

Online Consumption of University Students from Paraíba during the Covid-19 Pandemic

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Abstract:

Background: Covid-19 has affected the lives of all citizens of the world in some way. The disease caused the closure of countless establishments and commercial organizations, as well as changes in the consume habits of the population. The objective of this research is to analyze how the coronavirus pandemic changed the online consumer behavior of a group of university students from the Paraíba state.

Materials and Methods: It is quantitative research, applied to a sample of 159 university students. The data was collected through an online questionnaire adapted from Galdino (2020), and later on organized with the assistance of the Microsoft Excel and analyzed using SPSS.

Results: From the results, it was observed that there were significant changes in the online consumer behavior during the pandemic period, such as an increase in the shopping frequency, mainly motivated by factors cost/benefit of the product or service, convenience and safety/health, as well as in the consume of products from the category Food/Drinks (Fast Consume - Delivery). Furthermore, it was observed that university students are more likely to use new platforms and new online channels to make their purchases, considering that, during the pandemic, most the respondents made purchases on at least one platform that they had never used before.

Conclusion: Finally, it is concluded that the changes in the pandemic period will also affect the post pandemic period, for most of the respondents revealed that they were satisfied with their online purchases during the pandemic and will continue with their online shopping frequency even after the Covid-19 period.

Key Word: Online Shopping Behavior; E-Commerce; COVID-19.

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I. Introduction

E-Commerce is the usual term to designate electronic transactions involving the purchase and sale of goods and services through the internet, environment in which a wide variety of online stores are available (Pattat, 2014). It involves all of the processes in the value chain carried out in a digital environment, using information and communication technology tools, aiming to fulfill business needs (Nakamura, 2011).

Since its emergence in the late 1970s and its diffusion in the mid-1990s, E-Commerce has been developing even more and is no longer just a business strategy used to give support to the traditional commerce. This practice continues to develop as digital consumers increasingly use digital devices for their purchasing activities and tend to trust their social medias, online recommendation systems and other technology tools to guide their purchasing decisions in the virtual environment (Cheung, Liu, & Lee, 2015). So, it is necessary for companies involved in E-Commerce to understand online consumer behavior and how it is affected by the online environment, so they can grow alongside the virtual market, which develops more each year, but had an even more considerable demand during the Covid-19 pandemic.

On March 11, 2020, the World Health Organization (WHO) has instituted pandemic state due to the rapid spread of the Covid-19 disease, caused by the SARS-CoV-2 virus (Lana et al., 2020). In an attempt to slow the spread of the disease, governments of all countries began to institute quarantine and lockdown, closing schools, gyms, beaches, malls, bars, among others. Thus, with the closure of commercial establishments due to the decrees established by governments, shopping online was no longer just a choice, but instead it has become a necessity for many people, which generated a greater than expected increase for E-Commerce, as shown by record from the

year 2020, that presents a 29% increase in the number of new consumers compared to 2019, and an increase of BRL 25.5 billion in sector revenues (Ebit, 2021).

Thus, as fast as the disease took hold on the world stage, companies had to go through a process of reinventing themselves to survive during the crisis caused by the pandemic, having to enter the online market, and the ones that were already on it needed to try to understand how this new panorama changed not only the sector itself, as well as the digital consumer (Cruvinel, 2020).

Commercial establishments such as department stores, furniture and electronics, as well as restaurants and snack bars, were closed, which resulted in many consumers starting to buy online. Due to fear of the virus, many citizens began to avoid some establishments that were not closed (considered essential), like supermarkets and drug stores, and also started to buy items from these segments online.

So, these factors resulted in a sort of migration of consumers, from the traditional to the digital commerce, increasing the amount of online consumers, or “E-Consumers”. Most of these consumers are considered “time starved”, busy people looking to save time, and they value convenience and practicality while shopping (Beauchamp & Ponder, 2010). Time starved consumers, especially the younger ones, are becoming more immediatists every day, that's why they turn towards the digital commerce more and more.

Among this audience, university students stand out, considering that this type of consumer is becoming more and more active in E-Commerce. This type of consumer usually practices intense shopping in virtual stores, considering that, with its constant and intense contact with the internet, the tendency to purchase products and services online is increased considerably (Diniz, 2017). According to a survey carried out by the Student Observatory with a sample of over 4,630 Brazilian university students, although this group does not have much purchasing power, 49% consider themselves active consumers and 65% enjoy shopping (Julio, 2017).

Thus, the present study seeks to answer the following research problem: “How the Covid-19 Pandemic modified college students' online buying behaviors?” In order to answer this question, the general objective of analyzing how the Covid 19 pandemic changed the online consumption behavior of a group of university students in the Paraíba state was formulated. In order to achieve this goal, the following specific objectives were established: i) Identify the frequency of use of internet shopping by university students, before and after the pandemic; ii) present the reasons that lead the surveyed public to shop online during the pandemic; and, iii) identify the changes caused by the Covid-19 pandemic in the virtual consumption habits of university students in the state of Paraíba.

This research is relevant for addressing a topic of great importance at the moment, for both academia and commercial organizations, as it presents data and information about consumption changes in online environments, helping to understand how these changes influence the daily lives of consumers, organizations and general society.

Therefore, this study is structured in five sections. The first section brings the introductory part. The second section brings the theoretical foundation, explaining about E-Commerce and online consumer behavior and what are the main factors that drive their purchase decision in digital environments, as well as data on the growth of E-Commerce during the Covid-19 pandemic. The third section addresses the methodological procedures that were used on the study. The fourth section brings the results and discussions. And in the fifth and last section there is the final conclusions, followed by the references that served as the basis for this work.

II. Literature Review

E-Commerce and E-Consumer Behavior

E-Commerce (Online Commerce or Digital Commerce) is a manner by which consumers can shop online in different digital environments. According to Albertin (2001) is the execution of the entire business value chain processes in a digital environment, through the intense application of communication and information technologies, according to business objectives. Thus, E-Commerce involves all the processes in the value chain: going from the customer approach, to the product delivery process.

This method of virtual commercialization has revolutionized the way that companies do business and interact with their environment, thanks to the technological advances and the growing ease to access the internet. Guerreiro (2006) claims that online commerce is an industrial revolution, and along with technological innovation, allows organizations to be more flexible and efficient in their procedures, operating closer to its suppliers and meeting the needs of its customers even more.

Nowadays, E-Commerce reaches all industries in some way, and creates new forms of digital market where prices are more transparent, the markets are global, and the marketing is highly efficient (Laudon & Traver, 2016). For Bertussi (2018), the advantages of Online Commerce are: lower initial investment compared to physical stores; the business can reach a wider audience; uninterrupted operation, 24 hours a day; can offer personalized products and services according to the needs and characteristics of consumers; the entrepreneur can interact directly with the customer; it is possible to obtain more information about consumer behavior; and, with the help from technologies and systems, it is possible to attend a higher level of demand.

Abyad (2011) affirms that, different from the conventional commerce, E-Commerce cyber operations have no geographic boundaries and can happen 24 hours a day, considering that the E-Consumer can make purchases at any time of the day, in accordance with their needs and desires. Through E-Commerce, it is possible to find a wide range of products and services more easily, with more convenience and speed, being able to compare them and make the purchase decision process more advantageous (Azevedo & Silva, 2015). Thus, as E-Commerce is an online practice, it depends on the internet for it to fully function.

However, the internet does not have the sales process as the only use for practitioners of digital commerce, as it also has become an important tool for strategic management, enabling organizations to achieve more efficiency, greater convenience and speed at customer service, improvement in the decision-making process, flexibility in its processes, greater dynamism in its inventory turnover, and others (Andrade & Silva, 2017).

Bilgihan, Kandampully and Zhang (2016) point out that, through the internet, entrepreneurs can interact with their customers through multiple online channels, thus managing to create a holistic shopping experience. These numerous virtual interactions give companies access to a diversity of consumer perspectives and ideas that can be used to develop innovations (Oinas-Kukkonen & Oinas-Kukkonen, 2013).

Considering all these factors, E-Commerce has offered numerous advantages for the sale and the commercialization of products. However, some organizations focus their efforts on technical aspects of the digital business, and end up neglecting the relationship with the consumer. A significant amount of earnings is lost annually across the world due to poor online shopping experiences experienced by consumers, which results in virtual companies not reaching their full potential (Bilgihan, Kandampully & Zhang, 2016). Therefore, organizations need to stand out and develop ways to win over their consumers, understanding their behavior.

Solomon (2011) states that the field of study of consumer behavior seeks to understand how people and groups select, buy, use or discard products, services, ideas or experiences, considering their reasons for buying, both utilitarian and hedonic. However, it is worth noting that, although the online consumer (digital consumer or E-consumer) presents a behavior similar to that of the traditional commerce consumers, some characteristics stand out. For Torres (2012), organizations need to understand how the media and virtual platforms used by consumers and the digital environment influence the online consumer's purchase decision. Thus, a better understanding of the behavior and purchasing habits of the E-Consumer can help in the decision-making process of entrepreneurs in this environment.

In the study by Al-Debei, Akroush and Ashouri (2015), the aspects that most influence the consumer's attitude towards online shopping are trust and perceived benefits. Trust is identified as an important factor in the purchase decision due to the risks involved in online commerce, considering that, to make a purchase in the digital commerce, the customer needs to assume some risks. The main risks perceived by customers are related to privacy and security, considering that, in order to register and complete a transaction on a website/app, the customer needs to provide personal information.

Because it is sensitive, personal and financial information, customers should feel secure in providing it, and know that it will be kept confidential. If this information is leaked, the responsible company may suffer a consequent exposure on social media, which will negatively impact its reputation (Andrade & Silva, 2017). Therefore, digital commerce entrepreneurs must strive to create a good reputation and trust with the E-Consumer, so that their customers can continue to be interested in buying in their store (Fang et al., 2014).

Regarding the perceived benefits of using E-Commerce, the most accessible prices stand out, as well as the speed and efficiency of the purchase that the environment provides (Lourenzani, Pereira Filho & Silva, 2001). Because they function online, virtual stores have a great advantage in terms of infrastructure costs, which end up being much lower compared to the costs of a store with physical facilities. In this way, this cost difference can be included in the final price of the product, resulting in a lower price, and consequently, becoming more attractive to the customer. This factor becomes even more important, since the consumer uses the internet not only to make the purchase itself, but also to make price comparisons between one store and another. According to Morgado (2003), if a consumer does not notice advantages in the price of the product of a certain virtual store while doing research, most likely he will not consider that store anymore, and will opt for others with better prices.

As for speed and efficiency, these factors are now even more important as most online consumers are considered "time starved", busy people who seek to save time and value convenience and practicality while shopping (Beauchamp & Ponder, 2010). Time-starved consumers, especially younger ones, are impatient and immediatists, so they are turning more and more to digital commerce each day.

E-commerce during the Covid-19 pandemic

In Brazil, although E-Commerce emerged in the 1990s, it only began to develop in the early 2000s (Torezani, 2008 & Mendonça, 2016). Since then, the sector has been developing more and more year after year. In 2011, Brazilian online commerce reached the number of BRL 18.7 billion in sales, in 2020, with the Covid-19 pandemic, sales reached the historic mark of BRL 87.4 billion (Ebit, 2021). The virus that causes respiratory infections, called SARS-CoV-2, has quickly changed the lives of people across the planet. According to Pejić-

Bach (2021), the disease has affected lives and economies in all countries around the world, generating countless challenges for private and public organizations.

The world had the first contact with the new Coronavirus at the end of 2019, when the first cases of Covid-19 disease began to appear in China, a disease that has a high power of contamination and rapid spread. At the beginning of 2020, WHO pronounces itself about it and confirms the circulation of SARS-CoV-2, and already in March it declares a pandemic state.

Due to the alarming amount of contamination by the disease and the growing number of deaths, federal, state and municipal governments begin to institute norms in an attempt to reduce the spread of the virus. The main measures adopted were the institution of quarantine, the prohibition of agglomerations and social distancing, which led many commercial establishments to close temporarily due to the decrees.

In order not to close the doors of their business definitively, many companies had to migrate to E-Commerce, in order to guarantee their survival in the market. Thus, with a greater number of products and services being offered in digital commerce, people practicing social distancing and avoiding leaving their homes, online sales of basic grocery products, for example, had an increase worldwide, reaching a growth of 74% at that initial moment (Bhatti et al., 2020). As for Brazilian E-Commerce, surveys show that it had considerable growth in 2020. According to data from the Webshoppers 43 report, by Ebit/Nielsen and Bexs Banco, compared to 2019, pharmacy items showed an increase of 19 % and the food segment had an increase of 30% (Ebit, 2021).

The Webshoppers 43 report also provides information on the number of new Brazilian consumers (new shoppers), those who never shopped online before the pandemic period. Compared to 2020, Brazilian online commerce had a 29% increase in new consumers, compared to 2019 (Ebit, 2021) and, among them, 83% declared that they would buy again using the internet. Although many people had doubts and fears about online shopping, the need and convenience made many people make their first online purchase because of the pandemic, and the tendency is that many maintain their frequency of online purchases even post-covid. According to a survey carried out by Criteo, a global technology company, 94% of Brazilians intend to continue shopping online (Ecommerce Brasil, 2021).

Thus, it can be said that E-Commerce gave people the opportunity to continue to supply their shopping needs with the online purchase of products. It also contributes to launching new trends that will last even after the pandemic

III. Material And Methods

This study is characterized as quantitative in nature, which, according to Silva and Menezes (2001), uses statistical resources and techniques to translate opinions into numbers and information to later classify and analyze them. It is also descriptive research, as its main objective is to describe the characteristics of a given population or phenomenon, establishing relationships between variables (Gil, 2010). Köche (2011) states that descriptive research finds and assesses these relationships as these variables manifest themselves spontaneously in facts, situations and conditions that already exist, without manipulating them.

Regarding the technical procedures that were used, it is a survey that, according to Gil (2010), is characterized by the direct interrogation of people whose behavior one wants to know and proceeds to request information from a significant group of people about the problem being studied, to then, through quantitative analysis, obtain the conclusions corresponding to the collected data. For this survey, an online questionnaire adapted from Galdino (2020) was applied.

Thus, for data collection, the questionnaire was organized into 4 sections containing 18 questions in total. The first section contained the term of consent and the question: "Have you made at least one purchase over the internet in the last year?". Thus, those who did not make any purchases during the period were redirected to the end of the questionnaire, those who did, continued to the next section. The second section surveyed the respondents' sociodemographic data (gender, age, marital status, higher education course and income).

In the third section, questions were actually asked about the online consumption behavior of the college students during the first year of the Covid-19 pandemic. Some questions were also asked about their online consumption before the pandemic, in order to be able to make a comparison and get to the results. The fourth and last section was devoted to closing the questionnaire.

The questionnaire used was made on the Google Forms online platform, and disclosed online through three social networks, being: Instagram@, Facebook@ and WhatsApp@, through a link, to the people of interest to the study, first being requested the virtual acceptance of the Informed Consent Form (ICF). Then, the opinion-type questionnaire without identification of the participants, used closed questions and multiple choices, organized in blocks following a logical sequence with clear and objective guidelines, to facilitate the respondent's understanding. The sample consisted of 159 university students from different courses at institutions in the state of Paraíba in Brazil.

The criteria adopted for sample selection was: i) being a university student with a link to a higher education institution in Paraíba; ii) have made at least one online purchase during the Covid-19 pandemic. Those

who didn't fit these prerequisites were redirected to a closing section. The questionnaire in question was answered between March and April of 2021, after which the collected data were organized and analyzed using descriptive statistics, frequency, percentage with help of a Microsoft® Excel® and analyzed using SPSS.

IV. Analysis and Result

Initially, the sociodemographic data of the sample are presented. Of these, 102 (64%) are women and 57 (36%) men, aged between 22 and 30 years old (61%). The predominant marital status was single (127 respondents), representing 80% of the total, with 52% of these university students studying Management. As for family income, 34 (21%) of the respondents have a registered job and, of these, 48% have an income of 1 to 3 minimum wage (R\$ 1,100.01 - R\$ 3,135.00), while 33% have an income of up to 1 minimum wage (up to R\$1,100.00). This information corroborates to the theory because, although university students consider themselves active consumers, they have low purchasing power (Julio, 2017).

Then, respondents were asked "Was your first purchase on the internet during the pandemic?" From the total, 85% answered no, as they had already purchased online before. Thus, most of those surveyed were already shopping in digital environments even before the pandemic, and this is in line with what Diniz (2017) says, university students often practice intense shopping in online stores, as this audience is in constant contact with the internet, which helps to contribute to the increase in online consumption considerably.

In contrast, 24 respondents (15%) declared having made their first purchase online during the pandemic period. These are the New Shoppers (new consumers), and according to a report by Ebit/NIELSEN in partnership with Bex Banco, Brazilian digital commerce had 13 million new shoppers in 2020, which represents a total of 29% percentage increase in comparison to the previous year, 2019 (Ebit, 2021).

This increase was mainly due to the decrees that determined the closure of commercial establishments, and many consumers were forced to turn to E-commerce to meet their shopping needs, including those who had never shopped online before. According to Rezende, Marcelino and Miyaji (2020), online commerce companies must pay attention to their customer service on behalf of these new shoppers, as they must have more questions related to the online shopping process, as they are still getting used to the digital commerce environment.

Due to this new panorama resulting from the social isolation caused by the pandemic, not only did the number of new E-commerce shoppers increased, but also the frequency of online purchases by consumers in general. Thus, they were asked: "Do you believe that your frequency of internet shopping has increased with the pandemic?", 114 (72%) of the respondents answered yes, and 45 people answered no, representing a percentage of 28%. For Schnaider (2020), the increase in the frequency of online purchases may be the result of physical stores having been closed on behalf of Covid-19, which made Brazilian online commerce in 2020 show revenues 41% higher than in 2019, caused by the high number of orders in virtual stores during the period in question (Ebit, 2021).

In order to make a better comparison of the respondents' purchasing frequency in the periods before and during the pandemic, it was asked "Before the pandemic, on average, what was your frequency of internet purchases per month?" and "With the pandemic, on average, how often do you shop online per month?". The summary of the answers to these questions can be found in Figure 1, below.

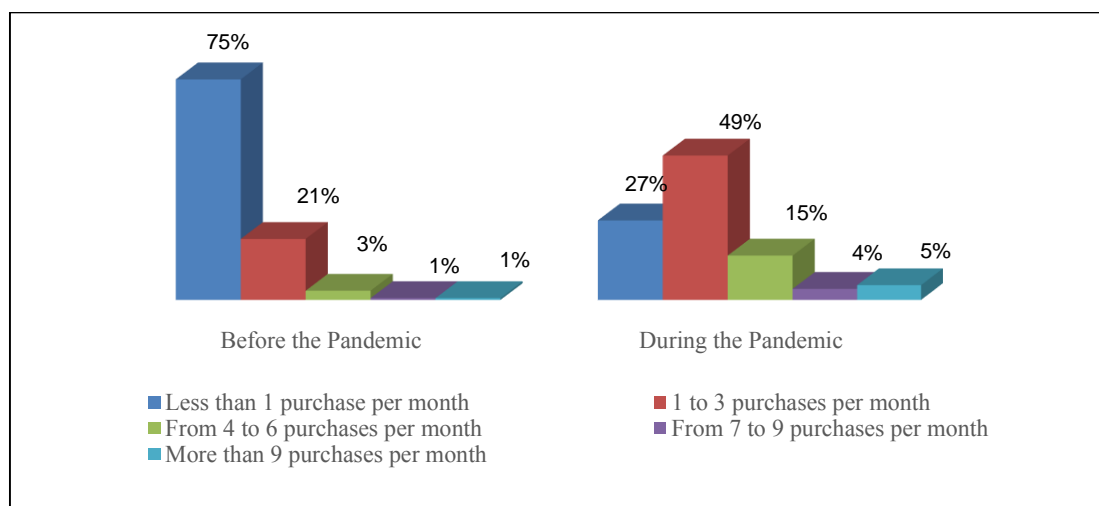


Figure 1: Frequency of Consumption Before and During the Pandemic

Thus, it was observed that before the pandemic period, 75% (n=119) of the respondents answered that they made less than one purchase per month, with this frequency being the highest percentage. During the

pandemic, only 27% (n=43) claimed to make less than 1 purchase per month. During the pandemic, however, the frequency with the highest percentage was 1 to 3 purchases per month, totaling 49% (n=78). As for the other frequencies, there were also significant increases. It is worth mentioning the category "4 to 6 purchases per month", which only 3% of respondents (n=5) said they made before the pandemic, while during the pandemic, this number rose up to 15% (n=24). So, it is evident that there was an increase in the frequency of purchases among those surveyed.

The increase in the consumption of E-Commerce products and services had already been happening for some years, but with the emergence of the pandemic it was boosted (Kim, 2020). This increase in the frequency of purchases can be explained by the occurrence of several commercial establishments being closed and social isolation having been established, which led people to spend more time at home. In this way, E-Commerce presented a solution for their needs to purchase goods and services to be fulfilled.

However, necessity isn't the only reason that drives consumers to shop on E-Commerce. Thus, to better understand the reasons that led and lead respondents to buy online, before and during the pandemic, the question was asked "Before the pandemic, what was the main reason for you to make a purchase on the internet?" and "With the pandemic, what is the main reason for you to make a purchase on the internet?". The summary of the answers to these questions can be found in Figure 2, below.

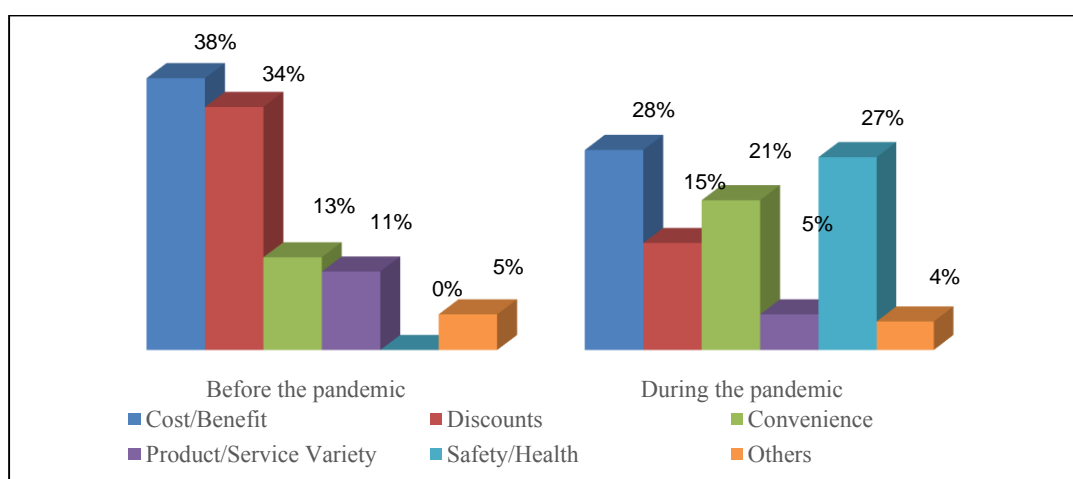


Figure 2: Motivating Factors for buying Before and During the Pandemic

Thus, it is noticeable that although the cost/benefit factor has shown a percentage decrease of 27% between the periods, it still proved to be the factor that most motivates respondents to make purchases in online environments in both periods, both before with 38% (n=60), and during the pandemic, with 28% (n=44). These data make it possible to corroborate what was exposed in the theory: the price of the product or service is one of the main benefits perceived by consumers regarding E-commerce, as well as being a decisive factor in the purchase decision of the virtual consumer.

In addition to physical stores generally having higher prices, as they have more costs with their physical facilities, customers also do not want to waste their time going from store to store in order to compare prices (Pattat, 2014). In this way, online shopping environments offer a faster and more efficient alternative to compare prices and, according to Laudon and Traver (2016), one of the greatest benefits that E-commerce offers to virtual stores is the price reduction, which even makes it less costly for companies to establish a strong market presence in digital commerce.

Regarding the discounts factor, this is also very important among respondents, considering that 34% (n=54) said that the main reason for making a purchase before the pandemic was discounts, while 15% (n=24) responded that that was its main reason for making a purchase during the pandemic. This finding is in line with the theory and other studies that demonstrate the importance of the discounts factor in the purchase decision of online consumers, such as the study by Andrade and Silva (2017), in which surveyed consumers stated that they only buy when they find a great deal. Although the discounts factor is of considerable importance among respondents, it is noted that there was a decrease of 56% between the periods, as some people began to consider other factors as more important reasons to buy online, such as convenience and safety/health, who had higher percentages during the pandemic period compared to the period before the pandemic.

Regarding the convenience factor, this was appointed by 13% (n=20) of the respondents as the main reason for shopping before the pandemic. During the pandemic, this number rose up to 21% (n=34), resulting in an increase of 70%. Convenience is an important factor as it allows consumers to shop from anywhere and at any time of the day, and has been identified as a motivating factor for online purchases since the first studies on virtual

consumer behavior, such as Ladeira (2000), which highlights convenience as one of the main attractions of E-commerce, as well as Morgado (2003), who carried out a study with consumers, where most responded that they thought it was important to be able to buy without leaving their homes.

This importance of the convenience factor continues to this day, and has become even more relevant with the pandemic, considering that, with social isolation, people began to spend more time at home, and to consider convenience and safety as some of the main reasons for migrating from traditional to digital commerce during the Covid-19 pandemic (Synthesio, 2020).

Regarding the safety/health factor, it showed the greatest increase between the periods. Before the pandemic, none of the respondents considered this factor as the main reason to shop online, while during the pandemic, 43 respondents (27%) said they considered this as the main reason to shop online. This increase has a more direct link with Covid-19 and the new concerns that the disease has brought to people's daily lives, as when a carrier of the virus coughs or exhales, it releases droplets of infected fluid, and many of these droplets fall on surfaces and objects close to the infected, as well as in their own hands, making the virus transferable to others (Meyer et al., 2020 & World Health Organization et al., 2020).

Thus, people started to buy more online as they saw it as a safer alternative to prevent the spread and contamination by the virus, which justifies the increased concern with the safety/health factor between periods and can be corroborated by what said Koch, Frommeyer and Schewe (2020), that shopping online is especially useful in the current context of the pandemic, as it reduces the consumer's risk of contracting the disease.

However, it is noticeable that even virtual purchases involve some physical contact, such as product delivery and payment at the delivery stage. For this reason, many companies have started to worry about developing new and better forms of delivery and payment that do not involve contact between the delivery person and the consumer (Rezende, Marcelino & Miyaji, 2020), with the purpose of preserving the safety and health of its customers and employees.

According to data from this survey, there was an increase in the frequency of purchases and the number of people who made their first purchase online during social isolation. To better understand the behavior changes of the respondents in this regard, the question was: "Of the categories presented, which category did you start to buy more on the internet considering the moment of the pandemic?" and "Which category did you buy on the internet for the first time in the pandemic?" As shown in Table 1, below.

Table 1: Most Outstanding Categories among Respondents

Which category did you buy more online during the pandemic?		Which category did you buy on the internet for the first time during the pandemic?	
Category	Frequency Percentage	Category	Frequency Percentage
Food/Beverages (Fast consumption - Delivery)	41%	Electronics	14%
Electronics	13%	None of the alternatives	13%
Books	12%	Clothing	13%
Clothing	7%	Food/Beverages (Fast consumption - Delivery)	11%
Food/Beverages (Supermarkets - Sites, Apps)	5%	Books	11%
Home and Decoration	4%	Cosmetics	8%
Amusement	4%	Food/Beverages (Supermarkets - Sites, Apps)	6%
Cosmetics	3%	Home and Decoration	4%
None of the alternatives	3%	Amusement	4%
Others	3%	Pharmacy	4%
Sportive Articles	2%	Others	4%
Computing	2%	Sportive Articles	3%
Pharmacy	1%	Office Items	3%
Automotive	0%	Computing	2%
Office Items	0%	Automotive	0%

Thus, it is noticeable that 41% (n=65) of the respondents said they had started to buying a greater quantity of products in the food/beverage category (Fast consumption - Delivery) during the pandemic, this being the most prominent category among those surveyed. This high percentage is in line with what Rezende, Marcelino and Miyaji (2020) claimed that there was a growth in delivery services and the food service segment during the quarantine, as they offer greater convenience and speed that are increasingly desired by consumers.

Another factor that justifies this growth is the closing of commercial establishments such as bars and restaurants, mostly due to social isolation measures resulting from the pandemic. For this reason, consumption of products in the food service segment through the delivery system increased by 94% during 2020, according to a study carried out by Sebrae in partnership with Abrasel (France, 2021).

As for the categories purchased for the first time during the pandemic, electronics had the highest percentage, with 14% (n=22). In a nationwide survey by Criteo, during the first year of the pandemic, online sales of electronic devices grew enormously, in particular laptops (increase of 666%) and tablets (increase of 492%) (Vilela, 2021). The increase in sales in these categories may be related to the occurrence of a greater number of people performing remote work from their homes.

The need for companies to enter E-commerce was also accompanied by the need to adopt new ways of promoting and selling online. However, with the various uses of the internet and especially with the importance that media and social networks currently have, companies must be aware and seek to establish their presence in various communication channels and sales platforms in the online environment. This factor is related to a concept called “omni-channeling”, and it refers to the ability of organizations to relate to their customers across different channels and platforms.

With the quarantine and the growth of E-commerce, the omnichannel became an even greater need for companies and, as stated by Rezende, Marcelino and Miyaji (2020), the improvement and development of new channels allows companies to make sales and communicate with their customers more efficiently, conveniently and safely, and it is also important for companies to maintain their survival even after the pandemic. Therefore, the respondents were asked about the channels used for the first time during the pandemic with the question: “Did you make purchases through any website/APP for the first time? If yes, which one(s)?”. According to Figure 3, below.

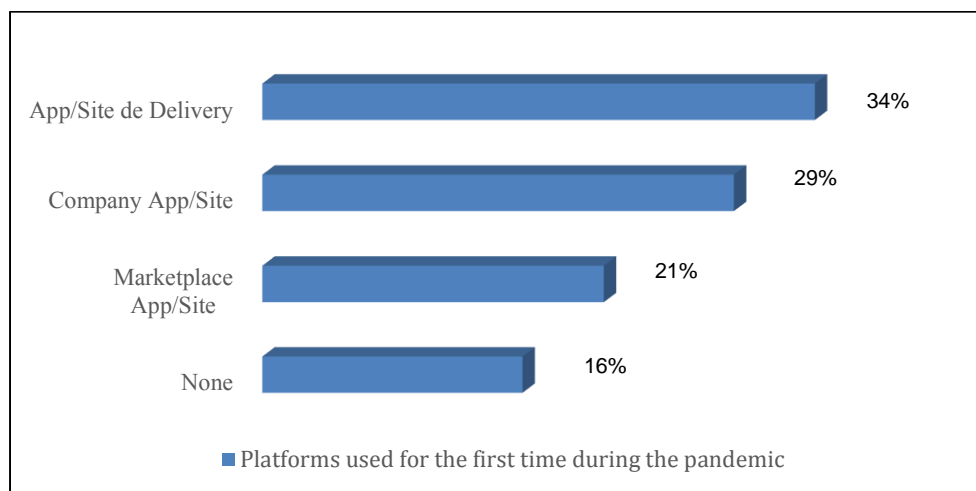


Figure 3: Platforms Used for the First Time During the Pandemic

As a result, it is evident that 84% (n=127) purchased on at least one platform for the very first time, with greater emphasis on the use of the Delivery App/Site platforms (34%), while 16% (n=32) did not buy for the first time on any platform during the pandemic. This helps to support the importance of omnichannel for commercial organizations, as it shows that more and more consumers are using new channels and diverse platforms to make their online shopping. Rezende, Marcelino and Miyaji (2020) point out the importance of companies investing in improving their delivery systems, and cite the example of the growth of the Latin American market, mainly driven by pharmacy, restaurant and supermarket items.

Although quarantine and pandemic have driven the growth of E-Commerce (Kim, 2020), one of the factors that will be decisive in ensuring the continued development of the sector also in the post-pandemic period is the consumer satisfaction with their online purchases during the isolation time. Therefore, respondents were asked about their satisfaction with E-commerce with the question “During the pandemic, in general, were you satisfied with your purchases on the internet?”. 99% (n=157) said they were satisfied with their purchases made during the pandemic. Batista, Abreu and Brandão (2014) stated that the success of E-commerce companies will only be achieved through customer satisfaction.

Considering that satisfaction is one of the determining factors for the intention of future purchases by consumers, it was asked whether the respondents intended to maintain their frequency of purchases in online environments even in the post-pandemic period. 94% (n=149) of the respondents said they intended to keep their

frequency of online shopping after the pandemic period, while only 6% (n=10) said they did not. As shown in theory, according to a study carried out by the company Criteo, 94% of Brazilians intend to continue shopping online after the pandemic period (Ecommerce Brasil, 2020). E-commerce numbers are only increasing and, with the Covid-19 pandemic, this growth was intensified, as consumer habits of E-Consumers have changed, as well as the frequency of online purchases, as a possible result of social isolation and the closing of commercial establishments.

Furthermore, it was also found that some product categories stood out, in particular products in the food/beverage category (fast consumption - Delivery) and electronics, and that many online sales platforms were used for the first time during the pandemic. Furthermore, it was evident that the reasons for making a purchase on the internet have changed, especially safety/health, which became more considered during the pandemic, due to people's fear of being contaminated by the coronavirus.

Finally, it is noteworthy that E-commerce will continue to develop even after the pandemic, considering that most respondents said they were satisfied with their purchases during the period, and that they will maintain their purchase frequency even after the pandemic. Thus, it is up to Digital Commerce entrepreneurs to continue investing in improvements to their online businesses and working to improve customer satisfaction, as these consumption habits tend to be perpetuated in the future.

V. Conclusion

This research presented important data on E-Consumer behavior before and during the Covid-19 pandemic, as it made it possible to observe that there were in fact changes in online consumption behavior, such as the increase in the frequency of purchases in E-commerce during the pandemic and a change in the main reasons that induce respondents to make purchases in online environments. In particular, there was a significant increase in the safety/health factor, which started to be considered only after the appearance of Covid-19.

It was also verified that university students are more likely to use new platforms and online channels to make their purchases, since, during the pandemic period, most respondents made purchases on at least one platform they had never used before. Among these platforms, the one that stood out the most was the Delivery App/Site type, which is in line with the findings on the category of highest consumption by the respondents, food/beverage (fast consumption – Delivery). It can also be said that the changes in this period will also affect the post-pandemic period, as most respondents revealed that they were satisfied with their online purchases during the pandemic and will continue their online shopping frequency even after the Covid-19 period.

As for the limitations of this research, it is worth mentioning that the study was carried out with a non-probabilistic population with a sample containing a limited number of people. In addition, predetermined variables were used, which means that other factors that are relevant to the topic may not have been considered. So, for future research, it is suggested that other variables be used, as well as that the samples are larger, so that new patterns and consumption behaviors can be found.

Furthermore, this research brings important contributions on the changes in consumer behavior caused by Covid-19, being also relevant for associations and businesses, as they can be used to develop business strategies aimed at consumption in the digital market, due to the associations need to be aware of changes in consumer behavior, possible trends and growth opportunities in light of the pandemic situation experienced in the country.

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