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## SHOPPING PREFERENCES AMONG E-CONSUMER STUDENTS<sup>1</sup>

### Summary

**Purpose** | The aim of the study was to examine the relationship between education level and e-consumers' shopping preferences for different product categories. It also contributes to filling a research gap by investigating the role of education in shaping online shopping behavior.

**Research method** | The study is based on a sample of 277 valid survey responses collected electronically from university students. It analyses key factors influencing consumer choices, including product categories, shopping channels, and safety concerns.

**Results** | The findings indicate that education level has a limited effect on online shopping preferences, with significant relationships observed only in the categories of furniture and home furnishings ( $p = 0.035$ ) and tobacco products ( $p = 0.037$ ). Consumers with higher education are more likely to be early adopters of technology, demonstrating greater competence in evaluating online offers and in understanding security mechanisms. However, product-specific trends emerge:

- In the furniture category, individuals with a bachelor's degree exhibited greater flexibility, using both online and traditional channels, whereas those with an engineering degree preferred traditional shops.

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- In the tobacco category, consumers with a bachelor's degree preferred traditional shopping or a mix of channels, while those with a master's degree showed limited involvement in tobacco shopping.

**Originality/value/implications/recommendations** | This study contributes to the understanding of how education level influences online shopping behavior, particularly in specific product categories. Despite its insights, the study has limitations, including the small representation of certain educational groups and the absence of demographic controls such as income or place of residence. Future research should expand sample sizes, investigate age-related factors, and conduct cross-regional comparisons to enhance the understanding of the correlation between education and e-consumer behavior. The study was conducted exclusively among university students. As a result, the conclusions primarily concern young, educated consumers and cannot be generalised to the entire e-consumer population.

**Keywords:** e-consumers, education level, shopping behavior, online shopping, consumer preferences

**JEL classification:** M20, D12, E21

## 1. Introduction

Modern economic and technological conditions provide instant access to information for consumers. Owing to IT solutions, it is possible to review offers and their parameters immediately and to make a purchasing decision “on the fly”. This creates risks for consumers in the form of often ill considered purchasing decisions. On the other hand, it provides opportunities for retailers to generate higher profits. Therefore, the organisational possibilities and managerial decisions involved in running an online business become extremely important. When considering definitional issues, it is worth noting that from an economic point of view, a consumer is understood as a market participant [Szlegel, 2018, p. 2]. This concept definitely differs from the issue of the customer, as the latter is defined as an entity that purchases products and services for its own use or consumption and not for further resale or processing [Kotler, Keller, 2016, p. 179]. A more specific classification of consumers can be found in behavioral economics, which distinguishes between rational

consumers, who make informed and deliberate purchasing decisions, and impulsive consumers, who rely on emotions and cognitive biases [Kahneman, 2011]. Furthermore, in digital environments, researchers often differentiate between active consumers, who engage with brands through reviews, recommendations, and social media, and passive consumers, who primarily browse and make purchases without interacting [Solomon, 2019].

A special type of consumer is the e-consumer. The prefix “e” refers to “electronic”, i.e., using electronic devices including the Internet. It is related to the form of shopping. An e-consumer is mainly an individual who reports and satisfies his or her needs in the form of physical goods and services purchased online [Laudon, Traver, 2022, p. 382]. The evolution of e-commerce has also led to the rise of different types of digital consumers, including mobile consumers, who primarily shop via smartphones, and subscription consumers, who prefer automated and recurrent purchases through services such as Amazon Prime or Netflix. Moreover, the emergence of omnichannel consumers highlights the blending of digital and physical retail experiences, where customers use multiple touchpoints, such as visiting a store to examine a product before purchasing it online [Brynjolfsson et al., 2013, p. 25]. Online shoppers do not behave in the same way as shoppers in traditional shops. In the case of online shopping, an undoubted advantage is that there is more choice than in stationary shops. This makes it possible to choose a better offer both in terms of the breadth of the assortment and other parameters of the offer. This refers to the possibility of receiving better value in line with Porter’s classically understood concept of value management [Porter, 1985]. Synthetically classified customer values are grouped in this approach around sets of emotional, technical, economic, and socio-ethical values [Zeithaml, 1988, p. 62].

In this context, the parameters of an offer may relate to both economic (for example, attractive price, availability, convenience of payment terms or delivery time) and technical aspects (durability, quality, ease of use). These values are one of the main determinants of modern online shopping. The authors emphasise that consumers pay a lot of attention to economic values, but also in combination with functional qualities [Klopping, McKinney, 2004]. Klopping & MicKinney emphasised the importance of the Task-Technology Fit (TTF) model, according to which consumers are attracted by the ease and functionality of

online shopping [Gefen, 2000, p. 729]. The more transparent and accessible the shopping process is, the more likely a customer is to return to a shop. Consumer needs in the digital era have evolved significantly. Beyond the traditional economic and functional aspects, consumers demand speed, convenience, and personalisation. Modern shoppers expect personalised recommendations, seamless payment options, and efficient customer service. Additionally, ethical consumption has gained importance, with buyers favoring businesses that promote sustainability, fair trade, and corporate social responsibility [Pavlou, 2003, p. 106]. These shifting expectations have forced businesses to refine their strategies to meet emerging demands [Davenport et.al., 2020, p. 38].

The second category of considerations is security issues and trust in e-stores. There are constant concerns about the risks of carrying out transactions on the Internet, especially when purchasing higher-value products. Hence the priority of safe and transparent payment methods and access to reliable information about products. At the same time, opinions and reviews from other buyers and recommendations from friends make it safer to make purchasing decisions [Acquisti et.al., 2015, p. 509]. Globalisation has significantly transformed e-commerce by enabling cross-border trade. Consumers today can purchase goods from international retailers with ease, leading to increased competition among businesses. Companies must adapt to cultural differences, logistical challenges, and varying regulatory frameworks. Additionally, currency exchange rates, customs duties, and shipping times play a crucial role in influencing cross-border shopping behaviors. The rise of marketplaces such as AliExpress, eBay, and Amazon has made global transactions more accessible, yet they also present new challenges related to fraud prevention, tax compliance, and supply chain optimisation [Rogers, 2021, p. 101]. The availability of the Internet has been a key driver of e-commerce expansion. While developed countries enjoy high connectivity rates, many emerging economies still face barriers such as poor digital infrastructure and limited financial inclusion [Sheth, 2021, p. 17]. However, the rapid adoption of mobile internet has helped bridge this gap, enabling millions of new consumers to engage in online shopping. Governments and international organisations have recognised the importance of digital inclusion, investing in policies that improve broadband access and promote financial literacy to encourage safe and efficient e-commerce participation [Schaub et.al., 2017].

The third area conditioning the use of online shopping opportunities are elements related to the technological-functional area. Buyers are keen to use dedicated applications for quick access to offers and promotions. At the same time, manufacturers relying on the possibilities of geolocation and modern tools, for example those related to augmented reality (trying on a virtual version of the ordered product) or the possibility of so-called showrooming (viewing the product in a stationary shop and then ordering online), provide a more comprehensive offer, which favors the purchase decision [Kowalski et.al., 2014].

Big Data analytics and Artificial Intelligence (AI) have revolutionised e-commerce by enabling hyper-personalisation. Companies leverage massive datasets to predict consumer behavior, optimise pricing strategies, and improve supply chain management [Statista, 2023]. AI-driven recommendation engines, analyse past purchase history, browsing behavior, and demographic data to provide tailored product suggestions [Laudon, Traver, 2022, p. 84]. Future advancements in e-commerce are expected to integrate even more cutting-edge technologies. Blockchain applications promise greater transaction security and transparency, while the rise of the metaverse will allow consumers to interact with virtual stores in immersive environments [Chaffey, 2022]. Voice commerce is also expected to expand, with AI-driven voice assistants facilitating hands-free purchases and improving accessibility for consumers with disabilities [Blockchain Council, 2023].

From the point of view of running an online commerce business, it is important to understand the consumer decision-making process. According to researchers, such a sequence consists of five basic stages: identifying the feeling of need, searching for information, evaluating choice options and purchase, and post-purchase impressions [OECD, 2021]. In the context of online transactions, the emphasis is on the use of electronic technologies that enhance the flow of information and the individualisation of the offer [Digital Economy Report, 2021, p. 17].

Another growing aspect of e-commerce is sustainability and environmental impact. Consumers are becoming increasingly aware of the carbon footprint associated with online shopping, prompting businesses to adopt greener logistics solutions, such as carbon-neutral shipping and sustainable packaging

[McKinsey, 2022]. Companies integrating eco-friendly practices in their supply chain often gain a competitive edge by appealing to environmentally conscious buyers [Shopify, 2023].

## 2. Level of education and purchasing behavior of e-consumers

The level of education plays a key role in creating consumer behavior. This is particularly relevant in online shopping. Education influences analytical abilities, risk assessment and adaptation to new technologies. Consumers with a higher level of education show greater competence in searching for and analysing information. Numerous studies show that such people are more likely to use price comparison sites, check product reviews and expert opinions. Brucks [1985, p.5] pointed out that people with higher education have a better semantic memory, which allows them to remember information about products, among other things, more effectively and use it in decision-making. The issues of the danger of online transactions are also relevant here. Consumers with a higher level of education have a better understanding of security mechanisms, which allows them to use such solutions more readily. Gefen and Straub showed that better-educated consumers are on average 30% more likely to trust e-commerce platforms than those with a primary education [Gefen, Straub, 2004].

The level of education also plays a determinant role from the point of view of adaptation to new technologies. As education increases, the speed of adoption of modern solutions such as the use of mobile applications, augmented reality tools or recommender systems increases. Rogers pointed out that education favors being “early adopters”, i.e. people who are the first to adopt new technological solutions and apply them in everyday life [Rogers, 2003, p. 23].

An extremely important relationship is the relationship between education and preferences for specific product categories. According to the presented research results, consumers with higher education are more likely to invest in development-related products such as books, online courses or advanced software. Kotler and Keller noted that such individuals are more likely to invest

in luxury goods that emphasise their social status but at the same time often represent an investment [Kotler, Keller, 2016]. The findings of Ünver and Alkan indicate that as the education level of consumers increase, the possibility of e-commerce shopping increase [Ünver, Alkan, 2021, p. 47]. White's research shows that education is positively correlated with interest in ecological and ethical products [White, 2019, p.16].

### 3. Results. Research scope

The subject scope of the study concerns the relationship between education level and e-consumers' shopping preferences, with particular emphasis on the choice of purchasing channels (online, traditional, mixed) across different product categories. The analysis also undertakes the role of education in shaping digital competencies, attitudes towards transaction security, and the adaptation of new technologies influencing purchasing behavior.

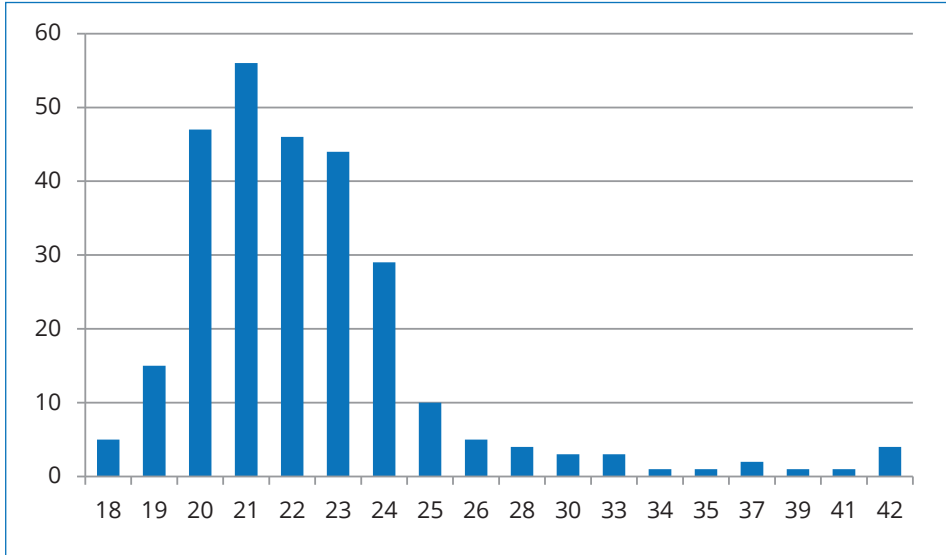
The object scope of the research covered university students, both full-time and part-time, who make purchases via the Internet. The study was conducted in the first half of 2024 using electronic survey tools. Out of 700 individuals invited to participate, 277 correctly completed questionnaires were obtained, which constituted the analytical basis of the research. Women accounted for more than 66% of the sample (183 respondents), and the group represented different levels of higher education (bachelor's, master's, and engineering degrees). Given the specific structure of the sample, the results should be interpreted in the context of young, educated consumers rather than as representative of the entire online shopping population.

Results from the study were focused on the level of education and to examine its relationship to purchasing preferences. To facilitate the verification of these assumptions, the results will be presented starting with the age distribution of the respondents. The age structure is shown in Chart 1.

Less than half (47.7%; 132 people) of the respondents declared that they were engaged in gainful employment. The declared education level graph is shown in Chart 2.

### CHART 1

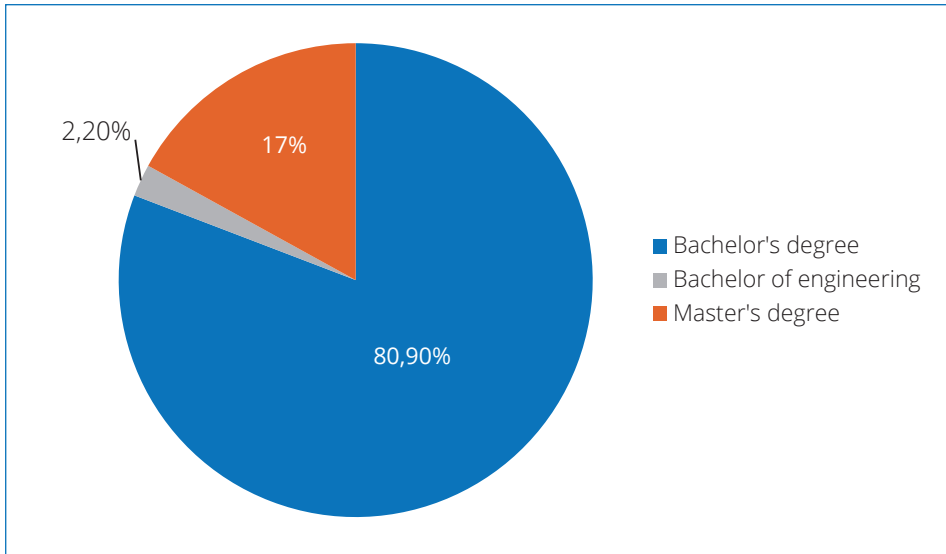
Age structure among respondents



Source: the authors' own study based on the conducted research.

### CHART 2

Level of education



Source: the authors' own study based on the conducted research.

The present analysis aims to investigate whether the level of education influences e-consumers' purchase preferences in different product categories. Due to the extensive scope of the carried out research, it was decided to deliberately narrow down the results presented to educational levels as being of particular interest. This is because few scientific studies in the field of purchasing preferences focus attention on the level of education. A chi-square test was conducted to test the significance of the relationship. The carried out chi-square tests assessed the relationship between education level and purchase preferences in 17 different product categories. In most categories (15 out of 17), no significant relationship was found ( $p > 0.05$ ), suggesting that the level of education does not significantly affect the choice of shopping channel in these groups. The exceptions are the categories furniture and home furnishings ( $p = 0.035$ ) and tobacco products ( $p = 0.037$ ), where a significant relationship was found between the variables.

TABLE 1

Detailed results of chi-square tests

Category	Chi <sup>2</sup> value	p-value	Significance of relationship
Groceries	0.81	0.937	none
Cosmetics	8.85	0.182	none
Clothing and footwear	4.32	0.633	none
Household appliances/RTV/GSM	9.04	0.171	none
Books and newspapers	2.38	0.882	none
Furniture and furnishings	13.54	0.035	significant relationship
Tobacco products	13.44	0.037	significant relationship

Source: the Authors' own study based on the conducted research.

### 3.1. The interpretation of the results for categories with a significant relationship

As a result of the significant relationship for the two categories, details of the educational level and the examined purchasing categories will be presented below.

## Furniture and home furnishings

In this category, it was noted that those with a bachelor's degree are more likely to shop in both channels (online and traditional), accounting for 103 cases (45.98% in this group). In contrast, those with a master's degree are more likely to choose to shop in traditional shops (17 cases; 36.17% in this group) or to vary their preferences between channels. Those with an engineering degree, as the smallest group, prefer to shop exclusively traditional (5 cases) or less frequently online and traditional (1 case).

**TABLE 2**

Level of education and shopping for furniture and furnishings

Level of education	No purchase	%	Online only	%	Traditional only	%	Online and traditional	%
Bachelor's degree (n1 = 224)	61	27.23	9	4.02	51	22.77	103	45.98
Master's degree (n2 = 47)	9	19.15	5	10.64	17	36.17	16	34.04
Engineering (n3 = 6)	0	0	0	0	5	83.33	1	16.67

Source: the authors' own study based on the conducted research.

## Tobacco products

Significant relationships were also noted for this category. In the tobacco products group, the total number of respondents who purchase this category of products is 126. For people with a bachelor's degree, there are 111 people (n4), with a master's degree, there are 14 people (n5), and with an engineering degree, there is 1 person (n6). Those with a bachelor's degree are more likely to purchase tobacco products in traditional shops (81 cases; 72.97% in this group) or in both channels simultaneously (23 cases; 20.72%). In contrast, those with a master's degree are much less likely to purchase this type of product and their purchases are mainly limited to traditional shops (6 cases; 42.86% in this group). Those with an engineering degree, although few, prefer only traditional shopping (1 case).

**TABLE 3**

Educational level and tobacco purchases

Level of education	No purchase	%	Online only	%	Traditional only	%	Online and traditional	%
Bachelor's degree (n4 = 111)	7	6.31	81	72.97	23	20.72	23	20.72
Master's degree (n5 = 14)	0	0	6	42.86	8	57.14	8	57.14
Engineering (n6 = 1)	0	0	1	100	0	0	0	0

Source: the authors' own study based on the conducted research.

#### 4. Conclusion

The research presented in the study was narrowed down to carry out an analysis of the level of education and to examine its relationship to purchasing preferences. This has been dictated by the paucity of current studies drawing attention to this. The results of the study indicate that the level of education has a limited impact on the shopping preferences of e-consumers. Significant relationships were only found for the categories "furniture and home furnishings" and "tobacco products". The inclusion of data for those with an engineering degree shows that this group, despite its small size, is characterised by a clear preference for traditional forms of shopping.

The survey encountered several important limitations that need to be considered when interpreting the results. Firstly, the small number of respondents with an engineering degree (6 people) may have affected the reliability of the conclusions regarding this group. In addition, the lack of consideration of other demographic factors, such as income or place of residence, may limit a full understanding of the impact of education level on purchase preferences. Another important aspect is the fact that the study was based on survey data, which carries the risk of errors due to the subjectivity of respondents' answers. Furthermore, the use of only chi-square tests restricted the scope of

the analysis, as it did not allow for controlling the impact of confounding variables such as age, gender, or income. Future research, including multivariate statistical methods, could provide a more comprehensive view of the studied relationships.

To deepen the understanding of the relationship between education level and purchasing preferences, further research is worth considering. As the first step, it would be advisable to increase the number of respondents, especially in under-represented groups such as those with an engineering degree. The next stage will also be more in-depth analyses focusing on the issues of age-group dependency, which are enjoying greater scholarly popularity, resulting in a greater number of scientific texts with analogous research proceedings. Comparative studies between different countries or regions, on the other hand, could provide interesting insights into the cultural and economic conditions influencing purchase preferences. Such an approach will provide a more comprehensive picture of e-consumers' purchase preferences and enable a better understanding of the factors influencing their choices. Expanding future research beyond the student population will be essential to improve the external validity of the findings.

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