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*Master's join degree/post graduate Programme
Enterprise Risk Management (ERM)*

MASTER THESIS



Multi-criteria decision analysis in Risk Evaluation of e shopping

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May 2020

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This thesis submitted for partial fulfilment of the requirements
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Summary

The development of e-commerce has increased the popularity of online shopping worldwide making it one of the most frequent purposes of using internet. Consumers' perceived risks of online shopping becomes a hot topic to research, as it directly influences users' attitude towards online purchasing vs buying in store, and their evaluation of risks will have significant impact to their online purchasing behavior.

An empirical study within the framework of this dissertation, with a structured approach could provide the means to conceptualize consumers' decisions and attitude towards online shopping based on their evaluation of different types of risks involved.

This particular research explores and offers us a deeper understanding from the customers' perspective on how perceived risks/benefits influence their attitude towards online shopping. Additionally, it contributes to identify which are the most critical factors that influence the behavior and decisions of buyers' concerning online shopping.

Theoretical analysis of the subject is utilized, as well as a mixture of quantitative and qualitative techniques. The necessary data are gathered by the use of questionnaires, taking a random sample from a mixture of e-customers (Cypriots and foreigners) living in Cyprus, asking them to respond on the importance they give to each dimension, using an importance scale.

As to the results of the questionnaires, these are concerned to the fact that the 58.5% of the participants decide to buy on-line instead buying in store in order to save time, the most male participants didn't change their attitude concerning on-line shopping due to Covid-19 whereas most female participants changed their attitude due to Covid-19. We conclude that female consumers chose to buy on-line more, than they previously did. Finally, most male participants consider of medium importance the product return and changing procedures in on-line shopping, whereas most female participants consider it of high importance and that the 61.3% of the participants said that their main concern when buying on-line is the Safety on transaction.

Περίληψη

Η ανάπτυξη του ηλεκτρονικού εμπορίου, έχει αυξήσει τη δημοτικότητα των διαδικτυακών αγορών παγκοσμίως καθιστώντας το έναν από τους πιο συχνούς σκοπούς χρήσης του Διαδικτύου.

Οι αντιληπτοί κίνδυνοι των καταναλωτών για διαδικτυακές αγορές γίνονται καυτό θέμα έρευνας, καθώς επηρεάζουν άμεσα τη στάση των χρηστών έναντι των διαδικτυακών αγορών έναντι των αγορών στα καταστήματα και η αξιολόγηση τους όσον αφορά τους κινδύνους θα έχει σημαντικό αντίκτυπο στη διαδικτυακή αγοραστική τους συμπεριφορά.

Μια εμπειρική μελέτη στο πλαίσιο αυτής της διατριβής, με μια δομημένη προσέγγιση θα μπορούσε να παράσχει τα μέσα για να κατανοήσουμε τις αποφάσεις και τη στάση των καταναλωτών απέναντι στις διαδικτυακές αγορές, βάσει της αξιολόγησής τους για τους διάφορους τύπους κινδύνων. Αυτή η συγκεκριμένη έρευνα διερευνά και μας προσφέρει μια βαθύτερη κατανόηση από την προοπτική των πελατών σχετικά με το πώς οι αντιληπτοί κίνδυνοι / οφέλη επηρεάζουν τη στάση τους απέναντι στις διαδικτυακές αγορές.

Επιπλέον, συμβάλλει στον προσδιορισμό των πιο κρίσιμων παραγόντων που επηρεάζουν τη συμπεριφορά και τις αποφάσεις των αγοραστών σχετικά με τις διαδικτυακές αγορές. Χρησιμοποιήθηκε θεωρητική ανάλυση του θέματος, καθώς και ένα μείγμα ποσοτικών και ποιοτικών τεχνικών. Τα απαραίτητα δεδομένα συλλέχθηκαν με τη χρήση ερωτηματολογίων, λαμβάνοντας ένα τυχαίο δείγμα από ένα μείγμα ηλεκτρονικών πελατών (Κύπριων και αλλοδαπών) που ζουν στην Κύπρο, ζητώντας τους να απαντήσουν στη σημασία που δίνουν σε κάθε διάσταση, χρησιμοποιώντας μια κλίμακα σπουδαιότητας.

Όσον αφορά τα αποτελέσματα των ερωτηματολογίων, αυτά αφορούν το γεγονός ότι το 58,5% των συμμετεχόντων αποφασίζει να αγοράσει on-line αντί να αγοράσει στα συμβατικά καταστήματα για να εξοικονομήσει χρόνο, οι περισσότεροι άνδρες συμμετέχοντες δεν άλλαξαν τη στάση τους σχετικά με το on-line shopping λόγω του Covid-19, ενώ οι περισσότερες γυναίκες συμμετέχοντες άλλαξαν τη στάση τους λόγω του Covid-19.

Καταλήγουμε στο συμπέρασμα ότι οι γυναίκες καταναλωτές επέλεξαν να αγοράσουν on-line περισσότερο από ό, τι στο παρελθόν. Τέλος, οι περισσότεροι άνδρες συμμετέχοντες θεωρούν μέτριας σημασίας την επιστροφή προϊόντων και τις διαδικασίες αλλαγής στις αγορές μέσω διαδικτύου, ενώ οι περισσότερες γυναίκες συμμετέχοντες το θεωρούν πολύ σημαντικό και ότι το 61,3% των συμμετεχόντων δήλωσε ότι το κύριο μέλημά τους κατά την αγορά on-line είναι η ασφάλεια κατά τη συναλλαγή.

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Chapter 1

Introduction

The trade as a concept, it includes the concept of selling and the concept of market. *Sale* is an agreement reached between two parties (seller and buyer) for a fee. More specifically, with the contract of sale, the seller has the obligation to transfer the ownership of the product or the right, which constitute the object of the sale and to deliver the product, and in turn the buyer has the obligation to pay the agreed price. According to Steve Bland, a sale is an agreement between the seller and the buyer to transfer a product for a price (money cost). He also states, that the ownership of the product is transferred at the time the seller receives the agreed amount and all the requirements of the buyer have been met.

According to Theofanidis, the market is a group of buyers with unsatisfied needs, who have both the ability and the determination to satisfy them. According to the researcher, the term market in economics refers to a space in which supply and demand for goods or services are found, as well as a specific space in which traders concentrate. It is now an indisputable and irreversible fact. The same goes for the development of telecommunications in their various forms (fiber optics, mobile phones, satellite connections).

In the recent past, consumer transactions and purchases and respectively, sales of traders were made by purely conventional means. Consumers had to go to the supplier of the goods or services in order to buy what they wanted or to receive a service. Nowadays, the way transactions are carried out has changed radically. One of the new and fastest ways to serve consumers is e-commerce, which is growing rapidly all over the world. By e-commerce we mean "the process of consumers and retailers conducting online transactions". It is also defined as the set of business strategies that aim to support and transform specific areas of business activity, using new technologies and conducting transactions through electronic media. However, except from the above there are also some risks that should be evaluated by customers, so as those not to be an obstacle for their decisions to make shopping online.

Chapter 2

Literature Review

2.1 The Meaning and Characteristics of the Internet

The Internet is the world's largest network that connects millions of personal computers and hundreds of thousands of Servers around the world. Internet users are able to access a range of services, the most popular of which are email and the World Wide Web – www (Andrade, Kaltcheva, Weitz, 2002). In recent years, the Internet has grown rapidly, and this is why it is now an important tool for both individuals and businesses. The Internet is a relatively new but very effective tool for any business, but without underestimating the resources of the company to be spent for this purpose. Some of the goals that can be set as part of an Internet marketing strategy, are as follows (Wang, Head, Archer, 2002):

- ✓ Increase in sales
- ✓ Customer support
- ✓ Increasing consumer awareness of the product
- ✓ Creating a relevant marketing channel
- ✓ Cost savings
- ✓ Brand enhancement / development
- ✓ Testing new services and products
- ✓ E-commerce

The development of an online presence of any company consists of several stages as follows:

- ✓ Utilizing internet services
- ✓ Creating and developing a website
- ✓ Completing an online presence
- ✓ Designing and launching an online store

2.2 The E-commerce

2.2.1 Definition

E-commerce covers any form of business or administrative transaction or exchange of information that is carried out using any information technology and telecommunications technology. By e-commerce we mean any complete transaction where it is performed only electronically via the internet, telephone or fax, without including the physical presence of the parties. Complex programming mechanisms and proprietary software are used to make such a transaction, which allows the electronic exchange of data between the two counterparties (Verhoef, Langerak, 2001).

2.2.2 Forms of the e-commerce

There is a clear categorization of e-commerce based on the type of the parties involved in the business transaction, and is divided into (Park, Kim, 2003):

- ✓ Business to customer or B2C
- ✓ Business to business or B2B
- ✓ Business to government or B2G
- ✓ In-business e-commerce (B2E)
- ✓ State to Consumer (customer to government or C2G)
- ✓ Government to Government (G2G)
- ✓ Consumer to Consumer or C2C
- ✓ M-Commerce - Mobile Ecommerce

In the first category, the purchaser, using a credit card usually and / or cash on delivery and / or bank deposit, can obtain a product or service that will arrive in place within a few days or at the same time if it can be digitally shipped, e.g. e-book, while drastically reducing the cost of operating and purchasing, as it does not require a physical distribution network (Sheehan, Hoy, 2000). In the second category there are transactions between companies, whether it involves

large quantities of products and / or services or possible partnerships for completion of a product e.g. cars that were the main trading volume until a few years ago (Szymanski, Hise, 2000).

The third case concerns transactions between undertakings with public authorities. The rapid spread of the Internet and the fight against bureaucracy, corruption and public efficiency have led to the creation of a plethora of web applications, for example. taxis-net, for faster and more efficient central government. The fourth case concerns large companies with in-group transactions, warehouse monitoring and real-time financial data. The fifth concerns private-state transactions. The sixth trade between states. The seventh transactions between private individuals (Mohanty, Seth, Mukadam, 2007).

While the latter case is a new trend, that is developing very rapidly. It deals with e-commerce, with the exception of C2C, for security transactions though, security levels have been incredibly checked, carried out by everyone, anywhere, anytime using mobile devices, namely smartphones and tablets. Modern, stressful lifestyles with limited free time, the proliferation of the Internet and mobile applications, and the constant effort to save time and money, have led to the development of mobile applications that make it easier for the state, businesses and citizens. So, they can now handle several transactions with the state, e.g. Tax office and Utilities Companies, while mobile applications brought businesses and consumers closer, e.g. e-shop.gr, skroutz.gr etc. (Huang, Christopher, 2003).

2.2.3 Pros and Cons of E-Commerce

The benefits to consumers are:

- ✓ Hours. Open 24/7/365
- ✓ Reduced purchase cost
- ✓ Worldwide market - Greater variety
- ✓ Fast and immediate purchase
- ✓ Better service/Personalized buying experience
- ✓ Saving time and effort

The benefits to businesses are:

- ✓ World market/selling internationally
- ✓ Competitiveness
- ✓ Optimized business image
- ✓ Two-way business-consumer communication
- ✓ Reduced operating costs
- ✓ Minimize malfunctions
- ✓ Wide range of activities
- ✓ Continuous and better warehouse control

In addition to these two sides, there is a general benefit to society as it enables remote areas, as well as people with mobility difficulties, to carry out their affairs and to make purchases that previously seemed difficult to impossible. On the contrary, of course, there are the disadvantages of e-commerce for all parties involved. (Janda, Trocchia, Gwinner, 2002)

For consumers:

- ✓ Forgery – Possible lack of security in online payments
- ✓ Absence of seller-customer contact

For Businesses:

- ✓ Possible lack of security in online payments
- ✓ Inability to present products
- ✓ High costs of implementing and optimizing an online store

From the societal point of view, e-commerce is a serious social phenomenon for consumers, especially in societies where there is economic inequality, and there is a risk that internet users will become richer as they buy from the 'cheap' global internet market as opposed to the poorest who should be content with a primitive and more expensive economy (Janda, Trocchia, Gwinner, 2002).

2.2.4 E-Commerce Risks

Risk is any threat intended to damage the integrity of electronic transactions and to exploit any information that it may obtain in violation of their privacy. The risks that exist during electronic transactions are:

- ✓ Data Capture
- ✓ Scams
- ✓ Denial of service
- ✓ Disguise
- ✓ Abuse
- ✓ Unauthorized access to computers (Wang, Head, Archer, 2002)

Nowadays the creation and development of an online store seems to be a fairly simple process, but to lay the foundations for a new business more properly we need to take some concrete steps. The first step before setting up an online store is to set goals that should be clear, tangible and measurable. In order to determine the goals of the store we will mainly consult existing statistical surveys on the opinions and impressions of internet users. Corresponding studies will help to obtain a numerical measure of the target sizes and the time intervals that need to be set to meet these goals (Janda, Trocchia, Gwinner, 2002).

Then the market segment that the company is going to target should be determined. The implementation of this process will be done by recording all the services and products offered in the online store, recording the market segments that can be served by the online store and selecting a segment and adapting the online services to it. Targeting many segments of the market at the same time is not recommended as it results in the company not focusing on any one and as a result of not adequately supporting their development goals.

When aiming at a single goal, the company manages to operate better and well-integrated as it provides staff with the time and knowledge needed to respond more effectively to the target and market segment they have chosen to address. Firms with limited resources are virtually impossible to create online stores that serve multiple markets at the same time. Selecting a

market segment and focusing on adapting the online store to the needs of that segment is the easiest way to succeed for these businesses (Janda, Trocchia, Gwinner, 2002).

Choosing software for the online store is essential to create an online sales environment, design appropriate web sites for online ordering and bank selection. An integrated online store should provide services such as search criteria based on criteria, credit card verification to verify the correct entry of credit card information, automated e-mails to the buyer after submitting their online ordering, shopping cart, emailing the business every time a new order is made, automated transaction reading real-time credit card details on the bank za for immediate approval or rejection of the transaction, encryption for credit card details as well as all sensitive data provided by the buyer (Huang, Christopher, 2003).

Familiarizing existing customers with online sales is an important factor to keep in mind. It will take some time for the online store to become involved in the sales of the business if the customers who have access do not have the convenience and experience of online shopping (Janda, Trocchia, Gwinner, 2002).

2.3 Categories of Online Shopping

The e-market places are divided into two categories, public and private. Most software-level features are common to both categories. The feature that sets them apart is the accessibility of the suppliers and the number of buyers who can participate. In private, the buyer is only one, the owner of the e-marketplace, while the public is in turn subdivided into four sub-categories depending on which party is the one who creates the online market and invites the other parties to the transaction. We can distinguish the following categories of business markets (Mohanty, Seth, Mukadam, 2007):

- ❖ Buyer-driven e-marketplaces. The online marketplace is created by an association of buyers, who are usually from the same business sector and are interested in purchasing products or services online.

- ❖ Vendor-driven e-marketplaces. The online marketplace is created by an association of suppliers or sellers who are interested in selling their products or services through the Internet.
- ❖ Independent-marketplaces. They are Internet-based markets and their main objective is to facilitate trade between buyers and suppliers. There are some key features that set them apart from other types of online shopping, which are:
 - ✓ They are communities of many buyers and many suppliers.
 - ✓ They try to serve the needs of buyers as much as they can and the suppliers.
 - ✓ Any company may participate in it, as long as it agrees with the general functioning of the markets.
 - ✓ Sometimes an independent marketplace acts as a broker in Internet, in the sense that the online marketplace does not own the products and services it markets, simply facilitates their exchange between the participating companies.
 - ✓ Technology-driven markets. The online marketplace is created by an IT company in order to provide its services to buyers and suppliers of products and services. The figures show that the most common category is that of independent e-markets, with purchasers guided by buyers being the next one.

Another categorization of e-markets is based on the market they are targeting. This creates the vertical and horizontal markets. Where the verticals are the markets referring to a particular sector, the horizontal ones are those traded products from a set of different sectors (Janda, Trocchia, Gwinner, 2002).

2.4 Characteristics of On-line Shops

Several studies have investigated the characteristics of market services (Jarvenpaa and Todd, 1997; Lohse and Spiller, 1998; Szymanski and Hise, 2000; Liu and Arnett, 2000). These studies divided the characteristics of online stores into four categories: merchandise, services customer service and promotions, navigation and convenience, and security (Park and Kim, 2003).

According to a study by Lohse and Spiller (1998), large online stores are less effective at turning website traffic into sales because it is difficult for consumers to find the products they are looking for. It has since been argued that the primary role of an online store is to provide information on price and product to help reduce consumer search costs (Bakos, 1997), more extensive and high-quality information available online, leads to better market decisions and higher levels of consumer satisfaction (Peterson et al., 1997). Online stores can offer hyperlinks to more extensive product information such as price comparison, product recommendations (eg book review in an online bookstore) and product demonstrations. According to Jin and Park (2003), successful sales people have a strong impact on consumer satisfaction levels, such as the consumers who look for specific ways to meet their needs.

The second category of features for e-shops, are customer service and promotion. Clients want careful, consistent and useful information across geographical barriers (Lohse and Spiller, 1998). These properties are often recognized as a crucial dimension to determine store choice behavior in both online and offline stores (Jarvenpaa and Todd, 1997; Kolesar and Galbraith, 2000). Consumer services include freight forwarders, answers to frequently asked questions, and credit, return and payment policies. Customers want help with choosing products, gifting services and communicating with them sales agents.

They also want a FAQ (Frequently Asked Questions) section for quick answers and information on shipping and handling costs. Promotion can marginally lead to customer satisfaction as an expectation of saving money by making online orders rather than buying traditionally (Jin & Park, 2006). This view is also supported by Jin and Sternquist (2004), who found that lower values lead to higher levels of satisfaction.

The third category of features is navigation and comfort. This relates to the user environment in an online store (Szymanski and Hise, 2000). Since the user interface of an online store has influenced the consumer's experience interacting with the product or service that the seller offers (Griffith, 2001), a well-designed environment can reduce consumer search costs and time spent needed to process the information. This will minimize the effort needed to make the choice and pay (Hoque and Lohse, 1999). Online shopping tends to be enjoyable and satisfying for

consumers when the websites of the sellers are fast, well organized and easy to search (Park and Kim, 2003).

The web *navigation* depends on the way information is organized and positioned in terms of design, layout and sequencing (Tarafdar and Zhang, 2006), hyperlinks, and overall organization effectiveness of information (Nielsen, 2000). Madu and Madu (2002) have suggested that consumers can easily be frustrated when a website is not easy to navigate. Barnes and Vidgen (2002) defined navigation, as the ability that allows the user and the company to communicate directly with each other, without worrying about distance or time.

Classified and easy *navigating* websites save time and effort for consumers to understand how to make online shopping more efficient (Szymanski and Hise, 2000). In addition, some general auxiliary features can help users find a specific issue in the documentation. The auxiliary's information also includes information on how one can navigate the store or use ordering features such as shopping cart. Most online stores have a product search engine, web site map and targeted navigation to help them search and shop (Park and Kim, 2003).

The last category of features is the web security. Online transaction security continues to dominate e-commerce discussions. Consumers worry about disclosing their personal and financial information. While most online stores require privacy of personal information, privacy policy and transaction guarantee, they do not provide detailed information on how transactions and personal data are secure (Elliot and Fowell, 2000). Security and privacy make an important contribution to customer satisfaction (Park and Kim, 2003; Szymanski and Hise, 2000; Wagner and Rydstrom, 2001). Communicating with customers by providing information has been found to be important for enhancing customer satisfaction from the seller. Shankar et al. (2003) found that the ease of obtaining information and the depth of information on a web site increase overall satisfaction. The quality of information also affects satisfaction levels (Park and Kim, 2003).

2.5 Consumer Behavior in Online Shopping

Consumers tend to engage in relational behaviors to succeed greater efficiency in their decisions, reducing information processing, achieving greater intellectual consistency in their decisions,

and reducing perceived risk of future choices (Sheth and Parvatiyar, 1995). After a few successful transactions, the consumer begins to feel safe with the provider or supplier (Ravald and Gronroos, 1996). When consumers trust a company, they know that it can fulfill their needs and wants, so they can commit to it.

2.6 Previous Research on the Internet Consumers' Buying Behavior

Park and Kim (2003) conducted a survey in Korea exploring the relationship between the different characteristics of online markets and consumers' buying behavior. The results of online questionnaires in online bookstores, indicate that information quality, quality of the user environment and security perceptions influence satisfaction information and relational benefits, which in turn are indicative, related to each consumer's commitment to the website and their actual shopping behavior. They have empirically developed and documented a model of consumer relational buying behavior in an online shopping context.

The key factors are the quality of the user interface, the quality of the product and service information, the security perception and knowledge of the site that have been found to have a significant impact on consumers' commitment to the site. In addition, they investigated whether satisfaction information and relational benefit play an important role in relational purchasing behavior of consumers. In an online shopping context, the ability to update the shopping website has been acknowledged to be an important factor in determining consumer loyalty to the website and in deciding whether or not to buy from the store. This highlights the importance of product information quality and the design of the user interface in the development of the online shopping website. Other features of e-shops have also been found to influence the perceived relative benefits of consumers to online shopping. The quality of service information was found to be the most important among the factors.

According to Garbarino and Johnson's (1999) study of a nonprofit theatrical company, there are significant differences in loyalty and loyalty for customers with relational behaviors, compared to customers with more trading patterns. Since there are differences between the real "world" and the corresponding "electronic", its effects consumer assessment (on diversity and interaction) -

eg satisfaction, loyalty and dedication - they can be enough to explain consumer behavior in an electronic content.

Lian and Lin (2007) conducted a research in Taiwan, in which they sought to clarify the relationship between consumer characteristics and attitudes towards online shopping, within different products. The grading scale for Internet products and services was used (Peterson et al., 2007), in which personal positions on specific products differ. For example, some people view computer games as a low-cost and often purchased product, while others have a different opinion, which has affected the study's findings.

The sample of the study consisted of undergraduate students with experience in online shopping. Undergraduate students have been chosen as a subject, so that participants have similar views on the four selected products (books, online newspapers and magazines, TV gaming systems, computer games). The survey data were collected through questionnaires, which were completed by a total of 220 students. The analysis revealed that the determinants of users' acceptance of online shopping vary, according to the type of product or service. In addition, perceived security and personal privacy concerns and product involvement may influence consumer acceptance of online purchases, but their influence varies with the type of product. Based on the study of these products the following results were obtained:

- ✓ The increased PIIT (Personal Innovativeness of Information Technology) positively influences users' attitudes towards the high cost market, rarely purchasing intangible products or services online.
- ✓ Increased personal perceptions of safety positively influence users' attitudes towards buying expensive, rarely purchased products or services.
- ✓ Increased concerns about the protection of personal data are negatively affecting users' attitudes towards the purchase of physical or physical products or services.
- ✓ High product involvement positively affects users' attitudes towards online shopping in the context of all available products or services.
- ✓ The types of products and services affect the relationships between the characteristics and attitudes of consumers towards online shopping.

Kim et al (2008) carried out a research in which they developed a theoretical model which describes the trust-based decision-making process, that the consumer uses when purchasing from a particular website. The sample of the study was undergraduates who did so, because several studies (Barnes, Vidgen, 2003) recognized them as representative of online consumers because they are younger and more educated than conventional consumers (Szymanski, Hise, 2000). The survey data were collected in two rounds, one before and one after the market, by electronic surveys. A total of 468 questionnaires were collected.

Finally, they examined the consequences of the model. The results have generally shown that the confidence and perceived risk of consumers on the Internet have serious implications for their purchasing decisions. In more detail, they have shown that confidence positively, directly and indirectly influences the consumer's purchase intention and negatively the risk perception. Consumer predisposition to trust, reputation, privacy, security issues, the quality of website information and company reputation have serious implications for the confidence that consumers display on a website online. However, the opinions of third parties do not significantly affect consumer confidence but reduce the perceived risk. Another result is that risk perception reduces the consumer's intention to buy, while the perceived benefit increases. Finally, they have shown that confidence addresses the risk problem with two ways: by reducing perceived risks and by immediately increasing market intentions.

Liang (2009) conducted a study in Taiwan that aimed to develop a model to predict the main factors affecting consumers' willingness to make online purchases. Understanding new consumer buying characteristics / behaviors allows sellers to tailor the marketing strategies they use to attract existing and prospective buyers. The data were collected through an online questionnaire and the sample consisted of 1,187 simple visitors and buyers aged 18-27. The results showed that the most important factors affecting consumer willingness are risk aversion, convenience, reliability, website quality, promotion and interaction functions, customer service and brand awareness.

Hernandez et al. (2010) conducted a survey in Spain to examine whether individuals' socioeconomic characteristics - "age, gender, and income" - influence their online shopping behavior. They further developed their Technology Acceptance Model (Davis, 1989; Davis et al.,

1989) to include factors: prior Internet use and perceived self-efficacy. The sample of the survey was 225 experienced online shoppers, that is, people who buy frequently from the Internet. The data were collected through a survey conducted using the computer-assisted telephone interview technique.

The results show that socio-economic variables do not mitigate (limit) the impact of prior use or perceptions of e-commerce. In short, they do not determine the behavior of an experienced online shopper. The results also helped to determine that once individuals acquire the status of experienced buyer; their behavior is similar, regardless of their socioeconomic characteristics. This is probably due to the experience gained during purchases. They have also shown that, for experienced online shoppers, socioeconomic variables do not increase the differences in the impact of online perceptions. This behavior may depend on other more complex variables such as personality, lifestyle, and perceptions of information technology.

Man and Yi (2010) conducted a research in Hong Kong, in which they examined previous research on the Technology Acceptance Model in order to develop a wider model, in order to be able to further explain other factors that affect consumers when making online purchases. The sample of the survey was 327 internet users, who had made at least one purchase from an online store, regardless of their age and educational background. The study includes factors such as external variables (confidence, risk and personal data protection, commitment, perceived value), Attitude towards use, Perceived Behavioral Control, Behavioral Intention, Social Influence, Voluntariness, Facilitating Conditions.

The results showed that users with a more behavioral intent to use a shopping website would tend to shop online. In addition, external variables are the main issue for users if they choose to buy online. The confidence and protection of personal data that certain websites offer, can make users more confident about purchasing from these websites. Their attitude towards the use of the website may also influence the purchase intention. However, social influence and facilitation conditions may not affect users. Without personal experience, users may choose not to shop online because of their social environment. They also think that the shopping website is no more suitable than the actual store, where there are various types of products and can buy them immediately, without worrying about any loss of delivery.

Lin et al. (2010) conducted a research in Taiwan with the primary aim of identifying the factors affecting consumer satisfaction with online shopping. In this research, the quality of information, the quality of the system, the quality of service, the product quality, delivery quality and perceived value were identified and used as prerequisites for user satisfaction. This study also revealed that these factors can affect online consumer satisfaction. The sample of the research consists of 390 students who had previous experience in online shopping. The results showed that consumer satisfaction was positively and significantly affected by information quality, system quality, quality of service, product quality, delivery quality and perceived price. In addition, delivery quality was the most important factor, followed by product quality. Evidence from this research suggests that e-commerce providers should pay more attention to where products are procured, and work with suppliers to deliver a higher quality of delivery such as ordering properly, in a timely manner and no damage.

Maditinos and Theodoridis (2010) conducted a research in Greece that aimed to validate the effect of seven, based on literature, factors (quality of product information, quality of user environment, quality of information on service, easy purchasing process, safety perception, product attractiveness, user involvement) on consumer satisfaction. The authors tested a set of assumptions about the effect of the above factors on overall satisfaction. They also tested a set of assumptions about the effect of satisfaction on behavior after the market was made.

The data were collected by e-mail questionnaires and a total of 359 replies were received. A sample of the survey was Greek consumers who had made an online purchase from a Greek online store. The results of the research showed that the quality of product information and the quality of the user environment have a significant impact on overall satisfaction, while the quality of service information, easy purchasing process, safety perception and product attractiveness only have a positive impact. In addition, the findings showed that customer satisfaction greatly influences post-market behavior.

Abadi et al. (2011) conducted a survey in Iran, in order to explore a conceptual framework for analyzing customer perceptions of online shopping. The data were collected through a questionnaire and the sample of the study consisted of 217 randomly selected students of a university, because students represent the majority of internet users in Iran. The results showed

that perceived risk, which is a barrier factor against the use of new systems, is the main factor that adversely affects consumers' intentions to make online purchases.

Also, trust is the most important factor that influences consumer behavior. In addition, perceived enjoyment, perceived usefulness, corporate reputation and social influence have an impact on consumer intentions. The perceived enjoyment was affecting the strongly intend to buy from perceived utility, and both have a positive impact. The reputation of the company is a crucial and important factor in consumer judgment, while social influence promotes online shopping and influences it through usefulness and enjoyment.

Delafrooz et al. (2011) conducted a survey in Malaysia, which aimed to identify the factors that influence consumers' attitude towards online shopping and market intention. Researchers have developed a new model based on the Attitude Model and the Theory of Designed Behavior. The new model included convenience, homepage, customer service, pricing, broader choices and fun, all of which focused on consumer attitudes. While the factors related to market intention were self-efficacy, prior experience, cost, accessibility, confidence and security. Data were collected through a questionnaire and the sample of the study was 370 randomly selected university students because they are generally considered to be better internet users.

The results have shown that online retailers should deliver more benefits to consumers in advance, thus keeping a positive attitude towards online shopping. That is, online retailers need to ensure that the process of buying from their websites should be as simple, easy and convenient as possible for consumers. Websites are designed in such a way as to not confuse potential customers who may not be familiar with this new form of shopping. In addition, online retailers should provide a competitive price for their products designed to attract online consumers and encourage them to make purchases (Verhoef, Langerak, 2001).

2.6.1 Risks in Electronic Transactions

Any threat that attempts to steal and exploit any sensitive information seen in an online transaction; it is considered a risk to an online transaction. The types of such threats vary, where the following being the most common risks of electronic transactions (Mohanty, Seth, Mukadam, 2007):

- ✓ Smuggling of data
- ✓ Destruction or alteration of data
- ✓ Malicious hacking
- ✓ Credit card fraud
- ✓ Phishing
- ✓ Autonomous malware (Viruses, worms, Trojan horses)

2.6.2 Consumer Risk Perception in On-Line Shopping

The reluctance of many consumers to make electronic transactions means that there are risks, that the consumer opposes. According to Lim (2003), the perceived risk has been shown to have a negative impact on the adoption of B2C e-commerce and e-banking, and customers have also been shown to be concerned about the possibility of credit card fraud. According to the theory of perceived risk, consumers are at risk because they face uncertainty and are likely to suffer adverse effects as a result of e-commerce (Barnes, Vidgen, 2003).

As mentioned earlier, the technological advancement or security of websites does not seem to be a sufficient condition for the level of credibility needed to be created, so that the perceived risks to consumer glass are perceived and electronic transactions are carried out properly. In other words, there is a limitation to the credibility that can be created with the help of technology. In order for e-businesses to feel the perceived risk, they must first recognize the consequences of different types of risk, as well as their sources. By creating categories / types of perceived risk, it is intended to make it easier to handle the risk by marketing experts to develop more effective strategies for saying it. The nine (9) different types of risk that consumers face in e-commerce, are as follows (Janda, Trocchia, Gwinner, 2002):

- ✓ The economic risk involved in the possibility of losing money, the delivery of purchased products or services and the possibility of theft of credit card details. The financial losses can also be caused by the misuse of credit card codes by unreliable online businesses. There is also an economic risk when the consumer believes that he can find the same product, or a better-quality product, cheaper elsewhere than on the internet. In general,

economic or financial risk is related to the cost of purchasing the product, the cost of maintenance and the potential economic loss due to fraud. When it comes to using a 3D credit card as a means of payment, consumers are at greater risk in this case than if they were using their credit card to pay at a restaurant, because on the 3D internet they feel that they lose control (Wopperer, 2002).

- ✓ Perceived risk of performance: It is concerned on the quality and performance of the product. The fear that the product will not *work* as expected by the consumer based on the design of the product and its distribution on the company's website or that it will have a short shelf life.
- ✓ Perceived physical hazard: The consumer fears that the product or service he buys, from the internet, will have detrimental effects on his health. Also, the consumer perceives as a risk that the product in question may not be as good as it appears on the company's website.
- ✓ Perceived social risk: The consumer is concerned about how the social environment will perceive his/her online shopping behavior. Possible updating of the social position due to the product or service that someone bought through the internet.
- ✓ Perceived personal risk: The concern that the person will be harmed as a result of his or her purchasing behavior. For example, that he will suffer from the theft of the credit card code.
- ✓ Fear that the privacy of consumers' personal data will be violated by the collection of personal data and data related to their purchasing habits by online businesses and their possible use in an inappropriate and illegal manner without the consumer's knowledge and permission.
- ✓ Risk related to the reliability of online businesses, such as the fact that this business may not be realistic. The digital certificates allow customers to verify the actual owners of the website and whether the business actually exists.
- ✓ Risk associated with the loss of valuable time through online shopping, such as the fact that the online store may have a very slow response time and service, or the website may be loading too late. This risk is also related to the case in which the consumer spends time on a purchase on the internet and finds that the purchase he made was bad and the product or service was below his expectations.

- ✓ Psychological risk associated with the potential consumer to eventually feel frustrated or stressed about a failed purchase and be driven through the market to reduce his self-confidence. The consumer also perceives as a risk that the product may not arrive at the required time or that the computer may malfunction during the transaction.

It also refers to the frustration and shame that the consumer feels, when personal data or personal preferences are revealed to third parties. The dimensions recognized in electronic / virtual transactions, are similar to those recognized in traditional channels in the real world. The difference is that in the internet, some of these common dimensions of perceived risk are enhanced and have a greater impact on the consumer (Cases, 2002).

The dimensions do not all have the same effect on a consumer's intention to shop online. According to Crespo et al. (2009), the dimension of performance and economic risk have the greatest impact on consumers, both for those with relevant online shopping experience and for those who use the internet but have never purchased from an online store. Contrary to Liebermann's article in Stashevsky (2002), the two (2) main perceived dangers on the Internet are the theft of credit card information and the risk of espionage when sending personal data over the Internet, i.e. the dimensions of the perceived risk that pose a financial risk and risk of infringement, privacy risk.

The dimensions of perceived risk with the least impact, according to Crespo et al (2009), especially for those who have never been to online markets, are the time and social risk. The above types of risk are related to the consequences of an online transaction, i.e. the type of loss that consumers believe they will suffer as a result of their online shopping decision. Consequences like these can come from a variety of sources. For example, concern about breach of privacy may be a source of either hacker attacks or fraud on the part of the online store.

Recognizing the sources of perceived risks, it allows sellers who are active on the Internet to invest their resources more effectively so as to feel the perceived risk and attract consumers. The sources of perceived risks are technology, the seller, the product and the consumer (Lim, 2003). More specifically, the sources of anti-online shopping risks are related:

- ✓ Upon the use of advanced technology: Consumers may face difficulties such as delayed data retrieval, search problems, computer security issues, etc., and fear that they will suffer consequences due to a technology failure.
- ✓ The fact that the relationship between online businesses and customers is de facto impersonal and from the outset and the reliability of the online store: The anonymity of businesses on the Internet leads to potential risks such as product delivery or abuse the customer's personal information. Therefore, the consumer is aware of the risk posed by the online seller.
- ✓ With the influence and pressure that the consumer receives from his social environment.
- ✓ By the nature of the product: The consumer fears that he will suffer losses caused by the product he bought. The perceived risk associated with the product starts from the lack of opportunity for the consumer to examine the product through touch, vision and testing.

The above four sources may correspond to the nine types of perceived risk mentioned earlier (Lim, 2003). For example, the perceived economic risk is based on both technology (potential hacker attack) and the product (high product quality) and the seller (fraud case). Thus, the perceived psychological risk can be the source of both the seller (possible late delivery of the product) and the product (poor quality) and the tech (possible computer malfunction during the transaction - concern about whether the transaction took place). The perceived time risk may be due to technology (slow loading of the website) or the seller (late delivery of the product).

Therefore, it seems that these types of perceived risk can be attributed to several sources. Others as types of risk have the same source as the perceived social risk that has the consumer as the only source. It turned out that the seller of the internet, the product and the technology are related to six, five and four types of perceived risk respectively. According to Cases (2002), the possible sources of risk identified in e-commerce are the product, the impersonal and extreme nature of the transaction, the internet itself and its use as a mean of realizing markets, and finally the website, where the transaction takes place.

Chapter 3

Research Methodology

The Quantitative Research Approach

The purpose of quantitative research, it is to study and verify social phenomena through objective measurements and numerical analyzes. In quantitative research, the scholar relies on existing theories to come up with his own. To complete the research, it is necessary to verify the cases through numerical data.

The methodology on which the research of this specific dissertation was based is described in the following sections. More specifically, the sampling and the sampling method that was used are presented in detail, as well as the process by which the data was collected. In addition, the structure of the questionnaire used, as a necessary tool for data collection, necessary for the implementation of primary research is analyzed. The available sources used to study consumer behavior, were used to substantiate this research, and the role of trust, corporate reputation, perceived risk, and store appraisal influences the intention to purchase any product from online stores.

3.1 The Purpose of the Research

The basic purpose of the research is to collect, study and analyze the qualitative data so as to have a deeper understanding from the customers' perspective on how perceived risks/benefits influence their attitude towards online shopping.

3.2 Research Questions

The specific research questions of the dissertation are set as follows:

- ✓ What influences the decision of a buyer to buy on-line instead buying in store?

- ✓ Is there a difference between men and women consumers in their attitude concerning on-line shopping due to Covid-19?
- ✓ Is there a difference between the way men and women consumers consider important the Time-consuming product return and changing procedures in on-line shopping?
- ✓ Which are the buyers' main concerns when shopping online?

3.3 Design of the Questionnaire

This questionnaire was designed to anonymously assess a deeper understanding from the customers' perspective on how perceived risks/benefits influence their attitude towards online shopping. It consists of demographic questions (age, gender, level of education, professional status) and some general questions (if the respondent has ever shop online, how often does he shop, how long ago he started shopping online), and questions around the variables being studied.

To create the questionnaire, questions were used from the English language. The questionnaire was then created electronically using the Google Forms tool. In this way, it was easily distributed through Email and Social Media. This particular Google tool offers the ability to display data instantly at any time, there is also the ability to transfer them directly to an Excel spreadsheet. The answers that were transferred to the excel account were processed with the help of the IBM SPSS Statistics program. The latter was used as the main tool for statistical analysis of the data collected in order to verify or not the research cases that have been defined.

The completion of the questionnaire was done anonymously by 126 respondents after the oral consent had been obtained from each person. The sample of the questionnaire consists of people aged 18 and over, who live in Cyprus. It took one (1) month from the distribution to the collection of the desired number of samples. The sample was selected randomly between the various citizens acting as customers in markets of Cyprus, as from end March to 26th April 2020. The respondents answered the questions of the questionnaire through Google Form research.

3.4 The Sample of the Research

The sample of the research is concerned by 126 respondents where the 54.8% of the participants were female and the rest 45.2% were male. The 27% of the participants were from 45-54 years old, the 44.4% were from 25-44 years old, the 15.9% were from 55-64 years old, the 7.9% were from 15-24 years old and the 4.8% were from 65 years old and up. The 82.4% of the participants were Cypriots and the rest 17.6% were EU and Non-EU Citizens living in Cyprus. The 46% of the participants had a master's degree, the 27% had a bachelor's degree, the 11.9% were High school graduates, the 11.1% had other professional qualifications and the rest 4% had a Doctorate degree. Finally, the 24.6% of the participants said that they had an income of more than 2501 euros per month, the 20.6% had an income of 1001 – 1500 euros, the 19.8% had an income of 2001 – 2500 euros, the 15.9% had an income of 1501 – 2000 euros, the 11.9% had an income of 500 – 1000 euros and the 7.1% had zero income.

3.5 Limitations of the research

The convenient method of non-probability sampling has been used, since there was no possibility for direct contact with the participants and as the survey was effected via internet there was no clarification, where necessary, of the questions. Also by using a different sampling method the participants could be more representative of the whole population, and we could have the chance to target groups of participants

A second limitation was the sample size, as a larger size of responds would be preferable in order to get a better understanding of the issue and more accurate outcomes.

As originally planned but due to Covid-19, was not possible to implement, would be interesting to get a bigger sample with personal contact from frequent online buyers, in order to understand their attitude against risk/benefits of online shopping and also concentrate on the after Covid-19 impact. The participants could be more representative of the whole population by using another method to collect primary data, as with the one used there was no chance to target groups of participants

Chapter 4

Results Analysis

4.1 Demographic characteristics of our sample

Gender

The 54.8% of the participants were female and the rest 45.2% were male. The relevant pie chart follows below.

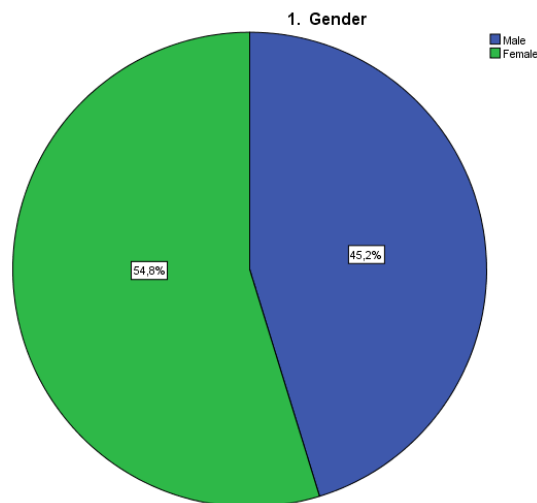


Diagram 1. Gender

Age

The 27% of the participants were from 45-54 years old, the 44.4% (accumulatively) were from 25-44 years old, the 15.9% were from 55-64 years old, the 7.9% were from 15-24 years old and the 4.8% were from 65 years old and up. The relevant bar chart follows below.

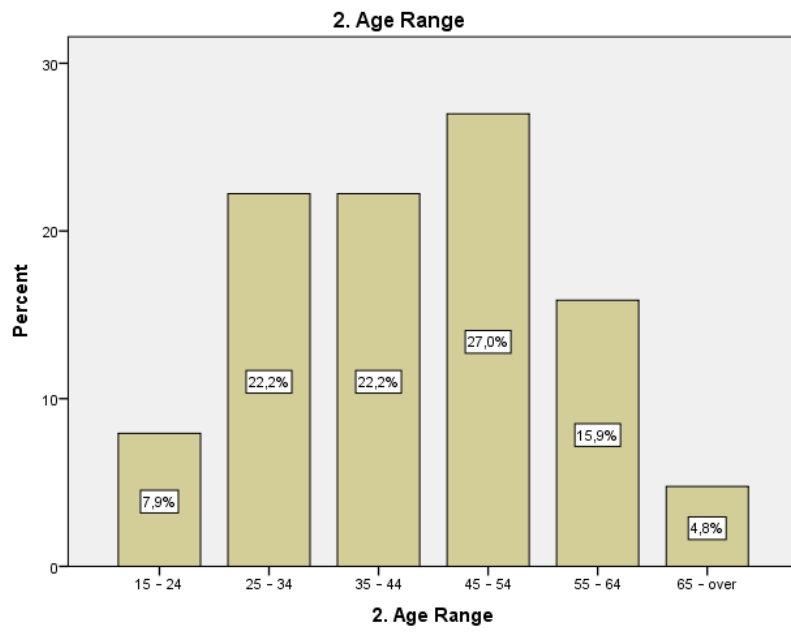


Diagram 2. Age

Nationality

The 82.4% of the participants were Cypriots and the rest 17.6% were EU and Non EU Citizens living in Cyprus. The relevant pie chart follows below.

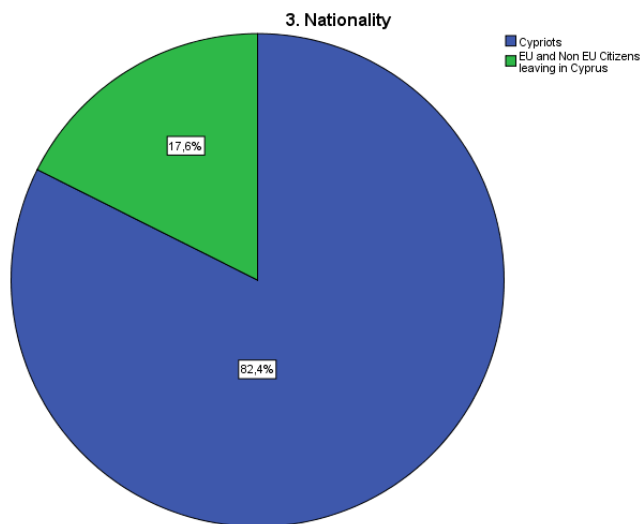


Diagram 3. Nationality

Educational level

The 46% of the participants had a Master Degree, the 27% had a Bachelor's degree, the 11.9% were High school graduates, the 11,1% had other professional qualifications and the rest 4% had a Doctorate degree. The relevant bar chart follows below.

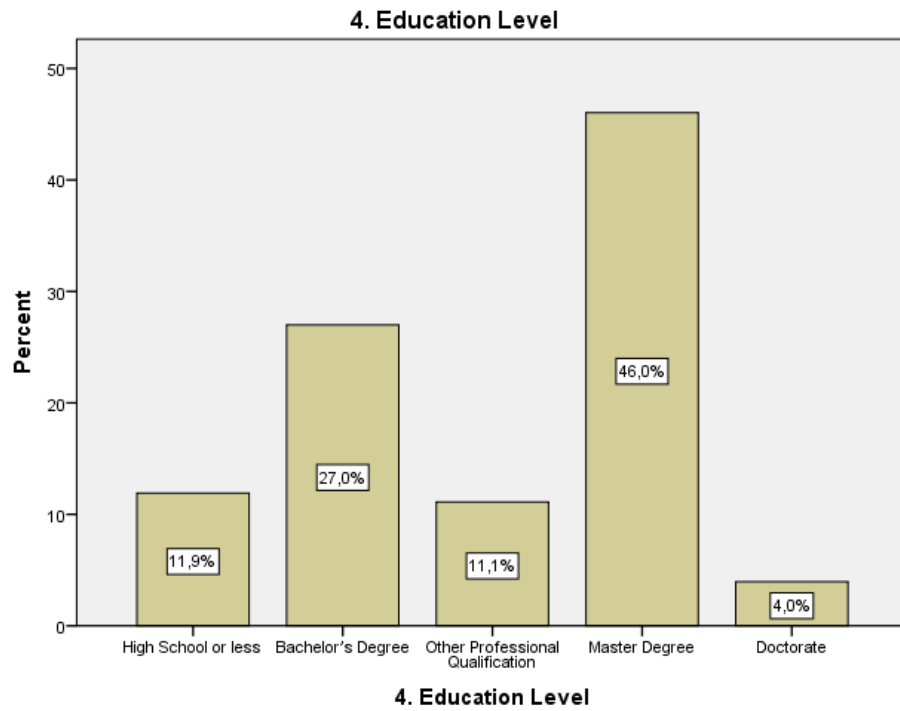


Diagram 4. Education level

Employment Status

The 82.5% were employed, the 7.9% were retired and another 7.9% were students. The rest 1.6% participants were unemployed. The relevant bar chart follows below.

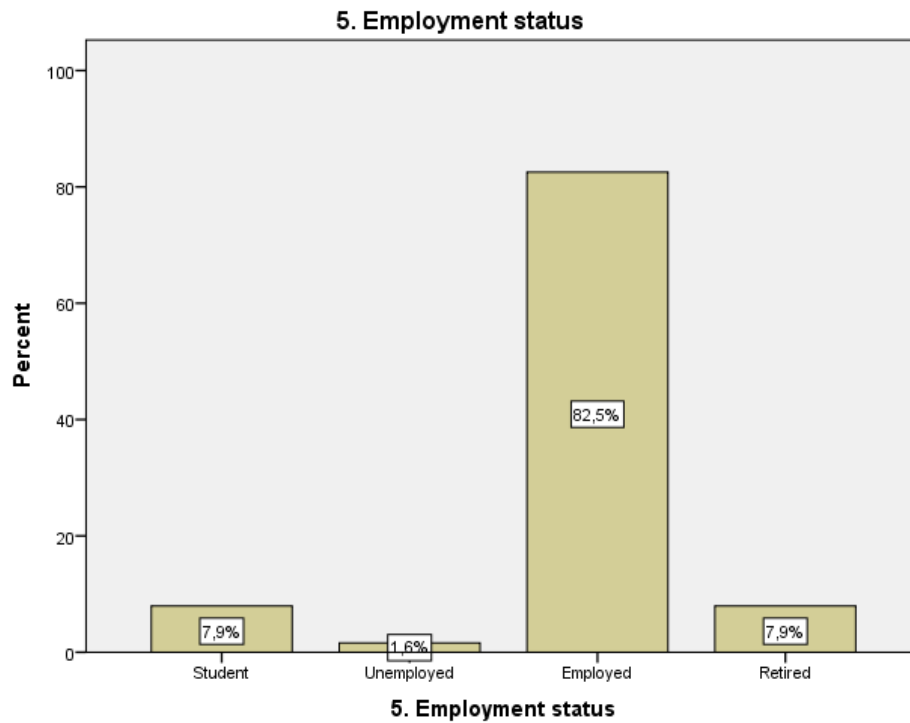


Diagram 5. Employment status

Monthly Income Range (€)

The 24.6% of the participants said that they had an income of more than 2501 euros per month, the 20.6% had an income of 1001 – 1500 euros, the 19.8% had an income of 2001 – 2500 euros, the 15.9% had an income of 1501 – 2000 euros, the 11.9% had an income of 500 – 1000 euros and the 7.1% had zero income. The relevant bar chart follows below.

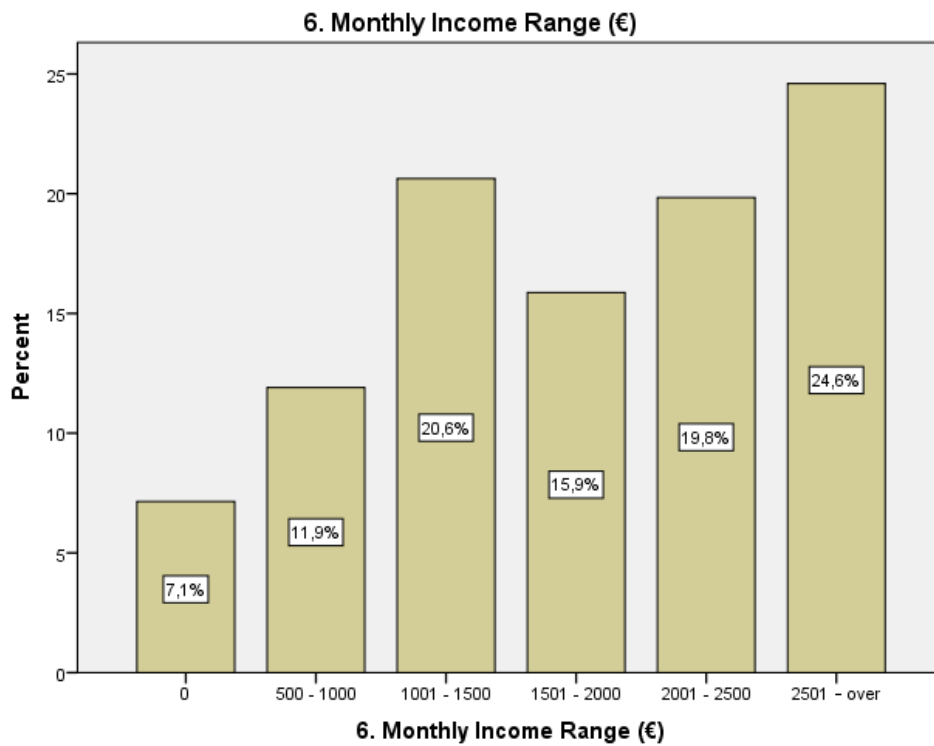


Diagram 6. Monthly Income Range

Shopping habits (Q7,Q8,Q9)

The 49.2% of the participants said that they go shopping for Groceries/daily necessities 1- 5 times per month, the 32.5% 6-10 times per month, the 9.5% 11-15 times per month, the 4.8% said that they never go shopping for Groceries and the rest 4% go from 16 times and up. The relevant bar chart follows below.



Diagram 7. Shopping groceries frequency per month

The 87.3% of the participants said that they go shopping for clothing 1- 5 times per month, the 9.5% they never go shopping for clothing and the rest 3.2% go shopping for clothing 6-10 times per month. The relevant bar chart follows below.



Diagram 8. Shopping clothing frequency per month

The 60.3% of the participants said that they do business shopping 1- 5 times per month, the 38.9% they never do business shopping and the rest 0.8% do business shopping 6-10 times per month. The relevant bar chart follows below.

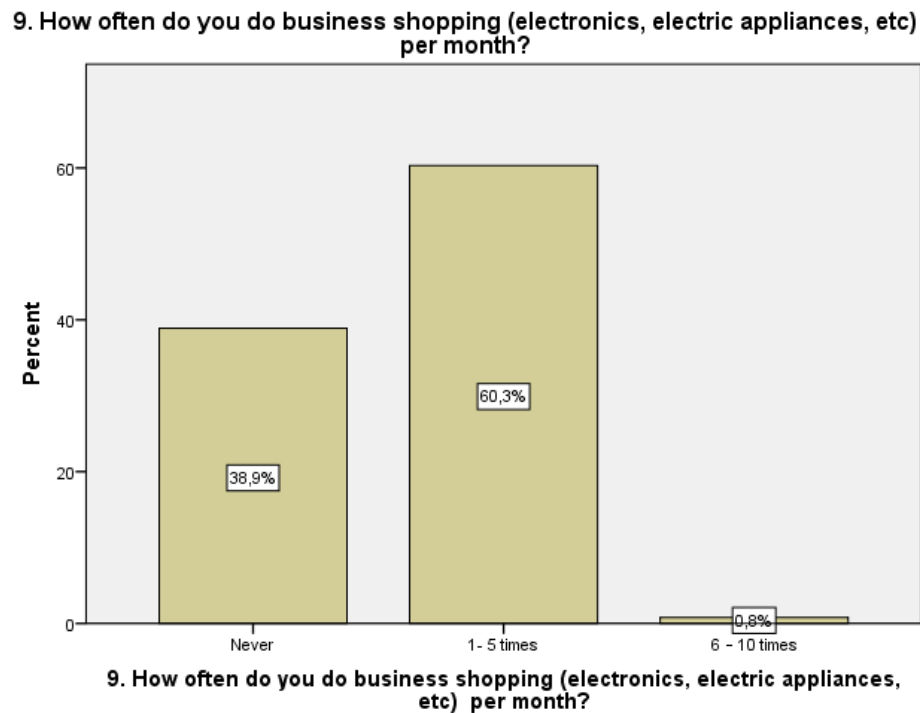


Diagram 9. Bussiness shopping frequency per month

Familiarity with internet e-shopping (Q10,Q11,Q12)

The 66.7% of the participants said that they use Internet for shopping/on-line transactions 1- 5 times per month, the 13.5% said that they never use Internet for shopping/on-line transactions, the 11.1% said that they use Internet for shopping/on-line transactions 6-10 times per month, the 5.6% 11-15 times per month and the rest 3.2% from 16 times and up. The relevant bar chart follows below.

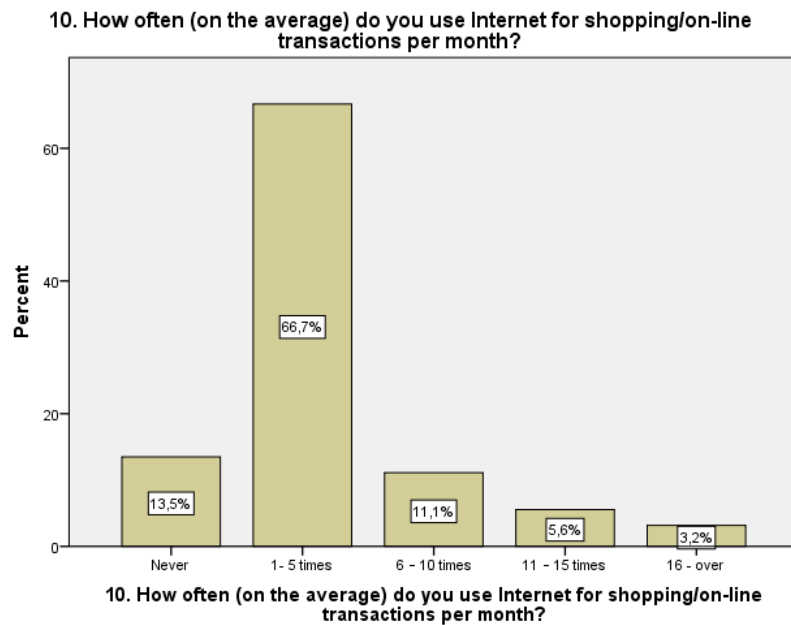


Diagram 10. Internet Shopping/on-line transactions frequency per month

The 54.8% of the participants said that they consider themselves as an experienced on-line shopper and the rest 45.2% do not. The relevant pie chart follows below.

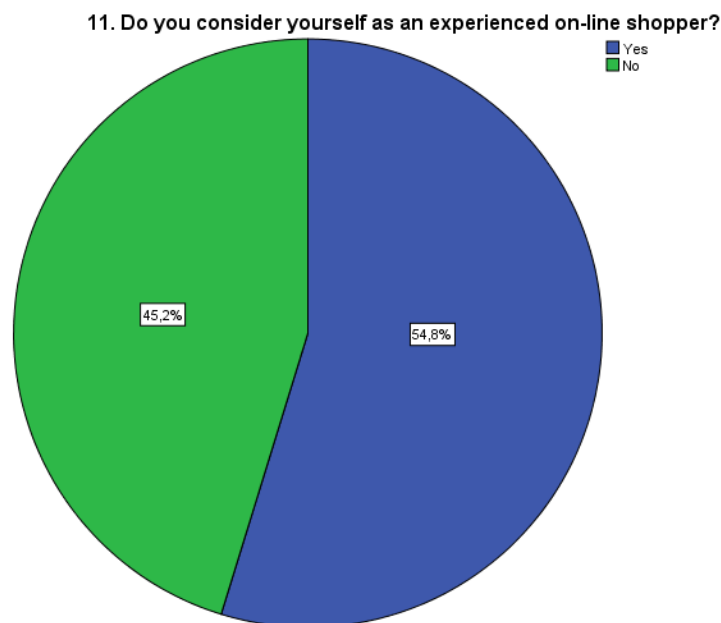


Diagram 11. On line shopping experience of participants

Main Reasons for not using e-shopping

The 58.5% of the participants that have never used e-shopping said that the most important reason for not using it was that they prefer to see/try products before buying, the 36.4% was that they prefer personal contact and assistance, the 23.1% was that they don't have internet access, the 19.2% that they are not familiar with technology, another 19.2% said that they don't trust internet transactions and the rest 9.8% said that they feel internet is too impersonal. The relevant chart and bar chart follow below.

12. If you have never used e-shopping, what are the reasons for not using it?

	most important %	2 %	3 %	4 %	least important %
No internet access	23,1	5,8	9,6	9,6	51,9
Not been familiar with technology	19,2	17,3	15,4	13,5	34,6
You don't trust internet transactions	19,2	23,1	25,0	19,2	13,5
You prefer personal contact and assistance	36,4	21,8	16,4	14,5	10,9
You prefer to see/try products before buying	58,5	17,0	11,3	5,7	7,5
You feel internet is too impersonal	9,8	19,6	33,3	13,7	23,5

*Note: the above percentages concerns only the participants that are not experienced in on-line shopping (almost the 60% didn't answer the questions)

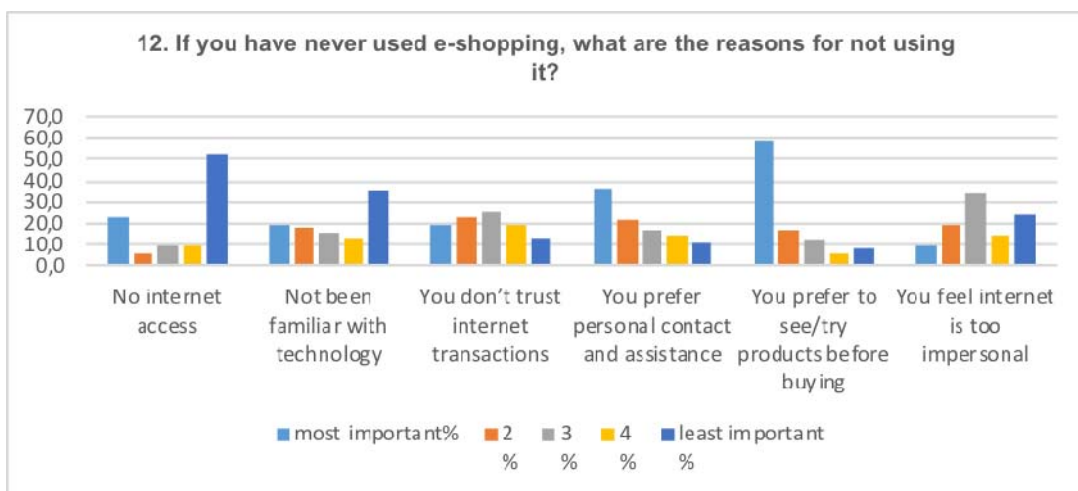


Diagram 12. Main Reasons for not using e-shopping

Following we have analyzed each reason separately:

The 21.4% of the participants that have never used e-shopping, said that the least important reason for not using it was that they don't have internet access and the 9.5% said that it was the most important reason.

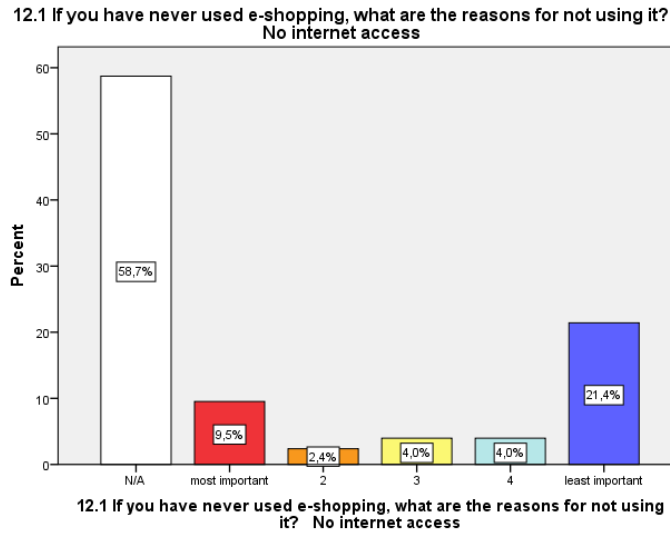


Diagram 12.1. How No Internet Access affects the use of e-shopping

The 14.3% of the participants said that have never used e-shopping, said that the least important reason for not using it was that they are not familiar with technology and the 7.9% said that it was the most important reason.

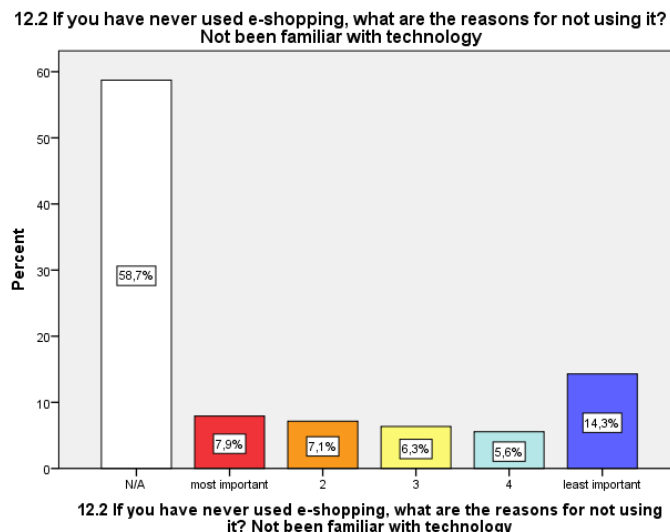


Diagram 12.2. How familiarity with technology affects the use of e-shopping

The 5.6% of the participants that have never used e-shopping said that the least important reason for not using it was that they don't trust internet transactions and the 7.9% said that it was the most important reason.

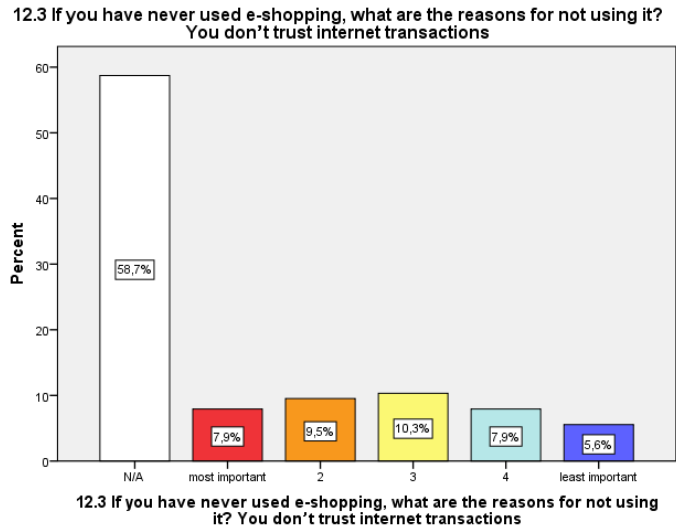


Diagram12.3. How trust on internet transactions affects the use of e-shopping

The 4.8% of the participants that have never used e-shopping said that the least important reason for not using it was that they prefer personal contact and assistance and the 15.9% said that it was the most important reason.

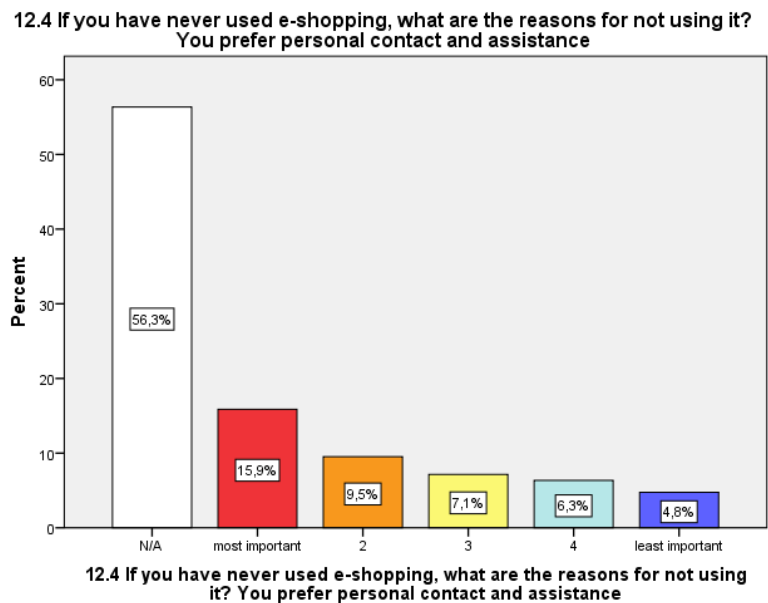


Diagram12.4. How personal contact and assistance affects the use of e-shopping

The 3.2% of the participants that have never used e-shopping said that the least important reason for not using it was that they prefer to see/try products before buying and the 24.6% said that it was the most important reason.

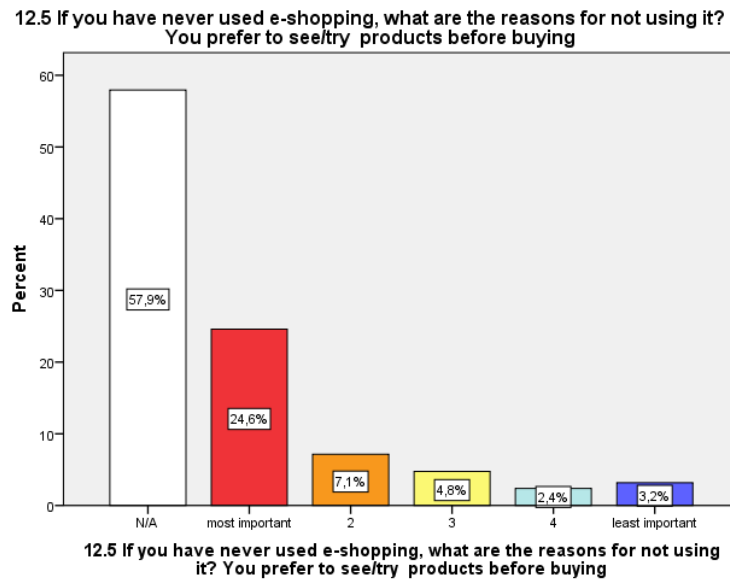


Diagram12.5. How the preference to see/try products affects the use of e-shopping

The 9.5% of the participants that have never used e-shopping said that the least important reason for not using it was that they feel internet is too impersonal and the 4% said that it was the most important reason.

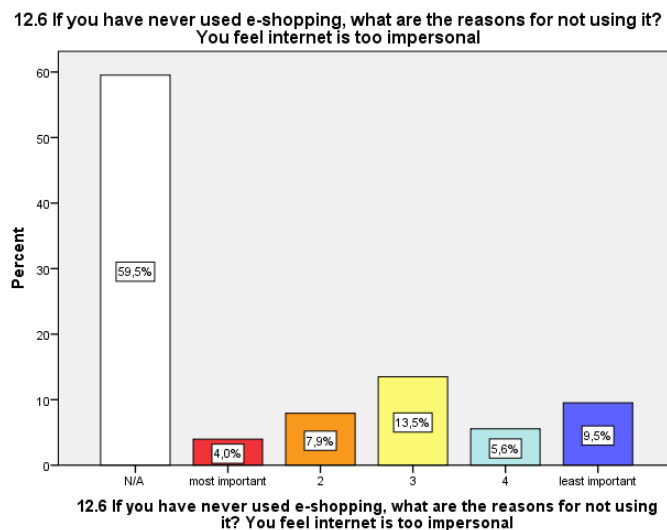


Diagram12.6. How the feeling that internet is too impersonal affects the use of e-shopping

The 12.7% of the participants that have never used e-shopping said that the least important reason for not using it was other reasons and the 4% said that it was the most important reason.

12.7 If you have never used e-shopping, what are the reasons for not using it? Other reasons

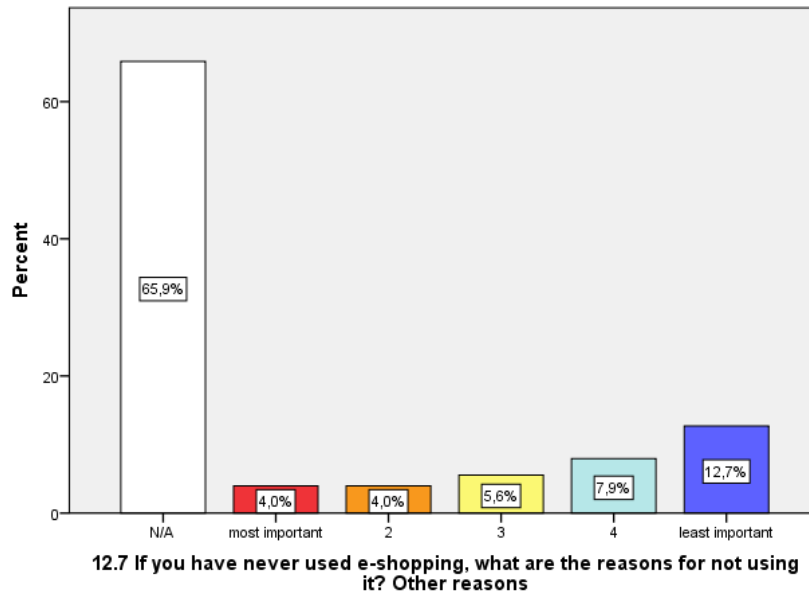


Diagram 12.7. How other reasons affect the use of e-shopping

Smartphones

The 23.8% of the participants who said that have never used e-shopping, use smartphones.

13.1 If you have never used e-shopping, do you use: Smartphones

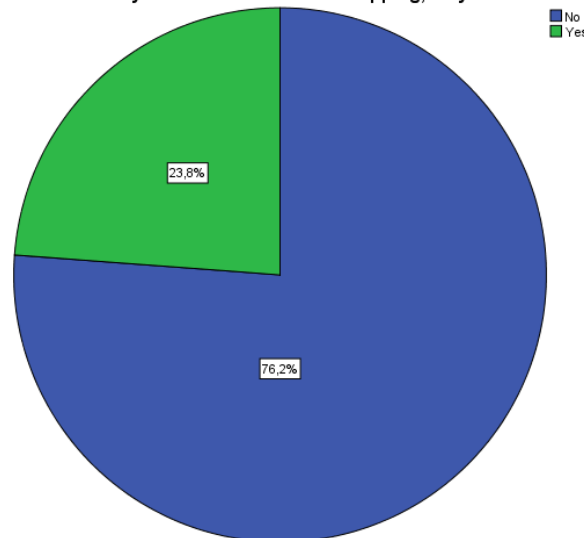


Diagram 13.1. Although never used e-shopping, do you use smartphones?

Computers

The 30.2% of the participants who said that have never used e-shopping, use computer.

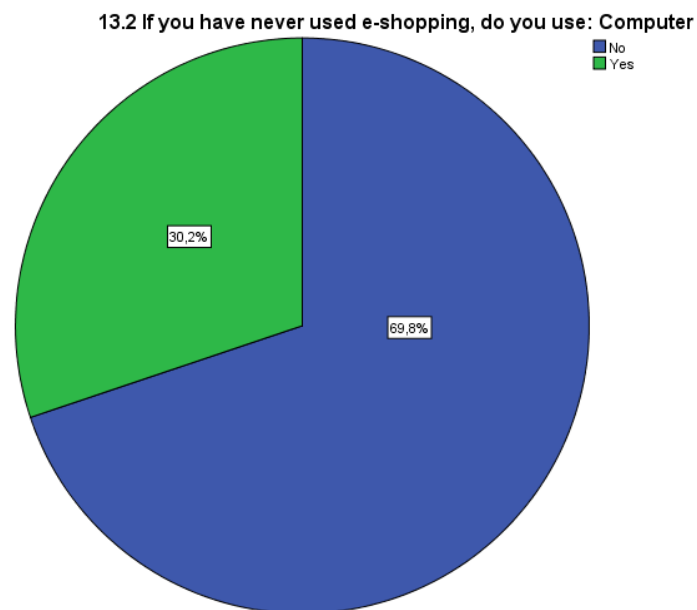


Diagram 13.2 Although never used e-shopping do you use computers?

Tablets

The 7.9% of the participants who said that have never used e-shopping, use tablets.

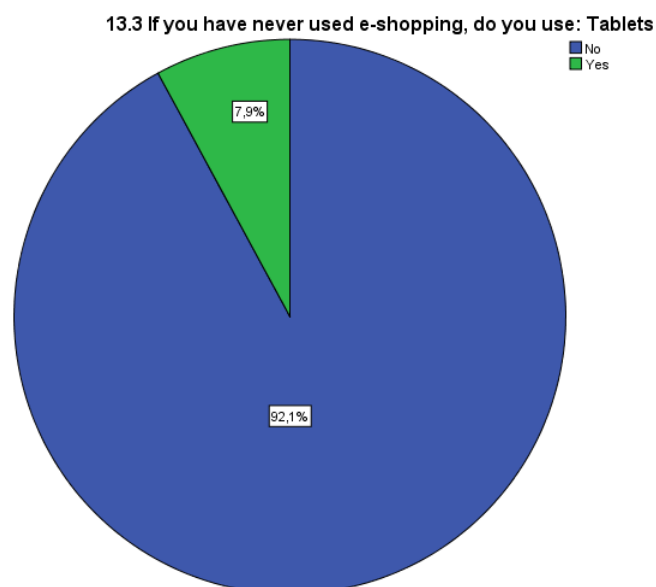


Diagram 13.3 Although never used e-shopping, do you use Tablets?

Social Media

The 16.8% of the participants who said that have never used e-shopping, use social media.

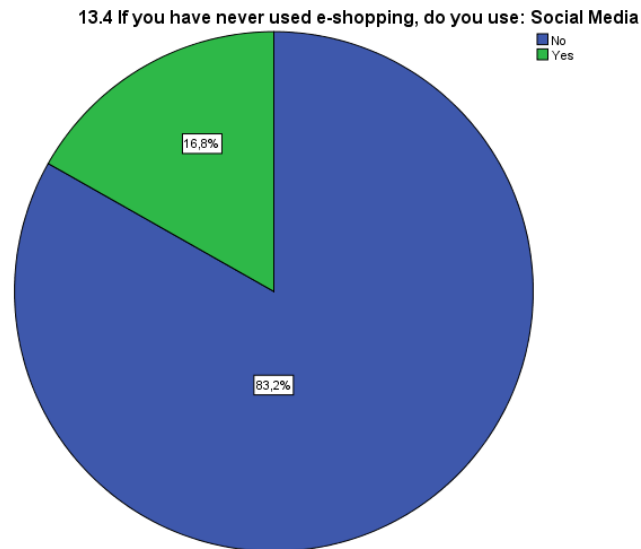


Diagram 13.4 Although never used e-shopping do you use Social Media?

Other

The 1,6% of the participants who said that have never used e-shopping, use other technologies.

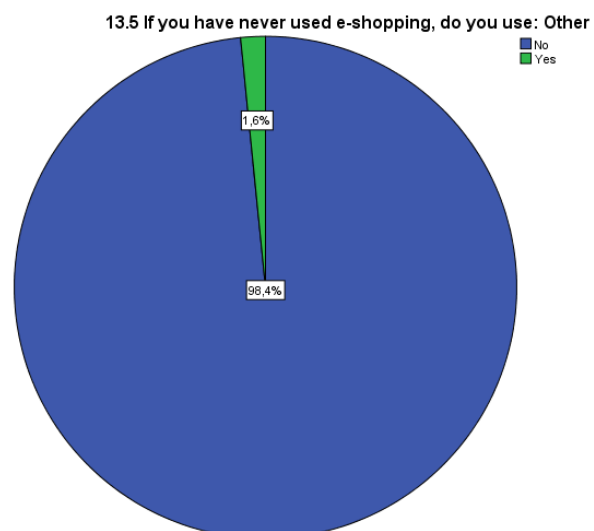


Diagram 13.5 Although never used e-shopping do you use Other technologies?

How long participants have been using e-shopping

The 45.2% of the participants said that they have been using e-shopping for more than 2 years, the 5.6% for 1-2 years, the 2.4% for 1-6 months and the rest 1.6% for 1 year. We must note that the participants that answered the question were 69 (54,8%), as the rest participants didn't use e-shopping. The relevant chart and bar chart follows below.

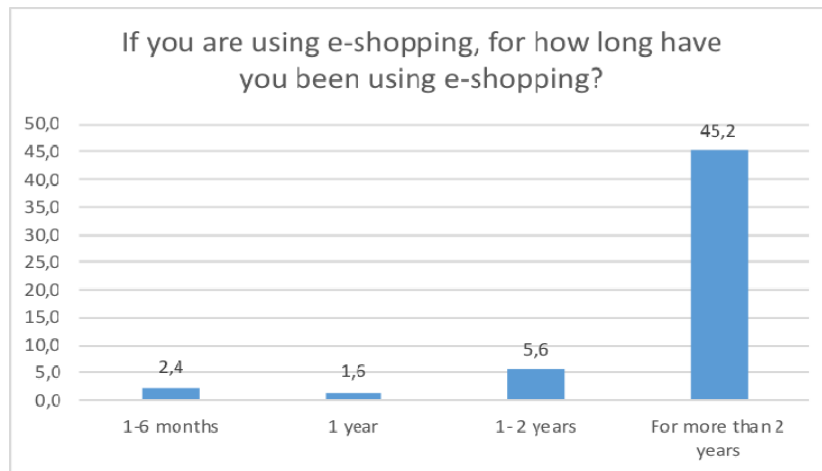


Diagram 14. How long participants have been using e-shopping

How is your decision on buying online instead of buying in-house is affected?

The 29.8% of the participants said that they are moderately affected on buying online instead of buying in-house by the ability of having internet access from multiple appliances and the 22.6% are highly affected. The relevant bar chart follows below.

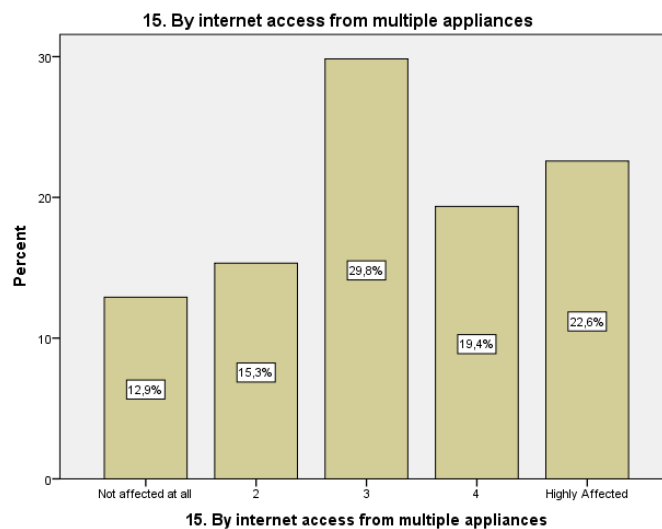


Diagram 15. How access from multiple appliances affects the use of e-shopping

The 41.9% of the participants said that they are highly affected on buying online instead of buying in-house by how well structured and user friendly is an online shopping store's platform and the 29.8% are quite affected. The relevant chart and bar chart follows below.

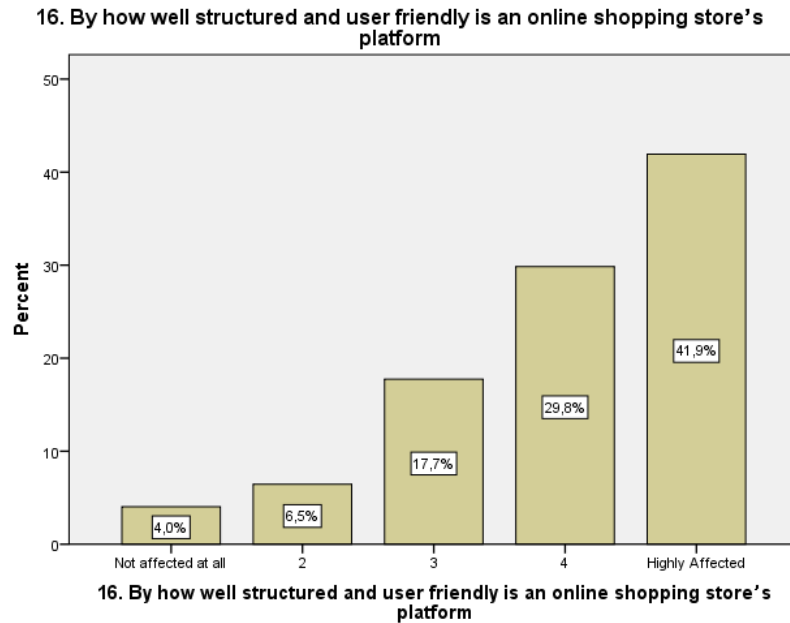


Diagram 16. How the structure of an online store affects the use of e-shopping

The 33.6% of the participants said that they are moderately affected on buying online instead of buying in-house by advertising of online stores and the 18.4% are quite affected. The relevant chart and bar chart follows below.

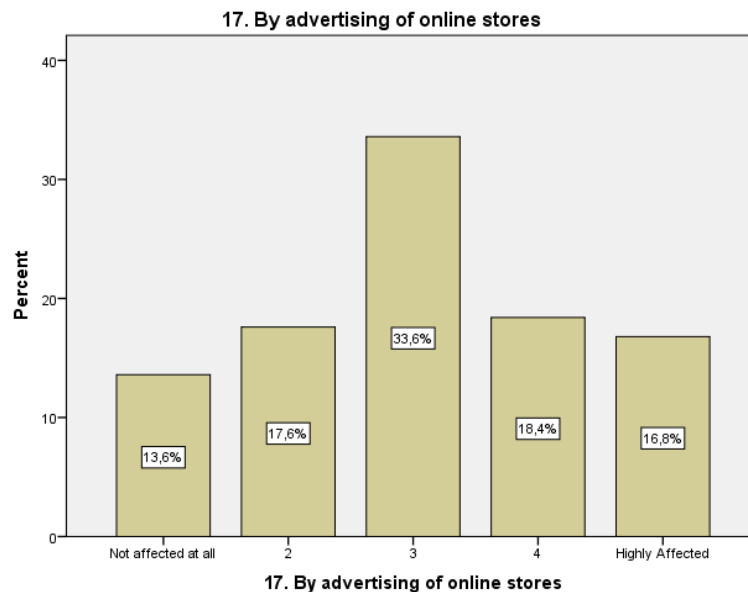


Diagram 17. How advertising of online stores affects the use of e-shopping

Participants declared as the most important reasons for using online shopping instead of shopping in house the 24 hours availability (50,8%), Saving time (47,9%), comfort/ convenience (45,5%) and wider selection of shops/goods (42,5%). See table and chart below.

18. Which are the main reasons for using online shopping instead of shopping in-house?

	most important %	2 %	3 %	4 %	least important %
Saving Time	47,9	17,4	11,6	11,6	11,6
24 hours availability	50,8	18,9	12,3	4,9	13,1
Wider selection of shops/goods	42,5	26,7	11,7	9,2	10,0
Geographic location of needed goods/services	33,6	25,2	22,7	7,6	10,9
Comfort/convenience	45,5	18,2	16,5	8,3	11,6
Security/Personal safety (not having to go outside)	16,4	21,6	26,7	15,5	19,8
Privacy	19,0	19,8	27,6	16,4	17,2
Better prices	33,6	23,8	23,0	13,1	6,6
Delivery at home	35,8	21,7	18,3	15,8	8,3

Table 1. Main reasons by importance for using online shopping instead of shopping in-house.

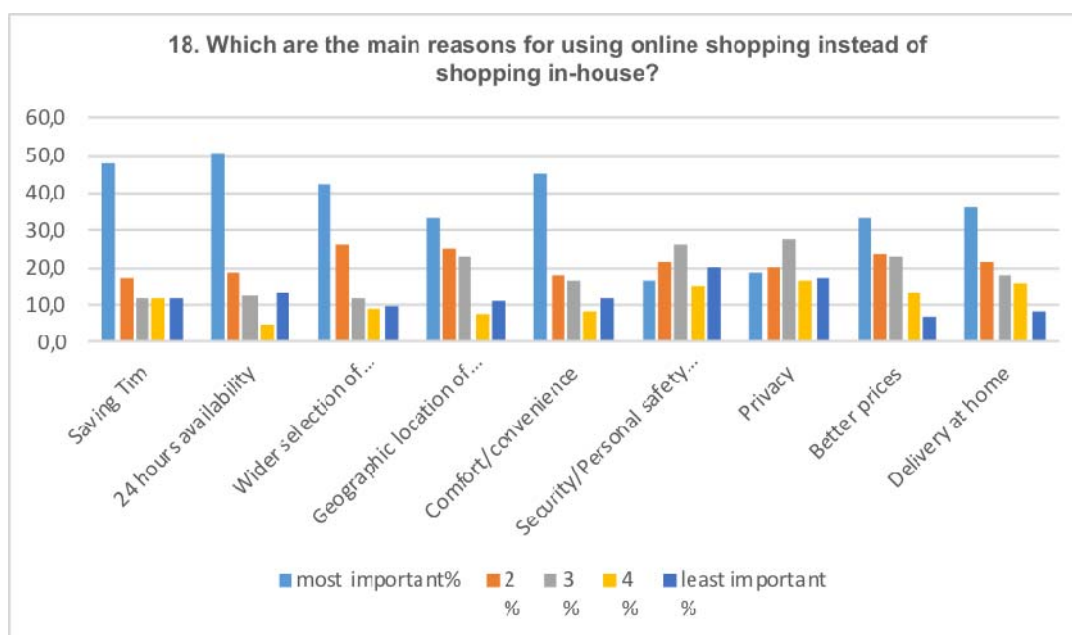


Diagram 18. Main reasons by importance for using online shopping instead of shopping in-house.

The 47,9% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house, is the fact that they save time.

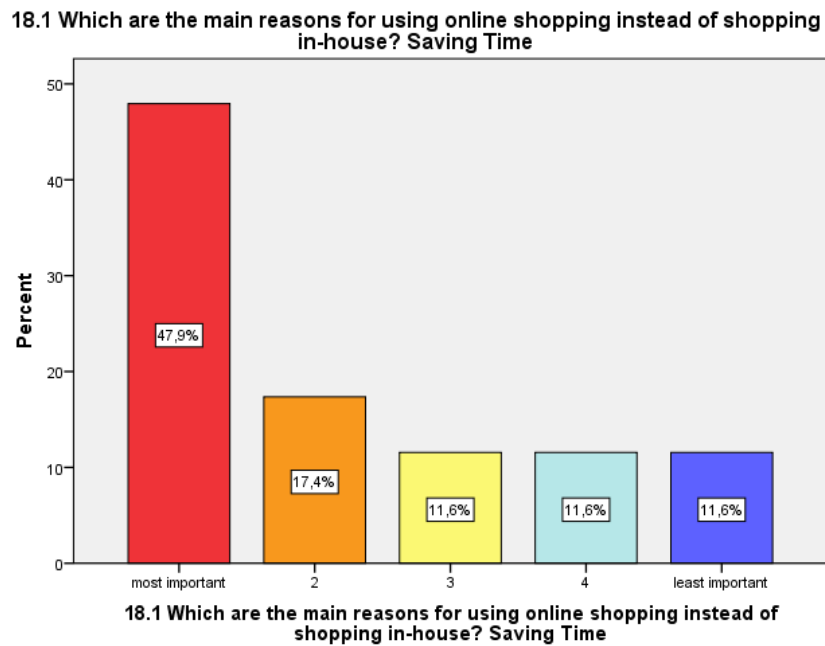


Diagram 18.1 Importance of saving time in deciding to use online shopping instead of shopping in-house.

The 50,8% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is the fact that it is 24 hours available.

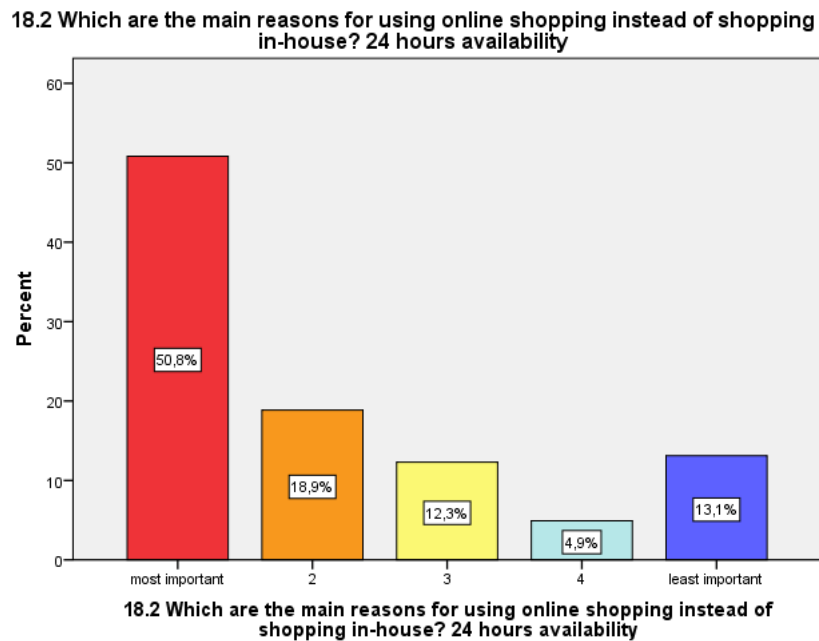


Diagram 18.2 Importance of 24 hours availability in deciding to use online shopping instead of shopping in-house.

The 42,5% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is the fact that there is the wider selection of shops/goods.



Diagram 18.3 Importance of wider selection of shops/goods in deciding to use online shopping instead of shopping in-house.

The 33,6% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is because of the geographic location of needed goods/services, as they have the chance to buy from all over the world.

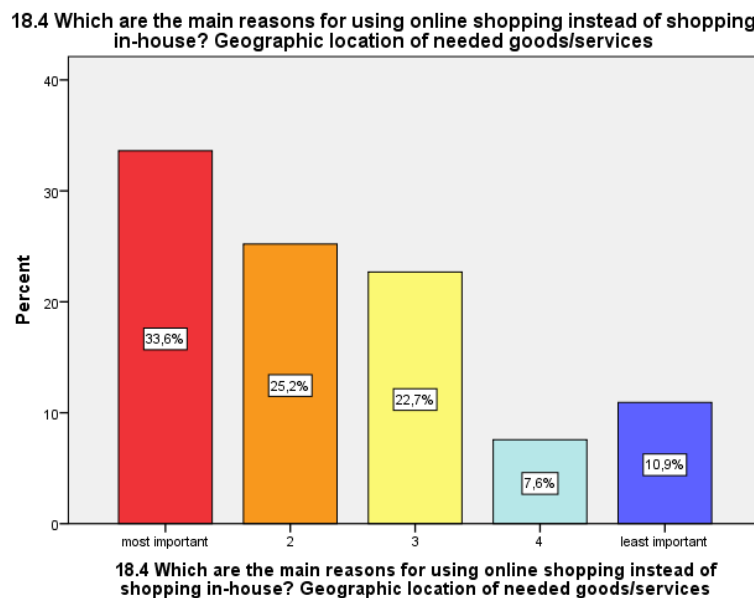


Diagram 18.4 Importance of geographic location of needed goods/services in deciding to use online shopping Instead of shopping in-house.

The 45,5% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house, is the fact that it is more comfortable/convenient.

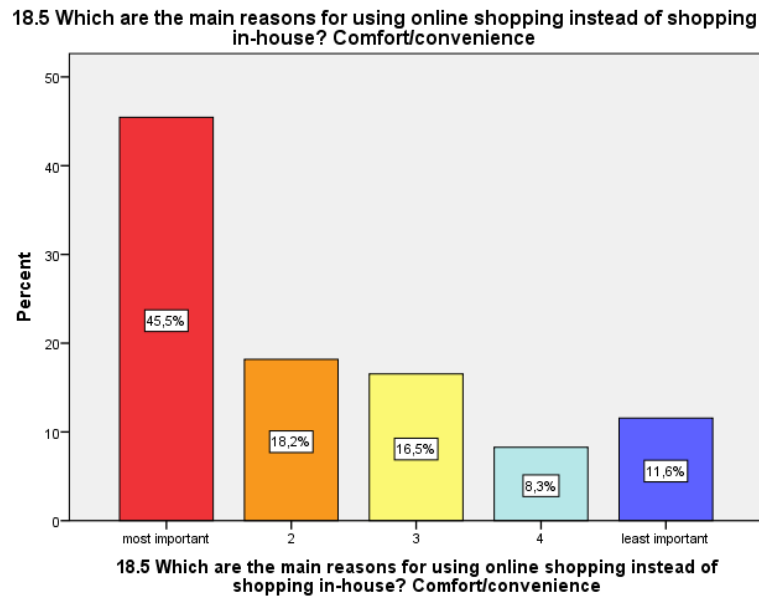


Diagram 18.5 Importance of comfort/convenience in deciding to use online shopping instead of shopping in-house.

The 16,4% of the participants declared that one of the most important reasons why they use online shopping instead of shopping in-house, is the fact that it offers them Security/Personal safety. This refers to personal safety and was most obvious lately with the lock down due to Covid-19, as people could use online shopping from home.

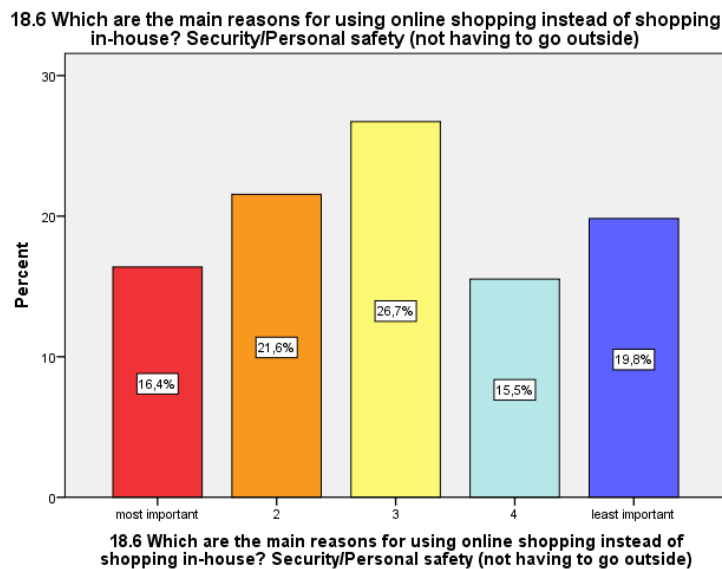


Diagram 18.6 Importance of security/personal safety in deciding to use online shopping Instead of shopping in-house.

The 19% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is the fact that it offers Privacy.



Diagram 18.7 Importance of privacy in deciding to use online shopping instead of Shopping in-house.

The 33.6% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is the fact that it offers better prices.

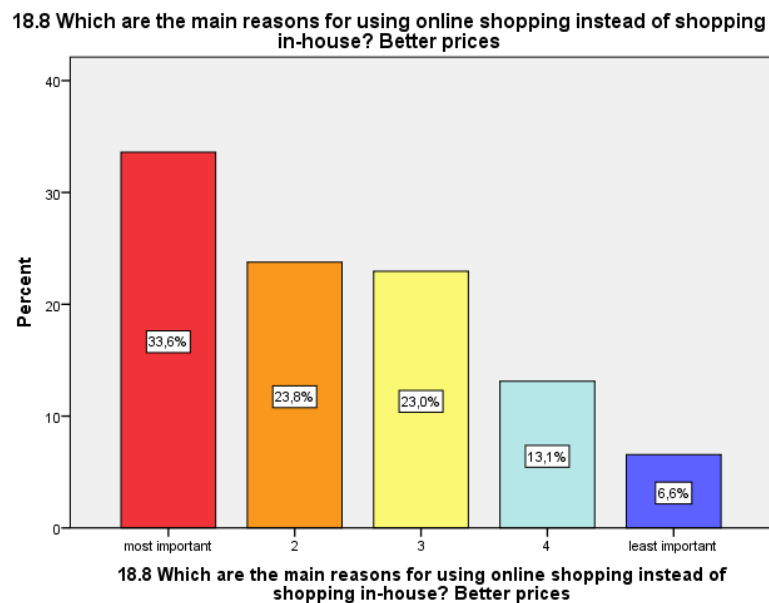


Diagram 18.8 Importance of better prices in deciding to use online shopping instead of Shopping in-house.

The 35.8% of the participants declared that one of the most important reasons for using online shopping instead of shopping in-house is the fact that it offers delivery at home.

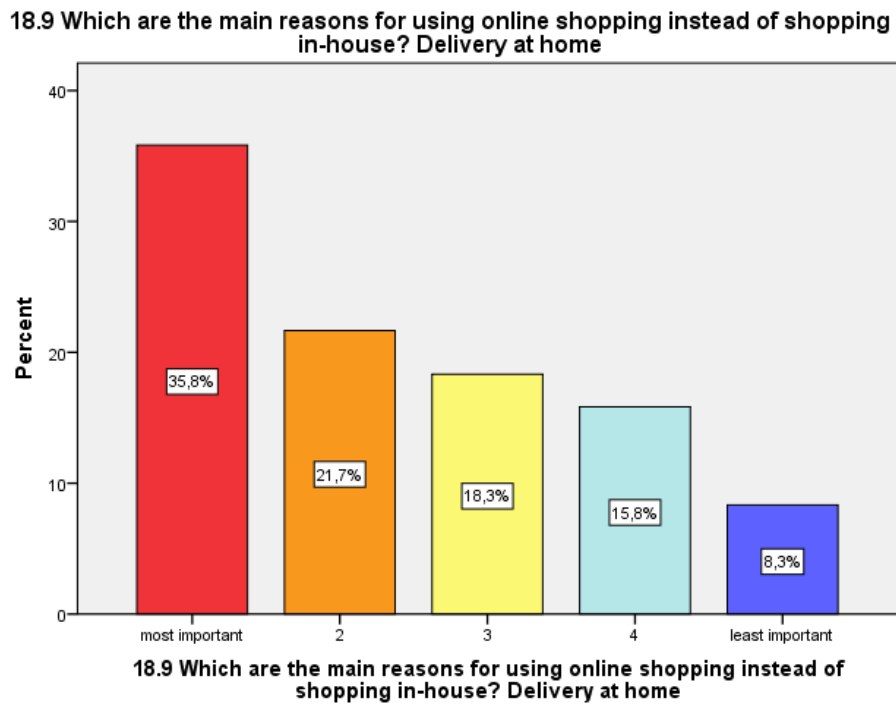


Diagram 18.9 Importance of delivery at home, in deciding to use online shopping instead of Shopping in-house.

The goods/services that the participants already buy online instead of buying in-house are analytically displayed in the following charts.

The 10,4% of the participants declared that they already buy online groceries instead of buying them in-house.

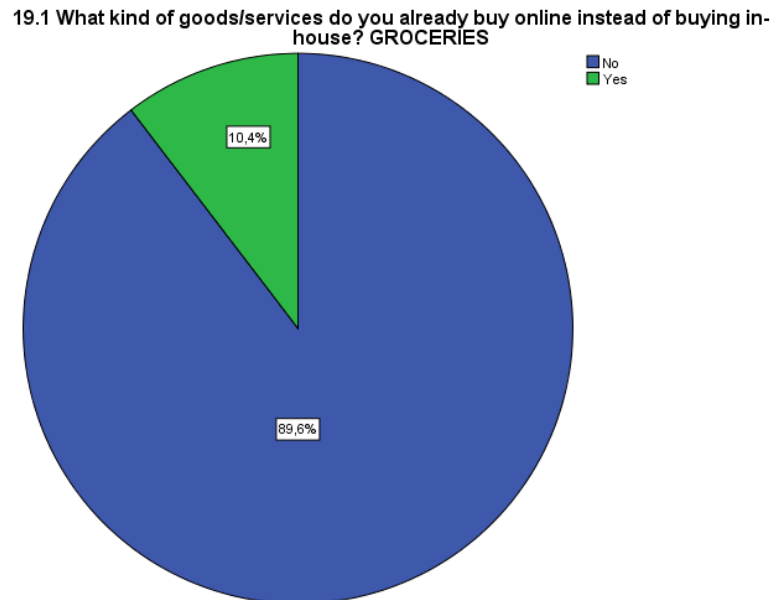


Diagram 19.1 Participants who already buy groceries online instead of buying in-house

The 58,3% of the participants declared that they already buy online Clothing/Shoes/Accessories instead of buying them in-house.

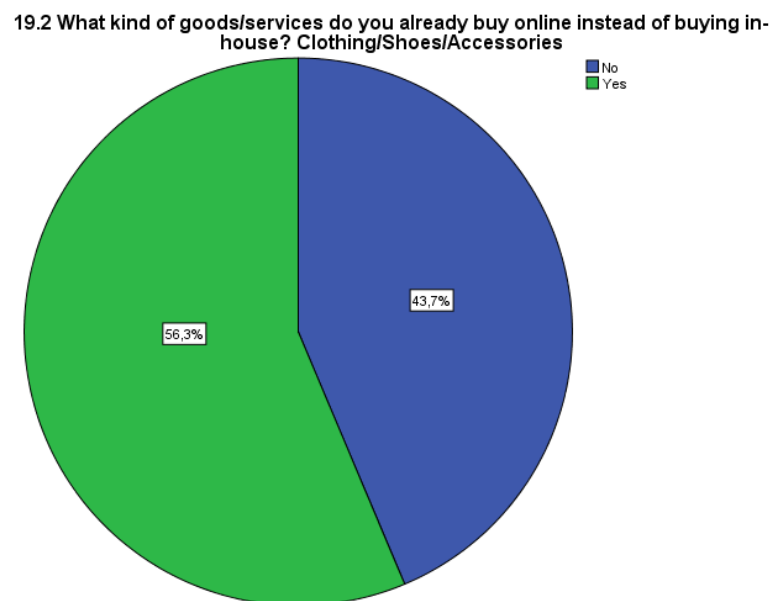


Diagram 19.2 Participants who already buy Clothing/shoes/accessories online instead of buying in-house

The 34,9% of the participants declared that they already buy online Decorations/utensils/household goods instead of buying them in-house.

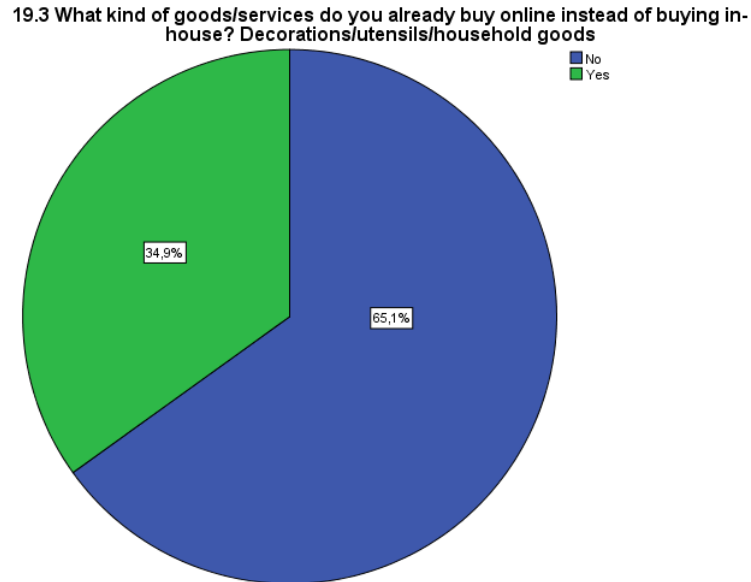


Diagram 19.3 Participants who already buy decorations/utensils/household goods online instead of buying in-house

The 34,9% of the participants declared that they already buy online Electronics/electrical appliances instead of buying them in-house.

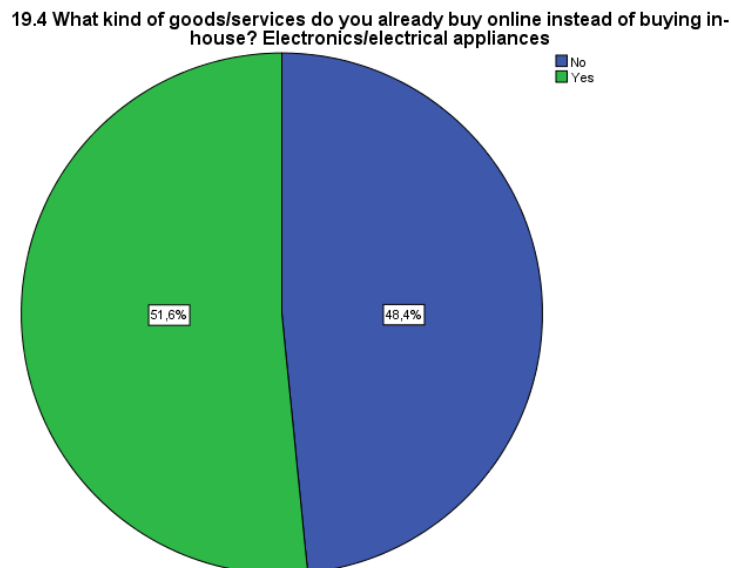


Diagram 19.4 Participants who already buy electronics/electrical appliances online instead of buying in-house

The 46% of the participants declared that they already buy online Books/cds/games instead of buying them in-house.

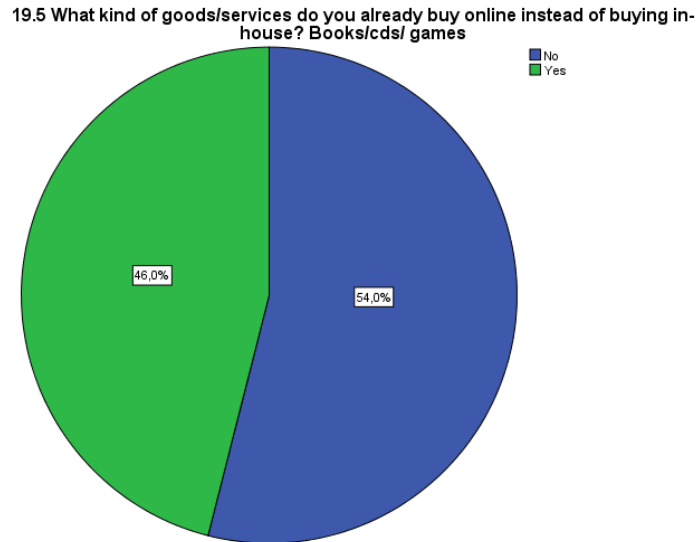


Diagram 19.5 Participants who already buy Books/cds/games online instead of buying in-house

The 52,4% of the participants declared that they already buy online Leisure services instead of buying them in-house.

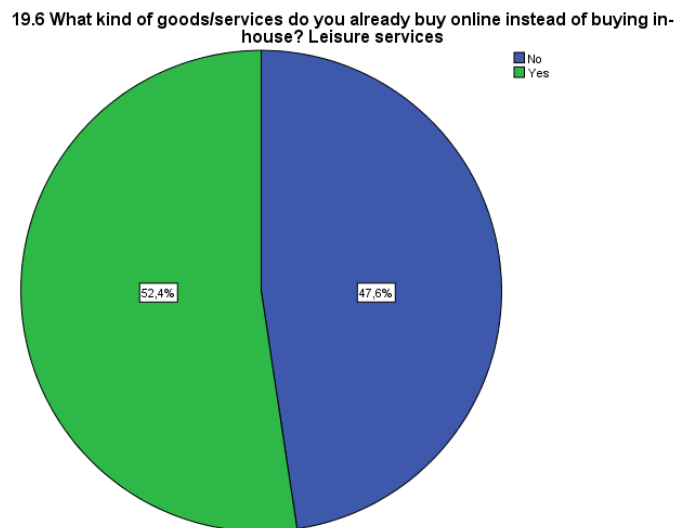


Diagram 19.6 Participants who already buy Leisure services online instead of buying in-house

The 70,6% of the participants declared that they already buy online Banking services instead of buying them in-house.

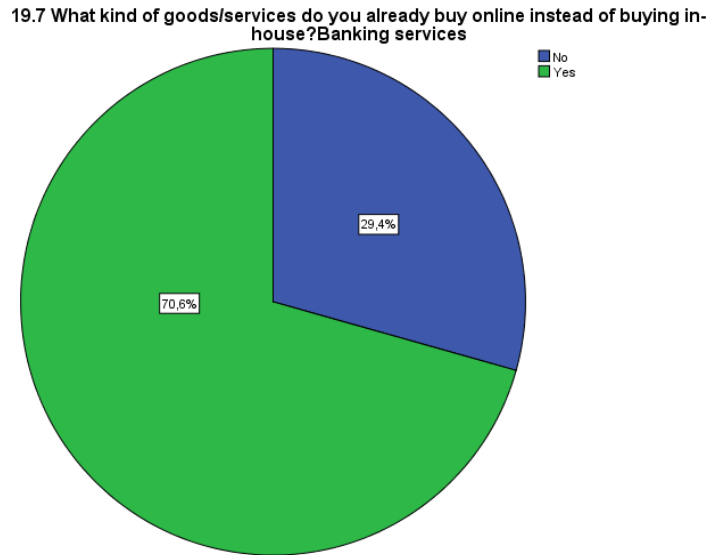


Diagram 19.7 Participants who already use Banking services online Instead of buying in-house

The 13,6% of the participants declared that they already buy online other things instead of buying them in-house.

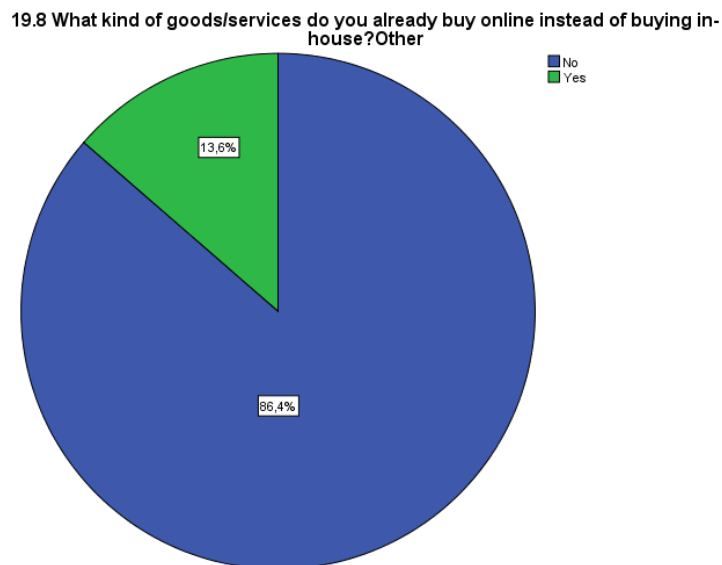


Diagram 19.8 Participants who already buy other things online instead of buying in-house

The goods/services that the participants intend to buy online instead of buying in-house are analytically displayed in the following charts.

The 23% of the participants intend to buy groceries online instead of buying in-house.

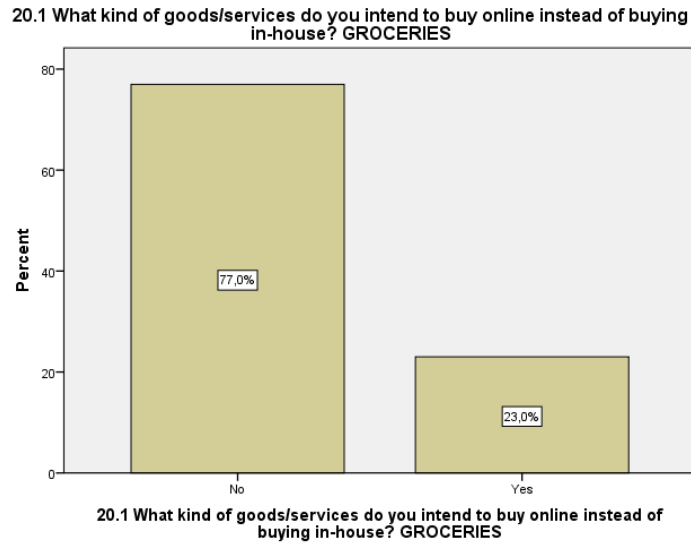


Diagram 20.1 Intentions of Participants to buy groceries online instead of buying in-house

The 44,8% of the participants intend to buy Clothing/Shoes/Accessories online instead of buying in-house.



Diagram 20.2 Intentions of Participants to buy Clothing/Shoes/Accessories online instead of buying in-house

The 31,7% of the participants intend to buy Decorations/utensils/household goods online instead of buying in-house.

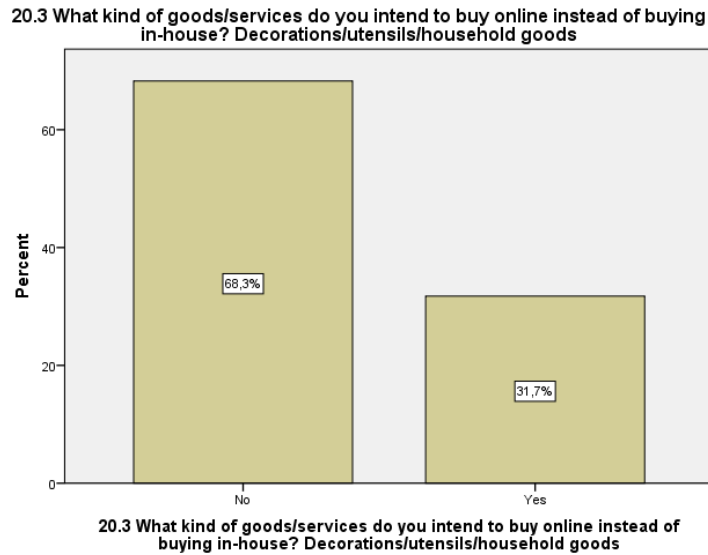


Diagram 20.3 Intentions of Participants to buy Decorations/utensils/household goods online instead of buying in-house

The 42,1% of the participants intend to buy Electronics/electrical appliances online instead of buying in-house.



Diagram 20.4 Intentions of Participants to buy Electronics/electrical appliances online instead of buying in-house

The 27% of the participants intend to buy Books/cds/ games online instead of buying in-house.



Diagram 20.5 Intentions of Participants to buy Books/cds/games online instead of buying in-house

The 27% of the participants intend to buy Leisure services online instead of buying in-house.



Diagram 20.6 Intentions of Participants to buy Leisure services online instead of buying in-house

The 34,1% of the participants intend to buy Banking services online instead of buying in-house.



Diagram 20.7 Intentions of Participants to buy Banking services online instead of buying in-house

The 50.8% of the participants declared that they feel more secure buying on-line things that they have already seen or tried in a physical store and the rest 49.2% gave a negative answer.

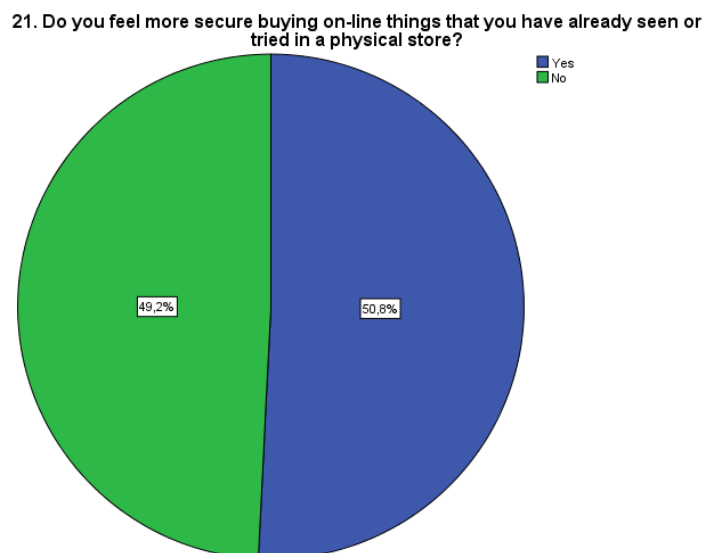


Diagram 21. Participants feeling more secure to buy online things that they have already seen or tried in a physical store

The 53.2% of the participants declared that Covid-19 changed their attitude against online shopping and the rest 46.8% gave a negative answer. The relevant pie chart follows below.

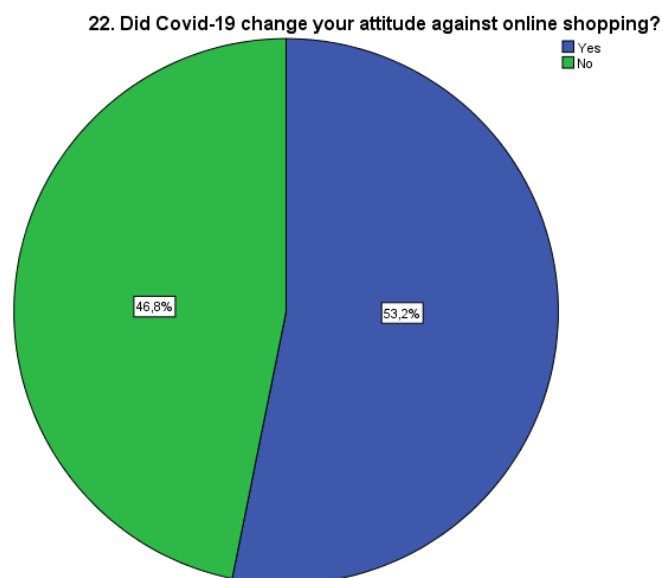


Diagram 22. Participants answers to question Did Covid-19 Change your attitude against online shopping?

23. Which are your main concerns when buying on-line?

	most important%	2 %	3 %	4 %	least important %
Safety on transaction	61,3	12,9	12,9	3,2	9,7
Goods never arriving, no possibility for a refund	37,1	27,4	18,5	5,6	11,3
Identity Theft/Credit Card fraud	50,8	24,2	10,0	7,5	7,5
Fake online stores	36,7	26,7	19,2	10,0	7,5
Incorrect/misleading description of goods/provided services	33,9	24,8	24,0	11,6	5,8
Misleading /Fake reviews	33,9	24	27,3	9,1	5,8
Incorrect delivery of goods	29,2	25,0	25,8	10,8	9,2
Order never arriving	26,1	28,6	22,7	9,2	13,4
Counterfeit Goods	28,6	23,5	26,9	10,9	10,1
Delivery time/Delay of arrival	21	29,4	33,6	9,2	6,7
Delivery charges costs	26,7	19	31,9	11,2	11,2
Time consuming changing procedures	25,6	29,1	26,5	8,5	10,3
Other	26,8	14,6	25,6	1,2	31,7

Table 2. Main concerns of participants, by importance, when buying online

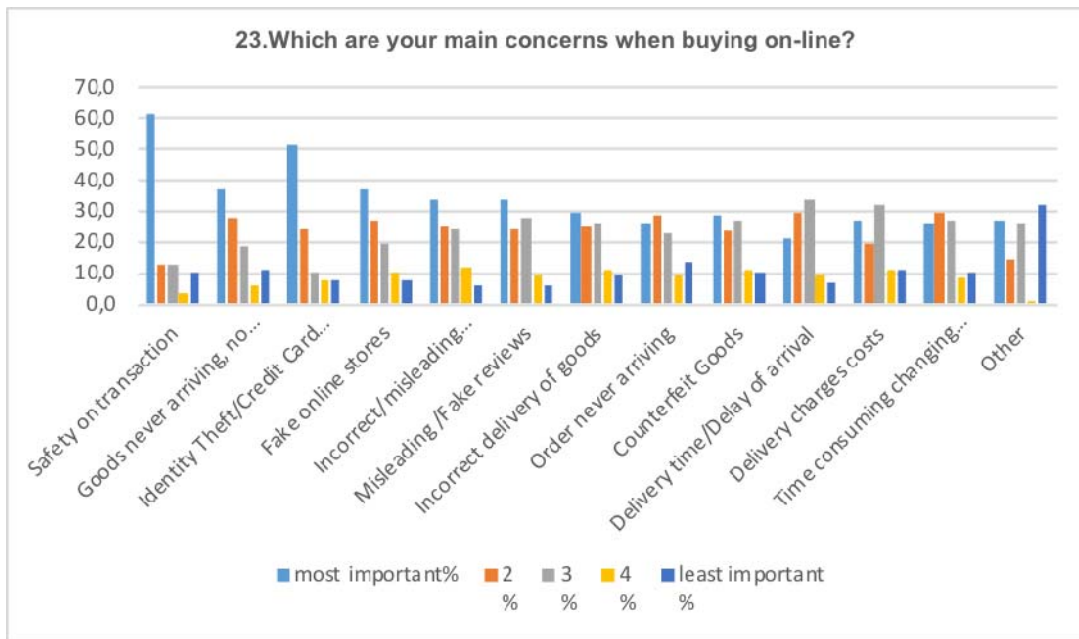


Diagram 23. Main concerns of participants, by importance, when buying online

Analytically, the 61.3% of the participants declared that their main concern when buying on-line is the Safety on transaction.

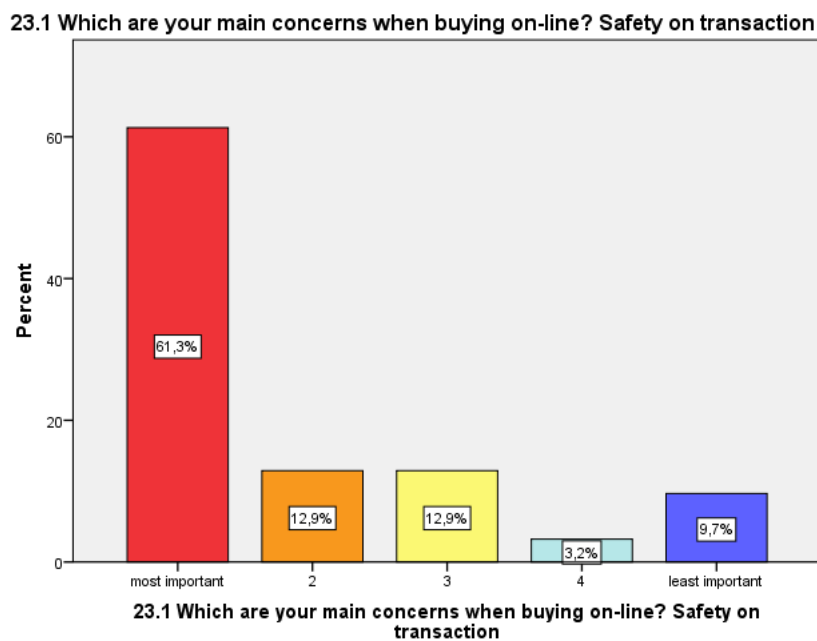


Diagram 23.1 How important is the concern on Safety on transaction for the participants when buying online

The 37.1% of the participants declared that their main concern is if goods never arriving, no possibility for a refund.

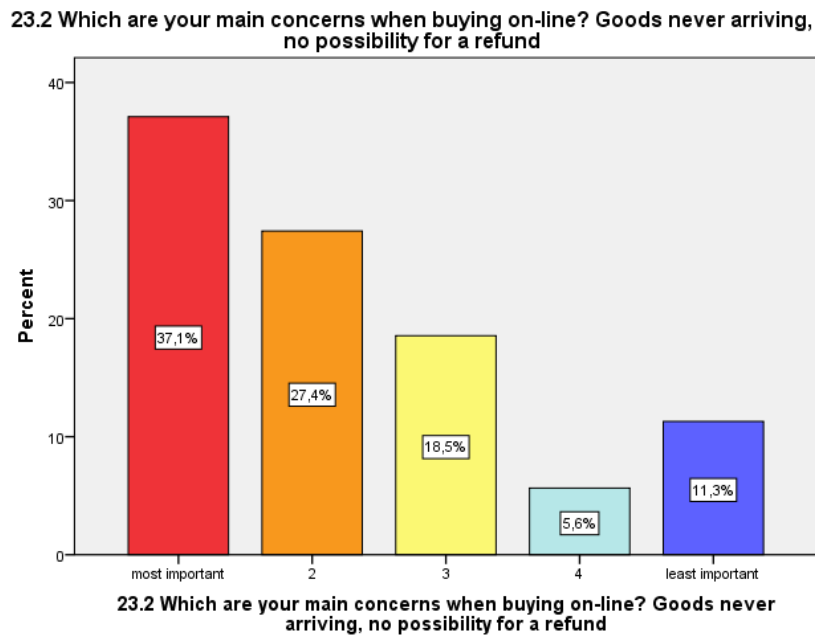


Diagram 23.2 How important is the concern of Goods never arriving, No possibility for a refund, for the participants, when buying online

The 50.8% of the participants declared that their main concern is to Identity Theft/Credit Card fraud.



Diagram 23.3 How important is the concern of Identity theft/Credit card fraud, for the participants, when buying online

The 36,7% of the participants declared that their main concern is fake online stores.

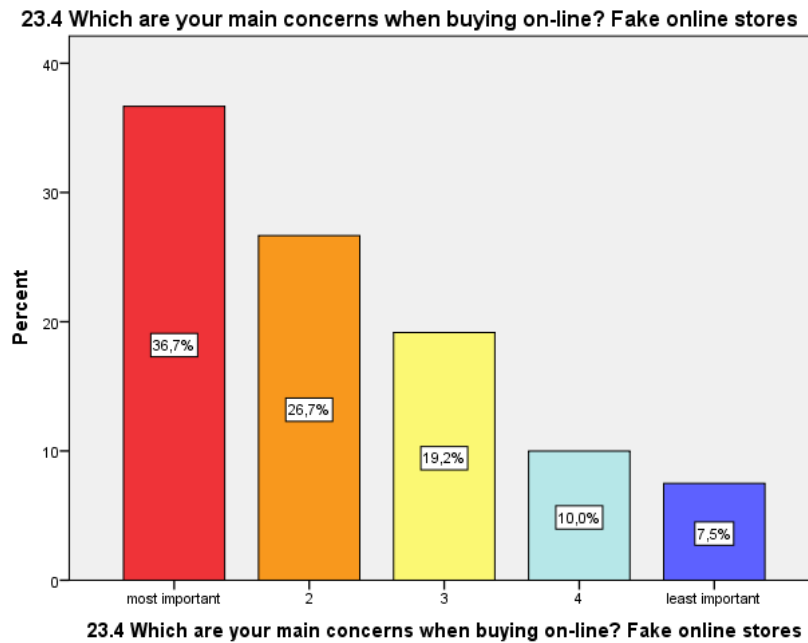


Diagram 23.4 How important is the concern of Fake online stores for the participants, when buying online

The 33,9% of the participants declared that their main concern is the Incorrect/misleading description of goods/provided services.



Diagram 23.5 How important is the concern of Incorrect/misleading description of goods/ Provided services, for participants, when buying online

The 33,9% of the participants declared that their main concern is the Misleading /Fake reviews.

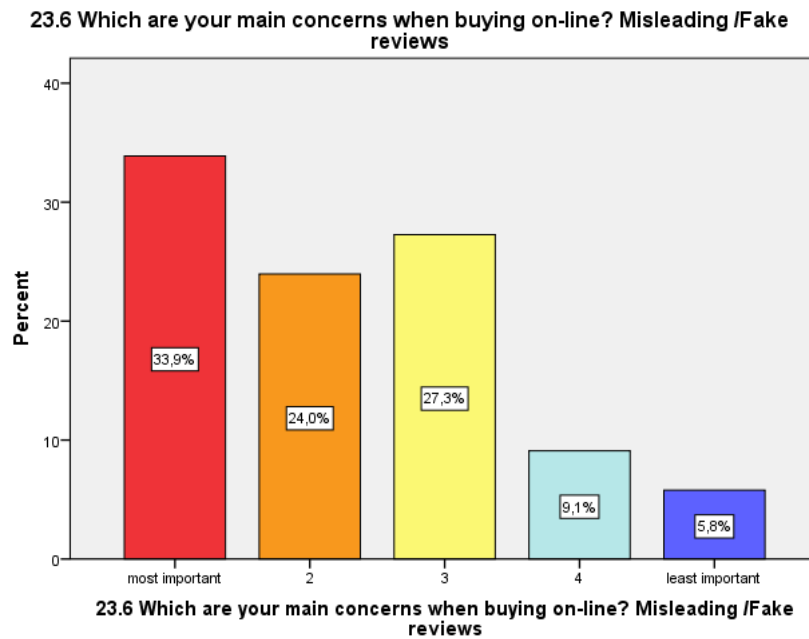


Diagram 23.6 How important is the concern of Misleading/Fake reviews for participants, when buying online

The 29.2% of the participants declared that their main concern is the incorrect delivery of goods.

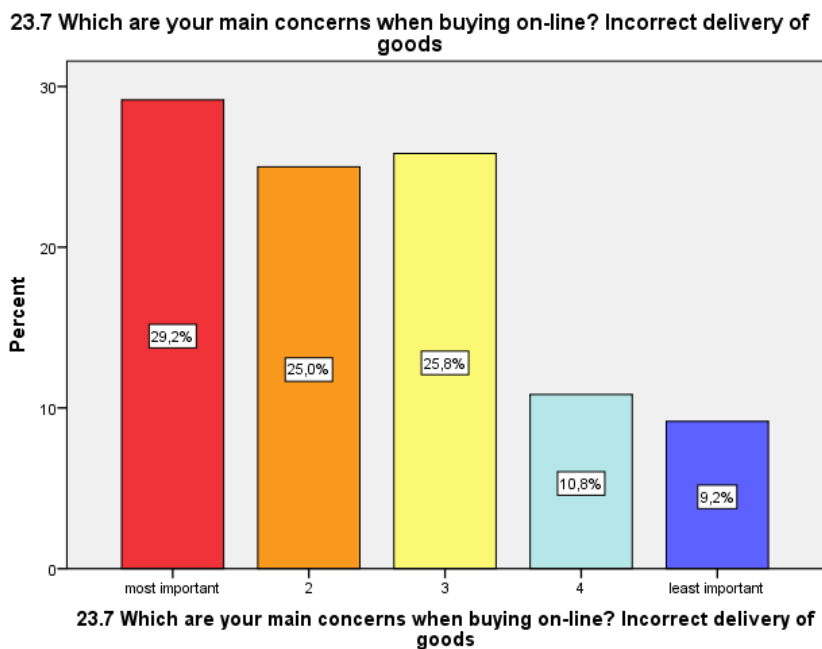


Diagram 23.7 How important is the concern of Incorrect delivery of goods, for participants, when buying online

The 26.1% of the participants declared that their main concern is afraid that the order will never arrive.

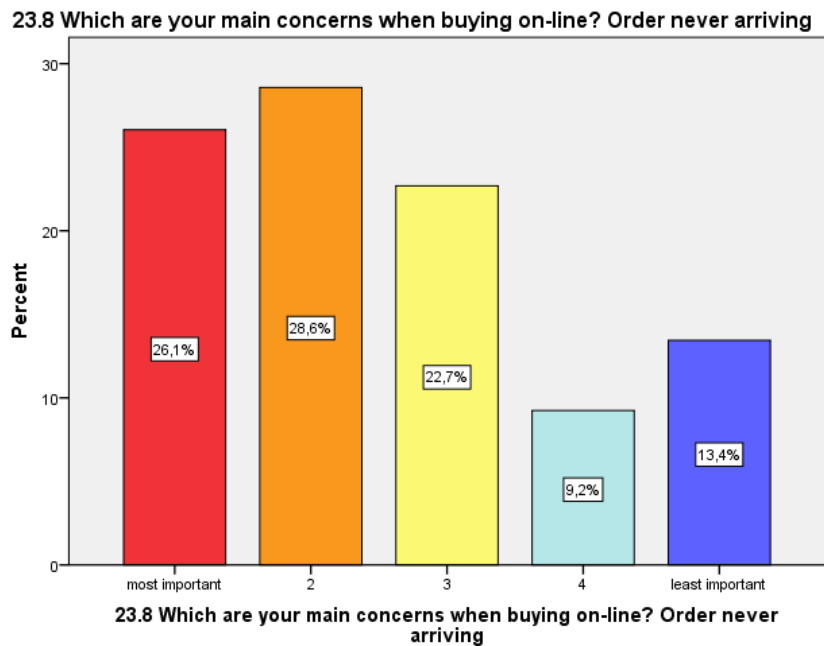


Diagram 23.8 How important is the concern of Order never arriving, for participants, when buying online

The 28,6% of the participants declared that their main concern is that goods are counterfeit.

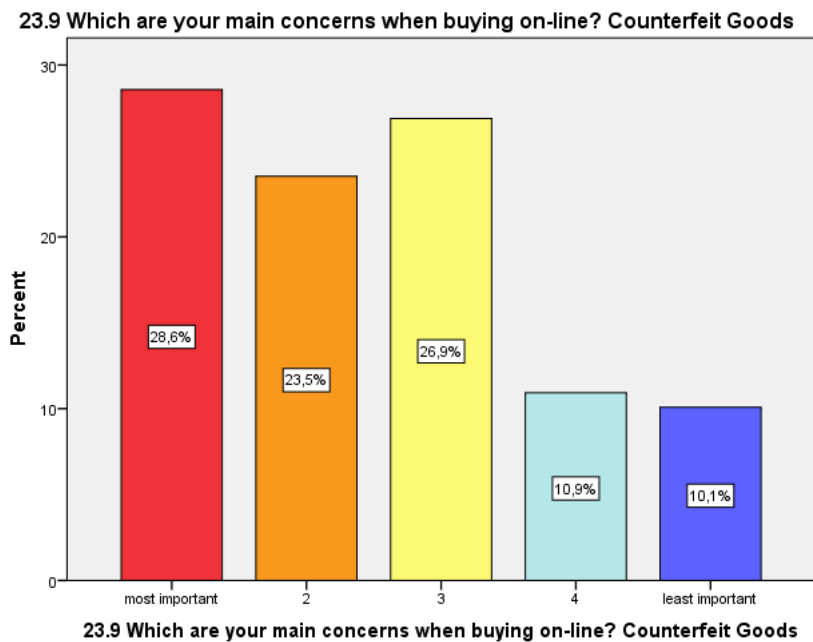
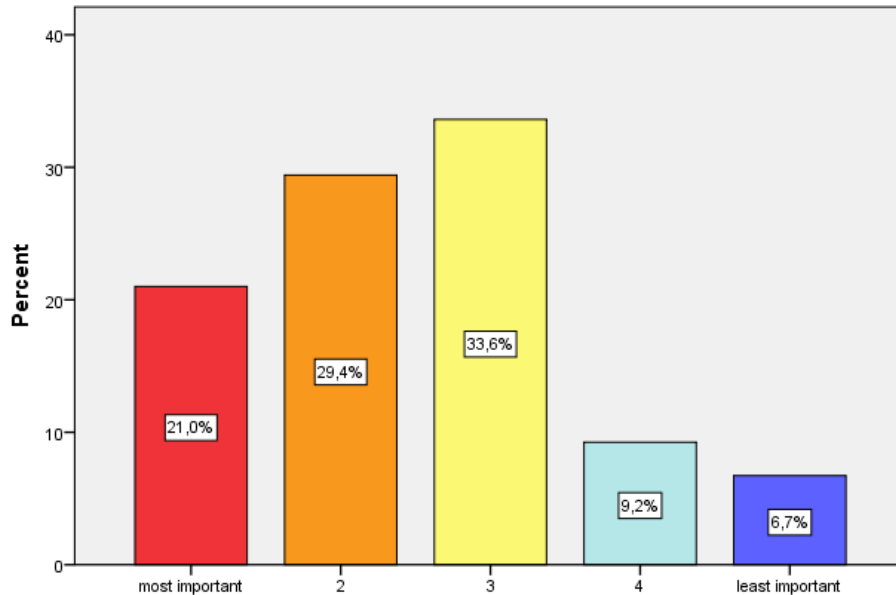


Diagram 23.9 How important is the concern of Counterfeit goods, for participants, when buying online

The 21% of the participants declared that their main concern is the Delivery time/Delay of arrival.

23.10 Which are your main concerns when buying on-line? Delivery time/Delay of arrival

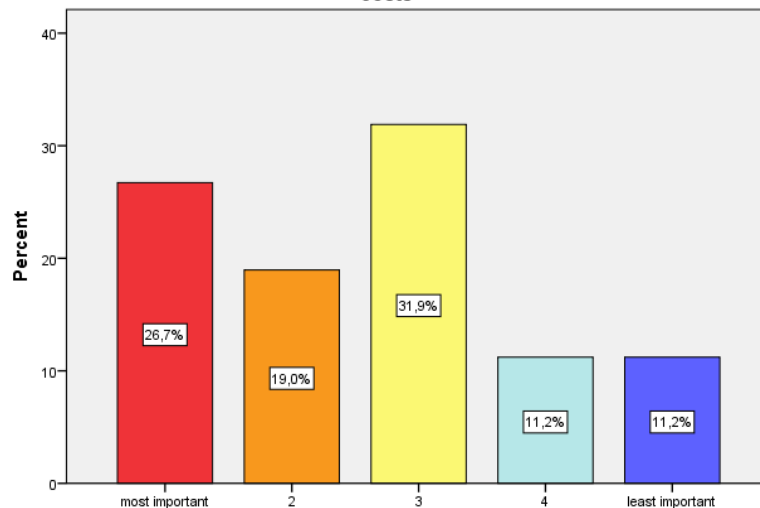


23.10 Which are your main concerns when buying on-line? Delivery time/Delay of arrival

Diagram 23.10 How important is the concern of Delivery time/Delay of arrival, for participants, when buying online

The 26.7% of the participants declared that their main concern is the delivery charges cost.

23.11 Which are your main concerns when buying on-line? Delivery charges costs



23.11 Which are your main concerns when buying on-line? Delivery charges costs

Diagram 23.11 How important is the concern of Delivery charges costs, for participants, when buying online

The 25,6% of the participants declared that their main concern is the time consuming changing procedures.

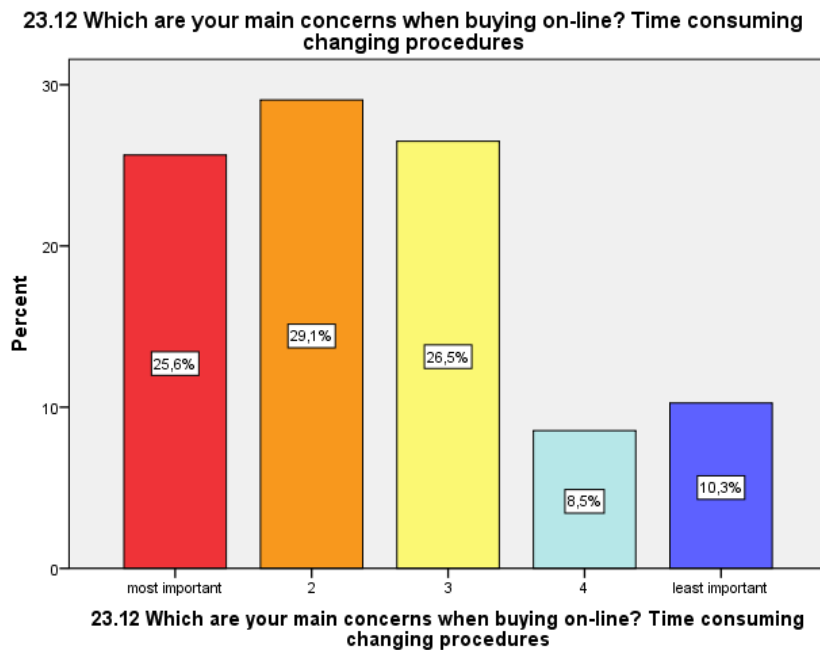


Diagram 23.12 How important is the concern of Time consuming changing procedures, for participants, when buying online

The 26,8% of the participants declared that their main concern are other things.

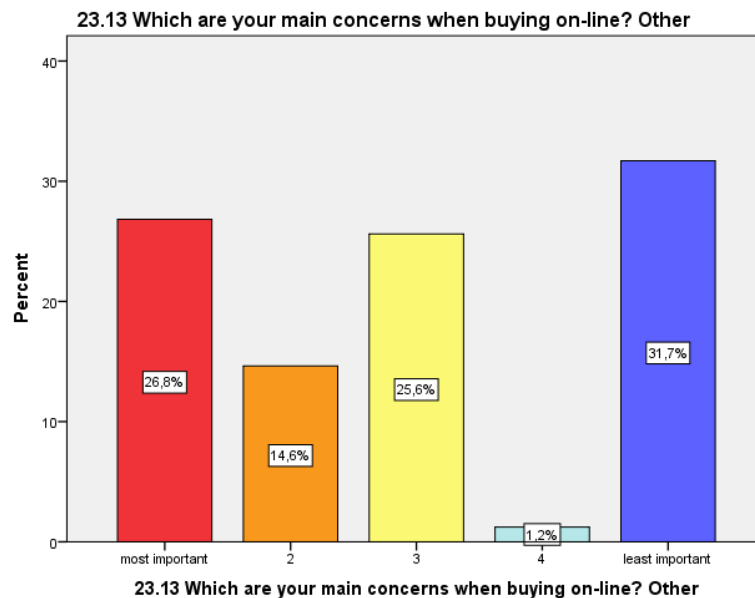


Diagram 23.13 How important is the concern of other things, for participants, when buying online

Risks considered as most important when buying online

The 65.1% of the participants consider the financial loss risk of high importance when buying on-line. The relevant chart and bar chart follows below.

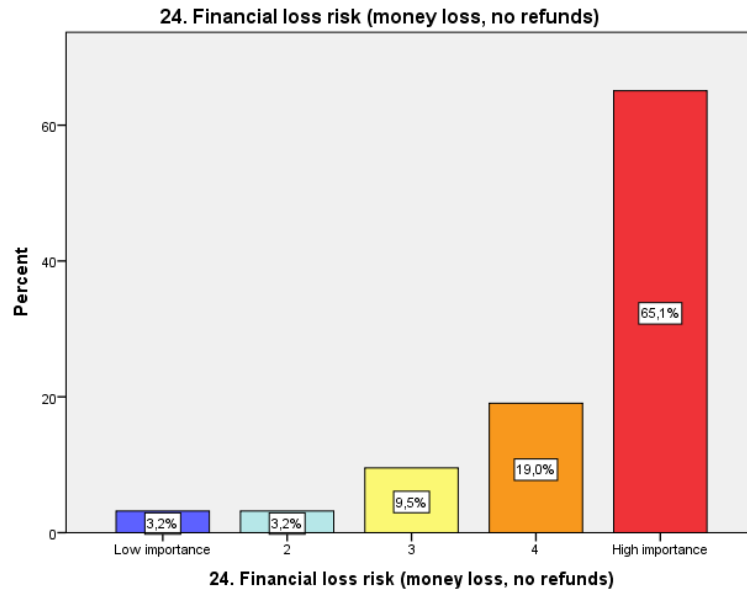


Diagram 24. How important is the risk of Financial loss (money loss, no refund), for participants, when buying online

The 63.5% of the participants consider the Identity theft/Credit card fraud of high importance when buying on-line. The relevant chart and bar chart follows below.

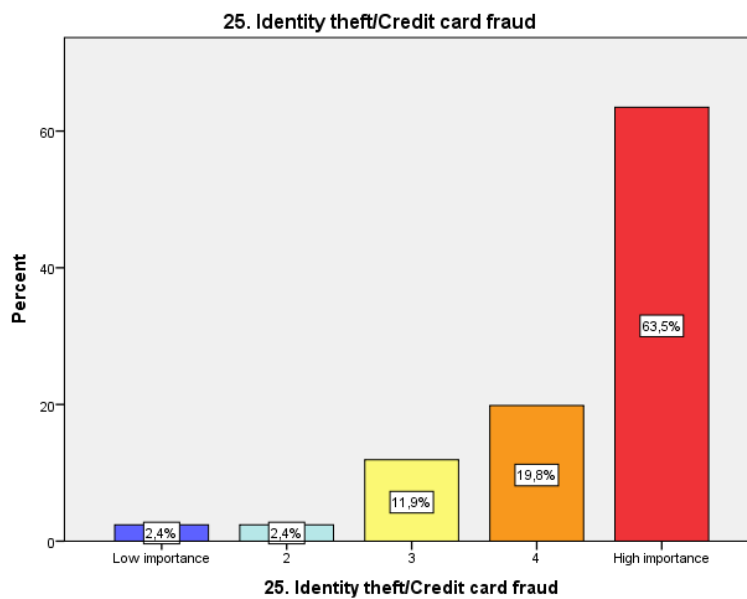


Diagram 25. How important is the risk of Identity theft/Credit card fraud, for participants, when buying online

The 45.2% of the participants consider the Product/Delivered service quality to be according to their expectations of high importance when buying on-line. The relevant chart and bar chart follows below.

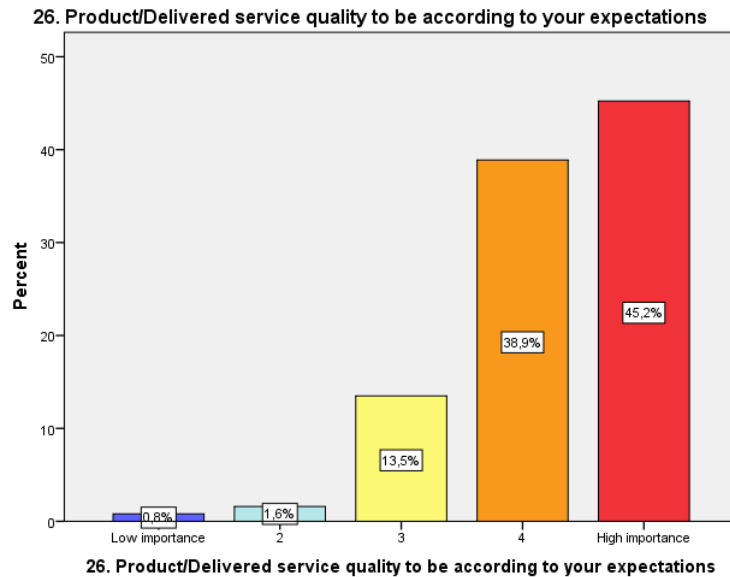


Diagram 26. How important is the risk of Product/Delivered service quality to be according to their expectations, for participants, when buying online

The 39.7% of the participants consider the Incorrect/misleading description of goods/provided services of high importance when buying on-line. The relevant chart and bar chart follows below.

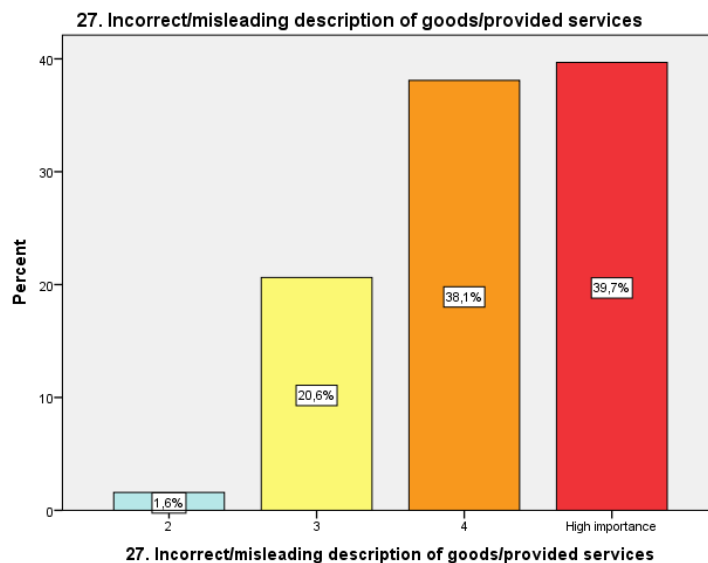


Diagram 27. How important is the risk of Incorrect/misleading description of goods/ Provided services for participants, when buying online

The 47.6% of the participants consider the incorrect delivery of goods of high importance when buying on-line. The relevant bar chart follows below.

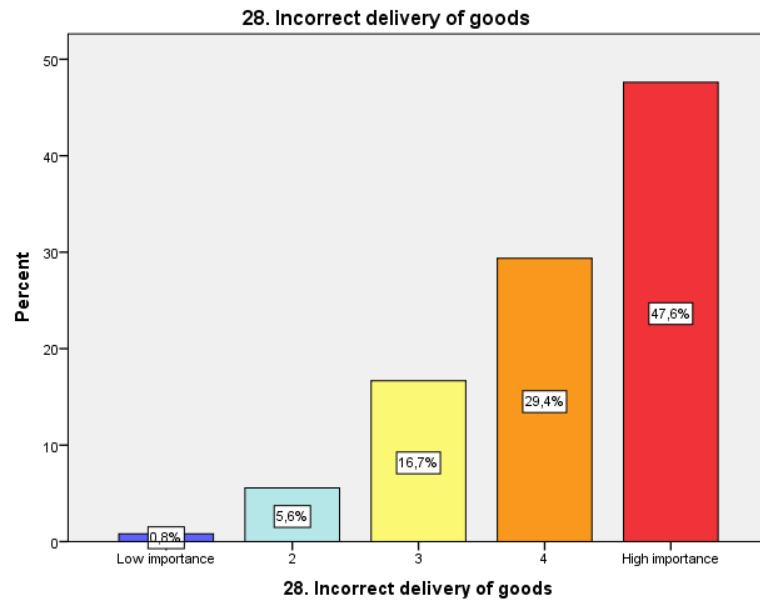


Diagram 28. How important is the risk of Incorrect delivery of goods for participants, when buying online

The 54.8% of the participants consider the Goods/services never arriving/not delivered at all of high importance when buying on-line. The relevant bar chart follows below.

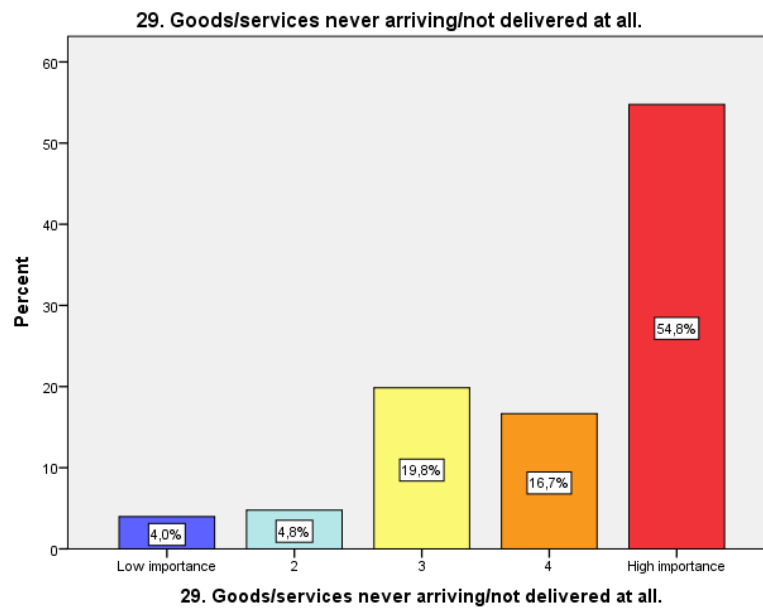


Diagram 29. How important is the risk of Goods/Services never arriving/ Not delivered at all, for participants, when buying online

The 39.7% of the participants consider the Delivery time/delays on arrival of quite importance when buying on-line. The relevant bar chart follows below.

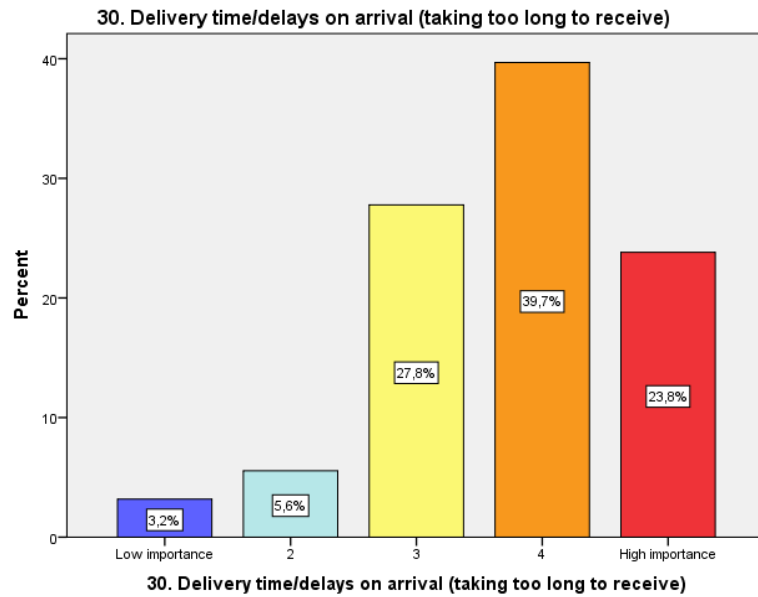


Diagram 30. How important is the risk of delivery time/delays on arrival (taking too long to receive), for participants, when buying online

The 36.5% of the participants consider the Delivery charges costs of high importance when buying on-line. The relevant bar chart follows below.

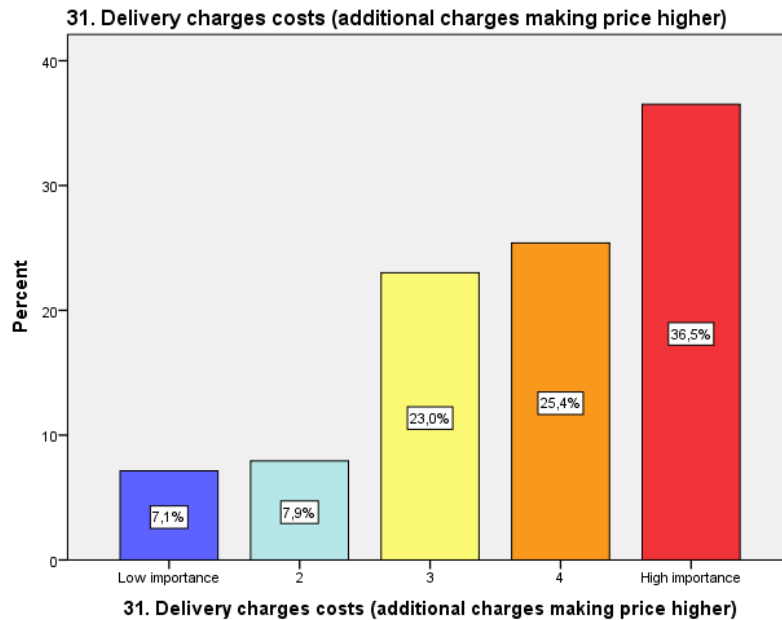


Diagram 31. How important is delivery charges costs (additional charges making price higher), for participants, when buying online

The 34.1% of the participants consider the Time consuming product return and changing procedures of high importance when buying on-line. The relevant bar chart follows below.

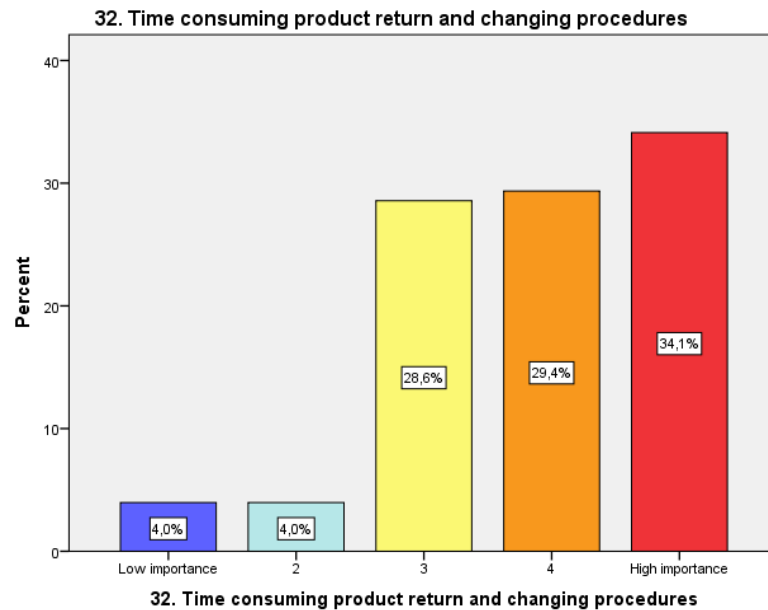


Diagram 32. How important is the time consuming product return and Changing procedures, for participants, when buying online

The 56.3% of the participants said that they see their personal future e-shopping behavior increasing, the 40.5% said that it will stay the same and the rest 3.2% believes that is going to be decreasing. The relevant bar chart follows below.



Diagram 33. How participants see their personal future e-shopping behavior

The 97.6% of the participants believe that e-shopping will grow in the future. The relevant pie chart follows below.

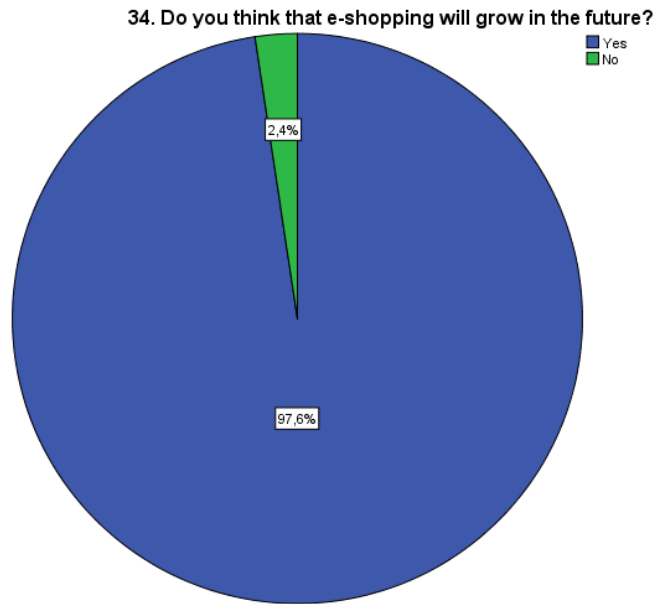


Diagram 34. Answers to question if e-shopping will grow in the future

The 55% of the participants declared that one of the sectors that e-shopping is going to increase is groceries.

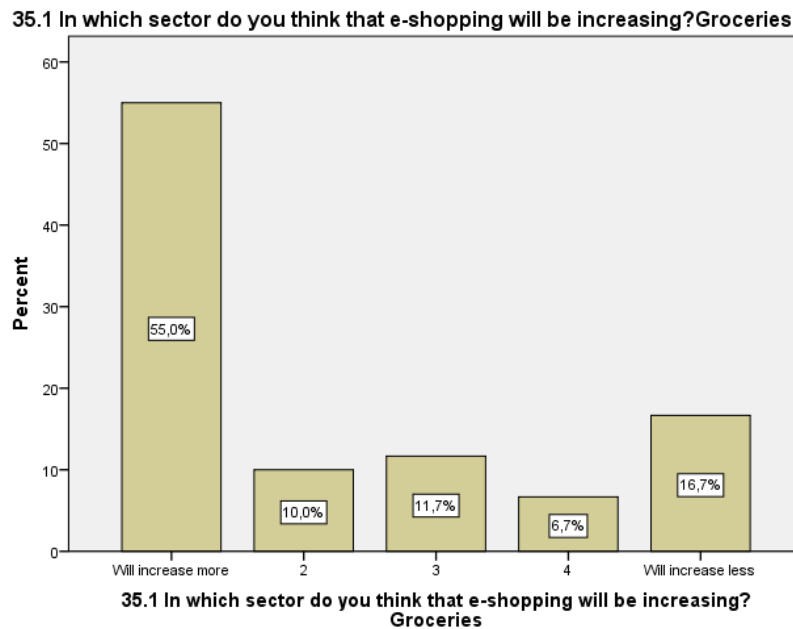


Diagram 35.1 What participants believe about increase in e-shopping in the sector of Groceries

The 45,1% of the participants declared that one of the sectors that e-shopping is going to increase is Clothing/Shoes/Accessories.

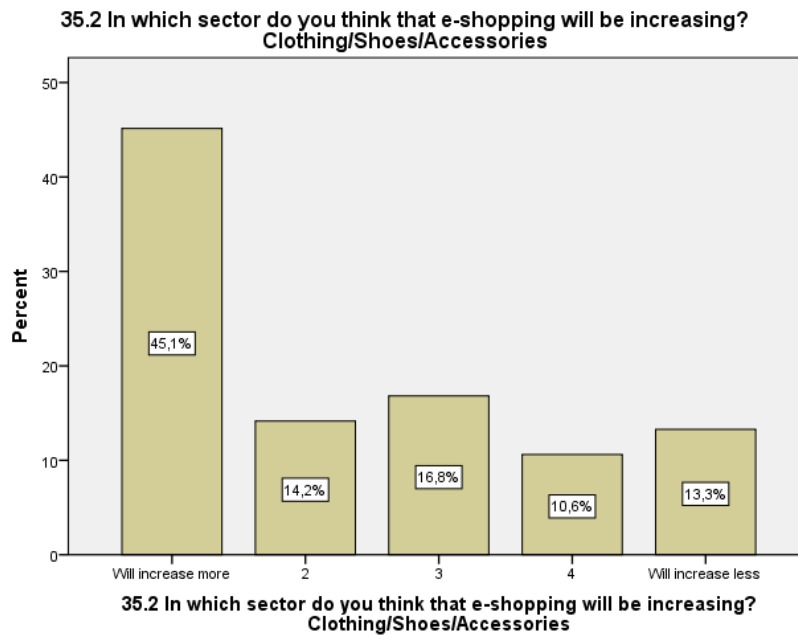


Diagram 35.2 What participants believe about increase in e-shopping in the sector of Clothes/Shoes/Accessories

The 25,5% of the participants declared that one of the sectors that e-shopping is going to increase is Decorations/utensils/household goods.

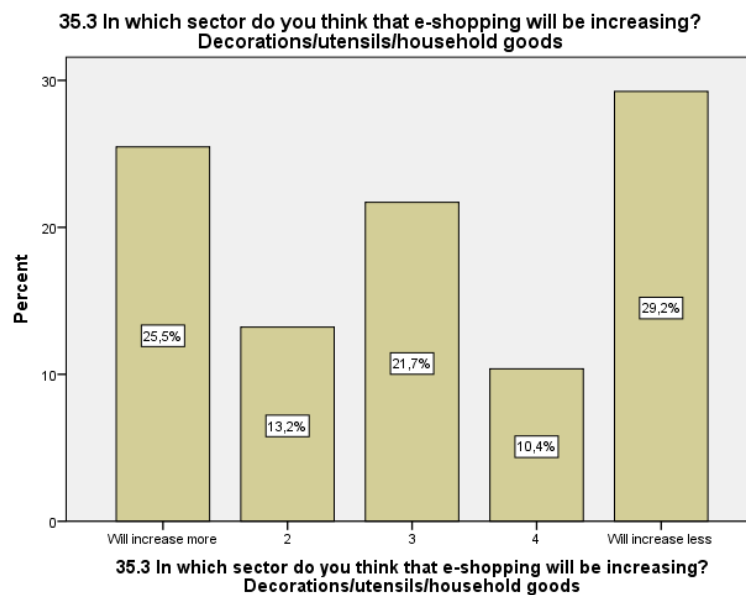


Diagram 35.3 What participants believe about increase in e-shopping in the sector of Decorations/utensils/household goods

The 31,2% of the participants declared that one of the sectors that e-shopping is going to increase is Books/cds/games.

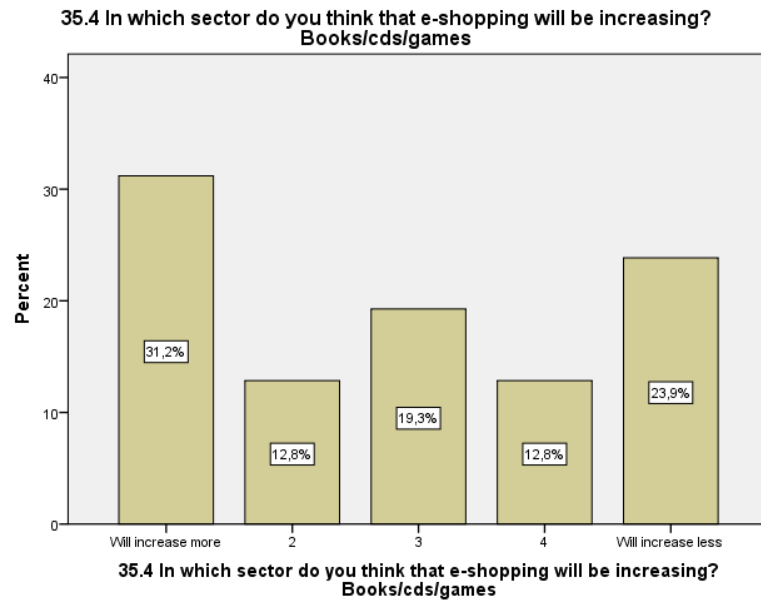


Diagram 35.4 What participants believe about increase in e-shopping, in the sector of Books/cds/games

The 37,3% of the participants declared that one of the sectors that e-shopping is going to increase is the Electronic/electrical appliances.

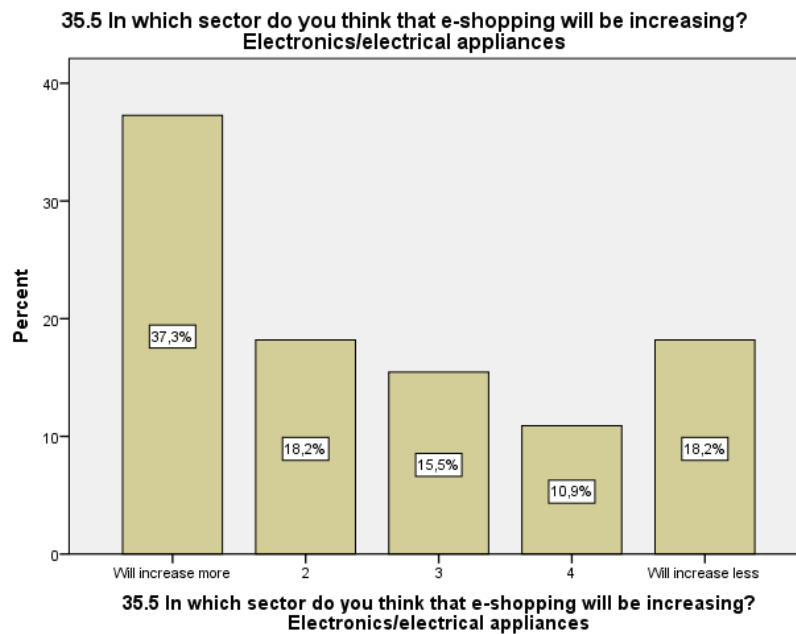


Diagram 35.5 What participants believe about increase in e-shopping in the sector of Electronics/Electrical appliances

The 56,4% of the participants declared that one of the sectors that e-shopping is going to increase is Leisure time.

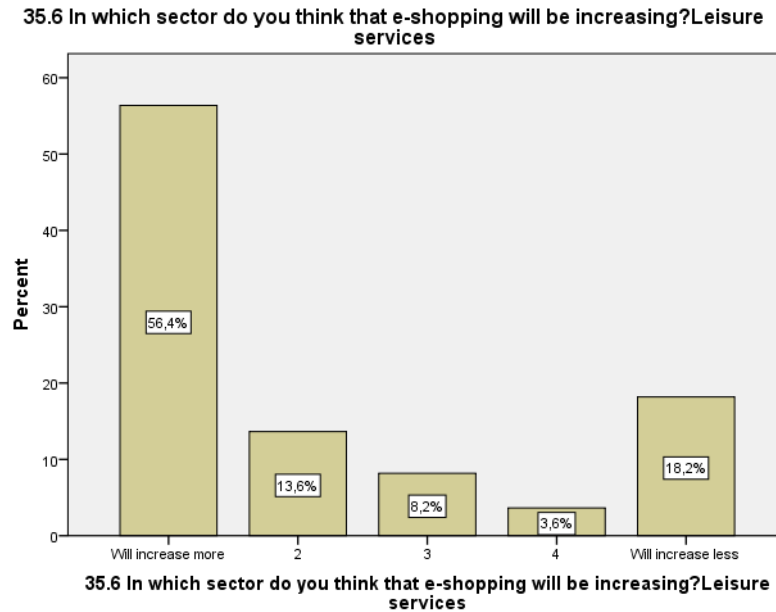


Diagram 35.6 What participants believe about increase in e-shopping in the sector of Leisure services

The 69,6% of the participants declared that one of the sectors that e-shopping is going to increase is Banking services and transactions.

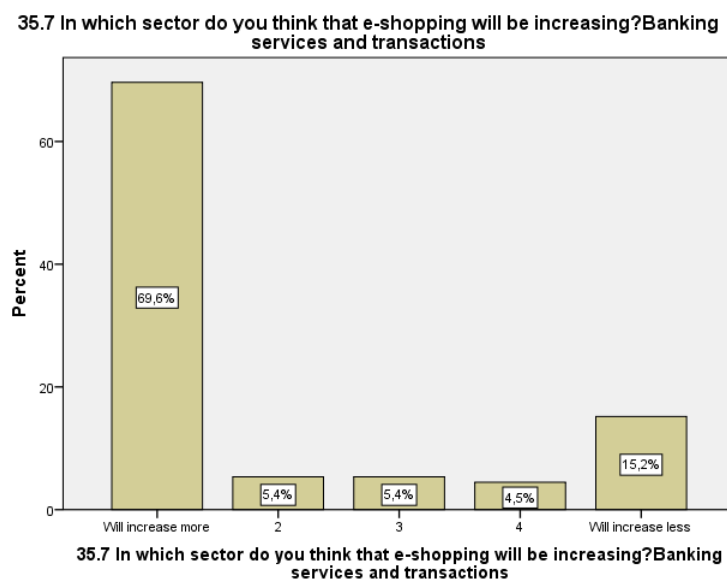


Diagram 35.7 What participants believe about increase in e-shopping in the sector of Banking services and transactions

The 38,8% of the participants declared that one of the sectors that e-shopping is going to increase are others sectors.

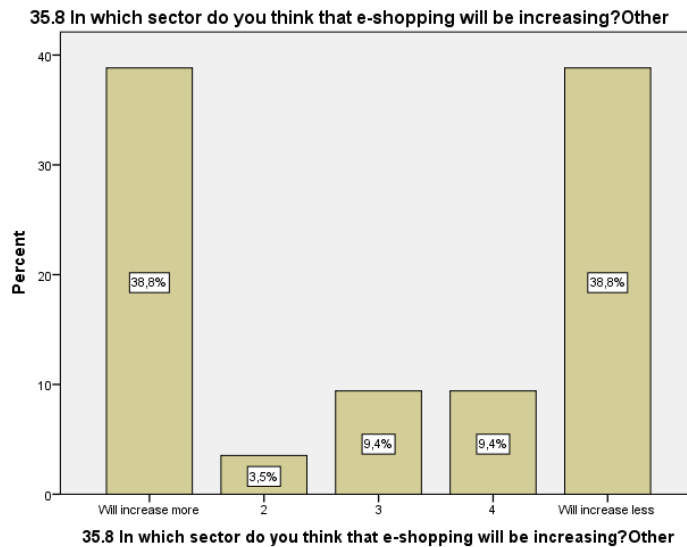


Diagram 35.8 What participants believe about increase in e-shopping in other sectors

The 75.4% of the participants believe that e-shopping in the coming years will be safer, the 19.8% will be same as now and the rest 4.8% will be less safe. The relevant chart and pie chart follows below.



Diagram 36. What participants believe about e-shopping security in the coming years **Diagram 35.2** What participants believe about increase in e-shopping in the sector of Clothes/Shoes/Accessories

Results

We correlated Demographic features in order to see if there was any interesting statistical importance with our main questions of our questionnaire. We will record only the correlations that were statistically significant.

Gender and Question 11

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as $\text{sig.} = .015$ that is $\text{sig.} <$ than Pearson rate 0,05. Our crosstab chart shows that most male participants consider themselves experienced on-line shoppers, whereas most female participants consider themselves non experienced on-line shoppers.

Below follow the relevant charts.

Crosstab

Count

	1. Gender		Total
	Male	Female	
11. Do you consider yourself as an experienced on-line shopper?			
Yes	38	31	69
No	19	38	57
Total	57	69	126

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,955 ^a	1	,015		
Continuity Correction ^b	5,109	1	,024		
Likelihood Ratio	6,023	1	,014		
Fisher's Exact Test				,019	,012
Linear-by-Linear Association	5,907	1	,015		
N of Valid Cases	126				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 25,79.

b. Computed only for a 2x2 table

Table 3. Correlation of gender and experience of online shoppers

Education Level and Question 11

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as sig.=,009 that is sig.< than Pearson rate 0,05. Our crosstab chart shows that most participants with Master degree consider themselves experienced on-line shoppers, whereas most participants with Bachelor degree consider themselves non experienced on-line shoppers. Below follow the relevant charts.

Crosstab

Count

		4. Education Level					Total
		High School or less	Bachelor's Degree	Other Professional Qualification	Master Degree	Doctorate	
11. Do you consider yourself as an experienced on-line shopper?	Yes	4	16	5	41	3	69
	No	11	18	9	17	2	57
Total		15	34	14	58	5	126

Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	13,639 ^a	4	,009
Likelihood Ratio	13,966	4	,007
Linear-by-Linear Association	10,090	1	,001
N of Valid Cases	126		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 2,26.

Table 4. Correlation of Educational level and experience of online shoppers

Monthly Income Range (€) and Question 11

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as $\text{sig.} = ,043$ that is $\text{sig.} <$ than Pearson rate 0,05. Our crosstab chart shows that most participants with more than 2501 euros of monthly income consider themselves experienced on-line shoppers. Below follow the relevant charts.

Crosstab

Count		6. Monthly Income Range (€)						Total
		0	500 - 1000	1001 - 1500	1501 - 2000	2001 - 2500	2501 – over	
11. Do you consider yourself as an experienced on-line shopper?	Yes	1	6	18	10	15	19	69
	No	8	9	8	10	10	12	57
Total		9	15	26	20	25	31	126

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,432 ^a	5	,043
Likelihood Ratio	12,205	5	,032
Linear-by-Linear Association	4,021	1	,045
N of Valid Cases	126		

a. 2 cells (16,7%) have expected count less than 5. The minimum expected count is 4,07.

Table 5. Correlation of monthly income and experience of online shoppers

Question 9. How often do you do business shopping (electronics, electric appliances, etc) per month and question 11.

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as sig.=,019 that is sig.< than Pearson rate 0,05. Our crosstab chart shows that most participants that do business shopping 1-5 times per month consider themselves experienced on-line shoppers, whereas most participants that never do business shopping consider themselves non experienced on-line shoppers. Below follow the relevant charts.

Crosstab

Count		9. How often do you do business shopping (electronics, electric appliances, etc) per month?			Total
		Never	1- 5 times	6 – 10 times	
11. Do you consider yourself as an experienced on-line shopper?	Yes	20	49	0	69
	No	29	27	1	57
Total		49	76	1	126

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,951 ^a	2	,019
Likelihood Ratio	8,365	2	,015
Linear-by-Linear Association	4,989	1	,026
N of Valid Cases	126		

a. 2 cells (33,3%) have expected count less than 5. The minimum expected count is ,45.

Table 6. Correlation of business shopping and experience of online shoppers

Question 22. Did Covid-19 change your attitude against online shopping and question 11.

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as sig.=,006 that is sig.< than Pearson rate 0,05. Our crosstab chart shows that most participants that are experienced on-line shoppers didn't change their attitude against online shopping (31,7%) whereas most participants that are non-experienced on-line shoppers, did change their attitude against online shopping (30,2%). Below follow the relevant charts.

11. Do you consider yourself as an experienced on-line shopper? * 22. Did Covid-19 change your attitude against online shopping? Crosstabulation

			22. Did Covid-19 change your attitude against online shopping?		Total
			Yes	No	
11. Do you consider yourself as an experienced on-line shopper?	Yes	Count	29	40	69
		% of Total	23,0%	31,7%	54,8%
	No	Count	38	19	57
		% of Total	30,2%	15,1%	45,2%
Total		Count	67	59	126
		% of Total	53,2%	46,8%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,610 ^a	1	,006		
Continuity Correction ^b	6,652	1	,010		
Likelihood Ratio	7,709	1	,005		
Fisher's Exact Test				,007	,005
Linear-by-Linear Association	7,549	1	,006		
N of Valid Cases	126				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 26,69.

b. Computed only for a 2x2 table

Table 7. Correlation of experience of online shoppers and change on their attitude against online shopping because of Covid-19

Question 18.8 Which are the main reasons for using online shopping instead of shopping in-house? Better prices and Question 11

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as sig.=,016 that is sig.< than Pearson rate 0,05. Our crosstab chart shows that more experienced on-line shoppers use online shopping instead of shopping in-house because they consider most important better prices whereas less non-experienced on-line shoppers consider this as most important. Below follow the relevant charts.

Crosstab

Count

		18.8 Which are the main reasons for using online shopping instead of shopping in-house?					Total
		most important	2	3	4	least important	
11. Do you consider yourself as an experienced on-line shopper?	Yes	27	20	9	7	6	69
	No	14	9	19	9	2	53
Total		41	29	28	16	8	122

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,228 ^a	4	,016
Likelihood Ratio	12,363	4	,015
Linear-by-Linear Association	2,264	1	,132
N of Valid Cases	122		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,48.

Table 8. Correlation of experience of online shoppers and the use of online shopping instead of shopping in-house because of better prices

4.2 Research Questions

4.2.1 Research Question No.1

How does a buyer decide to buy on-line instead buying in store?

The participants declared as main reasons for using online shopping instead of buying in store, by importance:

- ✓ Saving time (58,5%)
- ✓ 24 hours availability (50,8%)
- ✓ Comfort/convenience (45,5%)
- ✓ Wider selection of goods (42,5%)
- ✓ Delivery at home (35,8%)
- ✓ geographic location of needed goods/services (33,6%)
- ✓ Better prices (33,6%)
- ✓ Privacy (27,6%)
- ✓ Security/Personal safety (not having to go outside) (26,7%)

The decision of buying online instead of buying in house is also affected by:

- ✓ how well structured and user friendly is an online shopping store's platform
- ✓ internet access from multiple appliances
- ✓ Advertising of on-line shops

4.2.2 Research Question No.2

Was there a difference between men and women consumers in their attitude concerning on-line shopping due to Covid-19?

In order to answer this research question, we performed a chi-square test (χ^2) to see if there is a statistical difference.

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as $\text{sig.} = ,009$ that is $\text{sig.} <$ than Pearson rate 0,05. Our crosstab chart shows that most male participants didn't change their attitude concerning on-line shopping due to Covid-19 whereas most female participants changed their attitude due to Covid-19. We conclude that female consumers chose to buy on-line more, than they previously did.

4.2.3 Research Question No.3

Was there a difference between the way men and women consumers consider important the Time-consuming product return and changing procedures in on-line shopping?

We can see from the chi-Square tests chart that we have a statistical significance between the two variables as $\text{sig.} = .033$ that is $\text{sig.} <$ than Pearson rate 0,05. Our crosstab chart shows that most male participants consider of medium importance the product return and changing procedures in on-line shopping, whereas most female participants consider it of high importance.

4.2.4 Research Question No.4

Which are the buyers' main concerns when shopping online?

The research reveals that buyers' main concerns/worries when shopping online, classified by a scale of most important to least important and the significance buyers give to them, by considered significance are as follows:

- ✓ 61.3% Safety on transaction
- ✓ 50.8% Identity Theft/Credit Card fraud
- ✓ 37.1% Goods never arriving, no possibility for a refund
- ✓ 36.7% Fake online stores
- ✓ 33.9% Incorrect/misleading description of goods/provided services
- ✓ 33.9% Misleading /Fake reviews
- ✓ 29.1% Time consuming changing procedures.
- ✓ 28.6% Order will never arrive
- ✓ 28.6% Counterfeit Goods

The 33.6% of the participants consider of medium importance the Delivery time/Delay of arrival as well as the delivery charges cost (31.9%). The rest 31.7% consider other concerns least important.

Considering the above outcomes we can identify that buyers consider as most significant the risks of Safety on online transactions and Identity Theft/Credit Card fraud.

Chapter 5

Discussion

Based on the literature review it should be said that e-commerce involves the exchange of information, ordering, product delivery, payment, and after-sales service. It is now clear that e-commerce has been on the rise in recent decades, with globalization, fast-paced life, the economic crisis, and the spread of the internet (Matsatsinis et al., 2006). The exploitation of the internet and its use for business activities, have highlighted various types of online stores such as business to business, business to consumers, consumer-to-consumer, consumer to government and intra-operational resources. Such activities highlight the issue of e-commerce, which, as it has been seen, can be implemented in a number of ways and through complex mechanisms.

Some of those mentioned were credit cards, debit cards, prepaid cards, e-mail, e-checks and so on, while the most important security tools are cryptography and the use of electronic signatures. A set of surveys (secondary research), such as those mentioned in the second chapter of this dissertation, reveals that the e-commerce sector is developing rapidly while at the same time making significant gains and confirming the usefulness and efficiency of Internet businesses. The preliminary research was conducted on the basis of this dissertation, has shown that the use of the internet is quite common in everyday life, while the view of the index that participated in the research stated that it is not negative towards the realization of electronic markets.

It was also found that the levels of credit and intention to buy electronic products are very positive and / or neutral. According to the reliability indicators presented in this study, it is distinguished by moderate reliability. Factual analyzes showed that credibility, website loyalty, consumer experience and anti-valve security have a positive effect on the consumer's intention to use the electronic resource.

The above literature review results, are concerned to the answers of the particular dissertation's results from the research question where it was found that as to *how does a buyer decide to buy*

on-line instead buying in store, the 58.5% of the participants declared as most important that they save time so their decision to buy on-line instead buying in store is affected due to this advantage, the 50.8% give importance because is 24 hours available, the 42.5% because there is a wider selection of shops/goods, the 33.6% due to the geographic location of needed goods/services, the 45.5% that it is comfortable/convenient, the 33.6% that is has got better prices and the rest 35.8% because it offers delivery at home. Security/Personal safety (26.7%) and Privacy (27,6%) were considered of medium importance.

As to the research questions no.2, if there was a difference between men and women consumers in their attitude concerning on-line shopping due to Covid-19, most male participants didn't change their attitude concerning on-line shopping due to Covid-19, whereas most female participants changed their attitude due to Covid-19. We conclude that female consumers chose to buy on-line more, than they previously did.

As to the research question No.3, if there was a difference between the way men and women consumers consider important the Time-consuming product return and changing procedures in on-line shopping, most male participants consider of medium importance the product return and changing procedures in on-line shopping, whereas most female participants consider it of high importance.

Finally as to the research question No.4, about which are the buyers' main concerns when shopping online, it was found that the 61.3% of the participants said that their main concern when buying on-line is the Safety on transaction, the 37.1% said that their main concern is if goods never arriving, no possibility for a refund, the 50.8% is the Identity Theft/Credit Card fraud, the 36.7% is the fake online stores, the 33.9% is the Incorrect/misleading description of goods/provided services, the 33.9% is the Misleading /Fake reviews, the 28.6% is that the order will never arrive, another 28.6% is afraid that the goods are counterfeit and the 29.1% is concerned about the time consuming changing procedures. The 33.6% of the participants consider of medium importance the Delivery time/Delay of arrival as well as the delivery charges cost (31.9%). The rest 31.7% consider other concerns least important.

5.1 Management Implications

This section emphasizes that the main reason for conducting any kind of research in the context of business research is to draw on the facts that may help in the management operation and development of businesses. The results of this experimental study may provide some guidelines for e-commerce. To be precise, the guidelines given in this survey concern (a) e-commerce administrators and (b) e-commerce users. The findings of this study suggest that e-commerce site security managers should focus primarily on securing issues and safety on transactions. The findings of this study also give insight to the managers of the websites of the online stores on what are the factors on which the electronic consumers rely. Taking into consideration the outcomes of the research and the importance given to perceived risks, could meet the needs (incentives) of consumers regarding electronic services. This way, an online store will be able to attract more prospective customers without them having any doubts or hesitations.

The e-commerce sector is a fast-growing industry, and it is still accompanied by a large number of advantages, which outweigh any disadvantages. It should be emphasized that the existing single "holes" in the security of online stores should be closed. By creating a sense of security and safety, an online store should attract more buyers and is one of the most important factors to be considered while developing and updating orders' processing procedures and how these are fulfilled, for the viability of online businesses.

It is also advisable to conduct new consumer research in order to investigate their attitudes towards online stores and to identify possible inhibitory factors. In addition, it is recommended to focus on the factors that have been shown to be important for the intention to use e-commerce (dedication to the page, anti-van security and credibility). Finally, it is proposed to conduct scientific research on consumer protection measures. In particular, it would be useful to investigate the safer application of security measures (e.g. encryption) through vulnerabilities.

Chapter 6

Conclusion

Nowadays the creation and development of an online store seems to be a fairly simple process, but to lay the foundations for a new business more properly we need to take some concrete steps. The first step before setting up an online store is having set goals that should be clear, tangible and measurable. In order to determine the goals of the store we will mainly consult existing statistical surveys on the opinions and impressions of internet users.

Corresponding studies will help to obtain a numerical measure of the target sizes and the time intervals that need to be set to meet these goals. Familiarizing existing customers with online sales is an important factor to keep in mind. It will take some time for the online store to become involved in the sales of the business if the customers who have access do not have the convenience and experience of online shopping.

Several studies have investigated the characteristics of market services (Jarvenpaa and Todd, 1997; Lohse and Spiller, 1998; Szymanski and Hise, 2000; Liu and Arnett, 2000). These studies divided the characteristics of online stores into four categories: merchandise, services customer service and promotions, navigation and convenience, and security including the various risks in online shopping (Park and Kim, 2003). The product category contains product characteristics such as variety, quality and product information (Jarvenpaa and Todd, 1997). The rich variety of products can increase the likelihood that consumer needs will be brought together and satisfied. But not all catalog products are available in the store and on online basis (Szymanski and Hise, 2000).

By concluding, it should be said that the purpose of quantitative research, is to study and verify social phenomena through objective measurements and numerical analyzes. In quantitative research, the scholar relies on existing theories to come up with his own. To complete the research, it is necessary to verify the cases through numerical data.

This questionnaire in our survey was designed to anonymously assess a deeper understanding from the customers' perspective on how perceived risks/benefits influence their attitude towards online shopping. It consists of demographic questions (age, gender, level of education, professional status) and some general questions (if the respondent has ever shop online, how often does he shop, what are the main goods/services he bought or intends to buy, how often, and for what reasons), and questions around the variables being studied.

Finally, based on the results of the research upon SPSS use, it was found that these are concerned to the fact that the 58.5% of the participants decide to buy on-line instead buying in store due to the fact that they save time, the most male participants didn't change their attitude concerning on-line shopping due to Covid-19 whereas most female participants changed their attitude due to Covid-19. We conclude that female consumers chose to buy on-line more, than they previously did. Finally, most male participants consider of medium importance the product return and changing procedures in on-line shopping whereas most female participants consider it of high importance and that the 61.3% of the participants said that their main concern when buying on-line is the Safety on transaction.

Annex A

Questionnaire

Multi-criteria decision analysis in Risk Evaluation of e-shopping

Dear Participants,

I would be very grateful if you take some time to assist me on my Thesis research on **Multi-criteria decision analysis in Risk Evaluation of e shopping**, for my Master on Enterprise Risk Management of the Open University of Cyprus.

Your assistance will be valuable on clarifying how a buyer decides on buying online against buying in-store and how he/she evaluates perceived risks and the certain impact each risk has on his/her decisions.

The questionnaire is anonymous and confidential, and the time to complete is estimated to be 8-10 minutes. The results of the research will be used and analyzed for educational purposes.

Thank you for your valuable assistance and for taking the time to complete this questionnaire.

Maria Charilaou

Demographic Information

1. Gender

- Male
- Female

2. Age Range

- 15 – 24
- 25 – 34
- 35 – 44
- 45 – 54
- 55 – 64
- 65 – over

3. Nationality

- Cypriots
- EU and Non-EU Citizens leaving in Cyprus

4. Education Level

- High School or less
- Bachelor's Degree
- Other Professional Qualification
- Master's degree
- Doctorate

5. Employment status

- Student
- Unemployed
- Employed
- Retired

6. Monthly Income Range (€)

- 0
- 500 - 1000
- 1001 - 1500
- 1501 - 2000
- 2001 - 2500
- 2501 – over

Shopping Frequency per Month: (Shopping = Purchasing / shopping in general)

7. How often do you go shopping for Groceries/daily necessities per month?

- Never
- 5 times
- 6 – 10 times
- 11 – 15 times
- 16 - over

8. How often do you go shopping for Clothing per month?

- Never
- 5 times
- 6 – 10 times
- 11 – 15 times
- 16 - over

9. How often do you do business shopping (electronics, electric appliances, etc) per month?

- Never
- 5 times
- 6 – 10 times
- 11 – 15 times
- 16 - over

10. How often (on the average) do you use Internet for shopping/on-line transactions per month?

- Never
- 5 times
- 6 – 10 times
- 11 – 15 times
- 16 - over

Use of e-shopping

(e-Shopping = Purchasing / shopping in general using internet)

11. Do you consider yourself as an experienced on-line shopper?

- Yes
- No

12. If you have never used e-shopping, what are the reasons for not using it? (Please number reasons using an importance scale, starting numbering from 1 = most important to 5=least important)

- No internet accesses
- Not been familiar with technology
- You don't trust internet transactions
- You prefer personal contact and assistance
- You prefer to see/try products before buying
- You feel internet is too impersonal
- Other reasons

13. If you have never used e-shopping, do you use:

- Smartphones
- Computer
- Tablets
- Social media
- Other

14. If you are using e-shopping, for how long have you been using e-shopping?

- 1-6 months
- 1 year
- 2 years
- For more than 2 years

How is your decision on buying online instead of buying in-house is affected?

(Using a scale of 1= not affected at all, to 5 = Highly affected)

15. By internet access from multiple appliances

Not affected at all
1 2 3 4 Highly Affected
5

16. By how well structured and user friendly is an online shopping store's platform

Not affected at all
1 2 3 4 Highly Affected
5

17. By advertising of online stores

Not affected at all
1 2 3 4 Highly Affected
5

**18. Which are the main reasons for using online shopping instead of shopping in-house?
(Please number reasons using an importance scale, starting numbering with No. 1 as the most important for you to 5 as least important)**

- Saving Time
- 24 hours availability
- Wider selection of shops/goods
- Geographic location of needed goods/services
- Comfort/convenience
- Security/Personal safety (not having to go outside)
- Privacy
- Better prices
- Delivery at home

19. What kind of goods/services do you already buy online instead of buying in-house?

- Groceries
- Clothing/Shoes/Accessories
- Decorations/utensils/household goods
- Electronics/electrical appliances
- Books/cds/ games
- Leisure services (Concert Tickets, Flying tickets, Hotel accommodation)
- Banking services and transactions
- Other

20. What kind of goods/services do you intend to buy online instead of buying in-house?

- Groceries
- Clothing/Shoes/Accessories
- Decorations/utensils/household goods
- Books/cds/games
- Electronics/electrical appliances
- Leisure services (Concert Tickets, Flying tickets, Hotel accommodation)
- Banking services and transactions
- Other

Perceived Risks and Concerns

21. Do you feel more secure buying on-line things that you have already seen or tried in a physical store?

- Yes
- No

35. In which sector do you think that e-shopping will be increasing? (Please number sectors using a descending scale , starting numbering with No. 1 with the sector that will increase more)

- Groceries
- Clothing/Shoes/Accessories
- Decorations/utensils/household goods
- Books/cds/games
- Electronics/electrical appliances
- Leisure services (Concert Tickets, Flying tickets, Hotel accommodation)
- Banking services and transactions
- Other

36. Do you think that e-shopping in the coming years will be:

- Less safe
- Same as now
- More safe

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