Universitetet i Stavanger		
HANDELSHØGS	SKOLEN VED UIS	
BACHELOROPPGAV	E	
STUDIUM:	OPPGAVEN ER SKREVET INNEN FØLGENDE TEMATISKE RETNING:	
Økonomi og administrasjon	Markedsføring	
TITTEL:		
Perceptions of e-commerce		
How do perceptions of e-commerce vary betwee	en young- and elderly consumers?	

FORFATTERE:		VEILEDER:
Kandidatnr:	Navn:	Espen Olsen
1588	Jon Magnus Andreas Flåt Gjeruldsen	
1533	Vegard Skutlaberg	

Preface

This thesis is the result of our three-year bachelor's program in Economics and Administration at the University of Stavanger. It has been a lot of work but also very interesting and fun. We learned a lot throughout the months of working on the thesis. We want to thank everyone who took part in our interview.

A big thank you to our supervisor, Espen Olsen, for guiding us through this thesis.

- Jon Magnus Andreas Flåt Gjeruldsen

- Vegard Skutlaberg

Abstract

E-commerce has revolutionized how people make purchases, and it continues to grow rapidly. In 2024, e-commerce accounts for over 19% of all retail sales worldwide. It has changed the way businesses communicate with their consumers and provided more convenience and accessibility for the consumers. This bachelor's thesis aims to investigate how perceptions of e-commerce vary between young and elderly individuals and to analyze how these perceptions influence their behavior and frequency within e-commerce. The study focuses on two specific age groups, young (aged 20-25) and elderly (aged 55-65), within the Stavanger area.

The research investigates the aspects of e-commerce related to physical goods and excludes non-physical products such as tickets to events or other digital services. The thesis aims to provide valuable insight into these two groups' differences in e-commerce behaviors.

Table of content

Preface
Abstract
Models4
1. Introduction
1.1. Background
1.2. Purpose and problem
1.3. Research Demarcations
1.4. Outline of the thesis
2. Literature review
2.1. Age-related differences in online behavior
2.2. Frequency of online activities
2.2.1. Understanding the frequency divide11
2.3. Perceptions of e-commerce across age groups11
2.3.1 Attitudes toward e-commerce among young and elderly individuals11
2.4. Technological Adaptation and Digital Literacy13
2.5. Trust and security concerns
2.5.1. Perceptions of trust and security14
3. Hypothesis
4. Methodology17
4.1. Method
4.2. Interview
4.3. Selection of Participants
4.4. Research Design
4.5. Research models
4.6. Ethical considerations
4.7. Validity and Reliability
5. Analysis and discussion
5.1. Structure of the tables
Frequency
Time use
Knowledge
Attitude
Preference
6. Implications, further research, and conclusion35
6.1. Further research
6.2. Strategic Implications

Bibliography	
6.4. Conclusion	
6.3. Limitations	
6.2.2. Physical store	
6.2.1. E-commerce	

Models



Figure 5: Factors influencing consumer behavior (Kotler et al., 2020, p. 196).



Figure: Technology Acceptance Model (TAM) (Marikyan & Papagiannidis, 2023)



Figure: The theory of planned behavior (Ajzen, 1991)

1. Introduction

1.1. Background

The way humans engage in e-commerce has changed drastically over the recent decades. The increased use of the internet and new technological advancements have changed the whole perspective of shopping. What used to be the standard way of shopping has now been changed. E-commerce, also known as online shopping, is referred to as the process of purchasing goods and services over the Internet instead of the traditional way where you go to physical stores. It has grown large over the last decade and will continue to grow in the foreseeable future (Snyder, 2024). E-commerce has been shown to have several advantages compared to retail stores. It is both convenient and time-saving by making it possible to shop at all hours from anywhere you would like (Maheshwari, 2023).

Boston Computer Exchange was the first online marketplace to open back in 1982. It was invented even before the internet was widely available to the public by Alexander Rendall and Cameron Hall (DBpedia, w.d.). They wanted to create a place for people to buy used computers, equipment, and parts. With help from the English inventor Michael Aldrich and his newly invented data transmission, which made it possible for customers to wire money to businesses, Hall and Rendall made the world's first online shop (Gabrielyan, 2023). Not many people thought this would take off because of the minimal access to the internet, but fast forward to 2023, e-commerce stands for over 19% of all retail sales worldwide (Gelder K. V., 2024).

E-commerce created a brand-new way for businesses to reach out to their customers. It created large changes in the retail market, which meant that already established businesses had to change how they communicated with the consumers to keep up with the other already established businesses and the newcomers in the market. The uprising of e-commerce made it easier for the consumer by providing more convenience and accessibility. It allows all consumers worldwide to browse through large amounts of products without needing to physically travel to a retail store. This change in the way consumers looked at commerce was well received and stands for ¹/₅ of all retail commerce in the world today (Coppola, 2024).

The term e-commerce can be explained in various ways, but a simple way could be that ecommerce refers to trading goods and services over the Internet (Zwass, 2024). With the enormous growth of internet usage and technological advancements, e-commerce will push to become a more significant part of the "new normal," standing in the frontline of innovation, continuing to drive economic growth, and transforming consumers' shopping habits (Davis, 2024). Understanding the implications and changes in e-commerce is important for both businesses and consumers. Children nowadays grow up online and are taught to become comfortable online from an early age (Khatun, 2023). Elderly generations grew up before the internet; many never learned it thoroughly or became comfortable enough online. Can this difference change the perceptions young and elderly individuals have of e-commerce?

1.2. Purpose and problem

E-commerce is clearly a central topic in today's society. The combination of this large subject and the rapid change in technological behavior and perception among different generations led us to centralize our bachelor thesis around this topic. Therefore, this thesis aims to investigate how perceptions of e-commerce vary between young and elderly individuals and analyze how it influences their behavior and preferences within e-commerce.

After careful consideration, we decided on the research problem for our thesis: *How do perceptions of e-commerce vary between young and elderly individuals?* We chose to explore perceptions of e-commerce and how they vary between the two age groups because it is essentially the motivator or driver of people's acts toward all aspects of life (Kotler et al., 2020, pp. 206-207). Technology and the evolution of mankind are changing in the same direction. Investigating if different age groups are moving at the same speed and are fit for these changes will give us a better understanding of how perceptions between the two age groups may differ. In order to fully understand people's perceptions of e-commerce, we felt the need to answer it through a qualitative analysis, believing it would give us the most accurate and comprehensive answer. We hope to create a thesis that contributes to a greater understanding of e-commerce perceptions among different age groups.

1.3. Research Demarcations

In this study, we aim to investigate the different perceptions of e-commerce between two specific age groups: young (aged 20-25) and elderly individuals (aged 55-65). Our research investigates the aspects of e-commerce among these demographics within the Stavanger area. The study primarily focuses on defining the boundaries of e-commerce activities related to physical goods, such as clothing, cosmetics, and sporting goods, among others. We have excluded non-physical products such as tickets to events or digital services from our research, ensuring a clear focus on tangible consumer goods purchased through e-commerce platforms.

1.4. Outline of the thesis

The thesis contains several parts, with the introduction in the beginning. Following this, part two investigates a broad review of the theoretical foundation relevant to our study. It includes foundational theories in marketing and research articles, making it a solid framework to inform and develop our hypothesis.

In part three, the hypothesis section of the study, we present our chosen hypothesis. These hypotheses will help us address our research question. Part four defines the methodology used in the study, providing insights into the interview, selection of participants, research design, research models, ethical considerations, and validity and reliability of the thesis. Moving forward to part five, we focus on analyzing our collected data. We also discussed what we found, comparing it to the theories we discussed in the literature review and the hypotheses we proposed in part three. Finally, the sixth and concluding part of the thesis covers the findings and results of our thesis and aligns them with the theoretical foundation and empirical evidence. Additionally, this section acknowledges any limitations and potential insight into further research.

2. Literature review

To conduct our study on the differences in perceptions of e-commerce between young and elderly individuals, we began by reviewing relevant literature spanning traditional commerce theories and contemporary perspectives. This combination of theories forms the conceptual framework that supports our research and lays the foundation for our analysis and discussion. Our sources were chosen from various trustworthy academic journals, scholarly articles, and books, providing a balanced perspective that reflects the evolving nature of e-commerce globally.

Our search for literature was conducted systematically, utilizing established academic databases on the topic to ensure thorough coverage of relevant research. We accessed academic journals through Google Scholar, focusing on the period when e-commerce emerged as an important feature in consumer behavior and commerce strategies. In addition, we searched through the database provided by the University Library of Stavanger (Oria) to get additional literature on our research field.

The selection criteria for our literature review were narrow and aimed at finding studies that directly address the crossing of age, consumer behavior, and e-commerce perceptions. Articles included in our review were required to contain key terms such as 'e-commerce,' 'online shopping,' 'age differences,' 'consumer attitudes,' and 'digital orientation.' This ensured that our review contained a comprehensive range of perspectives while maintaining relevance to the specific focus of our study.

By combining and examining this wide range of sources, we aim to provide a detailed understanding of how young and elderly individuals see e-commerce differently. This literature review serves as the foundation for our research, guiding our exploration of key themes, trends, and insights that inform our hypothesis and research question. Through a careful examination of existing research, we aim to offer valuable insights into how ecommerce and consumer behavior are different between the two age groups.

2.1. Age-related differences in online behavior

Understanding how age influences online behavior is essential in exploring the varying perceptions of e-commerce between young and elderly individuals. A wide range of research has been conducted, and it has shown that age plays a significant role in shaping how people interact with digital technologies (Stanciu, 2017). This includes the engagement of e-commerce, social media usage, and other online activities. Younger generations, often referred to as digital natives, have grown up in an era characterized by considerable technological advancements and worldwide internet access. As a result, they tend to show distinct online behaviors and preferences compared to elderly generations who may have had limited exposure to digital technologies earlier in life (Klar, 2021).

Exploring the various angles contributing to these age-related differences is essential. Beyond the engagement of social media usage and frequency of online activities, factors such as technological competence, shopping habits, and concerns about trust and security also play significant roles in shaping how different age groups engage with e-commerce and digital platforms (Lee & Maher, 2021). By examining these various aspects, we gain a better understanding of the diverse online behaviors shown by young and elderly individuals.

2.2. Frequency of online activities

The internet usage is more frequent in the age group from 18 to 29. Research shows that there is a decrease in usage, the older the age group is. At the same time, the group being 65 and up, has embraced noticeably to key technologies compared to a decade ago. Simultaneously, the gap has narrowed between the oldest and youngest adults. In 2000, the gap in internet use was 56%; by comparison, it is now 24%. Even though the gap has narrowed, there are still some differences between age groups in the frequency of internet use. The age group between 18 and 29 used the internet most frequently, at 48%, compared with 22% of those between 50 and 64 (Faverio, 2022).

2.2.1. Understanding the frequency divide

The largest internet usage gap can be found between the age group 50-64 and 65 and over (Faverio, 2022). According to the same study used in the last paragraphs, 96% of all those between 50-64 years use the internet. This is a 22% increase from those 65 and older. The reason behind why there is such a big difference between the two age groups may be because of the difference in the usage of social media (Madden, 2010). Social media usage has almost doubled from 22% to 42% of all those aged 50-64.

The substantial differences in internet use by age also apply to the use of social media. Young adults aged 18 to 29 use a broader social media spectrum than elderly adults 65 and over, who mainly use Facebook (Smith & Anderson, 2018). Among the age group 18 to 29, 88% use any form of social media. Already at the age group 30 to 49, this number drops to 78%, to 64% within the 50 to 64 age group, and 37% in the age group 65 and older. The youngest adults use Snapchat and Instagram at a high rate, and the frequency with which they use these platforms is also high. Of those 18 to 24, 82% say they use Snapchat on a daily basis, and 71% even use the platform repeatedly throughout the day. Similar behavior is seen in the use of Instagram, where 81% of users use the platform daily, and 55% use the platform multiple times per day.

2.3. Perceptions of e-commerce across age groups

Having insights into how age influences the perceptions of e-commerce is important. As digital technologies continue to spread through all aspects of our daily lives (We Are Social, 2022), selecting the variation of how young and elderly individuals perceive e-commerce is essential for shaping strategies and interventions in the digital marketplace.

2.3.1 Attitudes toward e-commerce among young and elderly individuals

In our exploration of the perceptions of e-commerce among different age groups, it becomes clear that attitudes toward e-commerce vary between young and elderly individuals. These attitudes are shaped by multiple factors, including technological competence, previous experiences with online transactions, and concerns about security and privacy (Sultan & Uddin, 2011). The theory of planned behavior is a model looking into behavior within marketing and consumers. The model gives valuable insight into the structure of attitudes and intentions toward e-commerce among different age groups (Neighbors & Fossos, 2013). According to TPB, an individual's behavioral intentions are influenced by three main factors. The first factor is their attitude toward the behavior. The second is subjective norms, tied up with perceptions of e-commerce and perceived social pressures. Lastly, perceived behavioral control, or perceived ease, looked at with e-commerce in mind, is the difficulty of performing the behavior. For young consumers who are often more influenced by social networks, subjective norms may play an important role in shaping their attitudes and intentions toward e-commerce. Elderly consumers put more emphasis on perceived behavioral control, particularly if they perceive e-commerce as challenging due to factors such as technology or concerns about security.

The contrasting attitudes towards e-commerce among young and elderly individuals stem from distinct preferences that underscore their consumer behaviors. Key factors such as convenience, pricing, product assortment, platform usability, and social validation greatly influence their perceptions of e-commerce (Sli Systems, w.d.). Numerous research papers have explored this diversity in preferences, focusing on the drivers of e-commerce.

Notably, studies have revealed marked variations in preferences between young and elderly demographics. For instance, fast delivery, reliable tracking, and secure packaging hold outstanding importance for elderly consumers in the field of e-commerce. More than half of America's wealth is concentrated within the silent generation and baby boomers, which suggests that while pricing remains crucial, it may not be the main factor driving purchasing decisions within this age group (Gelder K. V., 2024). While this is the case for the elderly demographics, younger generations prioritize differently. Young consumers often prioritize competitive pricing, alongside a wide product range and the influence of social networks, when making online purchasing decisions (Sli Systems, w.d.).

Younger consumers tend to place a significant weight on affordability when engaging in ecommerce transactions. The availability of competitive pricing models and pricing transparency greatly impact this demographic's decision to participate in e-commerce. Furthermore, the many online product options appeal to the diverse preferences of young consumers, who value the convenience of accessing a wide range of products from the

comfort of their homes (Sli Systems, w.d). Additionally, the general influence of social networks, online communities, and thoughts surrounding the environment shapes the purchasing decisions of younger individuals as they seek validation and recommendations from peers and online influencers (Faverio & Anderson, Pew Research Center, 2022; Wood, 2022).

Understanding and exploring the drawbacks of e-commerce is crucial to fully understanding its perceptions among younger and elderly individuals. Concerns such as product quality, shipping times, and the authenticity of online transactions have been shown to be real threats to e-commerce, especially among the elderly generations. These factors also affect the younger population, but not to the same extent. Issues related to cybersecurity and privacy breaches may evoke doubt among elderly individuals, who may be less familiar with navigating online platforms securely (Cheng et al., 2023).

2.4. Technological Adaptation and Digital Literacy

Digital literacy encompasses the skills and competencies to safely and appropriately access, manage, understand, integrate, communicate, evaluate, and create information through various digital technologies (UNESCO, 2018). There is a digital divide in technology use among younger and elderly individuals (Rosell, 2021). Technological adaptation and digital literacy vary among generations depending on how tech-forward the world was growing up (Norton, 2021). Younger generations are born into a more technological world than elderly generations and may, therefore, also be more comfortable with technology. Elderly generations are typically more hesitant to engage in online activities because they must adapt. The Technology Acceptance Model (TAM) highlights individual's acceptance of information systems and suggests two key determinants of an individual's attitude toward using a particular technology: perceived user-friendliness and usefulness. Perceived user-friendliness is about the ease of use and convenience of interacting with the technology, and perceived usefulness relates to the benefits and utility of the technology in achieving desired outcomes (Marikyan & Papagiannidis, 2023).

When addressing the topic of technological adaptation and digital literacy, it is common to divide generations into digital natives and digital immigrants (Norton, 2021). Digital natives are those born in an era where the world was a tech-first society; digital immigrants are those born before the world turned into a tech-first society. People born between 1925

and 1980 are usually categorized as digital immigrants, while digital natives are those born between 1980 and today. While digital natives only know a world with technology, digital immigrants have had to learn to adapt to it, which has made them more skeptical towards technology and online activities.

2.5. Trust and security concerns

E-commerce has become a fundamental part of modern business models (Coppola, 2024). However, the experience and feeling of security and trust are crucial for consumers' decisions to shop online (Gurung & Raja, 2016). This section of the literature review will focus on research exploring trust and security concerns in e-commerce.

2.5.1. Perceptions of trust and security

Everyone who navigates through e-commerce websites and the internet generally has different perceptions of online security. It often varies between age groups. Elderly individuals often exhibit greater caution due to personal and financial information safety concerns. The elderly consumers may express apprehension about sharing sensitive data online, citing fears of identity theft and credit card fraud at a more significant rate than younger individuals (Abad et al., 2021). This cautious approach may stem from lower levels of digital literacy and a higher susceptibility to online scams among elderly individuals (Ohlheiser, 2023).

At variance with younger consumers, digital technologies may display a more relaxed attitude towards online security. They may trust e-commerce platforms' security measures and be more willing to share personal information online (Ohlheiser, 2023). However, this does not discredit their awareness of security risks. Instead, their perceptions may be influenced by user interface design (UI design) and the availability of secure payment options (Lindner, 2023). Despite their visible confidence, younger individuals remain the demographic most vulnerable to digital scams (OrboGraph, w.d.). Generation Z is 34% more likely to experience and report losing money to money fraud online than the elderly generation. Their familiarity with digital platforms, e-commerce, etc., does not mean immunity from fraudulent schemes. Therefore, while they may be less apprehensive about

online security, they still need to be aware of potential threats when engaging in ecommerce.

While younger individuals are the biggest subjects of money fraud, elderly consumers fall more easily for fake tech support via emails and phone calls (Federal Trade Commission, 2022). Compared to younger consumers, they fall for tech support scams by 398% more and 126% more on fake sweepstakes. Understanding the divergence in attitudes and trust towards online security between young and elderly demographics is critical to exploring e-commerce usage. Both younger and elderly generations are subject to security concerns but fall for different types of scams.

3. Hypothesis

In this section, we will present our chosen hypotheses, which are intended to help address our research question. A hypothesis formulated with the aim of having its accuracy tested by the study. It must be formulated to allow it to be either confirmed or refuted (Dalland, 2012, p. 219). We made two hypotheses to get to the bottom of our research question. These were developed before we began writing the thesis, and we structured the interview questions around them. We made a series of relevant interview questions for each hypothesis to gather thorough information. We felt that the two selected hypotheses had substantial depth and, therefore, they were sufficient. Too many hypotheses may complicate the task.

HYPOTHESIS 1: Young individuals engage in online activities more frequently than the elderly.

We will investigate whether more frequent online behavior in the form of frequency and time use may influence and affect the habits of both age groups regarding e-commerce. Many young individuals have a different view of the internet than elderly generations, as they have grown up in a time when it is integrated into almost every aspect of their daily lives. This may not have been the case for elderly generations.

HYPOTHESIS 2: Young individuals exhibit different online behaviors than the elderly.

This hypothesis examines differences in the online behaviors of the two age groups. There can be many reasons why two individuals of different ages have different online behaviors. In the analysis, we will explore the topics of knowledge, attitudes, and preferences further.

4. Methodology

This section of the thesis will discuss the methodology used to investigate whether young and elderly individuals have different perceptions of e-commerce. We will explain the method and design, as well as examine the research models developed in relation to the hypotheses. These research methods form the basis for part 5 of the thesis, which is the analysis. Finally, we will consider ethics, validity, and reliability.

4.1. Method

Sociologist Vilhelm Aubert has formulated methodology as "an approach, a means of solving problems and arriving at new knowledge. Any means that serves this purpose belongs in the arsenal of methods" (Dalland, 2012, pp. 111-112). In simpler terms, methodology is like a tool for encountering something we want to investigate, and it helps us gather the information we need for our study.

Qualitative methods are used in practical market analysis and social research. Social media has provided numerous exciting ways to expand the use of these methods (Silkoset et al., 2021, p. 117). Qualitative methods aim to capture meaning and experience that cannot be quantified or measured (Dalland, 2012, p. 112). On the other hand, quantitative data can be expressed in numerical or quantity units. Numbers enable us to conduct mathematical calculations, whether we are interested in determining the average income of a population or the proportion of the population relying on government assistance. We chose to use a qualitative approach in the study. It will make searching deeper and gaining insight from the interviewee's various perspectives easier. We will examine factors that are not necessarily easy to measure in data - including attitudes and knowledge, and therefore, a quantitative approach would be inappropriate.

4.2. Interview

There are several qualitative methodologies to use. We chose to conduct a qualitative research interview. During research interviews, we engage with individuals to understand how they express their experiences or articulate their behaviors (Kvale & Brinkmann, 2015, p. 20). It is recommended to choose interviews for topics that involve different aspects of human experience or our everyday conversations (Kvale & Brinkmann, 2015, p.

135). The qualitative research interview seeks to understand the world from the interviewee's perspective. Bringing out the significance of people's experiences and uncovering their perception of the world prior to scientific explanations is a goal. When preparing for an interview study, it is important to define the focus of the investigation - the reason behind conducting the study. Interviews are a way to collect firsthand information about the interviewee's usual experiences related to a particular topic. (Kvale & Brinkmann, 2015, p. 140).

Standardized interviews follow a formal structure that remains unchanged. Typically, there are no follow-up questions, and no explanations or rephrasing of questions are added. This corresponds to a questionnaire interview (Silkoset et al., 2021, pp. 119-120). Semi-standardized interviews are somewhat standardized, allowing the interviewer to provide explanations and rephrase questions as needed. The wording is more flexible, and the interviewer can respond to questions and offer explanations. Unstandardized interviews, on the other hand, lack structure entirely. There is no predetermined order or wording for questions. Unstandardized interviews are typically used for idea generation and are less suitable for structured interpretations. We chose to conduct a semi-standardized interview in the assignment. This is because we wanted to guide the interviewees if they got stuck and became unsure about anything with the questions and to be able to ask relevant follow-up questions that provided more depth.

4.3. Selection of Participants

Once we finished creating the questions, we went to the city center of Stavanger and the University of Stavanger to find interviewees. We chose to interview two age groups of randomly selected people. One age group consisted of students aged 20-25 years. The other age group was between 55-65 years old. It was also crucial that all interviewees lived in the Stavanger area since we wanted to limit the research to one region. Figure 1 shows an overview of the initial questions in our interview guide. Our sample size consisted of ten people in total. We noted their profession, gender, age group, and gross monthly salary, including student loans.

Interviewee	Profession	Gender	Age group	Gross mothly salary, including student loans
1	Student, part time job	Woman	20-25	12 000 kr
2	Student	Man	20-25	9500 kr
3	Student, part time job	Man	20-25	15 000 kr
4	Student, part time job	Man	20-25	18 000 kr
5	Student	Woman	20-25	9500 kr
6	Manuscript editor	Woman	55-65	61 000 kr
7	Health service	Woman	55-65	75 000 kr
8	Store employee	Man	55-65	36 500 kr
9	Senior advisor	Man	55-65	68 000 kr
10	Unit manager	Man	55-65	65 000 kr

Figure 1: Overview of the Interviewees

4.4. Research Design

The research design outlines how the analysis will be structured to solve the specific task. It is crucial to know what types of data are needed, how they will be analyzed, and how they will be obtained. The choice of design depends on our ambitions regarding explaining relationships and analyzing, as well as the existing knowledge in the field. Figure 2 is inspired by the book and illustrates three main types of design in the pragmatic approach (Silkoset et al., 2021, pp. 68-69).



Figure 2: Research design

In our study, we chose a descriptive design. This method describes a single variable or the relationship between two or more variables. We will examine variables in Figure 3 and Figure 4. According to (Silkoset et al., 2021, pp. 72-73), a descriptive design lacks the foundation to have a causal context. Instead, we can only observe that variables change systematically, which is known as correlation. We cannot conclude that one variable directly causes a change in another. The reason for this can be the many factors involved. With a descriptive design, we can analyze both primary and secondary data. We have utilized both in this assignment. Secondary data refers to information that already exists

and has been gathered by others for a different objective. In contrast, primary data are collected specifically for analytical purposes (Silkoset et al., 2021, p. 96). Primary data can be acquired through various ways, such as engaging in discussions with individuals, directly observing their behaviors, or analyzing documents. These approaches have the potential to give both qualitative and quantitative data, with the outcome influenced mainly by what approach you chose in the first place. We can obtain primary data in several ways, including through communication with people, observation of people, and document analysis. All three methods can provide us with both qualitative and quantitative data. It depends more on how we approach communication, observation, or record content in documents (Silkoset et al., 2021, p. 117). Quantitative data usually uses statistical methods to generalize, while qualitative data is used for analytical description and understanding of different contexts.

4.5. Research models

Gradually, as we worked on the thesis, we developed a research model for the two hypotheses. The point of the models is to give us a better overview of the variables and the interview questions since they work as the backbone of the analysis structure. We divided each hypothesis into variables, as shown in Figures 3 and 4. We made nine tables in total from our nine variables. We will return to the structure of these tables in the analysis part.



Figure 3: Sub-dimensions related to hypothesis 1



Figure 4: Sub-dimensions related to hypothesis 2

4.6. Ethical considerations

Ethics and research ethics are intertwined terms. Ethics, as Carson & Skauge explain, deals with questions on the subject (Carson & Skauge, 2019, p. 27). What is right to do and what constitutes a good way of living. Research ethics, on the other hand, refers to the planning, reporting, and execution of research, focusing on protecting privacy and ensuring the credibility of research findings (Dalland, 2012, p. 94).

In order to conduct a survey as part of our bachelor's thesis, it was necessary to obtain permission from Sikt.no. They provide services to the knowledge sector, driving Norwegian and international societal development through research, education, innovation, and entrepreneurship. Sikt aims to be a stable and reliable institution (Sikt, w.d.). The duration of their response time can extend up to a month, therefore putting pressure on the time limit. Consequently, we called them and were advised that as long as we abstained from disclosing any sensitive information that might compromise the anonymity of the interviewees, seeking formal approval was deemed unnecessary.

Respecting the anonymity of the interviewees is essential. Consequently, we did not record any audio during the interviews. Instead, one person conducted the interview while the other transcribed it into a Word document on a computer. This method was chosen for its efficiency, as typing on a computer is faster than handwriting. Qualitative data transcriptions are the product of attention to detail, forethought, and careful planning (Barbour, 2008, p. 192). Before the interviews were conducted, we notified the interviewees that we were bound by confidentiality regarding all information disclosed.

4.7. Validity and Reliability

Validity and reliability are two central concepts in research that ensure the quality and trustworthiness of the study. Validity is how well the research measures what we intend to measure. It is essential to ensure that the data and results concerning the phenomenon being studied or the research question are representative and accurate. On the other hand, reliability is the consistency of the results and data over time and under different conditions (Silkoset et al., 2021, p. 88).

In our research, we focus on age rather than gender. This choice was made because we wanted to investigate any differences in e-commerce based on age. By focusing exclusively on age groups and not considering gender, we could better isolate and analyze the effects of age differences in our findings. However, if we had included only one gender in the study, this could potentially have affected the validity by limiting the variation and diversity of perspectives. We interviewed a total of 10 individuals, 6 of whom were men. Although this did not result in an equal number of participants from each gender, it was more critical for us to reach saturation and an in-depth understanding of our research question. Qualitative interviews aim to explore the depth, and excessive interviewees can potentially lead to excess information (Dalland, 2012, p. 165). After ten people, we felt our sample size was sufficient to achieve our research objectives. There are diminishing returns when you increase the sample size, which no longer contributes to new evidence (Barbour, 2008, pp. 53-54).

5. Analysis and discussion

In this part, we examined the models we created around the two hypotheses. We transcribed the data from our interviews into different tables and then presented the semistructured interview results. Firstly, we explained the structure of the tables. Then, we analyzed Figure 3 based on the first hypothesis, "Young individuals have a more frequent online behavior than elderly individuals." After that, we analyzed Figure 4 based on the second hypothesis: "Young individuals have a different online behavior than the elderly."

5.1. Structure of the tables

As we mentioned earlier, the two models made up nine tables in total for the analysis. Each table is connected to questions we asked the interview participants. The two age groups are marked with young (Y) and elderly (E). The quotes came directly from the interviewees. We included one quote from an interviewee in each group for every table. Since we interviewed five people from each group, deviations were unavoidable. The quotes included in the tables will reflect what we felt represented the overall group, but we still discuss the other opinions.

Figure 3: Hypothesis 1

Model 3 is based on our first hypothesis and accounts for the first three tables.

Frequency

Table 1

Frequency		
Variable	Subsections	Quotes
Season	Products	"I buy products in advance to save money. For example, I typically buy winter clothes online in the summer/spring, since it is cheaper when it is a different season" (Y)
	Products	"I try to buy products I need for a specific season in advance to avoid limited options. I like to use what I have till until it is broken, so I typically want something from the moment that happens" (E)
	Budget	"I spend more money when there are good deals to make. Black Friday, or end of year sales are common events that I try to allocate some money for" (Y) "My budget is not too affected by seasons other than Christmas presents. I always try to buy what I need, and I think I could be more aware of my spending habits in order to save money" (E)
	Marketing	"I do get influenced by ads I see on social media sometimes, regarding seasons. I will say that it affects me sometimes, depending on my interest in the product. It does create a need for the product I sometimes was not aware of before I saw the ad" (Y)
	"I see ads on Facebook sometimes, but I do not act too much on these 'super deals'. I have read articles before about how they up the price of these products before they are on sale, so it is not really a good deal to be made" (E)	

Table 2

Frequency		
Variable	Subsections	Quotes
Regularity	Purchases	"It depends from month to month, but if I had to guess, I would say three times a month. I like to wait with buying things until I get my next student loan for the month. This keeps me away from spending too much on unnessecary things" (Y)
		"It is quite sporadic when I buy things online. I would say once a month on average. Some months it is more, and some months I dont buy anything at all" (E)
	Websites	"I visit websites alot. I look through websites for clothes several times a week. My budget is probably what keeps me from pressing the 'buy' button most of the time" (Y) "I do not spend alot of time on online websites. Of course it happens occasionally
	E-commerce vs physical	if I want something specific, but not other than that" (E)
		"There are some products I only buy online, but things like food, I always buy physical" (Y)
		"I buy more products physical than online, I think everybody does" (E)

Tables 1 and 2 present an overview of the questions regarding frequency, which is a term that refers to the rate of the occurrence of an event within a specific period (EcoStor, w.d.). From our findings regarding seasons, young individuals demonstrated a more proactive approach, taking advantage of online seasonal offers compared to the elderly. The largest factor for them was saving money. In contrast, elderly individuals were more concerned about the costs of shipping and handling fees and tended to prefer physical stores to avoid these additional expenses.

The younger age group enjoyed purchasing products several months beforehand. This behavior shows their awareness of seasonal price fluctuations and desire to capitalize on discounts. Furthermore, ³/₅ young respondents expressed a conscious effort to purchase products needed for specific seasons in advance to avoid limited options later on. This can indicate that they have a forward-thinking approach, anticipating their needs and planning their purchases accordingly. This was, again, linked to saving money. ²/₅ of them wanted to continue with this pattern in the future, regardless of them making more money after education, and the remaining ³/₅ thought they would care less if they had more money. Additionally, they acknowledged the influence of seasonal advertisements on their purchasing decisions, with two people admitting to being directly affected by marketing campaigns promoting seasonal products.

In contrast, elderly individuals appeared less affected by seasonal considerations in their ecommerce habits. While ²/₅ said they may still take advantage of seasonal sales, the overall influence of seasonal offers on their purchasing behavior seems to be lower. This was mainly due to them not ordering many products online in the first place. They prioritized buying what they needed regardless of seasonal discounts and exhibited a higher skepticism toward marketing tactics promoting seasonal deals. From a marketing perspective, young individuals are more likely to be influenced by social media and online ads, while most elderly prefer traditional channels such as print and television advertising. The literature review suggests that younger generations are more likely to be influenced by digital marketing channels due to their familiarity with technology (Cheng et al., 2023).

According to the interview answers, both groups took advantage of physical- and ecommerce shopping. Elderly individuals still tend to rely more on physical stores than the younger group, indicating their preference to see and feel the products before purchasing.

Looking the other way, it can suggest that businesses may be more likely to look to the needs and preferences of younger generations in the e-commerce market. ³/₅ of the young individuals shop online at least once a week, while only ²/₅ of the elderly do the same. We found secondary data, which indicates that younger generations are more comfortable with technology and have grown up with the internet as a part of their daily lives. Of the two groups, the elderly reported overall less frequent visits to online websites, indicating a lower level of involvement in online browsing. Their interactions with online platforms were driven by specific needs rather than exploratory behavior.

Time use

Table 3		
Time use		
Variable	Subsections	Quotes
Digital literacy	E-commerce	"When I buy something online, I tend to look for the 'perfect' price. I like to compare it across other websites as well. This can take some time. If I had to guess, it would be up to thirty minutes for a product" (Y)
		"I do not spend too much time on e-commerce. I usually know what I want on beforehand, so it goes rather quick. Probably ten minutes maximum" (E)
		"Probably two to three hours per day. I need to be available both for my friends and family, but my job also. Sometimes I cover other peoples shifts. I also tend to scroll through videos to kill time" (Y)
Social n	Social media	"I am not very active on social media. I use Facebook occasionally to keep in touch with family and friends, but that's about it. I would estimate I spend less than thirty minutes per day on social media platforms" (E)
	Websites	"I always read the news online. I also check on the stock markets quite often. Netflix is also a time thief for me. I'm guessing about two hours per day" (Y) "I check my emails and read the news. This can take up to twenty minutes a day" (E)

The data reveals significant differences in platform usage between the two age groups. For example, ²/₅ from the younger age group spent over 2 hours daily on e-commerce, compared to 0/5 of the elderly. All participants from the younger age group stated that they spent over 2 hours daily on social media, while only ²/₅ from the elderly age group did the same. This indicates a clear difference in time use between the two groups. The younger respondents demonstrated greater engagement with digital platforms, utilizing them for

product research and purchases. For other websites such as news outlets, school, and work-related websites, ³/₅ of the younger individuals spend over 2 hours daily, compared to ²/₅ of the elderly. The clear differences in social media and website use can be supported by research stating that the age group 18-29 has the most frequent internet usage of all age groups (Faverio, 2022).

Figure 4: Hypothesis 2

Based on the second hypothesis, we will examine the tables for Figure 4, which make up the remaining six tables.

Knowledge

Table 4 Knowledge		
Variable	Subsections	Quotes
Product	roduct Influence of e-commerce	"Artificial intelligence is getting more and more popular. I also think physical stores are getting more and more replaced by online stores. Potentially, many people can lose their jobs, which is not good" (Y)
		"I think more and more people are buying products online than before. Due to e-commerce not being very eco friendly, I think the total volume of sales will go down in the future" (E)
	Drice	"Buying online saves me for quite a bit of money. Because of that, I am going to continue" (Y)
	"I am aware that it can be cheaper to buy things online, but I tend to want a product fast, so I buy it in the real world instead" (E)	

Table 5

Knowledge		
Variable	Subsections	Quotes
Technology	gy Digital platforms	"Comparing now to when I was a teenager, platforms has already changed quite a bit. There is a bigger variety of apps and websites, and I guess they will just continue growing in the future" (Y)
		"The new technology makes everything more efficient, from ordering products, to quick access to websites. I think artificial intelligence is very common these days. It is already lifting the bar even higher" (E)
	Adaptability	"I think my ability to adapt is good. I like to follow trends, and I like to be updated" (Y)
	"I don't really adapt that well to new things in general, so it can be challenging with new technology for me. I am lucky to get help from family if needed" (E)	

Table 4 provides an overview of the factors influencing the online purchasing decisions of the two age groups, focusing on price and the influence of e-commerce. Our interview data revealed that both age groups prioritized price highly when making purchasing decisions. This may suggest the importance of cost-effective products for consumers across both age groups (Gourville & Soman, 2002). Younger individuals are more likely to be influenced by upcoming e-commerce trends, which can be connected to their greater familiarity with digital technology, their need for "niche" products, and greater customization options (Cheng et al., 2023). On the other hand, elderly individuals may be less aware of changes in e-commerce. This could suggest the need for better information for the consumers, making it easier to stay informed about new trends and offerings around e-commerce.

When considering the role of e-commerce trends, our interview data revealed both disregard and concern. Cheaper prices and more effective shipping were seen in both good and bad ways. These variables would make it more convenient for an individual but may also lead to economic and environmental problems. ⁴/₅ young interviewees pointed out their concerns with changes in e-commerce and how even lower prices could potentially do more harm to the world's population. At the same time, only ¹/₅ of the elderly age group showed concerns on this topic. The younger generation is often on the frontline regarding this topic (World Economic Forum, 2022). Therefore, it was not unusual to see that 80% of the interviewees from the young age group expressed concerns about e-commerce and its effect on the environment.

Overall, the findings from Table 4 suggest that both young and elderly individuals prioritize price when making online purchases. This is a consistent finding, based on the many answers given by our interviewees, and is also a significant factor in the increase in e-commerce (Snyder, 2024). However, both the young and elderly gave us their thoughts on e-commerce problems and trends. ²/₅ young interviewees told us they were concerned about e-commerce taking over the market and showed concerns about retail jobs and their existence. One person from the elderly age group talked about their concern with eco-friendliness and how e-commerce may be an environmental danger. Individuals from both groups showed concerns about these indirect effects that e-commerce is linked to.

However, as shown in the literature review and the general answers we got, e-commerce and its competitive prices will still go strong in the coming years (Gelder K. V., 2024).

Regarding knowledge about technology, the findings revealed a big deviation. Younger individuals are generally more adaptable to new technology compared to the elderly. All participants of the young group reported being able to learn new technology quickly, while only ½ of elderly adults felt the same way. This is quite a big difference. As mentioned in a research article, younger generations are born into a more technological world than elderly generations and may, therefore be more comfortable with technology. Elderly generations are typically more hesitant to engage in online activities because they must adapt to them (Norton, 2021). Norton also categorized people into different groups based on the era in which they were born. As it shows, the young group fits the digital native category, while the elderly group fits into the digital immigrant category. Moving on, both groups seem to know a lot about different digital platforms and how they have changed over the years. A few respondents from both groups mentioned artificial intelligence and its growing importance in e-commerce. According to some respondents, it makes websites highly efficient and improved.

Attitude

Table 6		
Attitude		
Variable	Subsections	Quotes
TT 1 . 1'	Tanana ta	"I am a bit unsure, but probably more quantity of products. I notice that what I want is often sold out" (Y)
Understanding	Improviments	"I would like a faster and easier process in terms of paying for the product. This could actually make me buy more products in the end" (E)
	Recommendations	"I would say that I follow recommendations both from social media and from close friends. On social media, it tends to be from influencers I follow" (Y) "I listen to recommendations from some of my close friends, or family. What I do varies. It can either be to buy a certain product, or to avoid it" (E)
	Importance	"To me, online shopping needs to be cheap. Also, the delivery time should be relativelty short, so the product arrives to my door on expected time" (Y) "Definitely the delivery time, as it can be a bit long sometimes. I tend to rather buy some products in a physical store, so I don't have to wait for the product through delivery" (E)

Attitude		
Variable	Subsections	Quotes
Trust		"I don't really feel that safe online. Recently I have been looking at different VPNs, that can help keep my private information safe on my phone and computer" (Y)
	Online security	"Because of my job, I am obliged to use an encrypted program on my computer to protect information. I have to take it very seriously. I am also not allowed to use Telegram or TikTok on my phone, since these apps can leak your private information" (E)
	Online purchases	"I pay with either a credit card, or with Klarna. I don't like to pay with my debit card" (Y) "I prefer to pay with a credit card. This way, I am protected against fraud" (E)

Table 7

Digitalization is often linked with the transition from physical to online stores. Just as there are many cases of inefficient online retailing, there are also numerous cases of efficient physical retailing (Kotler, Armstrong, & Parment, 2020, p. 419). Attitudes and perceptions towards e-commerce differ from individual to individual in both age groups. The data collected from the interview show that both age groups have positive attitudes toward e-commerce, with most of the interviewees indicating that it is convenient and easy to use.

There is always room for improvement in the e-commerce area. Both age groups had multiple proposals to improve e-commerce. Cheaper prices and a more comprehensive product range were important proposals mentioned by both age groups. Although many of the same improvements were agreed upon, younger individuals were more likely to mention faster delivery times, better website navigation, and improved search functionality. Elderly individuals, on the other hand, were more concerned with the security and privacy of their information. ²/₅ suggested the need for stronger authentication measures and increased transparency around data usage.

Social media, friends, and influencers' recommendations was a large factor for many people when they buy a product. All the younger interviewees said they got inspiration and recommendations from social media and friends before purchasing a product online. The elderly said they mostly got their recommendations from television advertisements and family members. The reason behind the difference in what channels the two age groups listen to, might be from variations in technological abilities between the two age groups. Young people are known to have more abilities and spend more time online, and therefore, get their inspiration and recommendations from social media and influencers. Elderly individuals spend more time watching television and the following advertisements

(Norton, 2021). Recommendations can be given from many people over many different channels, but how and what the single individual listens to varies from person to person.

The data suggested that both age groups prioritize online security when making online purchases. Many respondents expressed concerns about the potential risks of their private information being leaked online, particularly regarding identity theft and financial loss. This fear is understandable, given the increasing frequency of cyber-attacks and data breaches in recent years (Natalucci et al., 2024). Two respondents from both groups mentioned using VPNs, also known as Virtual Private Networks, or other encrypted devices to enhance their online security. The use of VPNs by respondents from both age groups reflected a growing awareness of the importance of online security and privacy. Both groups mentioned how these tools could reduce the risk of falling victim to cyber threats and protect their personal information while conducting online transactions. Compared to some of the findings from research articles, most of our young respondents were seemingly more concerned about their online security.

There are some differences in attitudes towards trust in online purchases. ³/₅ of the young group and ¹/₅ of the elderly group used Klarna, which is an online credit card that boosts safety on online purchases. None of the young respondents used a regular credit card on online purchases, while all the elderly interviewees preferred using it, with one of them using either Klarna or a credit card. Therefore, both groups are aware of the safety of online purchases. As a follow-up question regarding online security, we asked the respondents if they had ever been victims of online fraud. Three people, whereas two belonged to the young group, had experienced this. This can be connected to the younger respondent's familiarity with digital platforms (OrboGraph, w.d.).

Preference

Table 8

Variable	Subsections	Quotes
Activity	E-commerce	"The last time I bought something online was three days ago" (Y)
		"It was probably two weeks ago" (E)
	E-commerce	"When I buy things online, I can be anywhere. Sometimes I buy things when I am in class. It does not have to be anywhere specific for me" (Y)
	experience	"I prefer to have a quiet environment if I am going to buy anything online. I like to be at home" (E)

Table 9

Variable	Subsections	Quotes
Online marketplace	Social media	"I use Snapchat, Facebook and Instagram most regularly" (Y) "I prefer using Facebook amongst the different social media platforms" (E)
		"When I shop online, I prefer to buy skin products. They can be difficult to find in regular stores. I also like to buy training clothes" (Y)
	Web stores	"I tend to buy electronics online, especially when I am looking for gifts for family members. Other than that, I like to buy concert tickets or plane tickets online, but I understand you don't count that as a physical product" (E)
	Pros & cons	"The biggest pro for me is probably that I save money ordering online. I can compare many products, and find the most affordable one for my budget. However, the product does not always get delivered. One time the product got stolen, and I got no refund" (Y)
		"I would say that the biggest pro is that I get the product delivered right to my door, making everything more simple. I save alot of time that way. What I miss however, is the service I would get in a physical store. It can also be diffucult to navigate through some websites" (E)

Having insight into the preferences of e-commerce and individuals' experiences with ecommerce builds a great foundation for looking into the activity rate of e-commerce between the two age groups. The findings indicate some differences between the activity of e-commerce and the amount of money spent on e-commerce. Individuals from the younger age group spent between 0-2800 kr a month on e-commerce, while the elderly age group spent between 400-2000kr a month. Comparing the amount of money spent with the number of times the two age groups preferred to shop online will give intel on how active the two age groups are within e-commerce. The younger age group preferred to conduct ecommerce between 0-5 times a month, while the elderly age group stated between 0-3 times a month. This variance in activity levels can be attributed to the higher levels of digital literacy and comfort with technology among the younger generations (Norton, 2021). This may indicate that even though the amount of money spent is similar between the two age groups, the younger generation still prefers to engage in e-commerce at a larger frequency.

How and where we are while conducting e-commerce may greatly affect the overall activity and frequency. Everyone with internet access is free to conduct e-commerce at any time of the day from anywhere (Maheshwari, 2023). Where people are when they browse through different sites varies from the two age groups. ⁴/₅ elderly said they usually did it while being home in a calm and relaxing environment. The younger age group also stated the same but also included other places. ³/₅ young individuals said they usually engaged in a lot of e-commerce while at school. Our findings indicate that younger individuals typically got their recommendations from friends and social media, while elderly individuals usually got their recommendations from TV advertisements and family members. This suggests that people conduct e-commerce where they get the most recommendations.

It was earlier mentioned that younger generations, often referred to as digital natives, have grown up in an era characterized by large technological advancements and worldwide internet access. As a result, they tended to show distinct online behaviors and preferences compared to elderly generations who may have had limited exposure to digital technologies earlier in life (Klar, 2021). To show the significance of the findings from Table 9, it is important to underline the understanding of online marketplaces. The literature review highlights the growing importance of online marketplaces as a central driver of e-commerce growth. Social media goes under the umbrella of online marketplaces, and the different apps are filled with marketing ads and commercials for various products (Voorveld et al., 2018). All respondents from the young age group used Facebook, Snapchat, and Instagram regularly. The elderly respondents used Facebook, but a few used Snapchat and Instagram as well. However, it was not as significant as the younger age group. They may also not be in the target group of these influencers. When it comes to online purchases, both groups were quite divided. The young respondents preferred products such as winter clothes, summer outfits, sports gear, and even Christmas presents online, while the elderly group was harder to categorize. They mostly bought

health products or occasionally some electronic products. The favored things regarding ecommerce for both groups were very similar; most mentioned were the price and simplicity. The main differences came with the cons of e-commerce. ³/₅ young respondents mentioned time as a con, while ³/₅ of the elderly group felt like they missed out on service when they made purchases online instead of physically.

6. Implications, further research, and conclusion

6.1. Further research

When we developed the variables for our hypotheses, we took inspiration from Figure 5 in the marketing book (Kotler et al., 2020, p. 196). It consists of four main factors that influence consumer behavior: psychological, personal, social, and cultural factors. Perceptions are an important part of the psychological factors. When we gathered information for the thesis, we did not find many comparisons of social media usage by the young and elderly, so the topic might not be thoroughly explored. Since our research was a scratch on the surface, looking deeper into perceptions could give interesting findings. It would be an interesting addition to look more into the subcultural aspect. Exploring how perceptions vary among different age groups from diverse cultural backgrounds could provide a richer understanding of e-commerce behavior, as cultural influences may intersect with age-related factors to shape individuals' attitudes and preferences. Although we felt our sample size was sufficient, including more interviewees could result in more deviations and other interesting aspects.

6.2. Strategic Implications

Our thesis highlights valuable information that can give businesses insight. The rise of ecommerce will naturally affect physical stores. We provided a few key factors for both online and physical stores to focus on.

6.2.1. E-commerce

-Appeal:

A web store needs to appeal to its customers. Nowadays, spotting the difference between a modern and an old website is easy. Design can have a cost, but we believe it is important. When looking for a product online, buying it from a more professional website might be preferable.

-Crash course:

Most young people understand e-commerce well; however, many elderly could learn a thing or two. Offering crash courses on how to navigate and get a better understanding of e-commerce could be beneficial for pulling more customers away from the physical stores.

-Customer service:

Customer service is essential, and artificial intelligence programs may greatly improve it. By examining many different online stores and their AI bots, we have gotten the sense that our questions are not understood and that there is little help to get from them. This area has potential for improvement.

6.2.2. Physical store

-Hybrid:

Whether we like it or not, e-commerce will most likely continue to grow in the foreseeable future. We think it will greatly benefit a store by being both online and available at physical stores. This will, in theory, create more jobs since someone needs to control the web store and all the following responsibilities. This might also strengthen a store's image since it offers more exposure.

-Workshops:

For a physical store, a trick to attract more customers can be to organize workshops that align with the store's brand identity. This can improve the connection between a brand and its customers, making them more likely to visit again.

-Customer service:

We believe the importance of customer service applies to both online and physical stores. Some people prefer the comfort of physical service instead of talking to an artificial intelligence program. It is important that employees improve their customer service to keep people coming back.

6.3. Limitations

Even though our research aims to provide valuable insights into the differences in ecommerce between young and elderly individuals, it is essential to acknowledge certain limitations. We did not have an even split of genders, since 60% of the respondents were men. We felt that we reached a saturation point after ten respondents. Different genders can have different preferences and perceptions, making it a limitation of the study, but at least there was an even number of women in each group. The study was limited to the Stavanger area, so the findings may not be fully generalizable to other regions or demographic populations. Additionally, the qualitative nature of our research allows for in-depth exploration but may not capture the broad number of perspectives that quantitative methods could offer.

6.4. Conclusion

To answer our research question, "How do perceptions of e-commerce vary between young and elderly individuals?" we first had to examine our two hypotheses and investigate whether our findings supported them.

Hypothesis 1 was "Young individuals engage in online activities more frequently than the elderly." Through Tables 1 to 3 in the analysis, we observed a clear difference between the

two age groups regarding both frequency and time use in online activities. Young individuals demonstrated a more proactive approach towards seasonal products and were more open to marketing strategies offering discounts and promotions. Their efforts to anticipate and plan their purchases based on seasonal prices were different from those of the elderly. The reason for this was financial motivation for some of them, while most of the elderly were more skeptical because of shipping and handling fees. The younger age group tended to shop more frequently online, while the elderly group relied more on physical stores. The young group also spent more time on digital platforms, as well as other websites, compared to the elderly. It can indicate a connection between the amount of internet use and online purchases. The findings from our research confirm hypothesis 1 and illustrate the differences in the two age groups' frequency of online activities.

Hypothesis 2 was "Young individuals exhibit different online behaviors than the elderly." Tables 4 and 5 gave us intel and a better understanding of how differences in knowledge of products and technology created a gap in the perceptions of e-commerce between the two age groups. These differences may have affected the two age groups' attitudes toward e-commerce and their trust. The young age group put more trust in websites and their online security than the elderly age groups, as shown in Tables 8 and 9 in the analysis. Looking at the differences between the age groups, as shown in Tables 8 and 9 in the analysis. Looking at the differences between activity and the use of different online marketplaces within the age groups gave meaningful insight into how these e-commerce preferences varied between them. The younger age group preferred using a wider range of social media platforms, and they knew the field of e-commerce better than the elderly age group. Therefore, this confirms hypothesis 2, illustrates significant differences, and boosts the validation of our research question.

Through a qualitative analysis, we have gained valuable insight into the differences in ecommerce behavior, focusing on tangible consumer goods purchased through e-commerce platforms by young and elderly individuals within the Stavanger area. We conclude that our hypotheses are correct, and our variables gave great insight into how perceptions of ecommerce vary between young and elderly individuals.

Bibliography

- Abad, M. V., Jimenez, M. P., & Gonzalez, C. Q. (2021, November 23). E-commerce, social media and Social inclusion: A Typology of Users Over 60 Years of Age in Spain. p. 13.
- Ajzen, I. (1991, December). *The theory of planned behavior*. Retrieved from ScienceDirect: https://www.sciencedirect.com/science/article/pii/074959789190020T
- Barbour, R. (2008). Introducing Qualitative Research. Los Angeles: SAGE Publications Ltd.
- Carson, S. G., & Skauge, T. (2019). *Etikk for beslutningstakere*. Oslo: Cappelen Damm Akademisk.
- Cheng, X., Qiao, L., Yang, B., & Han, R. (2023, March 16). *To trust or not to trust: a qualitative study of olderadults' online communication during the COVID-19 pandemic*. Retrieved from Springer Link: https://link.springer.com/article/10.1007/s10660-023-09679-4
- Coppola, D. (2024, February 28). *E-commerce as share of total retail sales worldwide 2021-2027*. Retrieved from Statista: https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-worldwide/
- Coppola, D. (2024, February 28). *E-commerce as percentage of total retail sales worldwide from* 2021 to 2027. Retrieved from Statista: https://www.statista.com/statistics/534123/ecommerce-share-of-retail-sales-worldwide/
- Dalland, O. (2012). Metode og Oppgaveskriving 5. utgave. Oslo: Gyldendal Akademisk.
- Davis, S. (2024, March 28). *How Coronavirus (COVID-19) Is Impacting Ecommerce*. Retrieved from RoiRevolution: https://roirevolution.com/blog/coronavirus-and-ecommerce/
- DBpedia. (n.d.). *About: Boston Computer Exchange*. Retrieved from DBpedia.org: https://dbpedia.org/page/Boston_Computer_Exchange
- EcoStor. (n.d.). *What is frequency*? Retrieved from EcoStore: https://www.ecostor.com/resources/ecopedia/what-is-frequency
- Faverio, M. (2022, January 13). Share of those 65 and older who are tech users has grown in the past decade. Retrieved from Pew Research Center: https://www.pewresearch.org/shortreads/2022/01/13/share-of-those-65-and-older-who-are-tech-users-has-grown-in-the-pastdecade/
- Faverio, M., & Anderson, M. (2022, November 21). *Pew Research Center*. Retrieved from For shopping, phones are common and influencers have become a factor - especially for young adults: https://www.pewresearch.org/short-reads/2022/11/21/for-shopping-phones-arecommon-and-influencers-have-become-a-factor-especially-for-young-adults/
- Federal Trade Commission. (2022, December 8). *Who experiences scams? A story for all ages*. Retrieved from Federal Trade Comission: https://www.ftc.gov/news-events/datavisualizations/data-spotlight/2022/12/who-experiences-scams-story-all-ages
- Gabrielyan, M. (2023, January 26). *The History Of eCommerce and Online Shopping Development*. Retrieved from VirtoCommerce: https://virtocommerce.com/blog/ecommerce-history

- Gelder, K. V. (2024, March 1). Senior onlineshopping behavior statistics & facts. Retrieved from Statista: https://www.statista.com/topics/11538/senior-online-shoppingbehavior/#topicOverview
- Gourville, J. T., & Soman, D. (2002, September). *Pricing and the Psychology of Consumption*. Retrieved from Harward Business Review: https://hbr.org/2002/09/pricing-and-thepsychology-of-consumption
- Gurung, A., & Raja, M. K. (2016, October 10). Online privacy and security concerns of consumers. Retrieved from Emerald Insight: https://www.emerald.com/insight/content/doi/10.1108/ICS-05-2015-0020/full/html
- Khatun, F. (2023, October 30). *E-commerce's Evolution and Influence on Consumer Behavior*. Retrieved from Linkedin: https://www.linkedin.com/pulse/e-commerces-evolutioninfluence-consumer-behavior-fatema-khatun-1zpdc
- Klar, R. (2021, November 17). *Young people, more likely to rely on social media, though few trust it "a lot" : poll*. Retrieved from The Hill: https://thehill.com/policy/technology/582038-young-people-more-likely-to-turn-to-social-media-for-information-survey/
- Kotler, P., Armstrong, G., & Parment, A. (2020). *Principles of Marketing Scandinavian Edition*. London: Pearson.

Kvale, S., & Brinkmann, S. (2015). Det kvalitativeforskningsintervju. Oslo: Gyldendal Akdameisk.

Lee, L., & Maher, M. L. (2021, March 18). Factors Affecting the Initial Engagement of

Older Adults in the Use of Interactive Technology. Retrieved from National Library of

Medicine: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8000283/

- Lindner, J. (2023, December 16). *Must-know VenmoUser Statistics [Recent Analysis]*. Retrieved from Gitnux: https://gitnux.org/venmo-user-statistics/
- Madden, M. (2010, August 27). Older Adults and Social Media. Retrieved from Pew Research Center: https://www.pewresearch.org/internet/2010/08/27/older-adults-and-social-media/
- Maheshwari, R. (2023, June 14). *Online Shopping And Its Advantages*. Retrieved from Forbes Advisor: https://www.forbes.com/advisor/in/credit-card/advantages-of-online-shopping/
- Marikyan, D., & Papagiannidis, S. (2023, September 23). Technology Acceptance Model (TAM). Retrieved from TheoryHub: https://open.ncl.ac.uk/theories/1/technology-acceptancemodel/
- Natalucci, F., Qureshi, M. S., & Suntheim, F. (2024, April 9). *IMF Blog*. Retrieved from Rising Cyber Threats Pose Serious Concerns For Financial Stability: https://www.imf.org/en/Blogs/Articles/2024/04/09/rising-cyber-threats-pose-seriousconcerns-for-financial-stability
- Neighbors, C., & Fossos, N. (2013). *Theory of planned behavior*. Retrieved from ScienceDirect: https://www.sciencedirect.com/topics/psychology/theory-of-planned-behavior
- Norton. (2021, May 26). *Digital generations: The technology gap between seniors, parents, and kids*. Retrieved from Norton: https://us.norton.com/blog/how-to/digital-generations

- Ohlheiser, A. W. (2023, September 21). *Gen Z falls for online scams more than their boomer grandparents do*. Retrieved from Vox: https://www.vox.com/technology/23882304/gen-zvs-boomers-scams-hacks
- OrboGraph. (n.d.). Which Generation is Getting Scammed Online in High Numbers? Retrieved from OrboGraph: https://orbograph.com/which-generation-is-getting-scammed-online-in-high-numbers/
- Rosell, J. (2021, March 17). Use of technology does age matter? Retrieved from The Oxford Insitute of Population and Ageing: https://www.ageing.ox.ac.uk/blog/use-of-technologydoes-age-matter
- Sikt. (n.d.). Sikt Se hva vi kan tilby. Retrieved from Sikt: https://sikt.no/se-hva-vi-kan-tilby
- Silkoset, R., Olsson, U. H., & Gripsrud, G. (2021). *Metode, Dataanalyse og Innsikt 4. utgave*. Oslo: Cappelen Damm Akademisk.
- SLI SYSTEMS. (n.d.). What Do Young Consumers Want From eCommerce? Retrieved from Sli Systems: https://www.sli-systems.com/blog/what-do-young-consumers-want-fromecommerce.html
- Smith, A. (2014, April 3). *Older Adults and Technology Use*. Retrieved from Pew Research Center: https://www.pewresearch.org/internet/2014/04/03/older-adults-and-technology-use/
- Smith, A., & Anderson, M. (2018, March 1). Social Media Use in 2018. Retrieved from Pew Research Center: https://www.pewresearch.org/internet/2018/03/01/social-media-use-in-2018/
- Snyder, K. (2024, March 28). *35 E-Commerce Statistics of 2024*. Retrieved from Forbes Advisor: https://www.forbes.com/advisor/business/ecommerce-statistics/
- Stanciu, D. (2017, April 27-28). Age differences and preferences in online behavior. How aging and digital connectedness are reflected in current research regarding the use of social media. . p. 9.
- Statista. (2024, February 15). *E-commerce as percentage of total retail sales worldwide from 2021 to 2027*. Retrieved from Statista: https://www.statista.com/statistics/534123/e-commerceshare-of-retail-sales-worldwide/
- Sultan, M. U., & Uddin, M. N. (2011). Consumers' Attitude towards Online Shopping. p. 56.
- UNESCO. (2018). A global framework of reference on digital literacy skills for indicator 4.4.2. Retrieved from UnESCO: https://unesdoc.unesco.org/ark:/48223/pf0000265403.locale=en
- Voorveld, H., Noort, G. v., Muntinga, D., & Bronner, F. (2018, February). Engagement with Social Media and Social Media Adevertising: The Differentiating Role of Platform Type. Retrieved from ResearchGate: https://www.researchgate.net/publication/323162064_Engagement_with_Social_Media_an d_Social_Media_Advertising_The_Differentiating_Role_of_Platform_Type
- We Are Social. (2022, April 27). *More Than 5 Billion People Now Use The Internet*. Retrieved from We Are Social: https://wearesocial.com/au/blog/2022/04/more-than-5-billion-people-now-use-the-internet/
- Wood, J. (2022, March 18). *Gen Z cares about sustainability more than anyone else and is starting to make others feel the same*. Retrieved from World Economic Forum:

https://www.weforum.org/agenda/2022/03/generation-z-sustainability-lifestyle-buying-decisions/

- World Economic Forum. (2022, March 18). *Gen Z cares about sustainability more than anyone else - and is starting to make others feel the same*. Retrieved from World Economic Forum: https://www.weforum.org/agenda/2022/03/generation-z-sustainability-lifestyle-buyingdecisions/
- Zwass, V. (2024, March 4). *e-commerce*. Retrieved from Britannica Money: https://www.britannica.com/money/e-commerce