To gain an understanding into the growth of e-commerce in Ireland during the Covid-19 crisis

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Abstract

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The aim of conducting this study is to understand the reasons for the shift of consumer behaviour towards e-commerce for retailing. For this research, consumer behaviour, future shopping, traditional shopping, consumer demographics and sectoral trends are identified to be the key determinants that affect e-commerce. E-commerce trends have recently gained importance over the traditional methods for shopping. It is important to note that Covid-19 also had a major impact on people shifting towards E commerce. It will be interesting to see if these trends are here to stay post pandemic.

There is limited amount of research conducted in this area. However, the literature that is present suggests an online survey should be deployed to answer the research question.

Consumer behaviour is considered to be an important factor for any business to thrive. Due to immense competition in the industry, companies need to make sure that they are fulfilling the demands of consumers in order to gain competitive edge. The literature suggests that consumers nowadays prefer online shopping over traditional instore shopping due to busy schedules and the convenience that online shopping presents. Consumers can get anything to their doorstep by just a click of a button. The target population that was selected for this study were consumers who had shopped through online channels at least once and the goal was to understand their behaviour. The tool that was used to collect the data was an online survey. A total of 114 respondents were questioned about the topic. The data was then entered into the SPSS software and analysed. A comparative analysis from different sectors was done to have a better view of the topic.

From the analysis of the results, it can be seen that consumer behaviour and future shopping have a significant and positive the relationship with ecommerce. The higher the level of significance, higher will be the satisfaction towards e-commerce. It is very important for companies as well as marketers to look into the preferences and buying behaviours of consumers to gain competitive advantage.

Declaration

Submission of Thesis and Dissertation

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(Thesis/Author Declaration Form)

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Chapter I INTRODUCTION

1.1 Introduction

E-commerce refers to shopping online through online channels. It is not only efficient for consumers but also cuts down costs for many businesses. It is suggested from the literature that the future of shopping is online retail. New shopping carts with microchips are being introduced to make the checkout process even faster and smoother. However, from the research it has been observed that there are some consumers who still prefer shopping through traditional channels as they get to touch and feel the product and make payments through a secure method. This will be discussed in detailed in the following chapters. Some products such as food and clothes are easily bought through online channels but expensive product such as cars still require traditional showrooms. The study concluded that demographic factors such as age, gender, lifestyle and income have a major impact on choice of medium for retailing.

In this research study, "E commerce" is the dependent variable which is followed by five independent variables including "Consumer Behaviour, Future Shopping, Traditional Shopping, Consumer Demographics and Sectoral Trends". For companies to gain competitive advantage in this challenging environment, it is important for them to look at the demands of consumers. With the advancements in technology, many consumers prefer buying through E-commerce.

In summary, the emergence of Covid-19 has majorly affected the shopping behaviour of consumers. People around the globe have shifted from traditional mediums to e-commerce for shopping in order to avoid contact with other people which can result in the spread of this disease. It is important for the businesses to move from traditional channels to E retail channels if they want to gain a competitive edge in the market.

1.2 Definition of study variables

The definitions of the variables included in this study are given below:

1.2.1 E-commerce

According to Coppel (2000), E-commerce is defined as selling online goods or services that are delivered offline, as well as products that can be "digitized" and delivered online such as software. Melnichuk (2014) defines e-commerce as an online medium for the exchange of values and information using communications technology.

1.2.2 Consumer behaviour

Consumer behaviour is the process in which individuals or groups select, purchase, use, or dispose of products, services, ideas or experiences to satisfy their needs and wants (Swarbrooke & Horner, 2007). According to Moutinho (2000), Consumer behaviour is the process of gaining and arranging information in the direction of the purchase decision evaluating the products and services.

1.2.3 Future shopping

Online shopping which is the future of shopping is defined as the shopping behavior of consumers buying through online stores or websites used for online purchasing transactions (Wang & Chou, 2014). Jones and Vijayasarathy (1998), Internet shopping has received considerable attention in the popular press as the future of in-home shopping.

1.2.4 Traditional shopping

Traditional shopping is having the ability to physically choose and check out what an item or product is like, would look like, and its features (Reddy & Jayalaxmi, 2014). Traditional shopping activities generally consist of a visit in store. Consumers can then find out more information on the product a decision on purchase is made (Rotem & Salomon, 2007)

1.2.5 Consumer demographics

Consumer demographics include age, gender, income and lifestyle. Demographics includes gender, urbanization, household income level, age, race, education level, regional location etc. (Jensen, Clark & English Toliver, 2012).

1.2.6 Sectoral trends

Sectoral trends include different sectors of E-commerce including B2B, B2C and C2C. Different sectors have shown different trends in E commerce. Soft sectors have always gained an advantage over the hard sectors. There is different importance of different sectors on the Internet (Dutta, Kwan & Segev, 1998).

1.3 Problem identification

The aim of this research is to find out the factors that affect e-commerce. As the pandemic hit the world, there was a shift in buying behaviour of consumers from traditional mediums to online platforms. This research is based around this shift and the underlying factors behind the cause.

1.4 Problem statement

"Has COVID-19 impacted the buying behaviour of consumers through E-commerce?"

1.5 Conceptual framework

Figure 1: Conceptual framework of study

Independent Variables   **Dependent Variables**
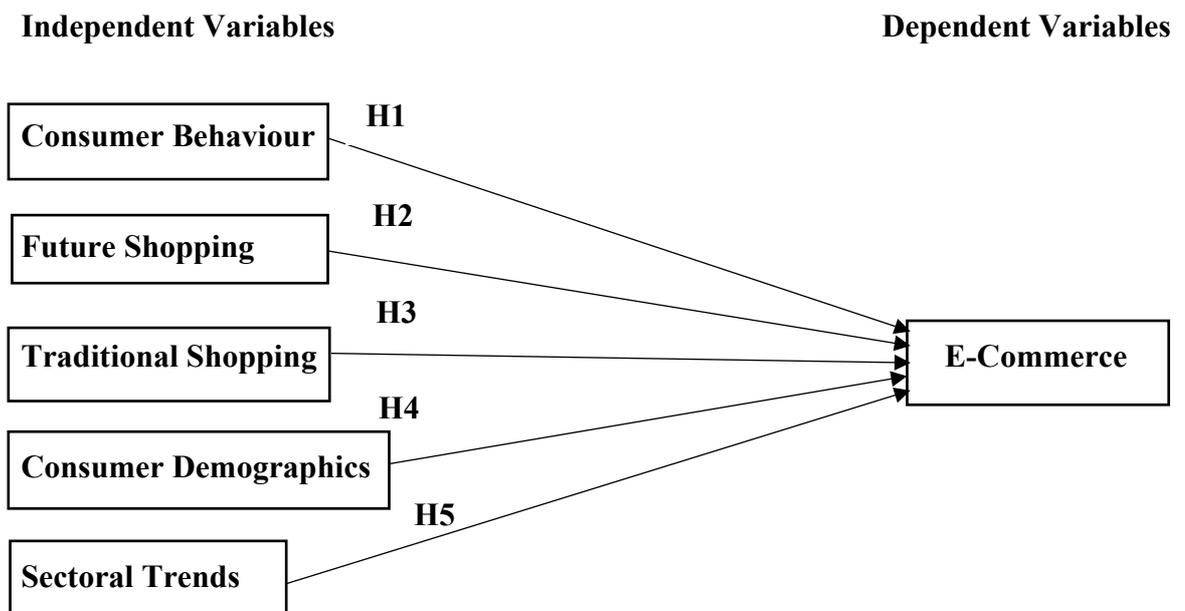
1.6 Structure of this study

This study is divided into seven chapters. The chapters outline the following;

- Chapter I: Indicates the background of the study and looks into the problem identification

- Chapter II: This chapter will include a robust literature review that will where key themes and concepts will be discussed.

- Chapter III: The research question will be discussed along with outlining the objectives.

- Chapter IV: The methodology and procedures used for this study will be discussed in great detail.

- Chapter V: The primary data will be investigated and discussed

- Chapter VI: Research limitations will be discussed as well looking into the data findings in greater detail.

- Chapter VII: Conclusion of this study will be discussed

The next chapter will explore the literature available around this topic.

Chapter Two – Literature Review

Chapter II: Literature Review

Definitions of key concept:

E-commerce is referred to as engaging in different commercial activities without having any spatial or temporal boundaries, through the internet (World Wide Web). Since it is a relatively new concept, people belonging to different demographics define it with their own perspectives (Poong, Zaman & Talha, 2006). E-commerce is online shopping where customers purchase products or services over the internet from the comfort of their own homes. It has been around since the early 1970's, however, it gained huge popularity in the 2000's as the use of technology emerged (Harn, Khatibi & Ismail, 2006). Online stores sell their products or services over the internet where consumers then place their orders and get them delivered to their doorsteps without having to physically go to the stores or shops (Kacen, Hess & Chiang, 2013). More recently, a new hybrid model between e-commerce and traditional store shopping has been introduced called click & collect.

2.1 Introduction

The review of the literature in this section is a summary of the key themes and theories identified and presented by other researchers in the past. These previous studies have guided the author in the investigation of this research. The literature review is analysed under the following themes;

- E – Commerce
- Traditional shopping & E – Commerce
- Future shopping & E – Commerce
- Consumer demographics & E – Commerce
- Global impact of E – Commerce
- Sectoral trends & E – Commerce
- Impact of weather conditions, Location & E – Commerce

2.2 E-commerce

There are several types of e-commerce. 'B2B' e - commerce is the transaction between two different businesses, 'B2C' describes the commerce between business and the consumer, whereas, 'B2E' commerce is between the business and its employees, and lastly, 'B2G' refers to commerce between business and the government (Nemat, 2011). E-commerce has a lot of benefits for consumers as it is convenient and saves a lot of time; ensures better buying decisions as they can take time to think about what they actually need. It also helps to look for alternative products and last but not the least, the services are available 24/7 (Jusoh & Ling, 2012). However, some customers still prefer traditional ways over e - commerce.

The spread of Covid-19, has affected e-commerce drastically since the pandemic started in 2019. According to Elrhim and Elsayed (2020), this pandemic pushed or forced consumers towards online shopping which almost doubled the revenue for the five major companies including Amazon, Alibaba, Rakuten, Zalando and ASOS. Covid-19 has led to a 13.2 % increase in e-commerce in India for example in the last 2 years, thus affecting consumer behaviour (Dinesh & MuniRaju, 2021).

2.3 Consumer behaviour & E-commerce

E-commerce has a huge impact on consumer behaviour and is beneficial in a number of ways. Firstly, Consumers do not have to step out and can shop from the comfort of their homes using any devices such as a laptop or even their mobile phones. Secondly, consumers can look into different websites in order to compare and contrast prices and find the cheapest rates available according to their needs. Furthermore, the convenience aspect is really high as it saves time and helps consumers choose the most suitable product by gaining accurate product information (Moon, 2004).

The impact of e-commerce on consumer behaviour can be categorised into internal and external factors. According to Warner, the external factors can include demographics, technology, socio-economics, marketing and culture. The internal factors include motivation; perception; self-image; semiotics and learning. Other factors that can affect consumer behaviour can be the use of devices, which includes resolution, interactivity and screen size (McLean, Al-Nabhani & Wilson, 2018).

Therefore, it is necessary to have knowledge of when, why and how consumers are using various technological devices to shop through e-commerce (Zhang, Farris, Irvin, Kushwaha, Steenburgh & Weitz, 2010). According to a survey conducted by Rodgers and Harris (2003), women are more discontented with online shopping than men, on the basis of trust, convenience and emotion.

There are a few drawbacks of e-commerce with respect to consumer behaviour, such as payment privacy, safety issues and post-purchase services but these are being overcome as the use of the internet as a medium for shopping is becoming more popular day by day (Mittal, 2013). The combination of less shopping time, scarce resources for processing information and availability of enormous information on the web has resulted in consumers demanding more control and efficiency, and less effort for shopping. This demand for effort reduction and convenience is boosting e-commerce (Webste, Trevino & Ryan, 1993). Furthermore, Koufaris, Kambil and LaBarbera (2001) state that the number of technological interactions will keep increasing in the future, thus leading to a growth in e-commerce.

Covid-19 has had a major impact on e-commerce since the pandemic started. As stated by Davis (2020), 52% consumers are avoiding going back to brick and mortar shopping in crowded areas whereas, 36% will avoid it until they receive a vaccine. Walmart has reported a significant increase in its e-commerce sales by 74% in the last 3 years. Moreover, the revenue for Facebook, Google and Zoom has drastically increased, largely due to the pandemic (Davis, 2020).

Covid-19 has not only led to an increase in e-commerce activity but has also led to decentralized decision making for C level executives. There has been an increase in technology and the use of it in the workplace, in order to increase efficiency during the pandemic (Hardy, 2020). According to a recent survey published by Deloitte, where some retailers enjoyed huge sales during Covid-19, many small retailers struggled. This could be largely down to the retailers inability to exploit the commerce platform correctly. Over 46% of respondents in Deloitte's (2020) survey stated that they plan to reduce their spending on categories such as electronics and vehicles. This could be down to a large number of these consumers losing their jobs and thus resulting in reduced income.

However, a major increase was seen on the spending on household supplies and groceries during Covid-19 breakout as consumers were mostly spending time at home (Silva, Neto, Grangeiro & Nadae, 2020).

Moreover, according to Kim (2020) a major reason for the decrease in revenue for some retailers can be the difficulty of processing the correct information from consumers. Most of these retailers are small businesses who do not have the manpower nor the software systems to keep up with the demands of consumers. The majority of these businesses cannot provide after services such as returns, which is why consumers purchase the same product elsewhere. Due to Covid-19, the traditional showroom shopping has faced a decline as the consumers are not ready to meet the retailers face-to-face. Moreover, browsing for products online, which can be taken as a new concept has gained huge popularity. Marketers can now gauge consumer behaviour on how they browse online using cookie software and target them on their search history (Sayyida, Hartini, Gunawan & Husin, 2021).

2.4 Traditional shopping & E – Commerce

Marketers tend to divide t shoppers into two categories, namely; Traditional shoppers and E-shoppers. This is done in order to increase the market potential and to tap into all the niches (Chiang, Chhajed & Hess, 2002). In 2001, the sales of traditional shopping were recorded to be 96.6% whereas; that of online shopping were 1.1% that adds to 97.7% of total sales, which clearly shows how it was the preferred shopping method for the average consumer (U.S. Census Bureau, 2001). Traditional shopping is preferable by some consumers as the cost of handling and shipping charges can be excessive in online shopping (Liang & Huang, 1998). Traditional stores are considered to be better when it comes to refund policy, social experience and post-purchase services. This gives the traditional stores a competitive advantage over online stores (Kacen, Hess & Chiang, 2013). According to Andersone and Gaile-Sarkane (2009), consumers are divided over traditional or e-shopping methods, depending upon their age, gender, income, status, lifestyle and consumer behaviour. Shopping is now being driven by the convenience of buying rather than by exhibiting it. Traditional shopping is popular amongst some consumers because of the possible factors such as comfort, music, layout and colour (Ainsworth & Foster, 2017). But astechnology is advancing, shopping trends are also changing and the consumers are leaning towards online shopping for various reasons. (Sharma & Jhamb, 2020).

2.4.1 Online shopping risks

A survey was conducted in Singapore (2020) which showed that consumers had trust issues on the reliability of the vendors, and they were reluctant to shop without examining the product face-to-face.

Security is also a major concern, Consumers do not feel safe putting their credit card details or personal information online. Internet security has been found out to be vulnerable and fraudulent by 60% of Singaporeans as stated by Sim and Koi, (2002). However, the likes of pre-paid credit cards and the launch of online banks such as Revolut can solve this issue and are seeing an increase in consumer usage for their services.

Forsythe (2006) states that any security doubt or risk in the minds of consumers while shopping online can negatively affect consumers and their motives to purchase products or services online. Their main concern is the stealing of their credit card information.

Moreover, as government's around the world introduced local lockdowns and new guidelines, many consumers started shopping online. The consumers outweighed the cons of credit card theft in order to stay away from or protect others from Covid 19 (Gao, 2020).

2.5 Future shopping & E-commerce

Online shopping is the new future of shopping (Hoberg, 2019). In the modern era, consumers do not have enough time to go to the physical stores so online shopping not only saves time but is more convenient (Szymanski & Hise, 2000). Future shopping is more user-friendly as consumers have plenty of options to compare with and to choose from, in order to select products that suits their needs and wants. Szymanski and Hise (2000) found that customer satisfaction is positively linked with online shopping because of some factors including greater product offerings, convenience, and site design. There are many advantages associated with online shopping such as; no space limitation, comprehensive information of goods, easy payment methods and reduction in cost. However, some disadvantages are also associated with future shopping methods which are the security issues, lack of shopping atmosphere and experience, delays in shipping and lastly, post purchase services (Yang, Zhao & Wan, 2010).

It is expected to stay and have further evolution with advancements in technology. Social media has been seen as a great channel for the use of e-commerce. Instagram and Facebook experienced a major increase in revenue each day since the pandemic (Chitte & Patil, 2020). In the United States, e-commerce has reached revenue of nearly $200 billion. Digital retailing keeps advancing with the innovations in technology such as Amazon's checkout system where the customers can exchange any unwanted gifts. E-commerce has been a threat to conventional retailers. Digital technology tends to replace the dull shopping windows to digital colourful and catchy screens (Rigby, 2011).

As time is progressing, the use of virtual reality (VR) and smart shopping carts is becoming very popular. Virtual reality displays provide a 9-dimensional (Consumers can click on the product and move it in any direction to see what it looks like) view of the product so that the consumers have a clear idea of what the product looks like in real life. These VR displays have made web browsing possible. These head-mounted VR displays are the future of e-commerce (Xi & Hamari, 2021). Nowadays, RFID (radio frequency identification, this identifies and tracks tags on products) and Zigbee technology (Wireless networking tool) based smart carts are being taken into consideration to make the retail process faster, easier and efficient. With the help of the RFID system, the products in the shopping carts will automatically be detected and this will ensure a smooth checkout rather than having to scan the barcodes (Sawant, Krishnan, Bhokre & Bhosale, 2015). On the other hand, the Zigbee system will attach a chip to the cart and the chip will send information to the billing system at the checkout which will calculate the price of the products in the cart. This will be a transparent method of shopping (Chandrasekar & Sangeetha, 2014).

2.5.1 EWOM – Electronic word of mouth

One way to overcome consumer's fears in shopping online is EWOM, electronic word of mouth marketing. For future shopping to continue to grow, EWOM is very important. This can help build trust between the consumers and the retailers so that the shopper can buy in confidence (Jing, 2016).

One aspect of EWOM is reviews left by previous buyers on the sellers site. These reviews influence consumers on whether they purchase the product or not. The first step in purchasing online is seeking information. If the product or service is rated low, the consumer most likely will not purchase the product based on the rating evaluation (Lee, 2010).

2.6 Consumer demographics & E-commerce

Demographic factors such as age, gender, income, lifestyle and education have a huge impact on the buying behaviour of consumers through e-commerce. With the emergence in technology, people are divided over whether to embrace it or not. Technology acceptance models have been made over the years to see whether individuals adapt to technology changes or not (Chau & Hu, 2001). According to this model, external factors such as user characteristics, technology characteristics and implementation influence consumer behaviour (Szajna, 1996). Age has an effect on internet usage as well. People below the age of 50 have a likelihood of spending more time on the internet. In addition, education also has an impact on the usage of the internet. The more educated a person is, the greater the chance of him/her using the internet. Furthermore, income has a positive effect too. The greater the income level, the greater is the ability to purchase computers and use the internet for e-commerce (Lee, 2010).

Women shoppers have a tendency to shop more through e-commerce than men. Consumers in the age group 18-35 are likely to shop more than those that fall in the age group of 35-55. Women have a greater level of trust and engagement (Riedl et al., 2010). Younger customers have greater self-concept and self-expression and they are more likely to be involved in fashion buying online (Chebat et al., 2006). The internet has different trends between people of different ages. According to recent studies, the lack of internet usage is not only based on access, but also depends upon the lack of social network (Iyer & Eastman, 2006). Some older people have a difficulty in using the internet and other technological devices; therefore, they do not adapt themselves to e-commerce. On the other hand, younger people are more likely to enjoy online shopping and using the internet. So, it is assumed that e-commerce adoption is affected by age (Lee, 2010). According to Trocchia and Janda (2000), the main challenges in adapting to e-commerce for older customers include; resistance to change, insistence on trying the product before buying and lack of IT experience. Age has a positive effect with difficulty in processing purchase (Morris & Venkatesh, 2000). Thus, the individuals above the age of 50 are less willing to adapt to the new retailing channels as they have trust issues with the internet which may be due to lack of experience in engaging with online activates and purchases. The individuals who are between the ages of 20-30 years have a broader digital culture and they have been interacting with e-commerce for several years, since they are more likely to use it (Hernández, Jiménez & Martín, 2011).

According to some researchers, emotion is also a factor that affects e-shopping. Positive emotion will ensure that the customers come back to the website for purchase while dissatisfaction will discourage the customer from purchasing. Female shoppers are likely to be less emotionally gratified as compared to men shoppers. However, men find e-commerce more practical as compared to women (Rodgers & Harris, 2003). Lifestyle has a major impact on shopping behaviour through e-commerce.

Young adults shop according to the social group they belong to (Putri & Suwito, 2020). The social group mostly consists of their friends and family members and celebrities the young consumers follow online. There is cohesion between their lifestyles and e-commerce.

With technology being so advanced, consumers have started to incorporate e–commerce in their day to day lives alongside their businesses as well. Moreover, they are gaining e-commerce education which makes it easier to use. Companies also train their employees based on technological education in order to make progress in the new era (Rezaee, Lambert & Harmon, 2006).

As the pandemic took over the world, From logistics to production, majority of businesses were shut down which affected not only the food/ grocery trends but also the social life of these consumers. Most of the consumers, despite their gender, adapted to the e-commerce channels to order their groceries and to maintain a social life through social media apps which also gave also gave a boost to the e-commerce industry (Hasanat, Hoque, Shikha, Anwar, Hamid & Tat, 2020). According to a recent survey conducted amongst internet shoppers, 75% of them fall in the category of 'Young, Educated and have a high Income' which shows that demographics have a high impact on e-commerce (Dillon & Reif, 2004).

2.7 Global impact of E-commerce

Looking at the global perspective, E-commerce has gained popularity since the pandemic hit the world. Ireland passed an E-Commerce Bill (The electronic commerce act) in 2000 which resulted in Ireland becoming a centre of e-commerce activities (O'Connor, 2001). But this came as a shock that many companies in Ireland moved towards liquidation and insolvency as they did not keep up with the changing trends. The major sectors that were affected were Food and Arts, Accommodation, Recreation and Entertainment. Furthermore, there was a decline in registration for new companies by 5.3% pre pandemic. The author believes the reasons for this could be the high rent, commercial rates and wages in Ireland. There was some relief that was given to business by the government during Covid in Ireland but it was not enough to stop many closing shop for good.

In Malaysia, the revenue from e-commerce is expected to increase by 11.8% by the year 2023, as stated by Statista.com (2021), because the local consumers are now adapting themselves to the changing trends. Moreover, the number of users that have penetrated the e-commerce market have risen by 2% only in the last year. There has been a boom in the e-commerce market in Malaysia since Covid-19 which clearly states that consumers prefer digital media over traditional methods for shopping (Shahzad, Hassan, Abdullah, Hussain & Fareed, 2020). Furthermore, countries like Saudi Arabia are encouraging its people to make use of e-commerce and the government is investing into technologies and software as they fear a reduction in sales of their crude oil. Consumers are showing great interest in e-commerce as there is an increase in online retailing so the country plans to gain competitive advantage in the era of globalisation (Salem & Nor, 2020). According to Tayade (2021), consumer behaviour had changed a lot in India too, with growth in e-commerce during the Covid-19 pandemic. There has been a drastic increase in internet penetration based on usage which has led to customers purchasing products mostly from online sources. As a result of this, customer choices have improved which has led to an increase in consumer welfare.

Today, creating a compelling e-shopping channel or website is key to competitive advantage for retailers (Novak, Hoffman & Yung, 2000).

E–commerce is rapidly becoming more and more popular globally and especially in countries such as China and Korea. Consumers have now started to understand the B2C market better, and they are rapidly making a shift, with the majority of their purchases coming through online shopping. E-shopping has become ubiquitous in Iraq since the start of the pandemic. Companies have made purchasing easy for consumers as they have introduced easy payment methods and delivery times. It has made e-commerce a new normal. Iraq faced some problems shifting to e-commerce as the day to day transactions were mostly based on cash but it was seen that young adults aged 20-25 adapted to it rather quickly (Ali, 2020).

On the other hand, Canada's food product supply was not hindered much by the pandemic as they had previously adapted to online shopping methods (Richards & Rickard 2020). Meanwhile, Indonesia had to depend on China for supplies as their e-commerce channel was not advanced (Widayat & Arifin 2020). In India, the trend of e-commerce became pretty common as the pandemic forced them to shop for groceries from the online channels (Rao & Moorthy 2020). China became the country with the largest e-commerce channels during the pandemic. It led the way for many other countries as well. But during the pandemic, the businesses sprang up and the many consumers quickly adapted themselves to the modern shopping ways. The older retailers survived the changes in the retail system whereas the newly opened businesses had to shut down as their e-retail channels were not that well established (Hasanat, Hoque, Shikha, Anwar, Hamid & Tat, 2020).

E-business started in Qatar when Covid-19 spread rapidly across the country. They were forced to close down the business in order to stop the spread of the virus. As a result of these restrictions, the consumers moved towards healthy choices and were compelled to purchase from farmers of small organic farms through e-channels rather than the Agri food businesses/ producers (Hassen, Bilali, & Allahyari, 2020). A survey was conducted in Ireland according to which Gen Z (who fall between the age group of 6-24 years old) enjoys online shopping more than Gen Y (who fall between the age group of 25-40 years old) (Shevchuk, 2020). Covid-19 has changed the way people used to shop through e-commerce channels in Ireland. They have risen up by to 30% since the last 3 years (Macdonald, 2020). E-commerce has grown by 50% growth rate in the last 5 years in India. The sales of goods and services have moved to the online system rather than traditional systems.

2.8 Sectoral trends

Electronics has revolutionised in both the marketplace and the global economy. It dates back to the 1970's when electronic funds transfer was first introduced but it became popular in the 90's. With time, e-commerce eliminated national boundaries and made possible international trade of products and services (Leontiades, 2001). Looking at the sectoral trends, 'Soft' sectors including financial services, software, and media have an advantage over 'hard' sectors including chemicals and pharmaceuticals and traditional manufacturing. Sectors such as agriculture have played an important role in transforming the society with its growth, as the shopping trends have also modified (Dutta, Kwan & Segev, 1998). Economies changed from off-line stores to shopping and banking online, especially for retail activities where delivery of goods is manageable.

Consumer electronics such as entertainment products and PCs have become a major retail category. Moreover, airline tickets and travel products are growing rapidly online (Buhalis & Deimezi, 2003). E-commerce started evolving majorly after 2008 and started penetrating in technologies with the emergence of social media including Twitter and Facebook (Trabichet, Scaglione & Schegg, 2013). E-commerce penetrated into the travel industry and customers started looking for information and booking tickets online. Whereas, online retailing established in the second phase in 2007 when new entrepreneurs emerged with e-commerce channels. In the recent years, social media gained popularity and has now become an integral part of everyone's daily life (Mahipal & Shankaraiah, 2018).

2.9 Impact of weather conditions on E-commerce

Weather is an exogenous factor that can impact the consumer's channel of retailing (Brynjolfsson, Hu & Rahman, 2009). It can be used to analyse the sales forecast. Sales forecast has a quantifiable impact on warehousing and logistics. Weather conditions have an impact on demand of product categories, for example customers purchase raincoats on rainy days and swimwear on warm days (Steinker, Hoberg & Thonemann, 2017). Weather also has an influence on human behaviour as it encourages or discourages the customers to purchase depending upon the mood (Hirshleifer & Shumway, 2003).

Sales face "gains" or "losses" due to "good" or "bad" weather. If the weather is bad, the customers prefer shopping through online retailers rather than going to the physical store. For example, precipitation during warm weather, shopping at a mall is much more attractive rather than precipitation in colder weather that blocks the roads and makes it difficult to travel to the mall. When consumers face unpleasant weather, they prefer making purchases online rather than shifting between venues over time, so weather has a significant impact on E-commerce (Ruth, 2020).

2.10 Location

Consumers who do not have access to retail stores or live in rural areas tend to shop online for supplies or travel to urban areas to shop (Farag, 2006). Moreover Deblasio (2008) states that consumers who live in these rural areas use commerce as a means of shopping instead of travelling to the neighbouring urban cities. The author also mentions that these rural consumers use the internet more to book restaurants, appointments and leisure activities to that compared to the urban regions.

2.11 Conclusion

The common theme in the literature suggests that E-commerce is becoming very popular medium for consumers Although it emerged in early 1970's, it started gaining popularity in 2000's with the advancements in technology. One of the reasons why E-commerce is gaining preference over traditional retail methods is because it is very convenient and easy to use.

Furthermore, sinch the start of the pandemic, it has been observed that many consumers avoid going to the physical stores in order to protect themselves from the virus. Shopping online makes it easier for consumers to compare and contrast prices and choose the best option for them, however, there are still some consumers who prefer going to the physical stores and purchase products after looking at them in real life.

Online shopping also helps companies cut down their cost. Nowadays, RFID and Zigbee technologies are being used in smart carts that helps in an efficient checkout process.

It has been observed that baby boomers still prefer shopping through traditional medium because it is easy to follow the return policy and obtain post purchase services. Traditional shopping medium provides security of payments.

Some expensive products such as cars are not suitable to be purchased through E channels. Consumer demographics including age, gender, education and lifestyle has a major impact on the choice of medium for retailing. The population who is young, educated and highly paid tends to shop through e-channels over traditional medium.

Covid-19 has pushed many countries such as Canada, India, Qatar, Malaysia, Saudi Arabia, China and Iraq to move most of its retailing to E-channels. Sectroal trends also affect the choice of medium for retailing. Soft sectors have an advantage over the hard sectors. A major growth towards E-retiling has been seen in the agricultural sector after the emergence of Covid-19.

Chapter Three – Research Question

Chapter III: Research question

3.1 Research aim

The aim of this research is to find out the effect of the selected independent variables (consumer behaviour, future shopping, educational qualifications and sectoral trends) on e-commerce. This research is targeted to find out the factors that influence the buying behaviour of consumers and the reasons why they prefer a specific channel for retailing whether it be online or traditional methods. This research study also provides a deeper insight into the constantly changing needs of consumers during the global pandemic. The research is aimed to study the effects of Covid-19 on the e-commerce industry. The buying behaviour of consumers especially in sectors such as grocery, retail, fashion and technology shopping have changed drastically since breakout of the pandemic. The buying behaviour through e-commerce of different age groups as well as genders will also be discussed.

3.2 Research question

The ultimate purpose of conducting this research is to find the answer to the following research question;

"Has COVID-19 impacted the buying behaviour of consumers through E-commerce?"

3.2.1 Null Hypothesis (H0)

a) Consumer behaviour has no significant impact on E-commerce
b) Future shopping has no significant impact on E-commerce
c) There is no difference between male & females using E-commerce
d) There is no difference in using E-commerce based on educational qualifications
e) Sector trends have no significant impact on E-commerce
f) There is no relationship between e-commerce, future shopping and consumer behaviour

3.2.2 Alternative Hypothesis (H1)

a) Consumer behaviour has a significant impact on E-commerce

b) Future shopping has a significant impact on E-commerce

c) There is a significant difference between male & females using E-commerce

d) There is a significant difference in using E-commerce based on educational qualifications

e) Sector trends have a significant impact on E-commerce

f) There is a relationship between e-commerce, future shopping and consumer behaviour

3.3 Research objective

To answer the aim of this study, the researcher will focus on the following objectives:

- To assess the impact of several factors on buying behaviours of consumers through E- commerce
- To evaluate the impact of COVID-19 pandemic on buying behaviour of consumers
- To recommend different ways of adapting consumers to E-commerce

This chapter has defined the aim of this study, outlined the research question which include the null and alternative hypothesis as well as highlighting the research objectives. The following chapter will justify the methods selected for the data collection.

Chapter Four – Research Methodology

Chapter IV: RESEARCH METHODOLOGY

4.1 Introduction

This chapter will outline the methods taken into consideration to achieve the selected aims and objectives outlined for this study.

According to Briks & Malhotra (2003) market research is characterized as the collecting, recording and analysing of data which explore the researchers outlined objectives. The authors add that the strategy and design are important in conducting appropriate primary research. Taking this into consideration, the "Research onion" (Figure 2) illustrated by Saunders et al (2007) was used as a model to develop this study. This model outlines stages researchers must go through when conducting research (Saunders, 2007). Moreover, the author adds that this model starts from the outer layer and proceeds to the core of the onion.
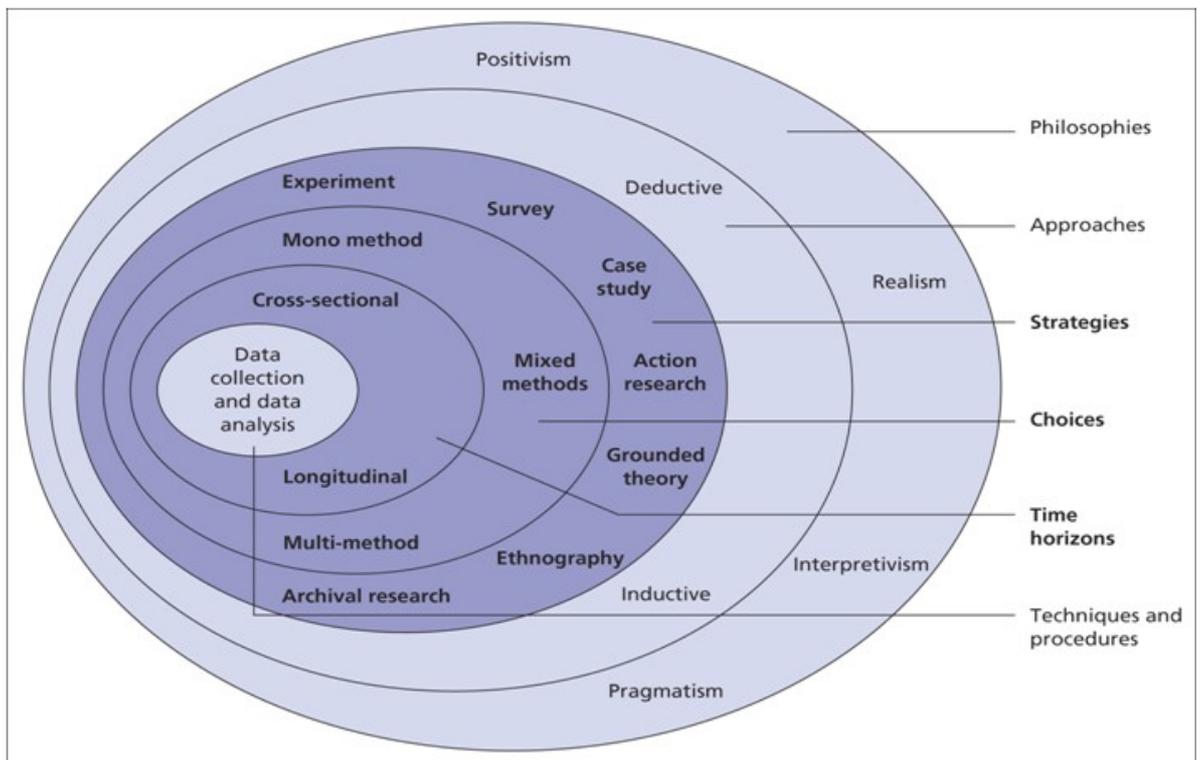
Figure 2 – Research onion (Saunders et al., 2007)

In this chapter, the methodology approach will be explained and justified. This section will also cover the following:

- The data collected vs the research problem
- A look at the data collection method
- Data processing and analysing
- Evaluating and justifying methodological choices

4.2 Overview of the study

In the following research study, the dependent factor is "E commerce" followed by five independent variables which are Consumer Behaviour, Future Shopping, Consumer Demographics, Sectoral Trends and age/ gender. To summarize, E-commerce refers to shopping through online channels which is the modern way of retailing or buying. Nowadays, E-commerce is becoming a preferred method of buying by many consumers as it is more convenient and very time effective. Due to busy schedules (work and personal), people are now shifting towards e-commerce. Moreover, the spread of the COVID-19 has shifted the buying habits of many consumers. The increasing competition in the retailing industry is now forcing many companies to adapt to future shopping trends in order to gain competitive advantage.

4.3 Research philosophy

Research strategy is determined by the choice of research philosophy that a researcher prefers to choose. Saunders & Lewis (2012) note that there are four research paradigms which researchers can select; Positivism, Pragmatism, Realism and Interpretivism. The four paradigms are briefly described below:

- Positivism: The positivism approach looks at the world as a single reality. This approach focuses on objectives and relies on any unbiased data that is collected for the hypothesis to be tested (Gill & Johnson, 2010). Previous theories provide the researcher a basis to develop hypothesis. This hypothesis needs to be tested without any bias.

Saunders et el., (2012) states that the researcher must not interfere with the data and must stay independent. This approach often means creating survey's with closed ended questions (Chapmen, 2005).

- Pragmatism: The pragmatism approach focuses on problem solving and pragmatic findings. Keleman & Rumans (2008) suggest that this approach is only relevant when they support action. The authors argue that the only important factor you can adopt in this approach is your research question. The researcher should only be guided by the research question.

- Realism: Saunders et al., (2012) proposes that there are two forms of realism, 'direct' and 'critical' realism. The difference between the two is that the direct form claims that there are only two steps to experiencing this world whereas critical realism states that there is only one step. Moreover, the authors describe the essence of this approach as what our senses show us is a reality of the truth.

- Interpretivism: The interpretivism approach states that circumstances are subjective (Malhotra & Briks, 2007). Moreover, Saunders et al., argues that it is vital for the researcher to identify the differences between humans and social actors. By selecting this approach, researchers are taking the position that humans attempt to make sense of the world. This approach often involves a qualitative study as there is a need for semi or unstructured interviews.

For the purpose of conducting this research, the research philosophy that was chosen was **positivism**.

4.3.1 Justification

This study's aim is to test hypothesis while also predicting consumer behaviour. The **positivism** philosophy that was adopted when structuring and conducting this study leads to **quantitative** research. This approach is based on the idea that knowledge is factual and logical. The adopted approach is the most suitable in order to answer the research question proposed. This approach will allow the author to test the hypothesis, analyse the cause and effect and discover new findings.

4.4 Research method

There are three types of research; quantitative, qualitative and mixed methods. All three have their own differences and each type has its own strengths and weaknesses.

For the purpose of this study mixed method was not considered by the researcher. It was important for the researcher to understand the main characteristics between quantitative and qualitative types before choosing either variable. Table 1 below illustrates the main differences between each type.

Qualitative Research	Quantitative research
Small sample size	Larger sample size
Open ended questions	Scaled, specific questions
Rich, Hardcore data	Reliable, hard data
Exploratory	Descriptive or Causal
Semi or unstructured	Structured
Numerical or standardized data	Non standardized data
Deeper understanding	Richer understanding

Table 1 - (Adopted from: Malhotra, 2012, Wilson, 2003 & Saunders, 2012)

Based on key differences outlined in the above table, the researcher focused this study on the **quantitative** type in order to collect the primary data needed. This was a fitting approach in order to test the hypothesis highlighted in the above sections. The data can be collected through online surveys and can be translated into graphs and statistical analysis can be conducted. These theories can also be confirmed or denied. Non experimental design survey was also chosen by the researcher. One key advantage of the approach of this design is that it tries to discover relations among the variables. This is done without any researcher influence (Wilson, 2003). However, there are some limitations associated with quantitative research, Gates (2013) believes that this type of research is unable to extract high quality in depth insights from respondents. However, Creswell (1994) debunks these claims and suggests that this research is to test the theory and not to develop it.

4.5 Research strategy

This aspect can be noted as one of the most important in the research onion layer. This outlines how the researcher will conduct the primary data collection. Saunders et al., (2012) states that there are many types of research strategies available to researchers, some examples include; surveys, experiments, case studies and ethnography. These strategies vary based on the research being conducted.

The research strategy chosen for this study was a **survey.** A survey allows for the theories to be tested correctly against the data as the questions can be constructed based on the outlined theory. The results will be analysed based upon the responses that were filled by the participants. A detailed research of this study will be conducted on the factors affecting E-commerce, so thus why the dependent and independent variables are also included in the survey questionnaire.

4.5 Research design

The research design can be noted as the general plan of action on how the researcher will go about answering their research question and objectives proposed (Saunders et al., 2012). Moreover, Domegan and Fleming (2007) state similar views, the authors propose that this stage in the research is regarded as the blueprint of how information will be gathered.

The variables for the purpose of this study include (E-commerce, Consumer behaviour, Future shopping, Traditional shopping, Consumer demographics and Sectoral trends). The research is based on **e-commerce** which is the **dependent** variable and selected independent variables.

This study was based on quantitative research design. Therefore, it is imperative to go through the elements that make up the research design. These elements will be discussed in the following sections.

4.5.1 Study variables

The research has been conducted to analyse the effect of the chosen variables on E-commerce. For this purpose, five independent variables had been chosen, which are listed above in section 4.2.

4.5.1.1 Dependent variable

The dependent variable (E commerce) is analysed based on the views of the customers obtained through an online survey.

4.5.1.2 Independent variables

Five independent variables have been chosen for the purpose of this research. As noted in the earlier sections, consumers today prefer E commerce over traditional shopping because of its ease of access and convenience. Literature suggests that the behaviour of consumers regarding E-commerce varies based upon their demographics and other external effects such as sectoral trends and weather impact.

Demographics including age, profession and education have a huge impact on selection of the choice of media for shopping. These are the variables that affect the use of E commerce that is why they have been chosen for the purpose of this study.

4.5.1.3 Demographic variables

The demographic factors included in this survey are:

- Gender
- Age
- Education
- Occupation

The demographic variables will be analysed through SPSS software along with the independent vs the dependent variables. These demographic factors are essential to the study in order for the researcher to get an insight into the sample population. This final data will define the behaviour of these consumers towards E-commerce based on their demographics.

4.5.2 Sample population

Domegan & Fleming (2007) refer to sampling as a process where the researcher gathers data from a subset of the population who mirror the actual population. The ultimate purpose of sampling is to gain access to various data sources which in turn provide the researcher with relevant and sought data (Mason, 2002).

The selected sample has been categorized by consumers who have at least **once** shopped using E-commerce. In this research, the sample was collected from e-commerce consumers through an online survey. The preferences of consumers can vary depending upon their lifestyle. The findings drawn from this research can determine the factors that have an effect on the behaviour of these consumers regarding E-commerce. This will provide a pathway to many retailers to use the information and gain competitive advantage according to the preferences of the target population.

The target population for this research is general public living in Ireland including people from different genders, different age groups and different income levels. A closed ended questionnaire was used for the purpose of this research. The questionnaire was filled by the population above the age of 18. These consumers are considered to be fully responsible when making their purchase decisions (Mason, 2002). It is important to highlight this detail as this aspect will be discussed in the later sections of this study.

4.5.3 Sample techniques

Sampling methods can be categorised into probability and non-probability sampling techniques (Donegan & Fleming, 2007). Members of the population have an equal chance to be part of the sample group in probability sampling. Malhotra (2007) mentions that the sampling error can easily be calculated The author also adds that bias is also removed from the sample as it focused on the randomization principle. In comparison, non-probability sampling involves researchers making some form of judgement and decisions thus including some bias.

For this research, a **non-probability sampling** technique will be used. The method selected in this technique is the **convenience sampling technique**. The characteristics of the population were determined using this technique.

4.5.4 Sample size

This sample was collected using the convenience sampling technique and the population chosen for this purpose was consumers above the age of 18 who have had prior experience with online shopping. This research collected the samples of 114 consumers. The individuals answered the survey on a voluntary basis. The population was targeted through the researchers social media posts with a link to the online survey (Facebook, Instagram, WhatsApp and Twitter). The respondents belonged to different genders, age groups and professions.

The target response for this study was 100 respondents due to time constraints. The researcher believes that this is only a small representation of the overall market. However, the researcher allowed for more responses to ensure the validity and reliability of the results.

4.5.5 Unit analysis

In this research, the unit of analysis is consumers that have used e-commerce as a means of online shopping **before** or **during** the pandemic. This study will examine consumers of both genders, male and female belonging to different age groups, professions, and incomes. A descriptive online survey has been used to observe the factors that affect customer satisfaction regarding E commerce.

4.5.6 Data collection procedures

Domegan & Fleming (2007) note that when data is being collected there are two ways in order to obtain information from individuals, you can either ask or observe. The procedure in collecting data needs to be appropriate in order to accomplish the aims of the objectives set out and to answer the research question proposed. Taking this into consideration and for the purpose of this study, the researcher decided that the data will be collected through an standardized online survey with closed ended questions. These questions were extracted from different research papers and articles. The data will be collected over a three week period.

Saunders et al., (2012) claim that by using this questionnaire approach the researcher is in control over the whole process. This differs from a qualitative approach, where the researcher relies on other individuals for their time.

Using an online questionnaire as a research instrument has many advantages. The most notable advantage is the fact that the questionnaire is not restricted and can be shared across multiple platforms which makes it easier to reach the desired quota of respondents while it also allows for easy access for all participants. Another advantage of this instrument is that it is cost effective. The distribution along with the analyses can be done with no cost.

However, there are areas of concerns for the researcher. There could a possibility of some participants not answering truthfully or responses in the data collected. Respondents can answer more than once or can lie in between questions. With that being said, online respondents usually tend to be unbiased and more precise compared to when Infront of an interviewer (Malhotra, 2007).

The questionnaire platform "Qualtrics" was used to construct the survey and to monitor future responses. The data collected here will be analysed through statistical software's such as Excel and SPSS.

4.5.6.1 Pilot study

Many scholars argue that questionnaires have to be pre tested by a small of numbers of respondents who match the final desired sample group (Malhotra et al., 2007). The reason for this is to highlight any design imperfections or mistakes in the questionnaire. Taking this into consideration, a pilot test was distributed among 5 respondents.

This is in line with Saunders et al., (2012) who highlights the importance of a pilot study. The author mentions this must be carried in order to ensure an effective questionnaire is rolled out. This was used to verify any mistakes and also allowed the researcher to check if the questions relate to the listed variables.

This step was really effective for this research as it did not allow for any time to be wasted and allowed for the necessary changes to be made. This step also help ensure that any future respondents will fully understand the questions asked.

4.5.7 Research instrument – Questionnaire

As indicated above, this study a quantitative research method and an online questionnaire was used as a research instrument for the collection of the data. The questions consisted of four moving parts. Three parts are linked to measurement scales and one in relation to demographics. There was a total of 21 questions asked. The researcher worked hard to get the sequence of the questions right. Domegan & Fleming (2007) suggest that it is vital for the questions to have a good flow so that it puts the respondents at ease, this will then guarantee a full completion of the questionnaire. The authors add that respondents should be thanked for their time at the end of the survey.

It is also important not to note again that this questionnaire was formulated based on previous studies and cases.

The first category in the questionnaire related to demographics including gender, age, education and occupation of the target population. Although, Doemgan & Fleming (2007) advice that sensitive questions should be left till the end, the researcher felt that by doing so would ruin the flow of the questions and risk the respondents leaving the survey mid-way. The next category was e-commerce, which is the **dependent** variable in this study. This consisted of questions regarding the ease and knowledge of e-commerce.

The next category consisted of questions relating to online shopping which can be described as the modern form of commerce. Moving further, questions regarding traditional shopping were also proposed, which is the traditional method of commerce in which physical stores are used for the purpose of retail or shopping.

The next set of questions related to consumer behaviour. This was to see what respondents thought about online shopping and how have they adapted themselves to it during the pandemic. It was further inquired if the respondents would continue to shop online once the pandemic is over.

Finally, questions about sectoral trends were asked. The sectors were listed down in the questions which made it easier for the target population to select. These options were based on sectors that are available online. Respondents were then given a chance to leave any final notes or comments at the end of the survey.

This will be discussed in more detail in the following sections.

4.5.8 Data analysis

There are two main types of data research analysis, primary and secondary data (Saunders et al., 2012). Both sources were used for this study. Secondary data was used to conduct and construct chapter two, the literature review.

Once the researcher collected the primary raw data from the sample, it was necessary to first clean the data and then preform analysis. The researcher opted to use SPSS software to perform the analysis. The data was collected over a three week period.

Prior to performing the analysis, the researcher ensured that the dataset and the SPSS output file did not contain any error codes or wrong data. The researcher looked out for any odd or extreme high numbers which could skew the data output and averages. This would lead to a misinterpretation of the data.

The researcher also had previous experience using the software tool, which made it easier to run the required analysis and tests.

4.5.9 Time horizon

Cross sectional technique has been used as the time horizon in this study because the information gathered for the research purpose was at a specific time period. It is also important to note that the researcher had to complete this study in 4-5 months. There are a lot of factors that have an impact on customer satisfaction and E commerce, but due to lack of time only five variables have been taken into account.

The time period in this study took into account all stages including; topic hunting, research gathering, reviewing the literature, selecting the correct methodology, collecting the primary data and finishing with some analyses and reporting.

4.6 Measurements & Scales

To qualify and quantify the primary data, measurement and scaling is done. The nature of the variable is considered for this purpose. Numbers are assigned to each variable according to the characteristics and then they are measured. The study measures consumer behaviour, future shopping, traditional shopping, consumer demographics and sectoral trends.

4.6.1 E-commerce

E-commerce has been measured in the questionnaire by using a 2 items scale (Salem. M.A, 2020). The responses were recorded by asking questions like "Your views on e-commerce" and "I think that I have the resources, knowledge and ability to use E-commerce". To measure the responses, a 5-point Likert scale was used. The respondents were provided with 5 ranges to choose from which ranged from strongly disagree to strongly agree. These are shown below:

"1" as strongly disagree   "2" as disagree   "3" as neutral

"4" as agree   "5" as strongly agree

4.6.2 Consumer behaviour

Consumer behaviour is measured by a 5-items scale (Dinesh. S and Muniraju. Y, 2021). These questions were used to measure consumer behaviour. The questions that were asked included "I have shopped online pre pandemic" and "On average how much did you spend shopping last month"

4.6.3 Future shopping

This variable was measured by using a 4-items scale proposed by Cheng et al (2006). This scale is accurate and is used to measure the relation between future shopping and E commerce in this study. Questions proposed to respondents included "Shopping online is easy and flexible to use", "Internet shopping provides me with convenience" and "Internet shopping provides an online payment security."

4.6.4 Traditional shopping

For traditional shopping 2-items scale was used (Kacen J.J, Hess J.D and Chiang, 2020). The questions that were asked to respondents included "Compared to traditional stores, a lot of uncertainty is involved when purchasing the items online" and "After receiving the product, it may need some post purchase (after sale) service."

4.6.5 Consumer demographics

To measure consumer demographics, 4-items scale, made by (Lee. J.W, 2010) was used. This is a very effective scale to measure the relation between consumer demographics and E commerce. The respondents were asked questions about gender, age, education and occupation. Nominal and ratio scales were used to measure the demographics.

4.6.6 Sectoral trends

Sectoral trends were measured by using 2-items scale made by (Macdonald. O, 2020). Questions that were asked included "Are there any specific sectors that you buy online" and "If yes, which sector do you buy online".

4.7 Ethical considerations

This section discusses the guidelines that the researcher considered when conducting this study, this was looked into deeply to avoid any ethical issues. The identity of the respondents was kept anonymous as no questions were asked related to any names, contact numbers and their personal addresses. The guidelines and information about the questionnaire were written at the in a note send to respondents that appeared above the link to the survey and the respondents were clearly informed about the research. The data was collected solely for the purpose of this research and the information was kept discreet. Self-esteem of the respondents was not harmed. The survey was answered with the consent of the respondents. Opinions of all the respondents were respected. The participants of the research were not subjected to any harm.

4.8 Limitations

This section will list some limitations that the researcher faced which could potentially influence the final results.

- The sample was restricted. The data was collected only from 114 respondents which was a small sample size. In order to give a comparative view of shopping behaviour throughout the world, a much larger data should be collected for having an accurate research.
- There is a small chance that many respondents might not have read the questionnaire with proper attention which can cause an error in the results. This leads to a few neutral or unbiased responses.
- Time constraint was also a limitation for this study. There was limited time to conduct the research and analyse the data, hence a limited sample was chosen.
- Closed ended questions style was chosen by the researcher and this limits extracting valuable data from respondents. This style can only extract as much as the questions have asked.

Chapter Five – Findings and Analysis

Chapter V: Findings and Analysis

5.1 Introduction

This chapter will provide a description and analysis of the collected data and the findings of that data will also be presented. Data planning is a vital component in the onions layer since it collects the data, analyses and summarizes it which leads to the formulation of results.

To recap, the research question asked is "Has Covid-19 impacted the buying behaviour of consumers through E-commerce?" Thus the main focus of this study is to answer the research question proposed. Each section is designed to answer the research question as the analysis must align with the research objective. Moreover, other relevant frequencies and correlations were also investigated in order to gain a deeper understanding and to provide robust analysis.

The following key sections have aided the research through the examining of data which are listed below;

- Overview of the collected data sample
- Profile of respondents
- Descriptive statistics
- Hypothesis testing
- Summary of the analysis conducted

5.2 Overview of the collected data

This section contains an overview of the raw data obtained throughout the quantitative data analysis procedure. This study employed a self-administrated questionnaire approach, with an online survey selected as the main data gathering tool. The online survey was distributed through social media and responses were collected accordingly. The overview and why this survey was being conducted appeared at the beginning of the survey.

There was a total of 114 responses collected. The responses have been received and collected from different social media groups and platforms through the Qualtrics survey software tool.

The following table (Table 2) represents the core variables (e-commerce, future shopping, sectoral trends and consumer behaviour) which indicates that there are some missing values. The numbers of missing values are low and therefore should not affect the overall analysis.

Table 2; Frequency distribution of valid responses

		E-commerce	Future Shopping	Sectoral Trends	Consumer Behaviour
N	Valid	114	100	103	106
	Missing	0	14	11	8

5.3 Normality test

A normality test is performed to see if the sample data came from a population that is normally distributed (Nadarajah, 2005). The Shapiro-Wilks and the Kolmogorov-Smirnov normality test is one of the most common normality tests that can identify all deviations from normality (Nadarajah, 2005). When the p-value is **less than** or **equal** to 0.05, the test rejects the hypothesis of normality. However, the following table shows every variable's p-value is higher than .05, which indicates data passed the normality test and is also statistically significant.

Table 3; Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
E-commerce	.308	100	.073	.774	100	.089
Future Shopping	.200	100	.090	.940	100	.097
Sectoral Trends	.217	100	.065	.883	100	.075
Consumer Behaviour	.281	100	.185	.759	100	.198

a. Lilliefors Significance Correction
Kolmogorov-Smirnov is not mentioned in text

5.4 Profile of respondents

The demographic variables of this report were presented using frequency distribution. Frequency distribution is used to group data into mutually exclusive classes. This then shows the number of observations in each class (Lind et al., 2012). This can help simplify the data.

The following (Table 4) shows the frequency breakdowns and percentage of the findings.

Table 4; Frequency breakdown of Demographic characteristics.

Category	Sub-Category	Frequency	Percentage
Gender	Male	59	51.8
	Female	52	45.6
	Other	1	.9
	Total	112	98.2
	System	2	1.8
Total	114	100.0	
Age	18 - 24	34	29.8
	25 - 34	60	52.6
	35 - 44	13	11.4
	45 - 54	5	4.4
	55 and above	1	0.9
	Total	113	
	System	1	
Total	114	100.0	

Education	Primary/ Junior	2	1.8
	Secondary/ High School	12	10.5
	Bachelor's degree (e.g., BA, BSc.)	79	69.3
	Master's degree (e.g., MA, MSc., MEd)	19	16.7

	Doctorate or professional degree (e.g., MD, DDS, PhD)	1	0.9
	Total	113	99.1
	System	1	.9
Total	114	100.0	

	Employed full time (35 or more hours per week)	83	72.8
	Employed part time	3	2.6
	Unemployed and currently looking for work	6	5.3
	Self-employed	7	6.1
Occupation	Full time Student	6	5.3
	Retired	2	1.8
	Unemployed not currently looking for work	4	3.5
	Total	113	
	System	1	
Total	114	100.0	

5.4.1 Gender

Among the total number of respondents, male respondents (n = 59, 51.8%) are higher than the female respondents (n = 52, 45.6%). Three respondents also responded with the 'other' option that was also added into the gender question (n=3, 2.6%). The researcher did attempt to get an even split in order to avoid any gender bias, this has been achieved as the split is very close. The ages were allocated intro groups which can be seen in (table 5) below.

#	Answer	%	Count
4	Male	51.8%	59
5	Female	45.6%	52
6	Other	2.6%	3
	Total	100%	114

Table 5; Breakdown of Gender

5.4.2 Age

Over 53% of the respondents are aged from 25 to 34 years old. The 114 participants were spread across five different age categories as seen in (Figure 3) below. This category constituted to the largest part of the sample and this can be categorised as a limitation. This can be considered as a potential over generalization of one age section.
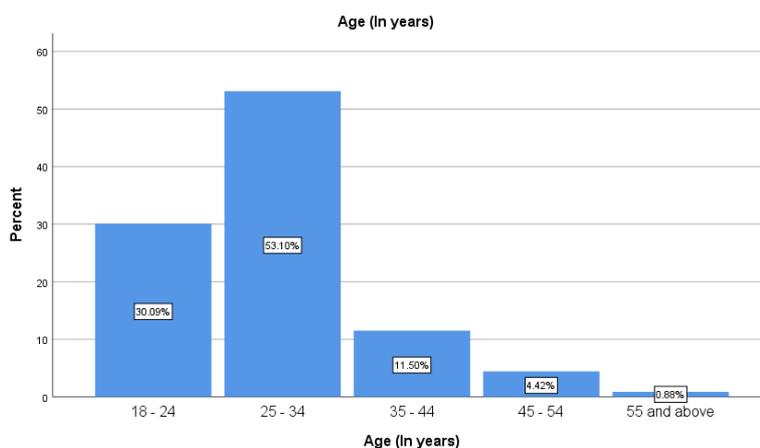
Figure 3: Bar Chart of Age

#	Answer	%	Count
1	18 - 24	30.09%	34
2	25 - 34	53.10%	60
3	35 - 44	11.50%	13
4	45 - 54	4.42%	6
5	55 and above	0.88%	1
	Total	100%	114

Table 6; Breakdown of Age

5.4.3 Education

Among the total number of participants (114), 69.91% of participants have a bachelor's degree. It is important to note that 87.6% have high levels of education as seen in (Figure 4) below. Previous literature suggests that having high levels of education makes consumers more technology prone, which in turn can allow them to shop online easily (Dinesh & MuniRaju, 2021).
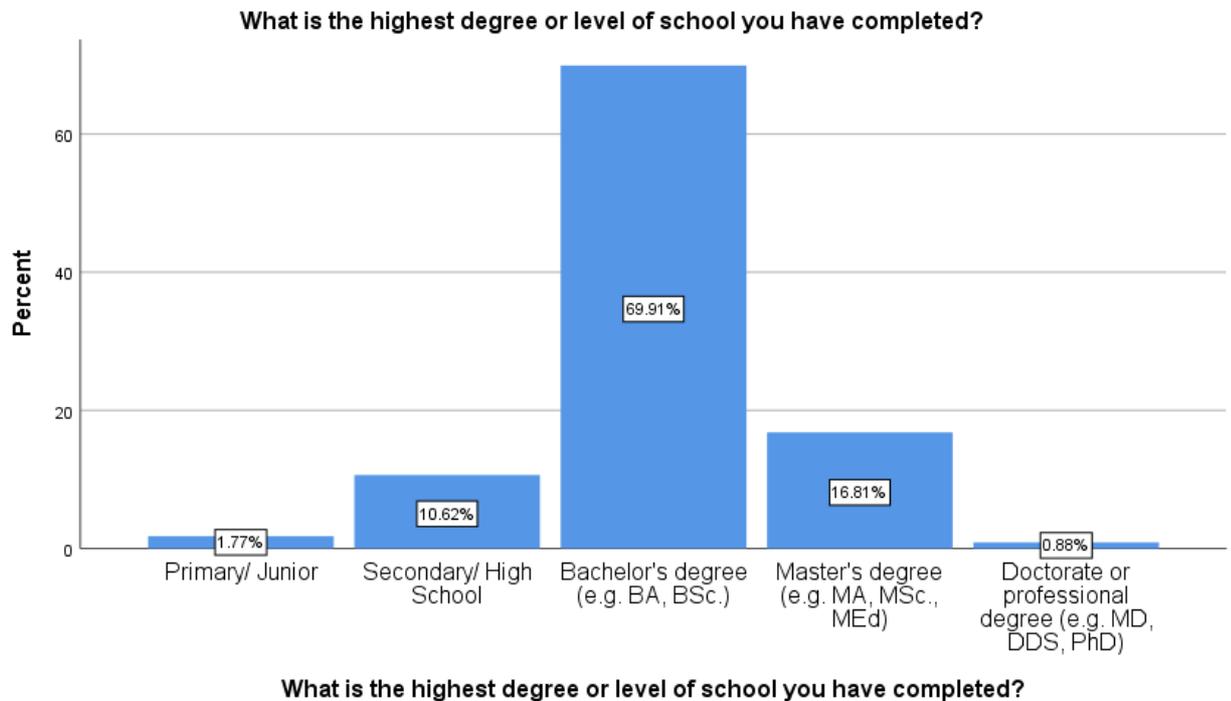
Figure 4; Bar Chart of Education Attainment

5.4.4 Occupation

Over 74% of respondents in this study are in full time employment while only 5.4% are either retired or unemployed. Again, this could be listed as another limitation. The researcher did not have enough adequate time to carefully distribute the survey among all occupational sections listed.
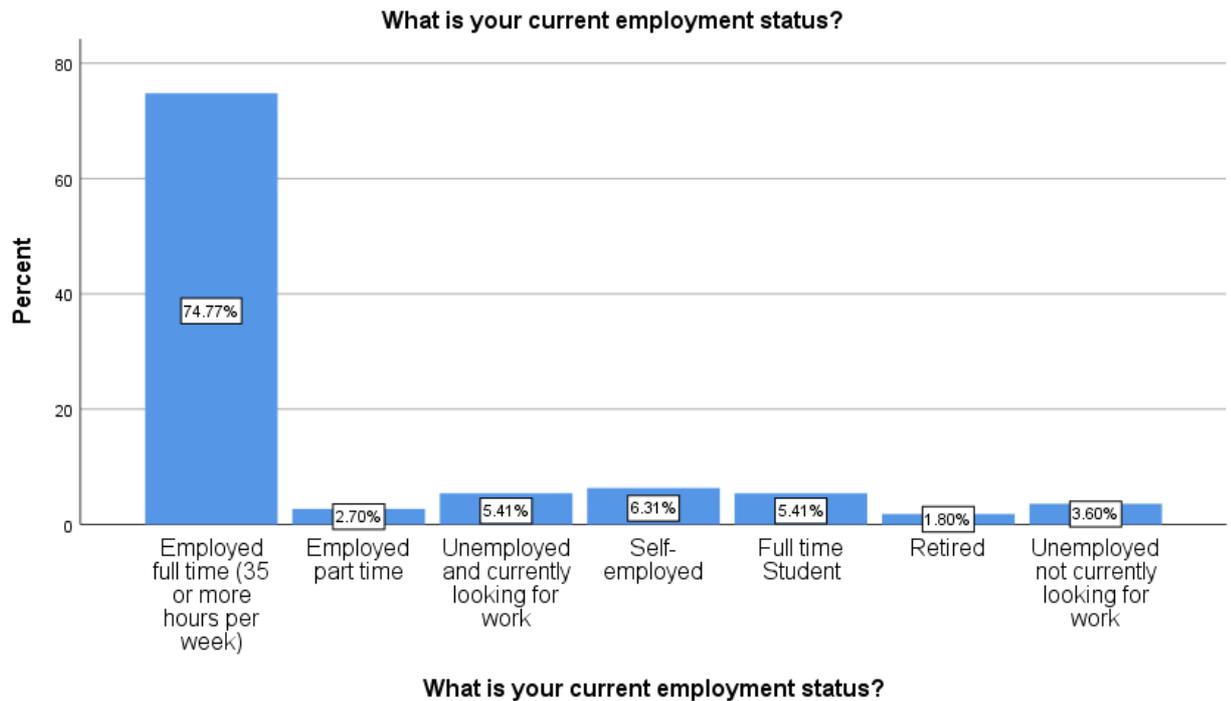
Figure 5; Bar Chart of Occupation

5.5 Descriptive statistics

The descriptive analysis includes means, standard deviation and kurtosis values. Mean or average value is used to indicate the centre of distribution (Malhotra, 2010). In addition, Malhotra (2010) suggests that the standard deviation is used to see how the data has deviated from the mean. Kurtosis and skewness are commonly used to delineate the shape of the distribution (Hair et al., 2019). This can also be used to test for normality of data (See table 7). For range, it can be observed that the lowest response is 0 which is coded by e-commerce.

Besides, the highest response in the survey is 4.53, which is coded from consumer behaviour. The standard deviation for this variable is 0.674 which represents that the value is closer to the mean. The kurtosis and skewness values are near 0, indicating the normal distribution of the data. There are some negative skewness values in this table indicates data that are skewed left.

Table 7; Descriptive Statistics of quantitative variables

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
E-commerce	114	0	4	1.52	.719	.446	.226	.570	.449
Future Shopping	100	1.50	4.40	3.9800	.83461	-.467	.241	.158	.478
Sectoral Trends	103	1.00	4.32	4.0874	.76513	-1.339	.238	2.791	.472
Consumer Behaviour	106	1.00	4.53	4.2358	.67450	-2.312	.235	7.730	.465

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5.5.1 Histogram Representation for Normality Test

A histogram is a graphical representation of the sample data. It is a graph where the classes are marked on the horizontal and class frequencies on the vertical axis that allows us to identify and display the underlying frequency distribution of continuous data. The areas of the bars represent class frequencies, and the other bars adjacent to each other. When a graph is roughly bell-shaped and symmetric about the mean indicating the following histogram on the dependable variable e-commerce is normally distributed (Hair et al., 2019).
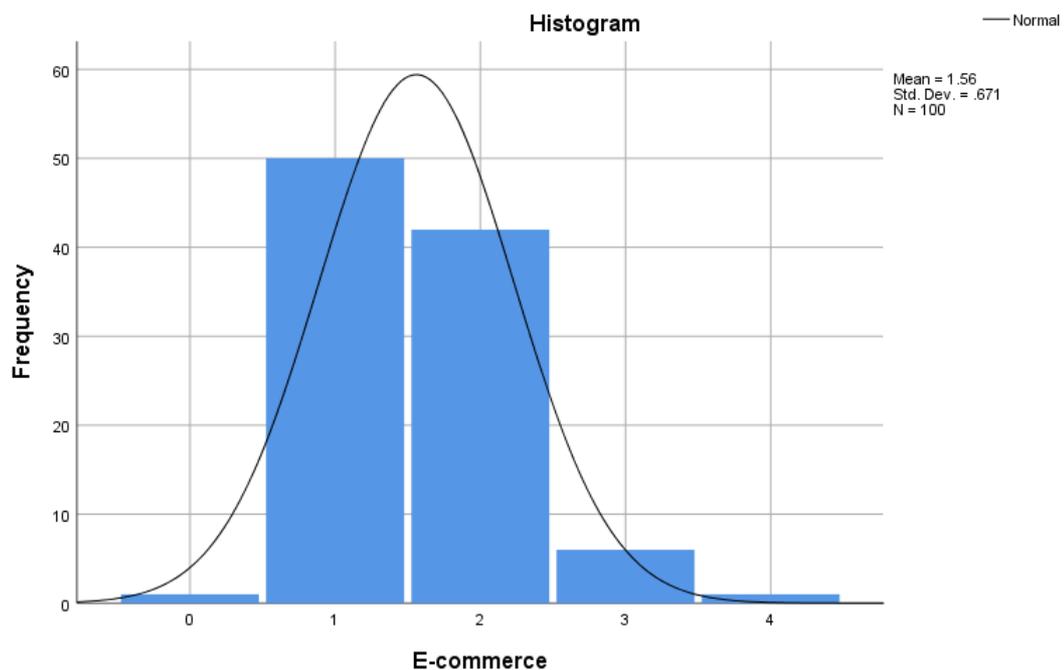
Figure 6; Histogram of e-ecommerce

The e-commerce histogram (Figure 6) is normally distributed. The mean, median, and mode of a completely normal distribution will all have the same value, which is graphically represented as the apex of the curve.
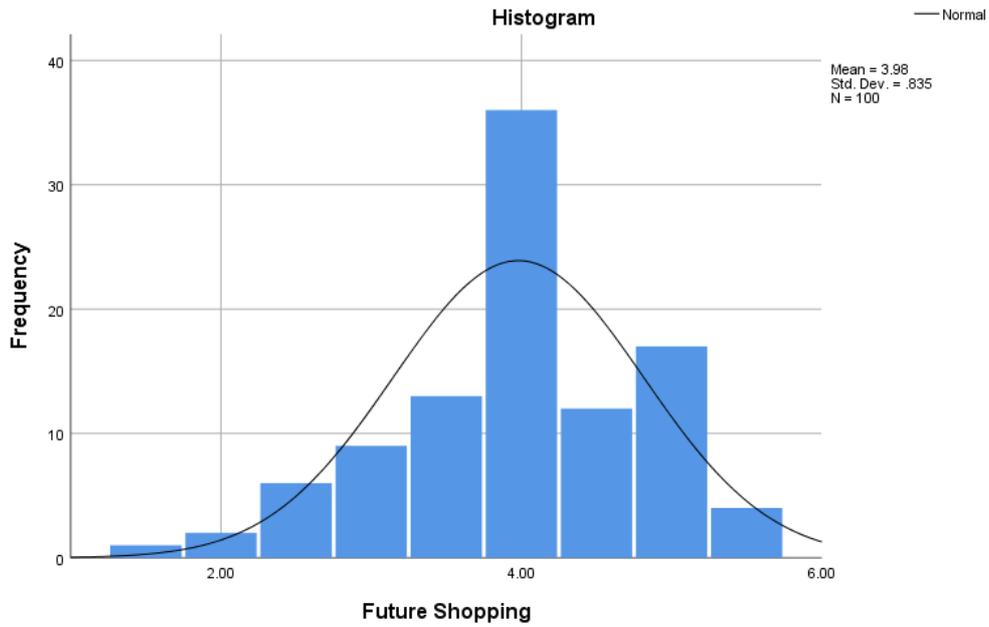
Figure 7; Histogram of future shopping

When there are a lot of observations, a histogram is really useful. Histograms depict just the count or percent of observations that fall into each class, breaking the range of values into classes.
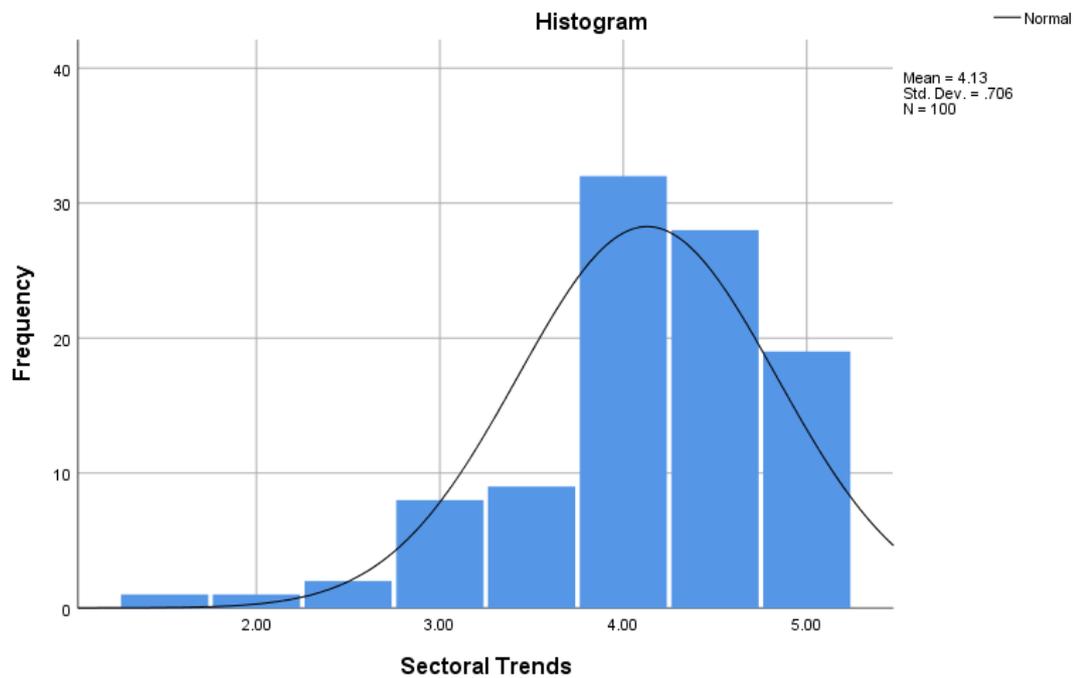
Figure 8; Histogram of sectoral trends

The following histogram for consumer behaviour health is also right-skewed because the mode is smaller than the mean and median, which is located to the left of the graph.
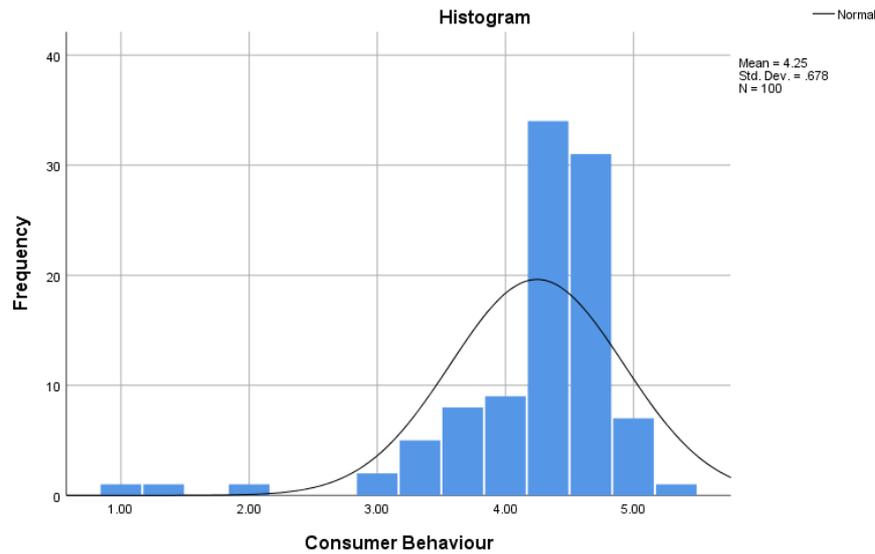
Figure 9; Histogram of consumer behaviour

5.6 Hypothesis testing

Inferential statistics let researchers come up with hypotheses regarding a situation or an occurrence. It varies from descriptive statistics in that it allows you to draw conclusions based on extrapolations rather than merely reporting the data that has been seen, like descriptive statistics do (Asadoorian, 2005).

5.6.1 Impact of consumer behaviour on e-commerce during Covid 19 – H1

The model summary table looks at how strong the relationship between the model and the dependent variable is. The linear correlation between the observed and model-predicted values of the dependent variable is represented by R, the multiple correlation coefficient. Adjusted R Square, which is a "corrected" version of R Square that penalizes models with a lot of parameters. In the combination of an independent variable, 20.5% of the variability in using e-commerce, $R2= .205$, adjusted $R2= .198$ and the standard error in the data is 0.618.

Table 8; Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453[a]	.205	.198	.618

a. Predictors: (Constant), Consumer Behaviour

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The ANOVA table represents the overall significance of the model, which is determined by using e-commerce. The result shows F $(1, 104) = 10.271$, $p<.05$, which suggests the model is highly statistically significant. Therefore, the independent variables are related to the dependent variable.

Table 9; ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.271	1	10.271	26.862	.000[b]
	Residual	39.766	104	.382		
	Total	50.038	105			

a. Dependent Variable: E-commerce

b. Predictors: (Constant), Consumer Behaviour

The coefficient table represents how much the dependent variable is expected to increase when that independent variable increases by one, holding all the other independent variables constant (Clogg, 1995). Consumer behaviour has a significant influence on e-commerce because the p-value (0.00) of this coefficient results is less than 0.05. The beta value shows that if consumer behaviour is increased by 1 unit, the using tendency of e-commerce will have increased by 0.464 units. Therefore, **the null hypothesis that consumer behaviour has no impact on E-commerce is rejected**. It can be concluded that consumer behaviour has a significant impact on E-commerce.

Table 10; Coefficient results

Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	3.530	.384		9.
	Consumer Behaviour	.464	.089	.453	5.

a. Dependent Variable: E-commerce

5.6.2 Impact of future shopping on e-commerce during Covid-19 – H2

In the combination of an independent variable (future shopping), 5.40% of the variability is using e-commerce, $R2= .054$, adjusted $R2= .044$ and the standard error in the data is 0.656. The model summary table is shown below (Table 11).

Table 11; Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.232[a]	.054	.044	.656

a. Predictors: (Constant), Future Shopping

The ANOVA table represents the overall significance of the model, which is determined by using e-commerce. The result shows $F (1, 98) = 5.582, p<.05$, which suggests the model is statistically significant. Therefore, the independent variables are related to the dependent variable.

Table 12; ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.406	1	2.406	5.582	.020[b]
	Residual	42.234	98	.431		
	Total	44.640	99			

a. Dependent Variable: E-commerce
b. Predictors: (Constant), Future Shopping

In a single-independent-variable regression, the coefficient indicates how much the dependent variable is predicted to change (Zhang, 2018). Future shopping has a significant influence on e-commerce because the p-value (0.02) of this coefficient results is less than 0.05. The beta value shows that if future shopping is increased by 1 unit, the using tendency of e-commerce will have increased by 0.187 units. Therefore, **the null hypothesis that future shopping has no impact on E-commerce is rejected**. It can be concluded that future shopping has a significant impact on E-commerce.

Table 13; Coefficient results

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.303	.321		7.166	.000
	Future Shopping	.187	.079	.232	2.363	.020

a. Dependent Variable: E-commerce

5.6.3 Using e-commerce during Covid-19 between male and female consumers – H3

An independent samples t-test was used to compare the using tendency of e-commerce on male (n=59) and female (n=52) consumers. The t-test was not statistically significant, with mean e-commerce of males (M= 1.54, SD=0.750) was not significantly higher than the females (M=1.54, SD=0.641), t (111) =.343, p>.05, two-tailed. Therefore, **the null hypothesis that there is no difference between male and female consumers on using E-commerce in the population is not rejected.**

Table 14; Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
E-commerce	Equal variances assumed	.909	.343	.029	109	.977	.004	.133	-.260	.268
	Equal variances not assumed			.030	108.899	.976	.004	.132	-.258	.266

5.6.4 Difference of using e-commerce based on educational qualifications – H4

A one-way between-groups analysis of variance (ANOVA) was used to investigate the educational qualification difference in using e-commerce on covid-19. The difference was statistically significant at the 5% level in the educational qualification difference for the five groups: $F_{(4, 108)} = 4.128$, $p = .004$. Therefore, **the null hypothesis that there is no difference in using E-commerce based on educational qualification is rejected**. It can be concluded that there is a significant difference in using E-commerce based on educational qualification

Table 15; ANOVA results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.446	4	1.861	4.128	.004
Within Groups	48.696	108	.451		
Total	56.142	112			

5.6.4.1 E-commerce is most commonly used by full-time employed and bachelor's degree holders – H4

Cross tabulation is a statistical tool used to analyse categorical data. Besides, it separates the categorical data or variables into different categories that are mutually exclusive from one another (Yin, 2013). All data has been accounted for and is properly separated by the device on e-commerce users. It can be seen right away that it appears most of the participants who full-time employed are using e-commerce (74.80%). Besides, out of 114 participants, 77 e-commerce users have bachelor's degree. Therefore, it can be concluded that most of the participants in this study are full-time employed and also have bachelor's degree.

Table 16: Cross-tabulation results

			What is your current employment status?							Total
			Employed full time (35 or more hours per week)	Employed part time	Unemployed and currently looking for work	Self-employed	Full time Student	Retired	Unemployed not currently looking for work	
What is the highest degree or level of school you have completed?	Primary/ Junior	Count	0	0	0	1	0	1	0	2
		Expected Count	1.5	.1	.1	.1	.1	.0	.1	2.0
		% of Total	0.0%	0.0%	0.0%	0.9%	0.0%	0.9%	0.0%	1.8%
	Secondary/ High School	Count	7	1	1	1	1	1	0	12
		Expected Count	9.0	.3	.6	.8	.6	.2	.4	12.0
		% of Total	6.3%	0.9%	0.9%	0.9%	0.9%	0.9%	0.0%	10.8%
	Bachelor's degree (e.g., BA, BSc.)	Count	61	2	3	3	4	0	4	77
		Expected Count	57.6	2.1	4.2	4.9	4.2	1.4	2.8	77.0
		% of Total	55.0%	1.8%	2.7%	2.7%	3.6%	0.0%	3.6%	69.4%
	Master's degree (e.g., MA, MSc., MEd)	Count	15	0	1	2	1	0	0	19
		Expected Count	14.2	.5	1.0	1.2	1.0	.3	.7	19.0
		% of Total	13.5%	0.0%	0.9%	1.8%	0.9%	0.0%	0.0%	17.1%
	Doctorate or professional degree (e.g., MD, DDS, PhD)	Count	0	0	1	0	0	0	0	1
		Expected Count	.7	.0	.1	.1	.1	.0	.0	1.0
		% of Total	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%
Total		Count	83	3	6	7	6	2	4	111
		Expected Count	83.0	3.0	6.0	7.0	6.0	2.0	4.0	111.0
		% of Total	74.8%	2.7%	5.4%	6.3%	5.4%	1.8%	3.6%	100.0%

The Chi-Square Test of Independence determines whether there is a relation between categorical variables (Howell, 2011). A chi-square test for goodness of fit with α= .05 was used to assess the relationship between education and occupation. The chi-square test was statistically significant, χ^2 (1, N=111) = 62.050, p=.00. Therefore, **the null hypothesis that there is no association between educational qualification and occupation is rejected**.

Table 17; Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	62.050[a]	24	.000
Likelihood Ratio	28.964	24	.222
Linear-by-Linear Association	3.167	1	.075
N of Valid Cases	111		

a. 32 cells (91.4%) have expected count less than 5. The minimum expected count is .02.

5.6.5 Impact of sectoral trends on e-commerce during Covid-19 – H5

In the combination of an independent variable, 0.7% of the variability in using e-commerce, $R2$= .007, adjusted $R2$= -.003 and the standard error in the data is 0.683.

Table 18; Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.084[a]	.007	-.003	.683

a. Predictors: (Constant), Sectoral Trends

The ANOVA table represents the overall significance of the model, which is determined by using e-commerce. The result shows F (1, 101) = 0.721, p>.05, which suggests the model is not statistically significant. Therefore, the independent variables are not related to the dependent variable.

Table 19; ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.336	1	.336	.721	.398[b]
	Residual	47.120	101	.467		
	Total	47.456	102			

a. Dependent Variable: E-commerce

b. Predictors: (Constant), Sectoral Trends

In a single-independent-variable regression, the coefficient indicates how much the dependent variable is predicted to change. Sectoral trends have not had a significant influence on e-commerce because the p-value (0.398) of this coefficient results is higher than 0.05. Therefore, **the null hypothesis that sectorial trends have no impact on E-commerce is not rejected.**

Table 20; Coefficient results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.860	.368		5.061	.000
	Sectoral Trends	-.075	.088	-.084	-.849	.398

a. Dependent Variable: E-commerce

5.6.6 Relationship between e-commerce future shopping, sectoral trends and consumer behaviour during Covid-19 – H6

To assess the size and direction of the linear relationship between e-commerce, future shopping, sectoral trends and consumer behaviour, a bivariate Pearson's product-moment correlation coefficient (r) was calculated. There is no correlation between e-commerce and sectoral trends. However, there has been a significant relationship between e-commerce, future shopping and consumer behaviour r = 0.232 and 0.453, $p<.05$, two tailed which is statistically significant. Therefore**, the null hypothesis that there is no relationship between e-commerce, future shopping and consumer behaviour in the population is rejected.**

Table 21; Correlation results

		E-commerce	Future Shopping	Sectoral Trends	Consumer Behaviour
E-commerce	Pearson Correlation	1	.232*	-.084	.453**
	Sig. (2-tailed)		.020	.398	.000
	N	114	100	103	106
Future Shopping	Pearson Correlation	.232*	1	-.051	.256*
	Sig. (2-tailed)	.020		.612	.010
	N	100	100	100	100
Sectoral Trends	Pearson Correlation	-.084	-.051	1	.224*
	Sig. (2-tailed)	.398	.612		.023
	N	103	100	103	103
Consumer Behaviour	Pearson Correlation	.453**	.256*	.224*	1
	Sig. (2-tailed)	.000	.010	.023	
	N	106	100	103	106

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

5.7 Conclusion

The data has been analysed using IBM SPSS 27. The analyses include a demographic analysis of 114 consumers. Standard formulas have been applied for calculating means, standard deviations, percentages, p values, F values, and so forth. In inferential statistics, an independent sample t-test and One-way ANOVA have been conducted to find demographic differences to measure the using tendency of e-commerce.

Correlation and Regression analysis helps to verify the relationship and influence between quantitative variables. The results show that consumer behaviour and future shopping have a significant impact on e-commerce during covid-19.

The data that a statistical test examines is only as good as the data that it explores. The statistical analysis produced by researchers that collect data using incorrect or biased techniques will be deceptive. The difference between the sample population and the actual population is referred to as "sampling error." The statistical methods don't study the nature of the phenomenon, which cannot be expressed in quantitative terms. This sample size may not enough to predict a big decisions.

When a test shows that a difference is not statistically significant, it could be significant in practical life. It can be concluded that the above results have fulfilled the aim of this research.

The next chapters aim is to match the above findings with today's literature, provide practical considerations and mention the limitations of this study.

Chapter Six – Discussion

Chapter VI: Discussion

6.1 Introduction

The prime objective of this chapter is to discuss the main research findings from this study as well as looking at what other past and present scholars have noted on this topic. A literature review was conducted in chapter two, and this became the basis of the selected research hypothesis. Practical considerations and limitations will also be discussed in this section.

The analysis of the results illustrate some interesting differences between the variables, which will be discussed below. Only four of the six hypothesis will be discussed in detail.

6.1.1 Consumer behaviour & e-commerce

The first hypothesis which claims that consumer behaviour has no significant impact on e-commerce is **rejected**. Tables 8, 9, and 10 in chapter five demonstrate that consumer behaviour has a significant impact on e-commerce.

This is most probably due to consumers personal choices and preferences for shopping. One consumer can have high levels of uncertainty when purchasing products online. Although the other consumer might not have this doubt. However, 84% of the Irish consumers that participated in this study claimed that compared to traditional stores, there is a lot of doubt involved when trying to find the right product or fit online (See appendix a). Traditional shopping stores were hindered when local and national lockdowns were introduced by different states and countries around the world. This forced many to shop online using e-commerce on a more regular basis.

Moreover, over 88% of these participants also mentioned that they increased online shopping only due to the pandemic (Appendix b). These insights suggest that there is a huge chance consumers could revert back to traditional shopping if companies fail to find a way to overcome these consumer challenges. The findings also show many consumers shopped online out of necessity and not by personal choice or preference.

When shopping online, consumers like to compare product prices and models. The power is in the hands of the consumer. Compared to traditional shopping, where consumers could fall into the trap of impulse buying and not being able to compare prices with other stores that easily.

This research supports the idea suggested by Silva et al., (2020), who explains that having a high price online compared to your competitors can turn the buyer off from buying your product and could create a negative brand image in any future interaction with the consumer.

Companies today use all sorts of internet based tracking software's for example, cookies in order to track consumer behaviour, however, there is still a lot of work to be done in this area, as newer technologies are being developed in this field. New GDPR regulations have come into force to protect the privacy of online consumers (GDPR, 2021). Consumer behaviour is already very difficult to track as trends and moods can change instantly, so does this mean that consumers will not be targeted by companies on products on their preferences? Will this lead to e-commerce growth slowing down, or will consumers go back to buying using traditional methods. It will certainly be interesting to see how this plays out in the future.

6.2.2 Future shopping & e-commerce

The second hypothesis which claimed that future shopping has no significant impact on e-commerce is **rejected**. The p value .02 indicates that future shopping has a significant influence on e-commerce.

As more and more countries are opening up their economies following the easing of Covid 19 restrictions and consumers getting fully vaccinated, international travel for example is back on the rise. 47% of respondents advised that they will spend even more online once the pandemic is over. The common theme in the answers was that the participants would spend their money on luxury items or travelling internationally post pandemic (Appendix c). Moreover, most of the participants answered when local lockdowns and restrictions were eased in Ireland. It is important to note that the pandemic is not over just yet, there is still a chance some countries including Ireland will fall back into a lockdown or other covid restrictions due to the alarming rise in the case numbers.

This goes in line with the views of Davis (2020) who suggests online sales will continue to grow once the pandemic is over. However, some consumers who remained in employment during the Covid 19 pandemic, have potentially built up significant savings they otherwise might not have had. According to a study conducted by the European Central Bank (2021) consumer savings reached "extraordinary levels" since early 2020 (Appendix d). Higher savings have been made due to lower consumptions as many brick and mortar stores remained closed. In simple terms, this means that consumers now have higher levels of disposable income which they can now spend.

This certainly does not mean that consumers will solely spend their money online. But in fact, it does give businesses and marketers a window to target these consumers who now have the disposable income.

6.2.3 Using e-commerce during Covid-19 between male and female consumers

The third hypothesis which claimed that there is no difference between male & females using e-commerce is **not rejected**. The t-test was not statistically significant as seen in table 14. The p value p>0.5 indicates that there is no difference between males & females using e-commerce.

This finding directly contradicts the report published by First Insight (2018) released on the CBC news platform. This survey mentioned that men consumers like to go into traditional stores to "touch and feel" compared to female consumers who don't need to go into the stores in the same way. This has changed the way businesses have had to react and promote themselves online. The survey also concluded that there is a significant difference in how males & females use e-commerce.

This is a significant finding, however, as many retailers were closed due to government restrictions, it can be assumed that due to Covid 19 male and female consumers can be seen buying only essential items. This can range from food and any day to day essentials.

Moreover, prior to the pandemic 36% male consumers have mentioned that Covid-19 has impacted hugely on how they spend online versus 25% of women (Forbes, 2020). The buying behaviour of consumers can seem to be shifted during the pandemic, the effects of this will be seen in years to come.

6.1.4 Sectoral trends & E-commerce

The fourth hypothesis which claimed that sectoral trends have no significant impact on E-commerce is **not rejected.**

This is also a surprising finding. Out of the 114 respondents in this study the majority of consumers overwhelmingly selected the following sectors in which they shop online; fashion, electronics, retail, clothing, technology and food, see more categories chosen in (Appendix e) with 76% of these participants confirming they only shop these specific categories online.

One of the main reasons consumers shop the above sectors is convenience. Online market places such as Amazon and eBay offer next day delivery on products, offer competitive prices and allow an easy returns procedure. Likewise, 91% of participants responded that e-commerce provides them with major conveniences, see more in (Appendix f). Consumers could make a purchase within a few clicks and in the comfort of their own homes.

Finally the final two other hypothesis were also rejected. To gain a deeper understanding of the topic, the researcher tested other variables. The analysis suggests that having a bachelor's degree and being in full time employment makes you more prone to buy online. Again, this could link also to convenience but could also be linked to the new normal for the Generation x/y consumers.

6.3 Limitations of this study

The researcher acknowledges that there are several limitations to this research study. There are many elements such as psychological and situational factors that were not looked at when analysing consumer behaviour and buying online.

As this is a fairly new topic, it was difficult gathering latest secondary data on this topic. However, similarities were observed between the old vs new literature.

Moreover, the method chosen to collect data can also be considered a limitation. An online survey cannot always extract out the exact information the researcher is looking for. Closed ended questions only provide one word answers and do not provide the required information in order to debate the new research found.

Furthermore, this study collected data of 114 participants that lived in Ireland. This has to be taken into consideration when discussing the primary data results. The subclass here can be considered somewhat small.

Time was also an issue for the researcher. There was limited time to conduct the research and analyse the data, hence why a limited sample was chosen.

It is important to note, the limitations listed above did not have a huge impact on the grand scheme of this study. The primary and secondary data that was collected was enough to investigate the main research question while also achieving the research objectives.

Chapter Seven – Conclusions & Recommendations

Chapter VII: Conclusions & Recommendations

The research was an applied research done for the purpose of analysing the effects of independent variables on the dependent variable. Consumer behaviour, future shopping, traditional shopping, consumer demographics and sectoral trends are the independent variables, and the affect they have on e-commerce which is the dependent variable. The sample size for the research was 114 respondents and the data was collected using a close ended questionnaire. It was distributed to Irish consumers using the Qualtrics software. From all five variables, it can be seen that consumer behaviour and future shopping are significant and have an effect on the dependent variable. It is important for the retailers to study the consumer behaviour and look into the demands of consumers to gain a competitive edge in the industry. The framework of this research provides a detailed pattern of consumer buying habits in the industry and gives retailers an insight into what needs to be done to fulfil the demands of consumers. The model is a good-fitted model which shows that the chosen independent variables have an impact on the dependent variable which is e-commerce.

From the findings, it can be seen that many consumers saved a lot of money during the pandemic. This suggests that when the economies start to rebound, there will be huge demands for products and services. Consumer demand is vital for retail industry. It is important for businesses to understand consumer behaviours and their needs. Thus, it is necessary for the retailers to keep these factors in mind and focus on what consumers prefer in order to enhance their business. If consumers can be satisfied, product loyalty can be achieved. When the customer demand is looked upon, consumers can develop a sense of authority, hence, they are attracted towards the business and their products.

As change is happening rapidly, retail channels are also evolving. Due to busy schedules consumers prefer shopping online rather than going to physical stores. From the research, it has been seen that the preference of customers totally depends upon their lifestyle and their age. Baby boomers for example still prefer going to a physical store and buy the product after looking at it. Touching and feeling the product is given a priority by them. Moreover, they do not feel safe making online transactions as they are considered to be less safe.

Since the Covid-19 pandemic hit the world, a huge change in the choice of medium for retailing has been seen. Even the older generation are preferring to shop online rather than going to the store. Going to physical store is not safe and this was also restricted during the lockdowns. Many of the retailers around the world have taken this opportunity and shifted their stores to e-channels. Most of the stores have implemented an easy refund policy which eliminates the chances of buying the wrong product. From the sectoral trends, it has been seen that people from all generations are preferring to shop online for groceries, food, technology in order to avoid contact with other people during Covid-19. With the changes in technology, the future of shopping is becoming very smart. Online shopping is gaining preference over traditional shopping and even in physical stores, carts with smart chips are being used to make the checkout process hassle free. Covid-19 has modified the ways how people purchase food for example. Thus, it has become a necessity to realign the supply chain. It is important for retailers, to make use of this opportunity and shift their businesses to e-channels.

7.1 Future research

After the completion of this study and gaining an understanding of the limitations, the researcher has identified that future quantitative research is needed on this topic to aggregate greater findings in the global space.

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Appendices

Appendices

Appendix A:

Q13 - Compared to traditional stores, a lot of uncertainty is involved when purchasing the items online e.g., the product you purchase may not be exactly what you want e.g. size issues and questions over the style
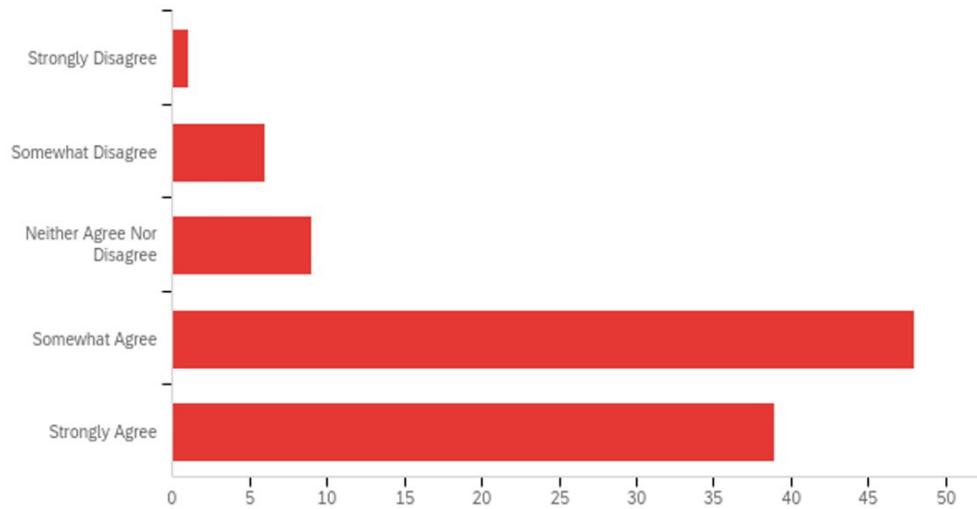

Appendix B:

Q24 - I increased my online shopping during the pandemic
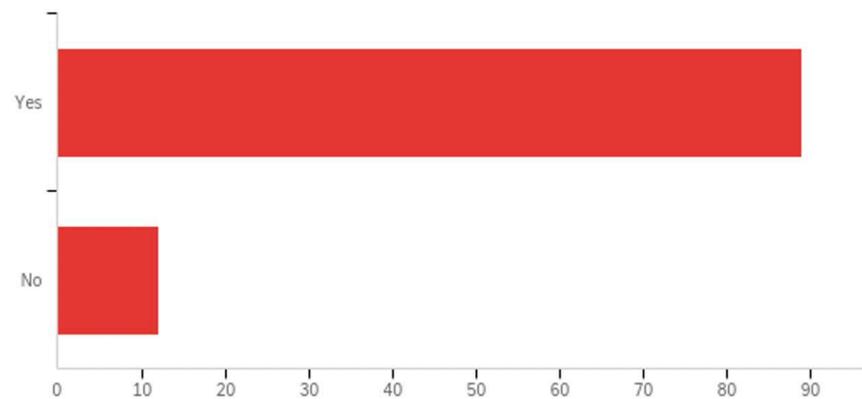
Appendix C:

**Q26 - I plan to spend more online once the pandemic is over**
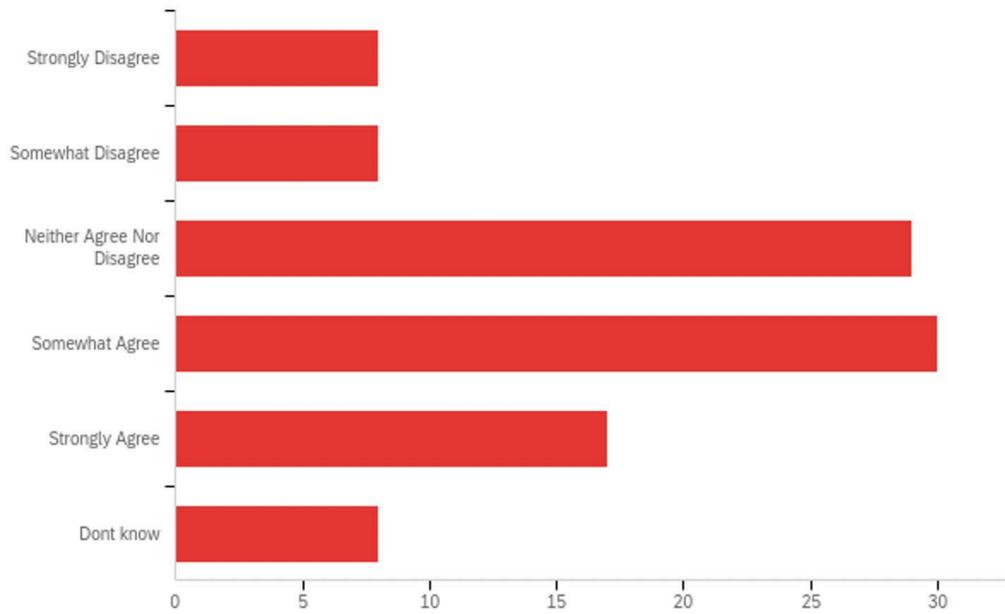
Appendix D:

Chart A

Indicators of household savings

(change with respect to December 2019/Q4 2019, percentage points of disposable income and percentage points)
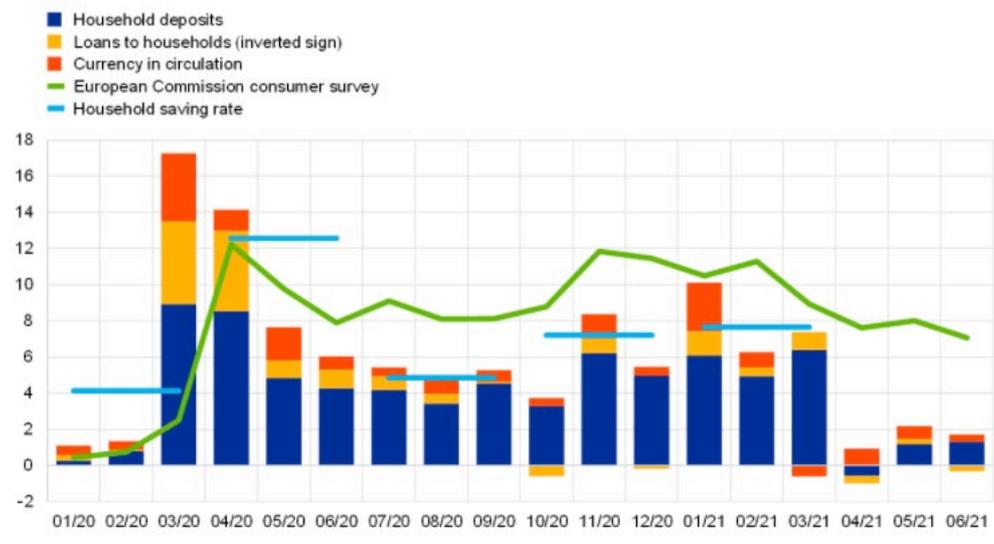
Appendix E:

Q15 - If yes, which sector/ products/ services do you buy online?

| If yes, which sector/ products/ services do you buy online? |
| --- |
| Fashion, electronic |
| Fashion |
| Recreational - video games, books, etc. Homeware - kitchen/sitting room items. Electronic Items |
| Retail |
| Clothing, Luxury |
| Fashion, electronics |
| Home, Luxury |
| ASOS, Amazon |
| Clothing, eletronics |
| Clothes |
| Fashion/Luxury Items (Golf Clubs, Electronics) |
| Groceries, clothing |
| Luxury |
| Technology |
| Retail |
| Food, beauty products, |

Appendix F:

Q10 - E-commerce/ Internet shopping provides me with convenience.
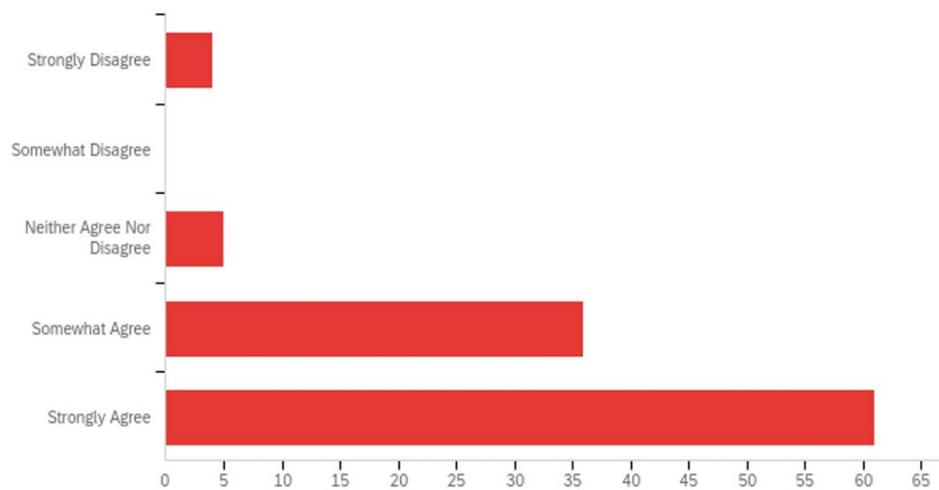
Survey questions

E-commerce is referred to as engaging in different commercial activities without any boundaries using the World Wide Web.

Thank you for taking the time to participate in this important research project. Your response is highly valued and will remain confidential and anonymous. There are no right or wrong answers.

Please answer each question as you can. It is important you answer all questions.

Gender

Male	Female	Other
◯	◯	◯

Age (In years)

◯ Under 18
◯ 18 - 24
◯ 25 - 34
◯ 35 - 44
◯ 45 - 54
◯ 55 and above

What is the highest degree or level of school you have completed?

○ No Qualification

○ Secondary/ High School

○ Bachelor's degree (e.g. BA, BS)

○ Master's degree (e.g. MA, MS, MEd)

○ Doctorate or professional degree (e.g. MD, DDS, PhD)

What is your current employment status?

○ Employed full time (40 or more hours per week)

○ Employed part time (up to 39 hours per week)

○ Unemployed and currently looking for work

○ Unemployed not currently looking for work

○ Student

○ Retired

○ Self-employed

E-commerce/ Shopping online is easy and flexible to use

☐ Strongly Disagree

☐ Somewhat Disagree

☐ Neither Agree Nor Disagree

☐ Somewhat Agree

☐ Strongly Agree

I think that I have the resources, knowledge and ability to use e-commerce.

- ○ Strongly Disagree
- ○ Somewhat Disagree
- ○ Neither Agree Nor Disagree
- ○ Somewhat Agree
- ○ Strongly Agree

E-commerce/ Internet shopping provides me with convenience.

- ○ Strongly Disagree
- ○ Somewhat Disagree
- ○ Neither Agree Nor Disagree
- ○ Somewhat Agree
- ○ Strongly Agree

Internet shopping provides an online payment security.

- ○ Strongly Disagree
- ○ Somewhat Disagree
- ○ Neither Agree Nor Disagree
- ○ Somewhat Agree
- ○ Strongly Agree
- ○ Dont know

The first step for buying merchandise is often to collect information such as where to buy, prices, and the reviews the product has.

Compared with buying in traditional walk in stores, a lot of time and effort is spent in searching relevant information when buying the items from web stores.

○ Strongly Disagree
○ Somewhat Disagree
○ Neither Agree Nor Disagree
○ Somewhat Agree
○ Strongly Agree

Compared to traditional stores, a lot of uncertainty is involved when purchasing the items online e.g., the product you want may not be exactly what you want, size issues and questions over the style

○ Strongly Disagree
○ Somewhat Disagree
○ Neither Agree Nor Disagree
○ Somewhat Agree
○ Strongly Agree

After receiving the product, it may need some post-purchase (after sales) service. Compared with traditional stores, there can be problems of post-purchase service after buying the items from web stores. (e.g. returns, refunds etc.)

○ Strongly Disagree
○ Somewhat Disagree
○ Neither Agree Nor Disagree
○ Somewhat Agree

○ Strongly Agree

Are there specific sectors/ products/ services you buy online? e.g., Retail, Fashion, groceries or electronics

○ Yes
○ No
○ Sometimes

If yes, which sector/ products/ services do you buy online?

[   ]

Any other comments (Optional)

[   ]

On average, how much did you spend shopping online last month?

○ Less than €1000
○ €1000 - €2000
○ €2000 and above

Due to the Covid 19 pandemic, do you believe consumers of all ages have shifted to shopping online?

Yes	No
○	○

I have shopped online pre pandemic (Pre 2019)

Yes	No	Never	Occasionally	Always
○	○	○	○	○

I shopped online during the pandemic

Yes	No
○	○

I will continue to shop online after the pandemic is over

○ Strongly Disagree
○ Somewhat Disagree
○ Neither Agree Nor Disagree
○ Somewhat Agree
○ Strongly Agree

I plan to spend more online once Covid is over

○ Strongly Disagree
○ Somewhat Disagree
○ Neither Agree Nor Disagree
○ Somewhat Agree
○ Strongly Agree
○ Dont know

Any final comments, do you have any negative or positive experiences using the e-commerce platform?

[   ]