E-commerce: perfil e motivação que influenciam na escolha pelo comércio eletrônico dos graduandos de Ciências Contábeis da UFSM

E-commerce: profile and motivation that influence in the choice for e-commerce of student Accounting Sciences of UFSM

Comercio electrónico: perfil y motivaciones que influyen en la elección del comercio electrónico por estudiantes de graduación de Ciencias Contables de la UFSM

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PALAVRAS-CHAVE

E-commerce;
Comportamento;
Pandemia;
Acadêmicos.

Resumo: O e-commerce é tendência e realidade no comércio brasileiro e, ainda, impulsionado pelo cenário de pandemia causado pelo COVID-19, se torna imprescindível recorrer às novas estratégias para distinção e sobrevivência no mercado atuante. Nesse contexto, objetivou-se analisar o perfil e a motivação dos graduandos em Ciências Contábeis da UFSM sobre o mercado eletrônico e investigar as plataformas mais utilizadas, além de observar os impactos que a pandemia trouxe no comportamento dos alunos pesquisados. Para isso, foi realizada uma pesquisa aplicada, de levantamento com abordagem predominantemente quantitativa. A coleta de dados ocorreu por meio de um questionário estruturado e adaptado dos estudos de Moraes (2018), Pattat (2014) e Tonin e Frate (2009). Posteriormente, os dados foram tabulados e rodados em software estatístico de análise. Como resultado obteve-se o perfil dos acadêmicos sendo marcado por ser um perfil jovem, prevalentemente feminino, com acesso à internet e na sua maioria já inserida no mercado de trabalho. Como principais motivações da amostra, destacaram-se a diversidade de produtos e o preço. Sobre a pandemia da COVID-19, o cenário propiciou o aumento da adesão ao comércio eletrônico, tendendo a continuidade

após a normalidade de rotina. O estudo traz contribuições para empresas de grande a pequeno porte, como forma de pensar estratégias voltadas ao e-commerce, especialmente aos alunos de Ciências Contábeis, a fim de estimular a utilização de processos eletrônicos no mercado de atuação ou empreender com foco no comércio virtual.

KEYWORDS
E-commerce; Behavior; Pandemic; Academic.

Abstract: E-commerce is a trend and reality in Brazilian commerce and, still, driven by the pandemic scenario caused by COVID-19, it is essential to resort to new strategies for distinction and survival in the active market. In this context, the objective was to analyze the profile and motivation of the undergraduate student in Accounting Sciences at UFSM on the electronic market and investigate the most used platforms, in addition to observing the impacts that the pandemic brought on the behavior of the students surveyed. For this, an applied survey was carried out with a predominantly quantitative approach. Data collection occurred through a structured questionnaire adapted from studies by Moraes (2018), Pattat (2014) and Tonin and Frate (2009). Subsequently, the data were tabulated and run in statistical analysis software. As a result, the profile of academics was obtained, being marked by being a young profile, predominantly female, with access to the internet and most of them already inserted in the job market. As the main motivations of the sample, the diversity of products and the price stood out. About the COVID-19 pandemic, the scenario led to increased adherence to e-commerce, tending to continue after routine normality. The study brings contributions to large to small companies, as a way of thinking about strategies aimed at e-commerce, especially for students of Accounting Sciences, in order to stimulate the use of electronic processes in the market or undertake with a focus on virtual commerce.

PALABRAS CLAVE
E-commerce; Comportamiento; Pandemia; Académica

Resumen: El comercio electrónico es una tendencia y una realidad en el comercio brasileño y, aún, impulsado por el escenario de pandemia causado por el COVID-19, se hace imprescindible recurrir a nuevas estrategias de distinción y supervivencia en el mercado activo. En ese contexto, el objetivo fue analizar el perfil y la motivación del graduando en Ciencias Contables de la UFSM en el mercado electrónico y investigar las plataformas más utilizadas, además de observar los impactos que la pandemia trajo en el comportamiento de los estudiantes encuestados. Para ello se realizó una encuesta aplicada con un enfoque predominantemente cuantitativo. La recolección de datos se realizó a través de un cuestionario estructurado y adaptado de los estudios de Moraes (2018), Pattat (2014) y Tonin y Frate (2009). Posteriormente, los datos fueron tabulados y corridos en un software de análisis estadístico. Como resultado se obtuvo el perfil de los académicos, estando marcado por ser un perfil joven, predominantemente femenino, con acceso a internet y en su mayoría ya insertos en el mercado laboral. Como principales motivaciones de la muestra, se destacó la diversidad de productos y el precio. En cuanto a la pandemia de COVID-19, el escenario llevó a una mayor adherencia al comercio electrónico, tendiendo a continuar después de la normalidad rutinaria. El estudio trae aportes a las grandes y pequeñas empresas, como una manera de pensar estrategias dirigidas al comercio electrónico, especialmente para los estudiantes de Ciencias Contables, con el fin de estimular el uso de procesos electrónicos en el mercado o emprender con enfoque en el comercio virtual.

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Introduction

Due to the COVID-19 pandemic and technological advances, new forms of sales and consumption have been developed, and driven by the growth of the internet, virtual commerce allows people to do business from their cell phones, laptops and other devices. According to the result of the survey released by the company E-bit, in the Webshoppers report, the Brazilian e-commerce hit record sales in the first semester of 2021, with R\$53.4 billion in sales, which represents a 31% growth compared to the previous semester (Ebit & Bexs, 2021).

The high competitiveness of the market and the consumers' demands have been demanding flexibility and changes in the positioning of companies. Gounaris et al. (2010) believe that, to be successful in a competitive environment, a company that invests in *e-commerce* needs to develop appropriate differentiation strategies, which must have as key components the focus on customer service and customer relationship.

For the development of good strategies, it is necessary to know the profile of your consumer. Consumer behavior involves the study of how individuals or groups select, purchase, use and discard products, services, ideas or experiences to satisfy their needs (Solomon, 2016). From the consumer's perspective, there are three unquestionable advantages of buying online: unlimited information, instant price comparison and customer services offered 24 hours a day (Ahmad et al., 2010).

To align their products, services or ideas with customers, organizations use market segmentation strategies, targeting only specific groups of consumers, since people almost always choose a product because they believe in its "personality" (Solomon, 2016).

Although it is increasingly present in the lives of Brazilian consumers, virtual commerce still involves a series of challenges in the country, given the need to analyze the behavior, the insecurities and the reason that lead this consumer to make a virtual purchase (Teixeira, 2015). In

this sense, the following research problem is raised: "what is the profile of the consumer who uses *e-commerce* and what are their motivations? Thus, it has as a general objective to analyze the profile and motivation of undergraduate students of the Accounting Sciences course at the Federal University of Santa Maria (UFSM) about *e-commerce*. In order to achieve the general objective of the research, the following specific objectives were established: (*i*) identify the profile of students who use of electronic commerce; (ii) analyze their motivations and perceptions; (*iii*) identify which platforms are most used; and (*iv*) verify what impact the COVID-19 pandemic had on the use of *e-commerce* for them.

Given the impulse generated by the need for adaptation on the part of companies and consumers during the pandemic, the transformation of buying and selling habits has changed. Soon, there was a greater use of the internet and *e-commerce* has strengthened as an alternative for survival and increased competitiveness of companies. Therefore, carrying out the study is justified by gathering information about the profile of consumers that can help in the development of strategies for electronic commerce.

The great relevance of electronic commerce and the need to know its consumers, have influenced numerous academic studies in this regard. In a similar study, Fernandes et al. (2021) aimed to know the online consumption habits of higher education students from two educational institutions, one located in Brazil and the other in Portugal. Other authors have also studied consumer behavior, such as Ferreira et al. (2022) who analyzed the decision making of consumers in the city of Dourados (MS) between buying in physical stores or through *e-commerce*, where they identified the profile of these consumers and what motivated or discouraged them to make *on-line* purchases. Pancotto et al. (2022) also sought to understand the reasons that affect the purchase decision of e-commerce consumers in their study, in addition to understanding the factors that generate satisfaction.

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In order to achieve the objective of the research, the study was structured in five sections being named as introduction, theoretical foundation, methodological elements of the research, presentation and discussion of the results and concluding remarks.

Theoretical Foundation

E-commerce

E-commerce has enabled companies to develop their business and improve their service due to the shorter time between production and shipment of a product or service (Al-Azzawi et al., 2021). According to Albertin (2010), electronic commerce "is the realization of the entire value chain of business processes in an electronic environment, through the intense application of communication and information technologies, meeting business objectives".

In general, e-commerce uses a *website* to carry out a transaction or facilitate the sale of goods and services over the internet (Kotler & Keller, 2012). A company's website can be seen as a virtual showcase where it is possible to expose products and their information (De Oliveira & Chaves, 2021). Therefore, there are strategies that can be used on the *website* that help the purchase decision, such as the offer of products and the way they are displayed (Lessa et al., 2021).

Al-Azzawi et al. (2021) state that the growth of *e-commerce* in recent years is due to the fact that it offers benefits to companies and consumers. According to the same authors, companies are able to deliver better services to their customers, and customers are able to purchase more easily through *e-commerce*. Based on market research by eMarketer, INSPER (2021) showed that Brazilian e-commerce had a 26.8% growth rate in sales in 2021 and with almost a third of online retail businesses in Latin America,

The COVID-19 pandemic accelerated the development of e-commerce, as it was the safest way to do business. In this context, technology and digital platforms were useful and had a great impact on the lives of the entire population (Galhorta & Dewan, 2020).

The Internet and Social Networks

The internet and social networks have enabled companies to break down geographic barriers, expand their businesses across the globe and have direct contact with their customers. The benefits of social networks for companies are many, including increased credibility, reduced uncertainty, increased visibility and lower operating costs (Sarmento & Frogeri, 2022).

Since the beginning of the year 2000, information technology has penetrated the *mainstream* market (conventional), becoming what is now considered the new wave of technology (Kotler et al., 2010). Since then, the growth of *e-commerce* benefits not exclusively electronic commerce, but all types of commerce, encompassing much more than simply retail sales and travel, but, electronics, books, decoration articles, used goods sales, information, the most varied types of services and an infinite range of products are sold electronically (Mendes, 2013).

E-commerce on virtual social networks allows consumers the experience of searching for desired products at any time, regardless of where they are (Caro et al., 2011). Social networks are also means of communication where consumers post their responses and feelings about a product or service (Aulawi et al., 2021). Therefore, it is on social networks that information and influences are exchanged on products and services marketed by companies, it is up to entrepreneurs to extract possibilities and advantages from them for the progress of their business (Turchi, 2018).

According to Tay (2021), it is essential for companies to be present on social networks, as they have a great impact on *e-commerce* due to the influence they generate on consumers. The author also cites three reasons for companies to be present in the digital environment: consumers spend hours of their day on the Internet; it is free and attracts consumers; and collaborates in the

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creation of the brand. In addition, when using good marketing strategies on social networks to relate to their customers, consumers feel involved in the process and begin to trust the company (Maskuroh et al., 2022).

E-commerce logistics and its challenges

After the consumer completes the purchase, one of the most complex and costly e-commerce processes begins. Due to its complexity, electronic commerce has changed intermediary concepts and logistical processes (Vieira et al., 2020), since logistics is a vital part of enabling the flow of goods (Rokicki et al., 2022).

In *e–commerce*, either *Business-to-Costumer* (B2C) is the most relevant as it directly relates the company producing a certain product or service with the final consumer (Vieira et al., 2020). B2C e-commerce requires companies to know how to deal with a large volume of orders, usually geographically dispersed and in a smaller quantity of items, in addition to a high rate of returns. These companies also hold the responsibility for managing or operationalizing the logistical phases, such as transport and order picking (Scandiuzzi et al., 2011).

Logistic processes are being seen as an important competitive differential, in view of globalization and the emergence of *e-commerce*. In order to achieve excellence in these processes, it is essential to use strategies related to logistical tasks, such as the acquisition of materials, inventory management, replenishment of supplies and physical distribution (Fernandes et al., 2011). Therefore, logistics has a relevant role in the task of meeting the needs of consumers and its impact should not be ignored, especially in virtual commerce (Scandiuzzi et al., 2011). It is an important mechanism for success in this new economy, capable of ensuring customer satisfaction and loyalty (Fernandes et al., 2011).

In addition to the already existing complexity in logistical processes, the COVID-19 pandemic brought numerous new challenges. The pandemic scenario increased e-commerce and logistics

companies were forced to accelerate changes in their operations, such as digitizing processes, using automation and artificial intelligence (Rokicki et al., 2022). Therefore, logistical services represent a key factor to meet the wishes of the virtual customer, who, in turn, progressively needs the good performance of this sector.

Online consumer profile

Consumer behavior, for Casas (2019), is the study of how it reacts through the various actions that companies take to impact and draw attention. The author also says that, through the study of consumer behavior, it is possible to find out what his real needs are, enabling companies to develop actions targeted to their public. This behavior is a continuous process and is not restricted to what happens at the moment the consumer makes the purchase, characteristics such as age, gender, family structure, social class, income, race, geography and lifestyle, therefore influence the choices of people as consumers are related to the rest of their lives (Solomon, 2016).

Knowing the profile of consumers and, consequently, their behavior, becomes even more important when Solomon (2016) says that motivation occurs when a need is awakened and the consumer wants to satisfy it. According to Casas (2019), there are five reasons why consumers delay satisfying this need: time pressure – being too busy to make the purchase; need for more information; lack of conditions to buy at that time; uncertainty of the need for the item; and high social and psychological risks if they decide wrong. After awakening the need, the purchase decision process begins, followed by the stage in which the consumer searches for product information, the stage of evaluating the available options and, finally, by the realization of the purchase (Da Silva et al., 2021).

According to Vaz (2010), there are five types of Brazilian online consumers: dispersed, pessimistic, insecure, freshman and customer. The

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dispersed consumer is the most common type of consumer, he places the order, but abandons the cart before completing the purchase. The pessimist, also known as the "technological pessimist", is the type of user who accesses the website, searches for the target product and sees the price, but does not have the courage to make the purchase online, he prefers to go to a store and buy the product in person. On the other hand, the insecure person is the one who trusts the web and makes online purchases, but only does so if they manage to talk to someone at the store before completing the purchase. Finally, the freshman is the user who has never bought on the internet, and who is going to make his first purchase, usually looking for companies that are famous in the offline world.

Through *e-commerce*, consumers have definitely changed his buying behavior. They now have an arsenal of search, comparison, analysis and decision tools that directly influence its business and can determine the difference between the success and failure of a product or service. There are several benefits that Internet users have discovered in *e-commerce*, such as saving time, exchanging experiences, reducing the risk of an inappropriate purchase, solutions based on common interests, increasing bargaining power, in addition, obviously, to a closer relationship with manufacturers' brands (Turchi, 2018).

Methodological Elements of the Research

This research was conducted with undergraduate students of the Accounting Sciences course at the Federal University of Santa Maria (UFSM) due to adherence and access to data collection. As for the nature of the research, it is classified as descriptive, for describing the behavior of a group, and applied for its practical interest, that is, that the results are applied or used, immediately, in the solution of problems that occur in reality (Marconi & Lakatos , 2017). As for the approach to the problem, it is classified as quantitative, as it is directly linked to data

quantification, experimentation, measurement and strict control of facts (Knethtel, 2014). Regarding the objectives, it is descriptive because it establishes relationships between variables, and, regarding the technical procedures, it is considered a survey.

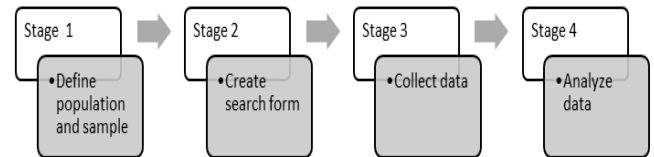To achieve the objectives of this study, the development was divided into 4 stages, as shown in Figure 1.

Figure 1: Stages of the methodology
Source: The authors (2022).

In the first stage, the research population was defined according to the number of graduates of the Accounting Sciences course. The second stage comprises the elaboration of the questionnaire, for which the research was divided into five blocks of questions, namely: (1) PA - students' profile, (2) M - motivation when making purchases in e-commerce, (3) P - undergraduates' perception of e-commerce, (4) PD - platforms that most attract undergraduates, and (5) C - impact of the COVID–19 pandemic on *e-commerce*. The questions that made up each research block are presented in Tables 1 to 5.

Table 1: Questions block 1

	Question
PA1	Age
PA2	Genre
PA3	Marital status
PA4	Occupation
PA5	What semester are you in?
PA6	Income (if you have no income of your own, consider family income)

Source: The author (2021).

Table 2: Questions block 2

	Question
M24	In general, you could say that with regard to the purchases you have already made over the internet,

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you are:

M26	I feel safe sending personal and financial information over the Internet:
M27	The Internet is à safe environment for shopping:
M28	I like to compare prices and products:
M29	I am afraid of buying products over the Internet:
M30	I find it cheaper to buy products on the Internet:
M31	I buy only from known sites:

Source: The authors (2021).

Table 3: Questions block 3

	Question
P7	Have you ever made an online purchase?
P10	How often do you shop online?
P14	Do you usually stop buying from physical stores to buy from online stores?
P15	I don't like having to spend time gathering information about products:
P16	Being able to shop quickly is key for me:
P17	I often make unplanned purchases:
P18	I tend to buy things on impulse, without much thought:
P19	I think several times before committing to new purchases:
P20	To describe on à purchase, I need to see and get the product first:
P21	When I am shopping, I like to have a salesperson by my side to assist me:
P22	I would say that I am à person with little time for shopping:
P23	Using the Internet helps me save time:

Source: The authors (2021).

Table 4: Questions block 4

	Question
PD37	Have you ever made à purchase through a social network?
PD38	I like to receive product information on my social media profile:
PD39	Advertising in social networks increases the interest about à certain product:
PD40	Which platform or online store do you shop most often online?
PD41	What attracts you the most on digital platforms?

Source: The authors (2021).

Table 5: Questions block 5

	Question
C42	During the CoronaVirus pandemic (COVID-19), your tendency in online shopping:
C43	As a result of the pandemic, I avoided physical stores and spent more time using e-commerce:
C44	During the most restricted period of the pandemic, I preferred to consume from small companies rather than the big ones of virtual form:
C45	My perception of e-commerce during the pandemic has changed favorably for this types of purchase:
C46	My attitude towards buying products online these days has increased:
C47	Even with the return of normality I kept buying online:

Source: The authors (2021).

The questions of the research instrument were adapted from Moraes (2018), Pattat (2014) and Tonin and Frate (2009) and varied in order to meet the objectives and variables of the research, with multiple choice questions using the Likert scale of 1 to 5 related to frequency, agreement and satisfaction. In addition to yes or no questions with justification, priority and open to assign responses.

In the third stage, data were collected from the application of the questionnaire to the defined population. The population was defined according to the number of graduates of the Accounting Sciences course, being 166 from the day shift, and 184 from the night shift, totaling 350 students, according to the course coordination. The Google Forms platform was used to apply the survey. The form was sent to undergraduates via email and WhatsApp between 11/08/2021 and 11/26/2021. From the total number of undergraduates, 61 responses were obtained, resulting in a non-representative sample, i.e., it is not possible to generalize the results.

Finally, in the fourth stage, the data were tabulated in an Excel spreadsheet and subsequently run in the statistical analysis software Statistical Package for the Social Sciences version 24 (SPSS®). For the analyses, the non-normal distribution of the data was initially observed, ascertained by means of the Kolmogorov-Smirnov test. Thus, Spearman's Correlation Coefficient was adopted to analyze the association between the variables that assess the intensity and meaning of the monotonous relationship on an ordinal scale (Sousa, 2019). Coefficient values close to +1 indicate little dispersion, which expresses a strong and positive correlation; on the other hand, values close to "zero" indicate a lot of dispersion and lack of

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relationship between the variables, and, finally, the coefficient value close to -1 means little dispersion and a strong negative correlation (Lopes, 2016). For this study, the conversion of correlation coefficients was adopted, being: <0.4 (weak correlation), >0.4 to <0.5 (moderate correlation) and >0.5 (strong correlation) (Hulley et al., 2003).

Results Presentation

From the constructs and variables it was possible to identify the questions that have correlation and their intensity. Priority, justifications and open questions were treated for content analysis performing, firstly, the floating reading and, later, putting the information in a protocol to highlight the relevant information of the respondents. Descriptively, these few open questions were analyzed along with the closed questions, all based on the studied theory, thus evidencing the answer to the problem question and the objectives of the present study, inferring about the perception of those involved in relation to the research variables.

In the subsequent sections, detailed analysis of the correlations of the variables are presented.

Profile of Undergraduates

The profile of undergraduates is mostly young, as 72.1% of graduates are 25 years old or younger – 18% are between 16 and 20 years old and 54.1% are between 21 and 25 years old. Of the remaining graduates, 18% are between 26 and 30 years old, 3.3% between 31 and 40 years old and 6.5% are 41 years old or older. Regarding gender, the survey was balanced, with 59% of female undergraduates and 41% male. Among the surveyed sample, 88.5% are single and 11% married.

In addition, 50.8% of students work or perform a paid activity, 14.8% have no employment relationship and the other 34.4% only study. Regarding the semester of undergraduates, a comprehensive participation of

the entire course was obtained, 18.3%, greater representation, corresponds to students from the second semester and the others with a very close division for the other semesters. With regard to the socioeconomic profile of the participants, it is possible to observe the distribution of their own or family income. Of these, only 6.6% of respondents chose not to answer this question.

Undergraduates' motivation about e-commerce

Since one of the specific objectives of the study is to identify the motivation of academics, this topic addressed factors that motivated students to opt for electronic commerce.

It is understood that e-commerce is a reality in the context of UFSM Accounting Sciences undergraduates, since 96.7% of them have already made some kind of online purchase. As for the frequency of these purchases, 36.1% use e-commerce monthly, 16.4% use it quarterly, 14.8% fortnightly and 13.1% weekly. Added to the undergraduates who make purchases only every six months and annually, they represent 19.7%, demonstrating a preference for purchases in a shorter period of time. In addition, most undergraduates make purchases using cell phones or laptops/desktop computers, with 88.5% and 85.2%, respectively. The payment method preferred by undergraduates in e-commerce is credit card, with 81.96%, followed by bank slip with 21% and PIX with 4.9%.

It is noticed that the sample is motivated to buy in e-commerce, a fact that may be related to the majority of graduates who work and have their own income, in addition to having access to the internet at home and at work or internship. Furthermore, as the majority of the sample is young, there is an evident domain of the internet that corroborates the use of e-commerce.

Undergraduates' perception of e-commerce

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With this stage of the research, the objective was to identify the perception of undergraduates about *e-commerce* and their level of satisfaction.

The survey numbers show that e-commerce has satisfied the needs of undergraduates, as 75.4% said they were satisfied and 16.4% were completely satisfied based on their experiences. 8.2% were in a neutral position, neither satisfied nor dissatisfied, and no respondent said they were dissatisfied. Therefore, e-commerce for most future accountants is positive, as they are satisfied with the service received, as shown in Figure 2.
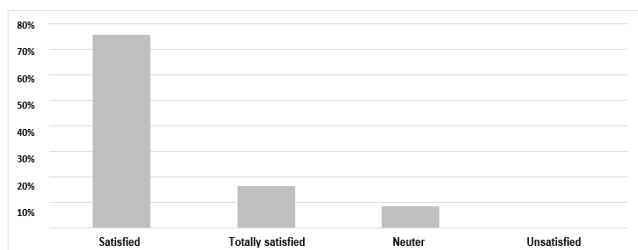
Graphic 1: Satisfaction with e-commerce
Source: The authors (2021).

A large part of the students, 91.8%, stated that they like to compare prices and products with greater practicality and number of sites available, being able to use tools that make this comparison, which presents itself as a competitive advantage for e-commerce. Corroborating this fact, 86.9% of undergraduates find products purchased on e-commerce cheaper and 83.6% say they prefer to buy only on known websites.

Preferred e-commerce platforms

This topic sought to identify which platforms most attract undergraduates, which products they usually buy and how often they buy them.

When asked about which products they usually buy on *e-commerce* there was a plurality of answers, but the items most mentioned by the undergraduates were accessories, electronics, books, health and beauty products and medication, added together, these items represented 78.8% of the answers. The 21.2% were divided among tickets, furniture, food, information items and footwear.

Regarding social networks, the electronic market shows growth, but it is not yet fully consolidated from undergraduates' perspective, with 57.4% have never made a purchase through a platform such as Instagram, however, 49.2% of students say that advertisements and adverts on social networks increase interest in products by showing a path to a future purchase.

With regard to the preference of platforms for *e-commerce*, there were a variety of responses, but Amazon's 29.5% stands out. On the other hand, Shein and Centauro represented only 1.63%. The numbers demonstrate the preference of undergraduates for platforms that are already established and with a higher degree of reliability, even so, it is possible to highlight the consumption of apps such as iFood, 4.91% and Instagram, 6.55%, representing 11.46% in the preference of undergraduates.
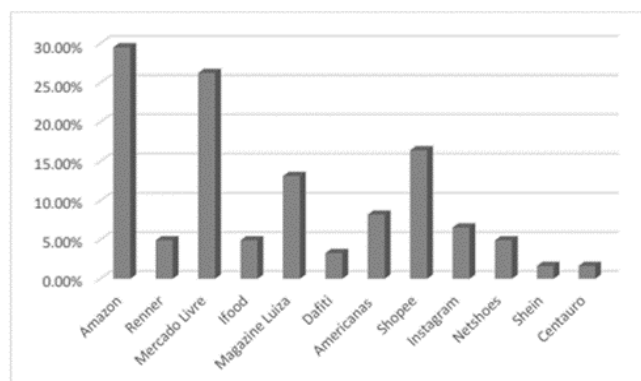
Graphic 2: Students' favorite platforms and stores
Source: The authors (2021).

From the results obtained, what most attracts undergraduates in e-commerce is the variety of options and ease of use, which added up to 83.4% of the answers, demonstrating a search for novelties by the respondents.

COVID-19 and its impact on e-commerce

When asked about their online shopping frequency during the COVID-19 pandemic, 57.4% of undergraduates said they increased the frequency of purchases, while 36.1% maintained the frequency and only 6.6% stated a decrease with purchases. In addition, 64% of students said

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they avoided physical stores and started using e-commerce more. Therefore, it is possible to establish a relationship between the need for confinement and the use of e-commerce.

There was significant growth in terms of e-commerce purchasing attitude during the pandemic, with 63.3% saying they bought more during the period. In addition, 84% of respondents also stated that they will continue using *e-commerce* even with the return of normality, demonstrating a trend for the future of this type of market.

Associations between *e-commerce* and motivational aspects

From Table 6, it is observed that the questions related to *e-commerce* indicated a weak correlation with the frequency of purchases and whether the undergraduate buys quickly on impulse and without planning or if they think several times before making the purchase and/or need to see and pick up the product beforehand. This is due to the large amount of variation in the frequency of making online purchases, where the weakest correlation is related to undergraduates not liking to spend time collecting information about the product, where the study shows that

most undergraduates prefer to spend time and have information about the desired object, in 67% of cases.

Regarding the frequency of purchases, there is a moderate correlation with undergraduates switching from shopping in physical stores to buying in e-commerce, which demonstrates the ease of access to e-commerce and shows the success, practicality and ease that it has brought to transactions.

Furthermore, there is a strong correlation regarding how much undergraduates plan to shop online, whether they are impulsive and whether or not they can commit to new purchases. In view of this, the undergraduates presented a profile and characteristics of rationality and security when making new purchases. Those who plan before buying tend not to buy on impulse and to think several times before committing to new purchases. Table 6 presents the correlations between the *e-commerce* variables, the cells showing "**" and "*" represent a significant correlation at the 0.01 level (bilateral) and a significant correlation at the 0.05 level (bilateral), respectively.

Table 6: e-commerce correlations

	P7	P10	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23
P7	1,000											
P10	,054	1,000										
P14	-,027	-,400**	1,000									
P15	-,202	-,253*	,100	1,000								
P16	,051	-,283*	,211	,336**	1,000							
P17	-,241	-,393**	,221	,186	,187	1,000						
P18	-,202	-,280*	,299*	,254*	,076	,671**	1,000					
P19	,183	,339**	-,147	-,292*	-,050	-,669**	-,737**	1,000				
P20	-,110	,192	-,155	-,079	-,047	-,237	-,156	,308*	1,000			
P21	-,031	,293*	-,154	-,105	-,178	-,053	-,063	,128	,331**	1,000		
P22	,257*	,080	,139	,180	,200	-,127	-,066	,037	-,211	-,094	1,000	
P23	-,174	-,189	-,158	,037	,276*	,244	,132	-,200	-,123	-,268*	-,006	1,000

Source: The authors (2021).

In motivational aspects (Table 7), there was only a strong correlation between how safe undergraduates feel sending personal

information and whether they think it is safe to shop in *e-commerce*. The correlation shows that undergraduates feel safe sending personal and

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financial information over the Internet, so they consider *e-commerce* safe. There are also weak correlations between the different variables of the motivation construct. On the one hand, there is mistrust about the internet as a whole, however shopping on large company websites did not prove to be a problem for 54.1% of students, information that is reinforced by 83.6% of respondents claiming to buy only from known websites. The correlations of the motivational aspects can be seen in Table 7.

Table 7: Correlations of motivational aspects

	M24	M26	M27	M28	M29	M30	M31
M24	1,000						
M26	,054	1,000					
M27	-,027	-,400**	1,000				
M28	-,202	-,253*	,100	1,000			
M29	,051	-,283*	,211	,336**	1,000		
M30	-,241	-,393**	,221	,186	,187	1,000	
M31	-,202	-,280*	,299*	,254*	,076	,671**	1,000

Source: The authors (2021).

It is possible to observe a series of correlations between the perception of undergraduates about *e-commerce* and motivational aspects (Table 8), and in most of them, the associations were weak. The most representative case is related to the fear of buying in e-commerce, which presented six weak correlations and one moderate one.

The weak correlations are due to the fact that undergraduates stated that they were not afraid of shopping online, however, the number of undergraduates who claimed to opt for *e-commerce* instead of physical stores is relatively low, 16.4%. Already, students who use *e-commerce* more often tend not to be afraid to make purchases. The moderate correlation found explores the frequency of undergraduates when they opt for *e-commerce*, with most of them using e-commerce on a monthly basis and, added together, weekly and fortnightly, it reaches a representative index of 29.5%, considering the great plurality of responses, demonstrating the loyalty of the virtual customer, already in the short term.

Another representative correlation refers to how secure undergraduates feel sharing personal and financial information, which resulted in four weak correlations and one moderate. This is due to the fact that, despite the increase in consumption in *e-commerce*, customers' resistance to revealing their personal data is an important factor that still generates some insecurity. Despite the growth of purchases via *e-commerce*, this style of commerce is still very recent and, therefore, there is a lot of insecurity on the part of the consumer in the transmission of personal data and passwords in a virtual environment at the time of payment. The correlations between *e-commerce* and motivational aspects are presented in Table 8.

Table 8: Correlations between motivational aspects and e-commerce

	P7	P10	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23
M24	-,212	-,265*	,361**	,070	,142	,160	,011	-,127	-,025	-,118	-,053	-,017
M26	-,062	-,239	,278*	,310*	,184	,324*	,415**	-,360**	-,152	-,242	-,003	-,045
M27	-,270*	-,089	,047	,237	,126	,254*	,314*	-,219	-,017	-,217	-,239	,242
M28	,095	-,001	-,092	-,373**	-,163	,023	-,078	,065	-,068	,231	-,162	,053
M29	,098	,410**	-,259*	-,203	-,208	-,367**	-,333**	,347**	,180	,232*	,085	-,393**
M30	-,021	-,242	,073	-,049	,018	,057	,087	-,071	-,085	-,172	-,170	,060
M31	-,049	,218	-,095	-,090	-,011	-,114	-,281*	,244	,040	,259*	,080	-,043

Source: The authors (2021).

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Correlating the use of e-commerce and variables related to the COVID-19 pandemic (Table 9), weak correlations were observed related to the use of e-commerce even after the return to normality, in which 85% of undergraduates stated that they would continue shopping online even with the return of normality. Respondents revealed that in the more restricted period of the pandemic, they opted to make purchases in large virtual companies rather than in small ones. Strong correlations, on the other hand, were caused by the increased use of e-commerce during the pandemic and the fact that most undergraduates preferred to avoid physical stores, making e-commerce something more attractive. The correlation between e-commerce use and the COVID-19 pandemic showed the strongest correlation of the entire study, which reinforces students' good perception of e-commerce during this period.

Table 9: Pandemic correlations and e-commerce use

	V42	V43	V44	V45	V46	V47
V42	1,000					
V43	,792**	1,000				
V44	-,082	-,024	1,000			
V45	,448**	,494**	-,093	1,000		
V46	,677**	,657**	,062	,509**	1,000	
V47	,147	,303*	-,273*	,289*	,285*	1,000

Source: The authors (2021).

It can then be seen that, from the survey of the sample's profile, it was possible to identify that the atypical pandemic scenario may have influenced the data, given that isolation led to greater use of *e-commerce*. It cannot be said that, if the study had taken place in a normal scenario, the data would be the same, but, based on theoretical information, *e-commerce* is a modality that is on the rise and that the pandemic has favored for the increase in online shopping.

Discussion of results

Social networks are the means of communication between commerce and consumers, therefore, the success of *e-commerce* can be linked to a good communication on social networks, as half of the survey respondents state that ads on networks influence their purchase intention. This result corroborates the results presented by Lessa et al. (2021), in which the authors identified that consumer behavior can be influenced by the way companies communicate, such as ads on social networks. Fernandes et al. (2021) also identified in their research that Brazilian students use social networks as a source of information to make their purchases online. Corroborating with previous results, Maskuroh et al. (2022) found that social networks are the best way to build a relationship with your customer and, therefore, marketing activities and advertisements are very positive in this regard.

From the results of the research, it can be stated that the COVID-19 pandemic had a great impact on the use of e-commerce and the changes in Amazon's turnover, presented in the study by Zhao (2022), support this statement.

The main factors found in the research that motivate the use of e-commerce are the variety of products and price, as well as in the study by Pancotto et al. (2022). In this, the authors concluded that consumers consider it extremely important for companies to offer affordable prices and a variety of products.

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Concluding Remarks

Based on the study carried out, one concludes that the profile and motivation of UFSM Accounting Sciences undergraduates about *e-commerce* were outlined, so the problem question of the research was answered. As a profile, we have people, mostly young people from 16 to 25 years old, students who have some type of income, work or other remunerated activity without an employment relationship, are predominantly female and have access to the internet.

It was found that almost all students have already made a purchase via *e-commerce* and the preferred form of payment is credit card. The students' perception of electronic commerce portraying their motivation, in response to the second specific objective of identifying the student's motivation to shop on the internet, is of satisfaction with the tool and a characteristic of great caution and prudence on the part of university students was observed , seeking as much information as possible about the desired items. Aspects such as product diversity and price were highlighted as the main motivations for operating in this market.

During the study, it was possible to identify the students' preference for making purchases on multinational store websites, in addition, social networks have proven to be a possible platform to be explored. In this sense, it was possible to find the answer to the third specific objective of investigating which platforms most attract undergraduates.

When answering the last specific objective, which was to analyze the impact of the COVID-19 pandemic in relation to the use of e-commerce, it was noticed that the atypical scenario accelerated the process of behavioral change of academics, social isolation intensified the process of adherence to e-commerce and consumption, in addition to expanding during this period, made the undergraduates choose to follow the new

modality even after a possible normality given the ease and better optimization of time.

This research brings contributions so that large and small companies can develop strategies aimed at *e-commerce* and the results obtained from the undergraduates' profile and their motivations can serve as a basis for managers' decision-making. In addition, the study may serve as support for further studies on the subject.

Due to the fact that the survey was carried out during the COVID-19 pandemic, the survey form was applied completely online, which can be seen as a limitation, given the difficulty in obtaining responses. For future studies, it is suggested to expand the studied population to other courses and institutions of higher education in the region, in order to outline other profiles and motivations for new analyzes and comparisons. Furthermore, it will be possible to carry out a new analysis of the consolidation, or not, of e-commerce after the return of in-person activities.

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