.16%) strongly disagreed and agreed with the statement concerning the influence of product features. Finally, 12.43% of participants presented their neutral position to the statement. In sum, the high percentage of respondents selecting the responses of "Strongly agree" and "Agree" revealed that if household appliances' features can meet the consumers' demands they can influence the consumers' decision to buy products online.

Finally, the last statement in the product aspect "I choose a product having good reputable serviceability" received positive results. This statement received the highest percentage of "Strongly agreement" with 46.49% meanwhile 40.54% also expressed their agreement to the statement concerning how serviceability of household appliances influenced their purchase of household appliances online. The proportion of respondents selecting "Neutral", "Disagree" and "Strongly disagree" for this statement was 10.81%, 0.54%, and 1.62% respectively. These research results affirmed the impacts of serviceability of household appliances on the respondents' intention to buy.

In order to support the results concerning how the respondents' intention to buy household appliances online was influenced by different attributes of quality, descriptive statistics were employed as in the table 2:

	Number	Min	Max	Mean	SD
Item 1	370	1	5	4.18	0.82
Item 2	370	1	5	4.21	0.85
Item 3	370	1	5	4.25	0.82
Item 4	370	1	5	4.15	0.90
Item 5	370	1	5	4.30	0.81
Overall	5	4.15	4.30	4.22	0.06

Table 2. Descriptive statistics of quality (Authors, 2022)

As shown in Table 2, mean value of quality aspect was calculated at 4.22 ($M = 4.22$; $SD = 0.06$) which means that the respondents agreed that five aspects of quality, including high and guaranteed quality, design specifications, durability, product features, and serviceability influence their intention to buy household appliances online. Specifically, mean values ranged from 4.15 to 4.30, indicates the influence of respective quality attribute on the respondents' intention to buy. Among these quality attributes, household appliances' serviceability had the greatest effect ($M = 4.30$; $SD = 0.81$) while product features had the weakest effect ($M = 4.15$; $SD = 0.90$).

To sum up, the results from percentage analysis and descriptive statistics concerning the influence of five attributes of quality support the first hypothesis concerning the influence of quality on online buying of household appliances

4.2.2 Hypothesis 2: Influence of price sensitivity on online buying of household appliances

Adapting the 4Ps in investigating how the consumers' intention to buy household appliances online was influenced by different factors, price sensitivity was assumed as the second factor in the current study. Four items in the questionnaire which are covering deals of online purchase, price comparison, feeling of discount missing, and price reference with Five-points Likert scale were performed by the researchers to examine how price sensitivity impacted the consumers' online buying purchase of household appliances. Results are shown in Table 3.

Items	Price sensitivity	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Item 6	I like to get the best deals for household products when shop-ping online.	1.62%	1.35%	11.89%	50.54%	34.59%
Item 7	I compare prices within household products when shopping online.	1.62%	1.62%	10.54%	45.68%	40.54%
Item 8	I am quite upset when I miss a discount on household products when shopping online.	1.62%	5.41%	25.41%	41.08%	26.49%
Item 9	I have a reference price for household products when shopping online (E.g., A rice cooker should not cost more than VND 1 million...)	1.89%	4.59%	15.14%	47.03%	31.35%

Table 3. Influence of price sensitivity on online buying of household appliances (Authors, 2022)

The first statement in the category of price sensitivity “I like to get the best deals for household products when shop-ping online” was used to find out the extent to which the deal was important to their online purchase of household appliances. The significance of deals was affirmed by the high percentage of the respondents expressing the agreement (50.54%) and strong agreement (34.59%) to the statement. A neutral position was depicted by 11.89% of the respondents who gave no idea regarding the impacts of deals on the respondents’ decision to buy household appliances online. Only 1.35% and 1.62% of the respondents selected “Disagree” and “Strongly disagree” answers to this statement.

Accordingly, the authors also sought the respondents’ opinion of whether they compared prices of household products online to determine the influence of price sensitivity. Interestingly, more than two fifths of the respondents respectively (45.68% and 40.54%) showed their agreement and strong agreement to the statement “I compare prices within household products when shopping online”. Their respondents’ answers to this statement referred to the great importance of price when they bought household products online. Only 10.54% of the respondents chose “Neutral” for the importance of price comparison in the decision-making process of the respondents. Accordingly, only 1.62% of the participants separately disagreed and strongly disagree with the statement. To sum up, the responses towards this statement affirmed the respondents’ affirmation of the importance of price to their online purchase of household appliances.

In addition, when being asked about the feeling of missing a discount when buying household products through online channels, interesting results were reported. The percentage of the respondents who strongly agreed that they were upset when missing a discount on household products when shopping online was only 26.49%. It was much lower than that percentage of other items in the category of Price sensitivity. There were 41.08% of the respondents choosing the answer “Agree” to the statement. Responding to this statement, more than one fourth of the respondents held the neutral position towards the feeling of missing a discount of buying household appliances online (25.41%) while 5.41% and 1.62% denied their upset feeling of missing a discount by selecting “Disagree” and “Strongly disagree” answers. Overall, the responses indicated the less influential impact of discount compared to other aspects of price sensitivity on the respondents’ buying of household appliances online.

The last dimension of price sensitivity explored in the current study referred to price reference the respondents used for online purchase of household appliances. Specifically, the highest percentage of respondents was reported with the choice of “Agreement” (47.03%) followed by “Strongly agreement” (31.35%) and “Neutral”. Other choices received

a small amount of respondents included “Disagree” (4.49%) and “Strongly disagree” (1.89%). In other words, the current study found that the consumers considered price reference as an important factor of price sensitivity influencing their online purchases.

Overall, the percentage of the respondents selecting the responses of “Agreement” and “Strongly agreement” of four statements of price sensitivity aspects in the current study revealed the influence of price sensitivity on consumers’ intention to buy household products online. These results were also supported by descriptive data in the following table (Table 4):

	Number	Min	Max	Mean	SD
Item 6	370	1	5	4.15	0.80
Item 7	370	1	5	4.22	0.82
Item 8	370	1	5	3.85	0.93
Item 9	370	1	5	4.01	0.91
Overall	4	3.85	4.22	4.06	0.16

Table 4. Descriptive statistics of price sensitivity (Authors, 2022)

Table 4 presents descriptive statistics of price sensitivity calculated from the respondents’ answers to four statements. It was found that mean values of all statements ranged from 3.85 to 4.22, showing the respondents agreement to all four statements. This was affirmed by the overall mean reported at 4.06. Among four dimensions of price sensitivity, the importance of price comparison was reported with the highest level of agreement while the upset feeling of missing a discount was the item calculated with the lowest level of agreement. Data consisting of percentage and descriptive statistics affirmed the hypothesis concerning the influence of price sensitivity on the respondents’ intention to buy household appliances online.

4.2.3 Hypothesis 3: Influence of internet security on online buying of household appliances

The current study attempted to explore the consumers' online buying behavior; therefore, internet security was selected as one of the variables predicting the respondents' intention to buy household appliances. The investigation into the impacts of internet security on the consumers' online purchase of household products used five items in the questionnaire. It includes concern of loss of personal information, credit card security, concern of fraud of transactions, risk of personal information disclosure in E-commerce platforms, and lower security than buying offline. The respondents' answers to five items of internet security were presented in Table 5.

Items	Internet security	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Item 10	I worry about loss of personal information when purchasing household appliances online from websites of providers or E-commerce platforms.	1.35%	4.05%	23.78%	43.51%	27.30%
Item 11	I worry about loss of credit card security when purchasing household appliances online from websites of providers or E-commerce platforms	1.62%	3.51%	17.57%	45.95%	31.35%
Item 12	The concern of fraud of transactions influences my purchase of household appliances online from websites of	1.89%	4.32%	21.08%	47.57%	25.14%

	providers or E-commerce platforms.					
Item 13	The concern of the likelihood that anyone can find my personal information influence my purchase of household appliances online from websites of providers or E-commerce platforms.	1.62%	5.14%	21.08%	47.30%	24.86%
Item 14	I find purchasing household appliances online from websites of providers or E-commerce platforms is highly risker than that from physical stores.	2.43%	5.41%	19.19%	49.19%	23.78%

Table 5. Influence of internet security on online buying of household appliances (Authors, 2022)

As shown in Table 5, in comparison to two aspects quality and price sensitivity, the level of agreement to five items of internet security was lower. In more detail, when being asked about the concern of loss of personal information when purchasing household appliances online from websites of providers or E-commerce platforms, only 27.30% of the respondents selected "Strongly agree" to express their perception. Following the choice of "Strongly agree", 43.51 % selected "Agree" as their affirmation of how they were concerned about loss of personal information when buying online. Besides those who expressed their concerns of loss of personal information, 23.78% had no idea of this internet security concern. Even 4.05% and 1.35% admitted that they had no worry of losing personal information when buying household products through online channels. Overall, the majority of respondents' intention to buy household products online was still affected by the concern of loss of personal information.

The second item in the category of internet security used by the authors in the questionnaire referred to loss of credit card information when buying online. Credit card is one of the most payment methods when buying products online; therefore, the authors attempted to explore how the concerns of loss of credit card information influenced their purchase intention. Because of the importance of credit card security, 45.95% and 31.35% of the respondents separately showed their agreement and strongly agreement to the statement demonstrating their worry of losing their credit card information. It was relatively surprising that 17.57% of the respondents selected "Neutral" for their answers of this statement which means that they had no idea about credit card security related to buying online. More surprisingly, 3.51% and 1.62% of the respondents did not care about the risk of losing credit card information when performing online purchases of household appliances online.

Corresponding with the loss of credit card information, fraud of transactions was another prevalent concern of consumers when shopping online. The statement "The concern of fraud of transactions influences my purchase of household appliances online from websites of providers or E-commerce platforms" was used by the authors as one of aspects of internet security that influenced the intention to buy household appliances. This statement obtained 47.57% and 25.14% for "Agree" and "Strongly agree" while 21.08%, 4.32%, and 1.89% of the respondents chose "Neutral", "Disagree", and "Strongly disagree" as their responses. The total percentage of "Agree" and "Strongly agree" at 82.71% implied the respondents' affirmation of the influence of concern of fraud of transactions on their intention to buy household products online.

In addition, the respondents also showed their concerns of the possibility of disclosure of personal information through online channels; 24.86% and 47.30% of the respondents selected "Strongly agree" and "Agree" answers to reveal their concern of the likelihood of their personal information being disclosed in online platforms when buying online. Unlike the majority of respondents who expressed their great concern of disclosure of personal information when buying online, 21.08% of the respondents selected "Neutral" and even 1.62% and 5.14% expressed their strong disagreement and disagreement to this internet security risk, reflecting their no concern of this risk. In sum, except nearly one fifth of the respondents who did not care about the risk of personal information disclosure, the respondents agreed that their intention to buy household appliances online is influenced by the possibility of personal information disclosure.

Finally, the authors pointed the respondents' comparison between the security when buying online and offline. It was strongly agreed and agreed by 23.78% and 49.19% of the respondents that they found buying household appliances online was more risky than that

offline. The other three respondents “Neutral”, “Disagree” and “Strongly disagree” received 19.19%, 5.41%, and 2.43% of the respondents respectively. In general, the respondents still perceived online shopping as a riskier method than buying offline.

Similar to the two aspects of quality and price sensitivity, the authors also employed descriptive statistics to support the results concerning how the respondents’ intention to buy household appliances was impacted by internet security concerns. Table 6 showed descriptive statistics of five items of internet security.

	Number	Min	Max	Mean	SD
Item 10	370	1	5	3.91	0.89
Item 11	370	1	5	4.02	0.88
Item 12	370	1	5	3.90	0.89
Item 13	370	1	5	3.89	0.89
Item 14	370	1	5	3.86	0.92
Overall	5	3.86	4.02	3.92	0.06

Table 6. Descriptive statistics of internet security (Authors, 2022)

As revealed in Table 6, mean values of five items of Internet security was calculated from 3.86 to 4.02, affirming the respondents’ agreement to the five statements of the influence of Internet security on their intention to buy household products online. Average mean for the aspect of Internet security was 3.92 combining with specific results of the respondents’ answers to each statements supported the hypothesis 3 concerning how the consumers’ intention to buy household appliances online was influenced by Internet security.

4.2.4 Hypothesis 4: Influence of convenience on online buying of household appliances

The fourth variable examined in the current study as an influencing factor on the consumers' online purchase of household appliances was convenience with four statements. The researchers used time saving, methods of buying, easiness of price comparison, and information searching to measure the impacts of convenience. Frequencies for the respondents' choice for each statement were shown in the following table (Table7).

Items	Convenience	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Item 15	I buy household products online because it saves my time.	1.35%	2.16%	13.78%	51.89%	30.81%
Item 16	I buy household products online because I can buy them anywhere with a laptop or phone connected to the internet.	2.43%	1.62%	10.00%	54.05%	31.89%
Item 17	I find it easy to compare prices on household products when I shop online	1.35%	2.43%	11.62%	48.38%	36.22%
Item 18	I can find out many household products and their's information at one time.	1.08%	1.62%	11.89%	50.54%	34.86%

Table 7. Influence of convenience on online buying of household appliances (Authors, 2022)

It was interesting that the frequency of each choice for four items of convenience aspect was relatively similar. Specifically, 30.81%, 31.89%, 36.22%, and 34.86% of the respondents selected “Strongly agree” for four statements respectively. Accordingly, the results for “Agree” response were 51.89%, 54.05%, 48.38%, and 50.54%. There are more than 10% of the respondents who held the neutral position concerning the influence of time saving, methods of buying, easiness of price comparison, and offered by online purchase on their intention to buy household appliances online (13.78%, 10.00%, 11.62%, and 11.89%). In particular, only a small number of respondents denied the impacts of different dimensions of convenience aspect on their online purchase of household products. While 2.16%, 1.62%, 2.43%, and 1.62% of the respondents selected “Disagree” as the response to four statements of convenience, “Strongly disagree” was chosen by 1.35%, 2.43%, 1.35%, and 1.08% of the respondents. In sum, the high percentages of “Agree” and “Strongly agree” indicated that the respondents’ online purchase of household product was determined by different dimensions of convenience.

Furthermore, to justify the hypothesis 4 concerning the influence of convenience on the consumers’ intention to buy household products online descriptive statistics were also employed by the researchers to supplement the above results. Table 8 shows descriptive statistics of convenience aspect.

	Number	Min	Max	Mean	SD
Item 15	370	1	5	4.09	0.81
Item 16	370	1	5	4.11	0.83
Item 17	370	1	5	4.16	0.82
Item 18	370	1	5	4.16	0.78
Overall	4	4.09	4.16	4.13	0.04

Table 8. Descriptive statistics of convenience (Authors, 2022)

It was shown in the above table, mean of four questionnaire items presenting the impacts of Convenience on their online purchase of household products was calculated from 4.09 to 4.16, implying that the respondents agreed that four dimensions of convenience covering time saving, methods of buying, easiness of price comparison, and information searching influenced their intention to buy. Conclusively, the overall mean of 4.13 for convenience aspect and detailed responses of the respondents to four convenience statements supported the fourth hypothesis concerning the influence of convenience on the consumers' intention to buy household appliances online.

4.2.5 Hypothesis 5: Influence of social media on online buying of household appliances

The final determinant of the consumers' online buying of household appliances examined in the current study was social media which was measured by five items. Five dimensions of social media used by the researchers in the current study included the influencers' reviews, frequencies of appearance of products on social media, hot trend products on social media, high-quality reviews on shopping sites, and attractive ads on social media. Results of the consumers' responses were presented in the following table.

Items	Social Media	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Item 19	I tend to buy household products after seeing the reviews of influencers.	1.08%	4.05%	22.70%	48.92%	23.24%
Item 20	I tend to buy household products that appear many times on social media.	5.14%	11.62%	24.05%	37.84%	21.35%
Item 21	I tend to buy household products when they are hot trend products and	6.49%	12.97%	21.08%	37.57%	21.89%

	have been used by many people.					
Item 22	I tend to buy household products when it has high-quality reviews on shopping sites.	2.70%	2.43%	15.41%	50.27%	29.19%
Item 23	I tend to buy household products when I see their attractive ads on social media	5.14%	11.89%	24.86%	36.76%	21.35%

Table 9. Influence of social media on online buying of household appliances (Authors, 2022)

As revealed in Figure 9, when responding to the statement “I tend to buy household products after seeing the reviews of influencers” the participants affirmed their agreement of the impacts of the influencers’ reviews on their online purchase of household by selecting “Agree” (48.92%) and “Strongly agree” (23.24%) responses. Although the majority of respondents were affected by the influencers’ reviews, 22.70% had no idea of the impact of the interviews asserted by the influencers in social media platforms. The rest of respondents (1.08% and 4.05%) strongly disagreed and disagreed with the statement concerning the impacts of the influencers’ reviews.

In terms of the other four items of social media, the similar results were reported with the influence of frequencies of appearance of products on social media, hot trend products on social media, and attractive ads on social media. The percentages of respondents selecting “Strongly agree” answer was 21.35%, 21.89%, and 21.35% for these three dimensions while those for the “Agree” response were 37.84%, 37.57%, and 36.76%. Accordingly, more than 20% of respondents expressed their neutral perception towards the statements “I tend to buy household products that appear many times on social media.”, “I tend to buy household products when they are hot trend products and have been used by many people.”, and “I tend to buy household products when I see their attractive ads on social media”, namely 24.05%, 21.08%, and 24.86%. Regarding the responses to “Disagree” and “Strongly disagree”, 11.62%, 12.97%, and 11.89% of the respondents and 5.14%, 6.49%, and 5.14% of the respondents chose these two responses.

In terms of the statement “I tend to buy household products when it has high-quality reviews on shopping sites”, more than a half of the respondents (50.27%) agreed with this statement while the “Strongly agreement” response obtained 29.19% of the respondents. Accordingly, 15.41% of the respondents showed their neutral perception of the influence of high-quality reviews on shopping sites on their intention to buy household appliances online. Finally, the influence of this dimension was rejected by 2.70% and 2.43% of the respondents who selected “Strongly disagree” and “Disagree” responses.

To sum up, the respondents’ answers to five items concerning the influence of social media on online buying of household appliances indicated that the consumers’ intention to purchase household products online was determined by social media. Descriptive statistics of five items also support this finding. Table 10 presents descriptive results.

	Number	Min	Max	Mean	SD
Items 19	370	1	5	3.89	0.84
Items 20	370	1	5	3.59	1.10
Items 21	370	1	5	3.55	1.16
Items 22	370	1	5	4.01	0.89
Items 23	370	1	5	3.57	1.10
Overall	5	3.55	4.01	3.72	0.21

Table 10. Descriptive statistics of social media (Authors, 2022)

It was shown in Table 10 the mean values of four items ranged from 3.55 to 4.01, reflecting the respondents’ neutral position and agreement attitude towards the influence of social media. However, the overall mean of this aspect was calculated at 3.72; in other words, the influence of social media on consumers’ intention to buy household appliances was affirmed. Both data of percentage and descriptive statistics supported the fifth hypothesis regarding the influence of social media on online buying of household appliances.

To sum up, percentages and descriptive statistics obtained from the respondents' answers to the questionnaire affirmed all five hypotheses indicating the influence of quality, price sensitivity, internet security, convenience, and social media on the consumers' intention to buy household appliances online. Among five factors, quality (M = 4.22; SD = 0.06) and convenience (M = 4.13; SD = 0.04) are the most influential factors, followed by price sensitivity (M = 4.06; SD = 0.16), internet security (M = 3.92; SD = 0.06), and social media (M = 3.72; SD = 0.21).

5 Discussions

After the data analysis, it is possible to answer both the main research question as well as the sub-questions associated with it. The data analysis performed on the information from the survey allow to fully understand the extent of the influence of quality, price sensitivity, internet security, convenience, and social media on the consumers' decision to buy household appliances online. Previous studies and real situations in the Vietnam market were used to discuss the current research findings.

Sub-question 1: How does quality influence online buying decisions of household appliances of consumers?

In terms of the influence of quality on online buying decisions of household appliances of consumers, as it is seen in the results of the survey performed for this study, the majority of consumers concern about the product quality and as such pay close attention to the product quality when searching for it. It is especially important when it comes to the products that are intended to be used for a long period of time such as household appliances which this research focused on. However, due to the nature of online purchasing, it is impossible to determine a quality of an item without an evaluation tool. For this purpose, the reviews play a role of quality check for a consumer. Thus, if a consumer sees two identical products, however, one of them possesses better review, he or she would be inclined toward the product with better review score even though the price of the product with better reviews is higher. It is also important to take into account the services that are supporting the purchase such as product returns, repair services and a contact information. If a company has a good number of services that would assist a consumer, then it is possible to return some amount of trust and keep customer loyalty if the product would fail. Overall, the quality has a direct influence over customer online buying decisions and has to be considered by online retailers. This finding is supported by previous studies by Hanslim et al. (2020, 131) who affirmed the relationship between consumers' buying interest and intention and their perception of quality and by Anwar and Andrean (2021, 79) who found is a statistical, positive correlation between product quality and consumer buying decisions.

Sub-question 2: How does price sensitivity influence online buying decisions of household appliances of consumers?

Regarding how price sensitivity influenced online buying decisions of household appliances of consumers, according to the results of the survey, price is the third most important factor for the consumers. The price of a product often is influenced by many factors especially when it comes to the online retail. The customer would usually consider both the price of a

product as well as the price of services associated with the product. Through the extensive usage of discounts and providing cheaper delivery as well as insuring the product for a limited amount of time. There is a limited number of options when it comes to price regulations and the online retailers have to monitor their competition in order to keep their prices updated and competitive as well as looking for other opportunities to change consumer decision making process. The influence of price sensitivity was also identified in previous studies in the landscape of consumer behaviors. Previously, Kwarteng et al. (2020, 219) found the importance of prices by stating that the consumers tended to search and compare prices before their decision to buy products. Furthermore, a recent survey by McKinsey (2020) affirms also indicated the increasing price sensitivity of consumers. These findings supported the current study's concerning the influence of price sensitivity on consumers' decision to buy household appliances online.

Sub-question 3: How does internet security influence online buying decisions of the household appliances of customers?

Accordingly, the current study also indicated the influence of internet security on online buying decisions of the household appliances of customers. Internet security has become an ever-increasing issue in the modern world. Because of that the consumers started to take it into account when it comes to online which is further proved by the survey done for this research. The internet security in itself consists of multiple layers: starting from the safety of the payment details such as credit card or bank information to the private data concerning the individual making the purchase. Such data must be protected by the online retailers through the usage of security protocols. Without taking any measures to protect sensitive information, that data could be used by the malicious parties in order for different types of purposes which would harm both the consumer whose data was leaked as well as the company image. Taking all that into account, the internet security is extremely important and has a great impact on the buying decision of customers. The current study also affirmed the influence of internet security. This finding is aligned with findings drawn by Gurung and Raja (2016, 2) and Aseri (2021). While Gurung and Raja (2016, 2) affirmed that different elements of Internet security can acted as the motivation or barrier to a consumer purchase behavior, Aseri (2021) mentioned phishing, fake online stores, data theft, adware, and theft of identity as the threats of security when buying online and consumers' lack of understanding of these threats can affect consumers' decision to buy online.

Sub-question 4: How does convenience influence online buying decisions of the household appliances of customers?

Another important finding of the current study was the influence of convenience on consumer's decision to buy household appliances online. This factor was perceived as the second greatest influential factor in the current study. Previous studies also generated similar findings. The survey findings by Smart Insights (2020) revealed that more than a half of customers admitted the influence of convenience of the purchasing process on their online purchase intention. Moreover, the study by Jiang et al. (2013, 195, 206-208) found that convenience of buying online covering information searching and flexibility and availability of different payment methods can generate the impacts on consumers' intention. These above studies supported the current study's findings. It is evident that if the suppliers of household appliances can offer the consumers a high level of shopping convenience through simple buying process online, flexible and various payment methods, availability of information for searching and comparison, etc. the consumers will be encouraged to buy those products online.

Sub-question 5: How does social media influence online buying decisions of the household appliances of customers?

The current study also identified the impacts of social media on consumers' intention to buy household appliances online, but as the least influential factor. This finding seems to be different from previous studies. The survey results by Barysevich (2020) and Nosto (2021) affirmed the significant impacts of social media on consumers' intention to buy. Helversen et al. (2018, 1) also affirmed the impacts of both positive and negative reviews on consumers' intention to buy. In the contemporary marketing context, there is no doubt that social media platforms have become one of the most effective tools for the marketers. Most of the brands utilized their own social media platforms to deliver content marketing to impacts their customers. In addition, the influential marketing through KOLs is also leveraged by the marketers to generate the impacts on consumers. If the marketers can effectively use social media tools in their marketing plan, they can draw positive impacts on their online consumers' behaviors.

Main question: How do the major drivers determine online buying decisions of household appliances of consumers in Ho Chi Minh City, Vietnam?

The answer on the main research question of this study is that the major drivers behind the purchasing decisions of consumers have a direct influence on their purchasing behavior. Product quality and price were determined to be one of the most important factors for the consumers with the internet security being the new factor that is quickly rising in importance.

Household appliances as a product is special in being purchased by a variety of age groups as well as people with a completely different social background. The online retailers had

given a rise because of their ability to deliver goods and allow to browse their inventory to be browsed online without consumers having to leave the house. The issue that online retailers face is their inability to persuade the consumer to purchase a product due to impersonal nature of the online purchasing. Thus, the value of understanding the drivers of the consumer behavior is revealed.

The factor of price for example shows that the customers react more positively on a product that has a lower price in one shop than another and for an online retailer it is easier to simply adjust the price or make a discount to make a product more appealing. The same practice cannot be applied to the product quality. The consumer cannot view or evaluate a product through the screen and as such this driver is harder to enforce. This is where the online review system usually comes into place. It allows for an easy solution for quality check for a concerned consumer.

The issue of online security, however, is a new development that is just rising in its importance. The customers care about the security of their data when they are shopping online and as such if their data is compromised, they would lose trust in the online retailer. Security protocols and general concern for the user's information can go a long way in ensuring that the information won't be leaked by the third parties for the malicious purposes.

The social media influencers are a new generation of marketing and follows the idea of social media personalities to advertise specific products for their followers. While it does not affect older age groups to the same degree as teenagers and young adults, it is still a new development that is rising in popularity. Online retailers can benefit from investment in the social media influencers by choosing to advertise products that are appealing to the younger demographic since they are most affected by this type of marketing.

Convenience is the last driver that is connected to the idea of how comfortable it is to buy goods at the online retail shop. The easier it is to navigate the online shop, the easier it would be for the consumer to find the product he or she is interested in. It also applies for the additional services such as delivery that can add additional value to the core product. A customer would be more inclined to buy similar product from an online shop if it offers additional services.

Overall, it is impossible for an online retailer to utilize all of the aforementioned drivers to their full potential but focusing on a number of them would be beneficial for the purposes of influencing customers buying decision.

6 Conclusion

6.1 A summary of key findings

Online shopping has become one of the most prevalent trends in the business landscape in recent year. The consumers can buy everything they want; household appliances are also goods that are traded online. Online consumer behaviors are different from traditional consumer behaviors; therefore, in recent years the scholars have driven their attention towards the investigation of online consumer behaviors. Accordingly, the current study attempted to explore the factors determining consumer's online buying decisions of household appliances of consumers in Ho Chi Minh City in Vietnam and their degree of influence. In order to obtain research objectives, five hypotheses were proposed to test how five factors, including quality, price sensitivity, internet security, convenience, and social media influenced the consumers' decision to buy household appliances online

To summarize, this research made use of questionnaire for the purpose of data collection. With over 380 respondents, it was possible to identify the importance of different aspects of online purchasing to the consumers. The participants were primarily residents of Ho Chi Minh City with different social status, age group and economic situation which allowed for the broader outlook. The identified aspects were the security concerns, price, quality of a product as well as the outside influencing factors such as social media influencers.

The results had proved that all of the identified aspects have a strong influence over the online purchasing decision of customers of household appliances.

6.2 Implications

The current study's findings indicated the influence of quality, price sensitivity, internet security, convenience, and social media on the consumers' intention to buy household appliances online. Therefore, the marketers of household appliance manufacturers and distributors can utilize research findings for their marketing strategy development and implementation.

Firstly, quality and convenience were perceived as the most influential factors. Therefore, the marketers should focus on promoting these aspects of household products to drive the consumers' purchase intention. In terms of quality, when buying online the consumers cannot directly touch and experience household products to check the quality, the manufacturers and distributors should provide design the consumer descriptions of product features, specifications, instructions of features, guarantees for products and good services.

In particular, the marketers should stress on after-sales services involving return and refund and guarantee for online customers to increase the consumers' confidence in buying online.

Regarding the aspect of convenience as the second greatest driver of consumers' intention to buy household products online, it was evident that online purchase was perceived more convenient than offline purchase. Therefore, it was suggested that the marketers of household products should enhance the convenience level for online consumers. Specifically, the marketers should design the website and other online channels that enable the consumers to search information of products and to compare prices between suppliers and alternatives with the least efforts and time. The convenience facilitated by the website and online channels will encourage the respondents to buy household appliances online. Other factors such as delivery and methods of purchase and payment should be integrated in the marketing strategies of household brands as well to attract online customers.

Furthermore, similar to traditional shopping of household appliances Price sensitivity is another important factor, the marketers should integrate different promotional programs for online customers to motivate them to buy household appliances through online channels. Seasonal discounts or special deals should be offered to only online customers to generate the impacts on consumers' decision to buy household appliances.

In addition, the current study's results also affirmed that the marketers could generate the impacts on consumers' purchase decision of household appliances online. Consumers stated their concerns of loss of personal information, credit card security, concern of fraud of transactions, risk of personal information disclosure in E-commerce platforms, and lower security than buying offline can drive the intention to buy household appliances online; hence, it is strongly recommended that the suppliers should develop a systematic, safe online buying process which ensured the security for online customers. The higher level of security of online shopping is, the more frequently the consumers will buy online.

Last but not the least, brands of household appliances should utilize different social media platforms to promote their products to the consumers. Because of the increasing impacts of influential marketing to consumer behaviors, brands should cooperate with the stars and KOLs to promote their products in social media platforms. In addition, reviews and testimonials should also be integrated into content marketing of household appliances to generate the impacts on consumers' decision.

6.3 Suggestions for further studies

As stated above, the use of single quantitative research method and small sample size were the major limitations in the current study; therefore, it is suggested that in further studies the

researchers should solve these limitations. Further studies should employ the mixed methods, combining both quantitative and qualitative methods to obtain more comprehensive and triangulated findings. Interviews should be performed as a research instrument to collect qualitative data to obtain in-depth information from the respondents concerning how the consumers' purchase intention of household appliances online was influenced by different factors. Furthermore, in further studies the researchers should employ a larger sample size so that research findings can be more reliable and generalized to a larger population.

Moreover, despite the increasing role of social media in marketing in recent years the current study identified social media as the least influential factor on consumer's online purchase intention. Therefore, it is suggested that the researchers should focus investigate on social media as the influencing factor separately to draw more conclusive findings concerning how social media may influence the consumers' decision to buy household appliances online.

References

Ajzen, I. 1991. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*. 50. pp. 179–211. Retrieved on 30 April 2022. Available at [10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).

Ali, M.R., Shafiq, M., & Andejany, M. 2021. Determinants of Consumers' Intentions towards the Purchase of Energy Efficient Appliances in Pakistan: An Extended Model of the Theory of Planned Behavior. *Sustainability*, Vol. 13, pp. 565. Retrieved on 20 April 2022. Available at <https://doi.org/10.3390/su13020565>

Anwar, M. & Andrean, D. 2021. The Effect of Perceived Quality, Brand Image, and Price Perception on Purchase Decision. *Advances in Engineering Research*, Vol. 201. Proceedings of the 4th International Conference on Sustainable Innovation 2020-Accounting and Management (ICoSIAMS 2020). Retrieved on 20 April 2022. Available at https://www.researchgate.net/publication/348935504_The_Effect_of_Perceived_Quality_Brand_Image_and_Price_Perception_on_Purchase_Decision

Aseri, A. 2021. Security Issues for Online Shoppers. *International Journal of Scientific & Technology Research*, Vol. 10, no. 3. Retrieved on 25 April 2022. Available at <https://www.ijstr.org/final-print/mar2021/Security-Issues-For-Online-Shoppers.pdf>

Barysevich, A. 2020. *How social media influence 71% consumer buying decisions*. Search Engine Watch. Retrieved on 30 April 2022. Available at <https://www.searchenginewatch.com/2020/11/20/how-social-media-influence-71-consumer-buying-decisions/>

Bhattacharjee, J. & Chetty, P. 2019. *An overview of online consumer behaviour theory and model*. Project Guru. Retrieved on 20 April 2022. Available at <https://www.projectguru.in/online-consumer-behaviour-theory-model/>

Bourn, D. 2018. *The Importance of Internet Security*. Retrieved on 20 April 2022. Available at <https://www.bourntech.com/the-importance-of-internet-security/>

Carah, N., and Shaul, M. 2016. Brands and Instagram: Point, tap, swipe, glance. *Mobile Media & Communication*, pp. 1-17.

Chivandi, A., Samuel, M. O. & Muchie, M. 2019. *Social Media, Consumer Behavior, and Service Marketing*. Retrieved on 25 April 2022. Available at <https://www.intechopen.com/chapters/66643>

Collins Dictionary n.d. *Household appliances*. Retrieved on 25 April 2022. Available at <https://www.collinsdictionary.com/dictionary/english/household-appliances>

Creswell, J. W., & Creswell, J. D. 2018. *Research design: Qualitative, quantitative, and mixed methods approach*. London: Sage publications.

Croes, E. & Bartelsa, J. 2021. Young adults' motivations for following social influencers and their relationship to identification and buying behavior. *Computers in Human Behavior*, Vol. 124, pp. 1-10. Retrieved on 30 April 2022. Available at <https://doi.org/10.1016/j.chb.2021.106910>

Dang, T. 2014. *The success of applying marketing mix 4Ps in Vietnamese dairy industry Vinamilk – a typical case*. Arcada: Degree Thesis International Business. Retrieved on 10 May 2022. Available at https://www.theseus.fi/bitstream/handle/10024/85926/Dang_Truc.pdf?sequence=1

Dharmajaya, M. A., Arijanto, A., Suroso, A., & Setyanto, R. 2020. How The Impact of Website Quality, Security and Brand Image on Purchase Decisions in The Online Buying and Selling Application. *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 22, no. 9. Retrieved on 10 may 2022. Available at 10.9790/487X-2209063643

Duarte, P., Costa e Silva, S., & Ferreira, M. B. 2018. How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, Vol. 44, pp. 161–169.

E-Marketer 2021. *Global Ecommerce 2021 – eMarketer*. Retrieved on 20 April 2022. Available at <https://www.emarketer.com/content/global-ecommerce-forecast-2021>

Elisabeth, B. 2021. The Theory of Planned Behavior. Retrieved on 2 June 2022. Available at <https://www.simplypsychology.org/theory-of-planned-behavior.html>

Fortes, N. & Rita, P. 2016. Privacy concerns and online purchasing behaviour: Towards an integrated model. *European Research on Management and Business Economics*, Vol. 22, no. 3, pp. 167-176. Retrieved on 30 April 2022. Available at <https://doi.org/10.1016/j.iedeen.2016.04.002>

Gautam, V. 2018. Shopping Convenience: A Case of Online Retailing. *Review of Professional Management*, Vol. 16, no. 1, pp. 1-16. Retrieved on 10 May 2022. Available at No.10.20968/rpm/2018/v16/i1/129207

Gilaninia, S., Taleghani, M. & Azizi3, N. 2013, Marketing mix and consumer behavior. *Kuwait Chapter of Arabian Journal of Business and Management Review*, Vol. 2, no.12, pp. 53-59.

Gill, A. A., Ansari, R. H., & Tufail, M.W. 2021. Going Green: Theory of Reasoned Action Application to Examine the Consumer Intention Through Mediating Role of Green Technology Beliefs. *Review of Applied Management and Social Sciences*, Vol. 4, no. 1, pp.

63-77. Retrieved on 20 May 2022. Available at <http://ramss.spcrd.org/index.php/ramss/article/view/99/106>

Goldsmith, R. E., Flynn, L. R., & Kim, K. D. 2010. Status Consumption and Price Sensitivity. *Journal of Marketing Theory and Practice*, Vol. 18, no. 4, pp. 323–338.

Gu, S.; Slusarczyk, B.; Hajizada, S.; Kovalyova, I.; & Sakhbieva, A. 2021. Impact of the COVID-19 Pandemic on Online Consumer Purchasing Behavior. *J. Theor. Appl. Electron. Commer. Res.*, Vol. 16, pp. 2263–2281. Retrieved on 22 May 2022. Available at <https://doi.org/10.3390/jtaer16060125>

Gurung, A. & Raja, M. K. 2016. Online privacy and security concerns of consumers. *Information and Computer Security*, Vol. 24, no. 4, pp. 348-371. Retrieved on 20 May 2022. Available at 10.1108/ICS-05-2015-0020

Ha, N. T., Nguyen, T. L. H., Pham, T. V., & Nguyen, T. H. T. 2021. Factors influencing online shopping intention: An empirical study in Vietnam. *Journal of Asian Finance, Economics and Business*, Vol. 8, no. 3, pp. 1257-1266.

Hanslim, F., Jaya, H. P., & Prasetyawati, Y. R. 2020. The Influence of Perceived Quality on Product Purchase Intention Through Event. *Communicare: Journal of Communication Studies*, Vol. 7, no. 2, pp. 121-134. Retrieved on 22 May 2022. Available at <https://doi.org/10.37535/101007220202>

Heinonen, N. 2021. *The impact of social media influencer marketing on purchasing decisions of Millennials in Finland*. LAB University of Applied Sciences: Bachelor of Business Administration, Degree programme in International Business. Retrieved on 30 April 2022. Available at <https://www.theseus.fi/bitstream/handle/10024/512809/Niina%20Heinonen%20Thesis.pdf?sequence=2&isAllowed=y>

Helversen, B., Abramczuk, K., Kopeć, W., & Nielek, R. 2018. Influence of consumer reviews on online purchasing decisions in older and younger adults. *Decision Support Systems*, Vol. 113, pp. 1-10. Retrieved on 25 April 2022. Available at <https://doi.org/10.1016/j.dss.2018.05.006>

Hsu, M. H., Chuang, L. W., & Hsu, C. S. 2014. Understanding online shopping intention: The roles of four types of trust and their antecedents. *Internet Research*, Vol. 24, no. 3, pp. 332-352.

Imelia, R. & Ruswanti, E. 2017. Factors Affecting Purchase Intention of Electronic House wares in Indonesia. *International Journal of Business and Management Invention*, Vol. 6, no. 2, pp. 37-44.

Jenyo, G. K. & Soyoye, K. M. 2015. Online marketing and consumer purchase behaviour: a study of Nigerian firms. *British Journal of Marketing Studies*, Vol.3, no.7, pp. 1-14. Retrieved on 20 April 2022. Available at <https://www.eajournals.org/wp-content/uploads/Online-Marketing-and-Consumer-Purchase-Behaviour.pdf>

Jiang, L., Yang, Z., & Jun, M. 2013. Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*, Vol. 24, no. 2, pp. 191-214.

Keenan, M. 2022. Global Ecommerce Explained: Stats and Trends to Watch in 2022. Share via LinkedIn. *Industry Insights and Trends*, Vol. 16, no. 2.

Kotler, P., Amstrong, G., Saunders, J., & Wong, V. 1999. *Principles of Marketing*. London, Prentice Hall.

Kumar, N. & Mohan, D. 2021. Sustainable apparel purchase intention: Collectivist cultural orientation and price sensitivity in extended TPB model. *Journal of Revenue and Pricing Management*, Vol. 20, no. 2, pp. 149-161.

Kwarteng, M.A., Jibril, A.B., Botha, E., Osakwe, C.N. 2020. The Influence of Price Comparison Websites on Online Switching Behavior: A Consumer Empowerment Perspective. *Responsible Design, Implementation and Use of Information and Communication Technology*. I3E 2020. Lecture Notes in Computer Science, Vol. 12066, pp. 216-227. Retrieved on 25 April 2022. Available at https://doi.org/10.1007/978-3-030-44999-5_18

Laskowski, P. P. 2017. Internet security –technology and social awareness of the dangers. *Studies in Logic, Grammar and Rhetoric*, Vol. 50, no. 63. Retrieved on 22 May 2022. Available at [10.1515/slgr-2017-0027](https://doi.org/10.1515/slgr-2017-0027)

Lee, E. J. 2015. Price Sensitivity, Repurchasing and Switching Intention of Internet Fashion Consumers. *Journal of the Korean Society of Clothing and Textiles*, Vol. 39, no. 1, pp. 106-120. Retrieved on 22 April 2022. Available at <http://dx.doi.org/10.5850/JKSCT.2015.39.1.106>

Liu, H. T. & and Tsaur, L. C. 2020. The Theory of Reasoned Action Applied to Green Smartphones: Moderating Effect of Government Subsidies. *Sustainability*, 12, 5979. Retrieved on 30 April 2022. Available at <https://doi.org/10.3390/su12155979>

Luanle, D. 2017. What are the elements that influence consumers on purchasing a non-reviewed product on the Internet? JAMK University of Applied Sciences: *Bachelor of International Business, Degree programme in International Business*. Retrieved on 2 June 2022. Available at

<https://www.theseus.fi/bitstream/handle/10024/132593/Dai%20Luanle%20Thesis.pdf?sequence=1&isAllowed=y>

Luenendonk, M. 2022. *Understanding the Marketing Mix Concept – 4Ps*. Cleverism. Retrieved on 22 April 2022. Available at <https://www.cleverism.com/understanding-marketing-mix-concept-4ps/>

Luong, H. T., Tran, M. D., Le, D. C., & Tran, N. T. 2021. Determinants influencing green consumption behavior of household appliances in Vietnam. *International Journal of Innovation, Creativity and Change*, Vol. 15, no. 5. Retrieved on 20 April 2022. Available at https://www.ijicc.net/images/Vol_15/Iss_5/15556_Trان_2021_E_R.pdf

Manzoor, U., Baig, S. A., Hashim, M., & Sami, A. 2020. Impact of Social Media Marketing on Consumer's Purchase Intentions: The Mediating role of Customer Trust. *International Journal of Entrepreneurial Research*, Vol. 3, no. 2, pp. 41-48. Retrieved on 22 April 2022. Available at 10.31580/ijer.v3i2.1386

Martin, L. 2019. Theory of Planned Behavior: Definition, Explained, Examples. Retrieved on 2 June 2022. Available at <https://www.cleverism.com/theory-of-planned-behavior/>

McKinsey 2020. *Pricing in a pandemic: Navigating the COVID-19 crisis*. Retrieved on 10 May 2022. Available at <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/pricing-in-a-pandemic-navigating-the-covid-19-crisis>

NDO 2021. *Vietnam's e-commerce to expand 53% in 2021*. Retrieved on 30 April 2022. Available at <https://en.nhandan.vn/business/item/10748902-vietnam%E2%80%99s-e-commerce-to-expand-53-in-2021.html>

Nguyen, D. H., de Leeuw, S. Dullaert, W. E. H. 2018. Consumer Behaviour and Order Fulfilment in Online Retailing: A Systematic Review. *International Journal of Management Reviews*, Vol. 20, no.2, pp. 255-276. Retrieved on 25 April 2022. Available at <https://doi.org/10.1111/ijmr.12129>

Nosto 2021. *14 Stats That Prove Social Content Influences Consumer Buying Behavior*. Retrieved on 30 April 2022. Available at <https://www.nosto.com/blog/how-does-social-media-influence-customer-behavior/#:~:text=81%25%20of%20consumers'%20purchasing%20decisions,based%20on%20social%20media%20referrals.>

Nurdianasari, R. & Indriani, F. 2021. Study of perceived online convenience and customer satisfaction toward behavioral intention in online shopping. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, Vol. 5, no. 2, pp. 399-409. Retrieved on 10 May 2022. Available at <https://jurnal.stie-aas.ac.id/index.php/IJEBAR>

- Ogiemwonyi, O. 2022. Factors influencing generation Y green behaviour on green products in Nigeria: An application of theory of planned behaviour. *Environmental and Sustainability Indicators*, Vol. 13. Retrieved on 20 May 2022. Available at <https://doi.org/10.1016/j.indic.2021.100164>
- Paul, J., Modi, A., & Patel, J. 2016. Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, Vol. 12, no. 5, pp. 123-134.
- Phaneuf, A. 2022. Ecommerce Statistics: Industry benchmarks & growth. *Insider Intelligence*. Retrieved on 22 May 2022. Available at <https://www.insiderintelligence.com/insights/ecommerce-industry-statistics/>
- Pütter, M. 2017. The impact of social media on consumer buying intention. *Marketing*, vol. 3, no. 1, pp. 7-13. Retrieved on 25 May 2022. Available at 10.18775/jibrm.1849-8558.2015.31.3001
- Ray, N. 2021. *The 5 P's of Marketing*. Retrieved on 22 May 2022. Available at <https://salespanel.io/blog/marketing/the-5-ps-of-marketing/>
- Riquelme, I. P., & Román, S. 2014. Is the influence of privacy and security on online trust the same for all type of consumers? *Electronic Markets*, Vol. 24, no. 2, pp. 135-149.
- Saha, S. K., Duarte, P., Silva, S. C., & Zhuang, G. J. 2021. Supporting sustainability by promoting online purchase through enhancement of online convenience. *Environment, Development and Sustainability: Dordrecht*, Vol. 23, no. 5. Retrieved on 20 May 2022. Available at 10.1007/s10668-020-00915-7
- Sandra, M. 2018. Advantages of using onlines surveys. Retrieved on 25 May 2022. Available at <https://datascope.io/en/blog/advantages-of-using-online-surveys/>
- Shagerdi, A., Haghghat, K., Haghghat, A & Otoofi, A. 2013. A study to detect important factors influencing purchasing product: A case study of home appliances. *Management Science Letters*, Vol. 3, no. 7, pp. 2179-2184.
- Shankar, V., Rangaswamy, A., & Pusateri, M. 2001. *The Online Medium and Customer Price Sensitivity (Working Paper)*. Retrieved on 30 April 2022. Available at https://www.researchgate.net/publication/228392737_The_Online_Medium_and_Customer_Price_Sensitivity_Working_Paper
- Singh, M. 2012. Marketing Mix of 4P'S for Competitive Advantage. *IOSR Journal of Business and Management (IOSRJBM)*, Vol. 3, no. 6, pp. 40-45.

Smart Insights 2020. *Convenience is driving e-commerce growth and influencing consumer decisions*. Retrieved on 20 April 2022. Available at <https://www.smartinsights.com/ecommerce/customer-experience-examples/convenience-is-driving-e-commerce-growth-and-influencing-consumer-decisions/>

Statista 2022. *Household appliances*. Retrieved on 20 April 2022. Available at <https://www.statista.com/outlook/dmo/ecommerce/electronics/household-appliances/vietnam#revenue>

Tezi, Y. L. 2019. *The relationship between purchase decision and perceived quality in cooking category of household appliances*. Marmara Üniversitesi. Retrieved on 30 April 2022. Available at <https://katalog.marmara.edu.tr/veriler/yordambt/cokluortam/B/D/B/C/A/5ddf6a21282af.pdf#page=90&zoom=100,91,115>

Top10hcm. 2022. Dân số TPHCM năm 2021 bao nhiêu? Retrieved on 22 April 2022. Available at <https://top10tphcm.com/dan-so-tphcm>

Tran, V. D., & Nguyen, T D. 2022. The impact of security, individuality, reputation, and consumer attitudes on purchase intention of online shopping: The evidence in Vietnam. *Cogent Psychology*, Vol. 9, no. 1. Retrieved on 20 April 2022. Available at <https://doi.org/10.1080/23311908.2022.2035530>

Tulwin, K. 2014. *The influence of price changes on consumers' purchase decisions*. A Work Project, presented as part of the requirements for the Award of a Master's Degree in Management from the NOVA – School of Business and Economics. Retrieved on 22 April 2022. Available at https://run.unl.pt/bitstream/10362/15070/1/Tulwin_2014.pdf

Uslu, A. & Buseynli, H. 2018. Impact of price sensitivity on repurchase intention in terms of personality features. *Uludağ İktisadi ve İdari Bilimler Dergisi*, Vol.17, pp. 515-532.

Vietnamnews. 2020. COVID-19 sends Vietnamese shoppers online. Retrieved on 20 April 2022. Available at <https://vietnamnews.vn/economy/716539/covid-19-sends-vietnamese-shoppers-online.html>

Zeren, D. 2021. Using Theory of Reasoned Action to Explain Consumer Behavior During COVID-19 Pandemic. In: Gülmez, M. (Eds.) *Understanding The Consumer Behaviour During COVID-19 Pandemic*. Vadi Matbaacılık.

Appendix 1. Questionnaire (English version)

Part A: General information

1. Please indicate your age
 - a. Under 18 years old
 - b. From 18 to 25 years old
 - c. From 25 to 30 years old
 - d. More than 30 years old
2. What is your gender?
 - a. Male
 - b. Female
3. What is your current employment status?
 - a. Employed
 - b. Unemployment and currently looking for job
 - c. Student
 - d. Self-employed
4. Please indicate your monthly income
 - a. Below 5 million VND
 - b. From 5 to 10 million VND
 - c. From 10 to 15 million VND
 - d. More than 15 million VND
5. Do you often buy products via online channels?
 - a. Yes
 - b. No
6. How often do you buy household appliances? (a household appliance is defined as an electrical device, machine, or piece of equipment that is used to support people perform household functions of cooking, cleaning, or food preservation.

Some examples of household appliances include vacuum cleaner, toaster, coffee maker, oven, etc.)

- a. 1 to 5 times a year
 - b. 5 to 10 times a year
 - c. More than 10 a year
 - d. Never
7. At where?
- a. At the store
 - b. Online
 - c. Both

If Online move to the next questions; If At the store just stop.

8. What types of devices you use to purchase for online orders?
- a. Mobile phone
 - b. Tablet
 - c. Laptop
 - d. Computer

Part B: Influence factors

Please indicate your opinion about the following statement by using the below assessment:

1 - Strong disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strong agree

9. What are your general opinions about **quality affection** on buying household appliances online?

	Strong disagree	Disagree	Neutral	Agree	Strong agree
I tend to buy household products which have high and guaranteed quality					
I tend to buy household products if its design specifications correctly interpret what I want.					
I tend to buy a product having long durable time.					
Features are one of the most important factors for me to decide to buy one product quickly.					
I choose a product having good and reputable serviceability					

10. What are your general opinions about **price sensitivity** on buying household appliances online?

	Strong disagree	Disagree	Neutral	Agree	Strong agree
I like to get the best deals for household products when shopping online.					
I compare prices within household products when shopping online.					
I am quite upset when I miss a discount on household products when shopping online.					

I have a reference price for household products when shopping online (E.g., A rice cooker should not cost more than VND 1 million...)					
---	--	--	--	--	--

11. What are your general opinions about **internet security** on buying household appliances online?

	Strong disagree	Disagree	Neutral	Agree	Strong agree
I worry about loss of personal information when purchasing household appliances online from websites of providers or E-commerce platforms.					
I worry about loss of credit card security when purchasing household appliances online from websites of providers or E-commerce platforms					
The concern of fraud of transactions influences my purchase of household appliances online from websites of providers or E-commerce platforms.					
The concern of the likelihood that anyone can find my personal information influence my purchase of household appliances online from					

websites of providers or E-commerce platforms.					
I find purchasing household appliances online from websites of providers or E-commerce platforms is highly riskier than that from physical stores.					

12. What are your general opinions about **convenience** on buying household appliances online?

	Strong disagree	Disagree	Neutral	Agree	Strong agree
I buy household products online because it saves my time.					
I buy household products online because I can buy them anywhere with a laptop or phone connected to the internet.					
I find it easy to compare prices on household products when I shop online					
I can find out many household products and their's information at one time.					

13. What are your general opinions about **social media** on buying household appliances online?

	Strong disagree	Disagree	Neutral	Agree	Strong agree
I tend to buy household products after seeing the reviews of influencers.					
I tend to buy household products that appear many times on social media.					
I tend to buy household products when they are hot trend products and have been used by many people.					
I tend to buy household products when it has high-quality reviews on shopping sites.					
I tend to buy household products when I see their attractive ads on social media					

Appendix 1. Questionnaire (Vietnamese version)

Những tác nhân chính ảnh hưởng tới hành vi mua sắm trực tuyến của nhóm sản phẩm gia dụng

Xin chào!

Tôi đang viết một luận án về sự ảnh hưởng của những tác nhân như giá cả, chất lượng sản phẩm, bảo mật, sự tiện lợi và mạng xã hội lên hành vi mua sắm trực tuyến của nhóm sản phẩm gia dụng của người dân thành phố Hồ Chí Minh

Bài khảo sát bao gồm 2 phần với tổng cộng 13 câu hỏi, các thông tin được cung cấp trong bài khảo sát sẽ được bảo mật và sử dụng với mục đích nghiên cứu thực nghiệm.

Nếu có bất kỳ thắc mắc gì, hãy liên lạc với tôi qua email Toan.tran@student.lab.fi

Thông tin cơ bản

Description (optional)

Bạn bao nhiêu tuổi? *

- Dưới 18 tuổi
- Từ 18 tuổi tới 25 tuổi
- Từ 25 tuổi tới 30 tuổi
- Trên 30 tuổi

Giới tính của bạn là gì? *

- Nam
- Nữ
- Khác

Tình trạng công việc hiện tại của bạn như thế nào? *

- Đang đi làm
- Thất nghiệp nhưng đang tìm kiếm việc làm
- Học sinh
- Kinh doanh

Thu nhập hàng tháng của bạn như thế nào? * ⋮

- Dưới 5 triệu VND
- Từ 5 triệu VND tới 10 triệu VND
- Từ 10 triệu VND tới 15 Triệu VND
- Trên 15 triệu VND

Bạn thường xuyên sử dụng thiết bị nào cho việc mua sắm trực tuyến? *

- Điện thoại di động
- Máy tính bảng
- Máy tính xách tay
- Máy tính bàn

Bạn có thường xuyên mua thiết bị gia dụng thông qua các kênh mua sắm trực tuyến không? *

- Có
- Không

Bạn mua thiết bị gia đình bao nhiêu lần trong 1 năm? (thiết bị gia dụng được định nghĩa là một thiết bị điện, máy móc hoặc thiết bị được sử dụng để hỗ trợ mọi người thực hiện các chức năng gia dụng như nấu nướng, dọn dẹp hoặc bảo quản thực phẩm. Một số ví dụ về thiết bị gia dụng bao gồm máy hút bụi, máy nướng bánh mì, máy pha cà phê, lò nướng, v.v.) *

- Từ 1 tới 5 lần
- Từ 5 tới 10 lần
- Trên 10 lần
- Không bao giờ

Bạn lựa chọn mua thiết bị gia dụng ở đâu? *

- Tại cửa hàng
- Mua sắm trực tuyến
- Cả hai phương án trên

Nếu bạn chỉ mua những thiết bị gia dụng thông qua cửa hàng, bạn có thể bỏ qua những câu hỏi tiếp theo.

Description (optional)

Ý kiến của bạn về "chất lượng sản phẩm" khi mua đồ gia dụng trực tuyến là gì?

	Hoàn toàn không đồng ý	Không đồng ý	Bình thường	Đồng ý	Hoàn toàn đồng ý
Tôi có xu hướng mua các sản phẩm gia dụng có chất lượng cao và đảm bảo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua các sản phẩm gia dụng nếu thông số kỹ thuật và thiết kế của chúng đáp ứng chính xác những gì tôi muốn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua sản phẩm có thời gian bền lâu.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tính năng là một trong những yếu tố quan trọng nhất để tôi quyết định mua sản phẩm một cách nhanh chóng.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi chọn một sản phẩm uy tín và có khả năng phục vụ tốt cho nhu cầu của mình	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ý kiến của bạn về "giá của sản phẩm" khi mua thiết bị gia dụng trực tuyến là gì?

	Hoàn toàn không đồng ý	Không đồng ý	Bình thường	Đồng ý	Hoàn toàn đồng ý
Tôi muốn nhận được những ưu đãi tốt nhất cho các sản phẩm gia dụng khi mua sắm trực tuyến.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi so sánh giá của các sản phẩm gia dụng khi mua sắm trực tuyến.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi cảm thấy khó chịu khi lỡ đợt giảm giá các sản phẩm gia dụng khi mua sắm trực tuyến.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có tham khảo giá các sản phẩm đồ gia dụng khi mua hàng trực tuyến (Ví dụ: Nồi cơm điện không nên có giá quá 1 triệu đồng...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ý kiến chung của bạn về việc "bảo mật" khi mua đồ gia dụng trực tuyến là gì?

	Hoàn toàn không đồng ý	Không đồng ý	Bình thường	Đồng ý	Hoàn toàn đồng ý
Tôi lo lắng về việc mất thông tin cá nhân khi mua đồ gia dụng trực tuyến từ các trang web của nhà cung cấp hoặc sàn thương mại điện tử.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi lo lắng về việc mất bảo mật thẻ tín dụng khi mua đồ gia dụng trực tuyến từ trang web của nhà cung cấp hoặc nền tảng thương mại điện tử	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sự lo ngại về những gian lận trong việc giao dịch ảnh hưởng đến việc tôi mua đồ gia dụng trực tuyến từ trang web của các nhà cung cấp hoặc nền tảng thương mại điện tử	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sự lo lắng về khả năng bất kỳ ai cũng có thể tìm thấy thông tin cá nhân của tôi làm ảnh hưởng đến việc tôi mua đồ gia dụng trực tuyến từ các trang web của nhà cung cấp hoặc nền tảng thương mại điện tử.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tôi thấy việc mua đồ gia dụng trực tuyến từ các trang web hoặc các nền tảng Thương mại điện tử có rủi ro cao hơn so với mua từ các cửa hàng thực.

Ý kiến chung của bạn về "sự tiện lợi" khi mua đồ gia dụng trực tuyến?

Hoàn toàn không đồng ý Không đồng ý Bình thường Đồng ý Hoàn toàn đồng ý

Tôi mua các sản phẩm gia dụng trực tuyến vì nó tiết kiệm thời gian của tôi.

Tôi mua các sản phẩm gia dụng trực tuyến vì tôi có thể mua chúng ở bất kỳ đâu chỉ cần có máy tính xách tay hoặc điện thoại kết nối internet.

Tôi thấy dễ dàng so sánh giá cả trên các sản phẩm gia dụng khi tôi mua sắm trực tuyến

Tôi có thể tìm hiểu nhiều sản phẩm gia dụng và thông tin của chúng cùng một lúc.

Ý kiến chung của bạn về việc mua đồ gia dụng trực tuyến thông qua "mạng xã hội" là gì?

	Hoàn toàn không đồng ý	Không đồng ý	Bình thường	Đồng ý	Hoàn toàn đồng ý
Tôi có xu hướng mua các sản phẩm gia dụng sau khi xem đánh giá của những người có tầm ảnh hưởng.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua các sản phẩm gia dụng xuất hiện nhiều lần trên mạng xã hội.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua các sản phẩm gia dụng khi chúng là những sản phẩm hot trend và được nhiều người sử dụng.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua các sản phẩm gia dụng khi nó có các đánh giá cao về chất lượng trên các trang web mua sắm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tôi có xu hướng mua các sản phẩm gia dụng khi nhìn thấy quảng cáo hấp dẫn của chúng trên mạng xã hội	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>