



Article

The Impact of the COVID-19 Pandemic on the Perception of Globalization and Consumer Behavior

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Abstract: The main purpose of this article was to identify the impacts of globalization and information and communication technologies on the consumer behavior of a young population aged 18–34 before and during the COVID-19 pandemic. The research was conducted using the CAWI (computer-assisted web interview) method using convenient sampling involving students of the University of Warsaw. The survey was carried out in three stages: in March 2020, December 2020 and November 2021. The last cycle of research enabled the authors to examine the changes in consumer behavior trends nearly two years after the outbreak of the COVID-19 pandemic in Poland and compare them with the tendencies that could be observed in March 2020 and December 2020. The findings from all survey questionnaires indicate that the behavior of respondents is generally consistent with consumer trends established and described in several reports concerning the impact of the COVID-19 pandemic on people's perception of globalization and consumer behavior. The main observation in terms of online purchases was that the growth itself was not very significant, but the frequency of purchases over the Internet increased. A similar trend could be observed in the case of using social media. Research of this scope was carried out in Poland for the first time, which proves the originality and value of this paper.

Keywords: consumer behaviour; globalization; COVID-19 pandemic



Citation: Fandrejewska, A.; Chmielarz, W.; Zborowski, M. The Impact of the COVID-19 Pandemic on the Perception of Globalization and Consumer Behavior. Sustainability 2022, 14, 9575. https:// doi.org/10.3390/su14159575

Academic Editors: Sebastian Saniuk, Tomasz Rokicki and Dariusz Milewski

Received: 21 June 2022 Accepted: 2 August 2022 Published: 4 August 2022

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1. Introduction

The globalization process has accelerated digital transformations and had a significant impact on consumer behavior [1–3]. The common experience related to global pandemics is further strengthening this trend. It is important to indicate that because the COVID-19 pandemic affected all populations globally, there emerged new digital trends such as the development of online shopping, a shift towards remote work and learning, and resorting to Internet-based entertainment that were largely similar irrelevant of the geographical location or nationality. Out of necessity, digital solutions are increasingly being adopted to continue some economic and social activities remotely. As Sharma and Singh claim, [4] "we have also been witnesses to the growing popularity of Internet-based solutions in developing countries", such as the popularity of fitness applications and websites. In the opinion of Sharifi, Khavarian-Garmsir and Kummitha, [5] "the increasingly wider adaptation of ICT solutions with regard to the purchase and use of goods and services over the Internet has long-term implications in terms of consumer expectations, competence and behavior". The United Nations (UN) Report entitled Fulfilling the Promise of Globalization: Advancing Sustainable Development in an Interconnected World, published in 2017, highlighted three megatrends related to globalization: shifts in production and labor markets; rapid advances in technology; and climate change. These trends were expected to shape and influence the future of nations and economies [6]. One of the significant megatrends was connected with the fast-moving development and advancement of new technologies, including ICT technologies as well as the development of cutting-edge solutions such as commercial applications of artificial intelligence, which has also affected the workplace environment and its conditions. In the report, we could read that "while these innovations

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can act as catalysts for sustainable development, countries that do not have access to them are at risk of being left behind" [7]. As mentioned above, the COVID-19 pandemic had a profound influence on the globalization processes and their perceptions by populations in different countries. Countries and specific regions experience difficulties in managing their business operations, and there are delays and stoppages in the functioning of supply chains. According to W. McKibbin and R. Fernando, "transport being limited and even restricted among countries has further slowed global economic activities". Furthermore, "panic among consumers and firms has distorted usual consumption patterns and created market anomalies" and "global financial markets have also been responsive to the changes and global stock indices have plunged" [8].

However, even though "due to the COVID-19 pandemic, most economic sectors have been affected" [8,9], and, according to Dulam, Furuta and Kanno [10], "many businesses have not been able to continue their activities as before," the demand for goods and services remained at a consistently high level. Consumers may avoid traditional ways of shopping, but they still purchase items; they just tend to do it online. In *COVID-19 and E-Commerce: A Global Review*, by the United Nations Conference on Trade and Development (UNCTAD) as part of the eTrade for All initiative, we may read that even though "restrictions on movement and other interventions to protect public health have reduced economic activity in most sectors and most countries, affecting production, distribution and consumption" [11], there were sectors that experienced accelerated growth. Thus, "amid slowing economic activity, COVID-19 has led to a surge in e-commerce and accelerated digital transformation" [12].

Such tendencies could be observed around the world. They appeared to increase the interdependence and integration of states and contributed to the creation of a global society, which was further accelerated by the application and diffusion of information technologies. Globalization processes also led to economic and social changes. Together with the flow of goods, capital and information, one might notice the trends related to the homogenization of cultures around the world. In addition, globalization was seen as a tendency in the world economy, politics, demography, social life and culture that led to popularizing similar phenomena, and this was happening despite geographical and physical distance. Additionally, the fact that the processes occurred in a developed or developing country was not a distinguishing factor in this case. The technical and technological changes consisting of greater and greater computerization, Internet usability or satellite communication, in line with political and economic transformations, enabled greater integration and interconnectivity between individuals, businesses, economies and countries around the world.

Undeniably, the outbreak and spread of COVID-19 resulted in the rapid increase in the popularity of e-commerce and social media. ICT tools have been used for all intents and purposes: work, trade, communication and networking. However, as far as globalization processes are concerned (i.e., perceived convergence processes), opinions regarding the COVID-19 pandemic increasing the globalization tendencies are no longer so unequivocal. As many scientists and researchers [7,13–15] claim, to a certain degree, the outbreak of the COVID-19 pandemic has also disturbed trends and processes connected with globalization and affected the way in which the phenomenon is perceived and approached. At this point, several questions appear, and the literature on the subject does not offer a single, unambiguous answer. First, the question arises of whether the globalization phenomena occurred in the same way in all regions of the world. Second, if there were differences in pandemic-related restrictions in particular countries (e.g., length of quarantine, isolation from the market, traditional trade restrictions, concessions related to subsequent phases of vaccination against COVID-19), is such cross-cultural comparison possible at all? Third, we ask whether the customer behavior controlled and enforced by these processes will be retained in the post-COVID-19 era and whether the new consumer behaviors will become a habit or just fleeting tendencies enforced by the present circumstances. Fourth, are the abovementioned trends sustainable and present in the entire economy or only in individual

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industries or sectors related to specific products and services? It appears that a research gap has arisen in the research field, and the authors will try to examine and describe the phenomena, at least to a certain degree, focusing on the case of Poland and Polish consumers surveyed in 2020–2021. Taking the abovementioned considerations into account, the authors of this article undertook to assess whether the global trends related to the impact of the COVID-19 pandemic, described in international reports, are reflected also in the perception of globalization and behavior of Polish consumers. The authors decided to carry out a survey among young consumers aged 18–34. From their point of view, the group of university students is an appropriate research sample because it is this population that is very active on the Internet and that frequently uses ICT tools (a smartphone accompanies them anytime and anywhere, and they use it for contact, entertainment and shopping). It is this openness to modern technologies, education level, IT competence and language skills that make this population able to provide valid and reliable answers to the questions on the survey on globalization and the impact of the pandemic on the digital behavior of young consumers in Poland. As part of the study covering a sample of university students, the following research questions were posed:

- How do globalization and ICT technologies affect consumers in Poland? (The working hypothesis H₁ is as follows: The changes in consumer behavior trends among young Polish consumers will be consistent with the findings of studies that were carried out among other populations or research conducted in other countries.)
- Is the COVID-19 pandemic influencing consumer behavior? Are the changes going
 to last after the pandemic period is over? Are there any fluctuations in the pace of
 e-commerce development and the advance of globalization? (The working hypothesis
 H₂ is as follows: The pandemic is strengthening convergence tendencies among
 populations and nations.)

In order to answer these basic questions, the structure of the presented article is as follows. After the introduction to the topic, the authors conduct a brief review of the literature on the subject. Then, in the Section 3, the test procedure and the detailed characteristics of the study samples are presented. The Section 4 contains a comprehensive analysis of the results and their discussion. The article ends with conclusions, limitations and directions for future research.

2. Literature Review

The COVID-19 pandemic has been present in Poland for more than two years, during which it has developed in several cycles that were characterized by increases and decreases in the numbers of people infected or quarantined and those who died from the coronavirus. In other countries, the course of the pandemic as well as limitations and restrictions resulting from it occurred in different ways [16-18]. Countries rarely experienced the same tendencies, and they did not occur at the same time, and above all, for all the regions involved, the virus's development and course were unpredictable. In Poland, the process of pandemic relief was additionally disrupted by Russia's aggression toward Ukraine and the growing wave of cross-border migration from Ukraine to Poland. The prolongation of the COVID-19 crisis, expressed by the unprecedented scale of health and psychosocial effects, is changing consumer behavior in terms of taking precautions and social distancing, moving from traditional consumer behavior toward more digital activity as regards shopping, contacts, entertainment and travel. If the above changes are only necessitated by the pandemic and they are only temporary and linked to these exceptional circumstances, then companies need to focus on short-term solutions taking into account the current trends. However, if the new trends will continue in the post-pandemic period together with newly developed, constant behaviors (creating new consumption habits as regards information search, online shopping and entertainment), a new strategy for companies needs to be developed [19,20].

Interestingly, the highest increase was indicated with regard to "increasing interdependence and integration of states, aimed at creating a global society, accelerated by the

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proper use of information technologies" at the expense of the definition focusing on the "increase in interdependence, integration, joint influence and unification in the economic and social sphere in the world, intensifying with rapid technological progress." Probably the common experience of the COVID-19 pandemic creates the impression that people act similarly, facing similar challenges related to financial or psychological struggles. The "joint influence and unification in the economic and social sphere" was no longer so obvious or visible to the respondents since the pandemic has caused considerable problems in terms of managing production, provision of services, travel and tourism and affected deliveries and global supply chains. Businesses face financial issues due to the COVID-19 pandemic, and the same is true for individuals.

As one may read in recently published reports on consumer trends [7,15,21], not only has the approach toward globalization and new ICT technologies changed during the COVID-19 pandemic, but also consumer behavior is affected by it. According to the recent report, *Consumers and the New Reality*, "globally, a new consumer is emerging, one that is financially constrained, more advanced in their use of digital technologies, more thoughtful and selective in their decision-making, and keen to see COVID-19 as an opportunity to reset values in the world" [15].

In the literature, there is a growing amount of research on, inter alia, changes in consumer behavior that the COVID-19 pandemic has caused or strengthened in various respects, such as health protection [22], labor market [23,24], purchasing and consumption [22] and tourism [25,26] as well as the increasing dependence on the Internet and ICT tools in all of these areas. Despite the growing amount of research, the problem of perceptions of globalization through the increasing number of purchases and the use of social media during the COVID-19 pandemic so far appears to be unsolved. It is in this area that the authors observed a knowledge gap, which they would like to fill by undertaking cyclical research analyzing the situation and perceptions of the impacts of the pandemic and globalization on the digital behavior of young consumers in Poland.

Therefore, this study aims to investigate the emergence and shaping of consumer behavior before and during a significant period of the COVID-19 pandemic. Among the countries of this region, Poland has a well-developed IT infrastructure for e-commerce, banking and payment services that support them very well. It is also characterized by a high level of competence in terms of the use of social media, today accessed most frequently via mobile devices. Our research shows that the growth and frequency were only slightly greater during the pandemic than before it. This proves the sustainable and permanent nature of certain acquired behaviors (treated as habits) in the analyzed periods. On the other hand, at the moment of "loosening" the restrictions in some areas (e.g., shopping for food products), there was a withdrawal from digital behaviors and a return to visiting traditional brick-and-mortar shops and direct (face-to-face) interactions with other people in other analyses carried out by the authors (data removed for refereeing).

Over the years, e-commerce has been gaining in value and popularity. The e-commerce sector is currently the fastest-growing retail segment. In 2015, the global market was worth approximately USD 1 trillion. The data for 2020 show that it exceeded USD 3 trillion, and the global e-commerce market is growing by 20% each subsequent year. However, the outbreak of the pandemic significantly accelerated the pace of development of the trend that could be observed over the last decades [27]. As was predicted in the Post-Nord Report, the growth of e-commerce globally in 2020 was significantly higher, "especially in mature markets that have had the capacity to scale up their e-commerce in conjunction with increased demand during the coronavirus pandemic" [28].

ICT research looks at the mechanism of the emergence of repetitive behaviors, that is, habits in the use of information and communication systems and their effects in various contexts. For instance, Limayem et al. [29] and Venkatesh et al. [20] introduce the issue of habits in the context of using information and communication systems and find various factors contributing to their formation. A very important aspect analyzed in this study is the process of globalization, understood as "the convergence of income, media and

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technology, which in turn is expected to lead to homogeneous consumer behavior" [30]. However, our research on globalization perceptions from the point of view of consumer behavior is conducted in light of the COVID-19 pandemic.

As lockdowns became the new normal, businesses and consumers increasingly "went digital," purchasing more goods and services online, increasing the share of global retail trade from 14% in 2019 to approximately 17% in 2020. Due to insufficient resources in most countries, frugality started to be seen as a response to prevent economic crises and financial struggles of households from spreading [31]. This trend is visible in consumers' choices of goods and services and their social behaviors. Palit claims that over the last three decades, "the world has become interconnected in a manner hardly witnessed before" and "the scale and speed of the interconnection have been remarkable" [32]. The shift toward e-commerce has definitely contributed to this situation.

Together with obtaining new levels of computer literacy, consumers started to increase both the frequency and value of their online purchases. They also started to use the new opportunities created by the rapid development of new ICT technologies. Consumers started to use the Internet for many intents and purposes such as: networking and developing relationships through social media, accessing the latest news, learning and gaining new knowledge or obtaining information, engaging in entertainment-related activities related to watching films, series and other types of digital content using streaming platforms, listening to music, playing online games, shopping for goods and services, remote work and contacts. As "explosive growth of the mobile platform accelerates the transition to digital content" [33], ICT technologies lead to the perception of the world as a global village, sparking discussions on the convergence of behaviors around the world and removing, at least in terms of their perception or significance, barriers and obstacles related to physical and geographical distance.

3. Methodology

To assess the tendencies that may be observed among young contemporary consumers, students at the University of Warsaw, the authors carried out a survey using the computer-assisted website interview (CAWI) technique. The online survey questionnaires were distributed using the servers of the university. The purpose of the research was to analyze whether there occurred changes in the perceptions of globalization processes between before and during the pandemic.

The research procedure consisted of the following stages:

- Selecting a research sample, constructing a prototype of a survey on changes in consumer behavior and the impact of e-commerce on globalization processes during a pandemic and verifying the survey in a pilot group;
- Conducting research on a verified and tested questionnaire, hosted on the servers of the University of Warsaw;
- Conducting the study before the pandemic period and during the pandemic with a similar research group;
- Analyzing and discussing the results obtained from the study;
- Drawing conclusions on the basis of analysis and discussion, limitations and future research directions.

This study on the perceptions of globalization among young people in Poland included a sample of students of the University of Warsaw took place in two cycles. The first survey was carried out in March 2020 (before the introduction of limitations and restrictions connected with social distancing, remote work and studies or travel resulting from the outbreak of the pandemic in Poland), and the second stage took place in December 2020. The research group consisted of students selected by convenience sampling. In the first research period (March 2020), the electronic questionnaire was correctly completed by 240 people (69% of the population to whom the invitation was issued), and in the second (December 2020), by 111 people (32%). The survey was conducted in March and December 2020 to analyze changes in consumer behavior before and during the pandemic. The

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differences that occurred between the two research samples were relatively small due to the fact that the survey was conducted in a similar environment of respondents, characterized by a similar structure of sex, age, education and social status, which allowed for high comparability of the results in the analyzed periods at the beginning of the COVID-19 pandemic in Poland in 2020 and during the pandemic in December 2020. The survey participants were selected among the population of students of the University of Warsaw, which ensures high comparability of the findings of the research carried out in three stages and is in line with the assumptions of the study.

The study on the impact of COVID-19 on consumer behavior carried out in the third stage of the research (November 2021) was a continuation of the previous research involving a similar sample of students from the University of Warsaw. A similar group, i.e., a sample consisting of the students of the University of Warsaw, was asked to compare their activities before and during the pandemic. The authors of the article conducted research involving a group of 96 students who filled in a survey questionnaire in a complete and correct manner (29% of the population to whom the invitation was issued). The questionnaire forms that were completed partially or did not meet the reliability standards (incorrect answers to control questions, completed the survey in too short a time, etc.) were rejected by the researchers. The present study findings will be used in the future to carry out a survey questionnaire that involves a larger sample, preferably involving representatives of other populations in Poland and abroad. The demographic profiles of the respondents for these three periods is presented in Table 1.

Demographics	March 2020	December 2020	November 2021	Demographics	March 2020	December 2020	November 2021
Gender				Place of residence			
Women	63%	61%	54%	Cities with more than 400,000 inhabitants	61%	51%	64%
Men	37%	39%	46%	Cities of 201,000–400,000 inhabitants	8%	11%	13%
Age				Cities of 101,000–200,000 inhabitants	1%	4%	3%
>18-24	97%	98%	87%	Cities of 21,000–100,000 inhabitants	9%	10%	8%
25-34	3%	2%	13%	Small city up to 20,000	8%	7%	4%
35–55+	0%	0%	0%	Countryside	13%	17%	8%
Education				Financial situation			
Primary	0%	0%	0%	Very good	12%	9%	22%
Secondary	88%	89%	82%	Good	52%	55%	61%
BA studies	11%	6%	18%	Average	36%	32%	17%
MA studies	1%	5%	0%	Bad	0%	4%	0%

Table 1. The demographic profiles of the respondents.

4. Research Findings and Discussion

Respondents were asked to indicate the most appropriate definition of globalization that in their opinion best illustrated this phenomenon. Respondents could choose one of five options. The definitions were determined on the basis of the literature and indicated the most common tendencies and characteristics of the phenomenon of progressive globalization. The phenomenon of globalization can be viewed and defined from different points of view. All of the definitions of globalization included in the survey emphasized the importance of the convergence of young consumers' digital behavior in shopping, social media use, entertainment, networking and travel. The purpose of this question was to find out how the respondents understand this concept. Due to the limited volume of the publication, the focus here is mainly on the use of the Internet for online behaviors such as information seeking, shopping and entertainment and the impact which COVID-19 may exert on digital consumer behavior among young population aged 18–34.

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In order to examine whether and to what degree consumers' attitudes toward globalization changed because of the pandemic, the authors compared the results of the study, which was carried out in cooperation with the team of the Department of Management Information Systems at the University of Warsaw in March 2020 (before the pandemic) and in December 2020 (during the pandemic). Respondents were presented with five definitions of globalization, from which they were to choose the definition that, in their opinion, best describes the phenomenon.

In March 2020, 30.8% of the respondents defined globalization as "all processes leading to increasing interdependence and integration of states, aimed at creating a world society, accelerated by the proper use of information technologies" [34]. The next most frequently chosen definition (24.6% of responses) was globalization as "an increase in interdependence, integration, joint influence and unification in the economic and social sphere in the world, intensifying with rapid technological progress" [35–37]. The definition of globalization as "the process of economic and social changes causing a rapid flow of goods in the material, financial and information spheres resulting in the homogenization of culture throughout the world" [38,39] was in third place with a result of 23.7%.

The next most common definition at 13.7% was globalization as "a tendency in the world economy, politics, demography, social life and culture, consisting in the spreading of analogous phenomena, regardless of the geographical context and the economic advancement of a given region" [40], and the fewest students at 7.1% defined globalization as "a phenomenon related to revolutionary technical (computerization, Internet, satellite communications), political (collapse of the communist system in Central and Eastern Europe) and economic changes (privatization, deregulation, commercialization)" [36].

An interesting phenomenon can also be observed in December 2020, where the number of people pointing to "increasing interdependence and integration of states, aimed at creating a global society, accelerated by the proper use of information technologies" increased to 40.5% (a difference in plus of 9.71%). An upward trend can also be noticed in the case of the definition of "the spread of analogous phenomena, regardless of the geographical context and the economic advancement of a given region," but the share of this response was only 16.22% (an increase of 2.47%). Perhaps the respondents indicated such a relationship due to the commonality of experiences related to the pandemic and the consequences of the above phenomenon for the economy, demography, politics, society and culture. In other cases, a decrease in the share of indications of other definitions was observed. The definition referring to globalization as "the process of economic and social changes causing a rapid flow of goods in the material, financial and information sphere as well as greater homogenization of culture throughout the world" recorded a decline of 3.03%. In the case of the definition emphasizing "the increase in interdependence, integration, joint influence and unification in the economic and social sphere in the world, intensifying with rapid technological progress," the group of respondents decreased by 9.26%. The least popular response recorded a decline as well, but at a very modest level of only 0.13%. During the survey, respondents were asked to assess their financial situation. The first question in this part of the survey focused on the students' subjective assessment of their material situation before and during the pandemic, and 44.8% indicated that their situation has not changed since the outbreak of the pandemic. Surprisingly, as many as 39.6% stated that it has improved (29.2% said rather yes, and 10.4% said it had improved considerably).

Perhaps this tendency is related to the fact that the population of university students is at the stage of life where they still rely on their parents to support them or if they work, they just need to cover their own individual everyday needs. Another possibility is that they are more selective in terms of their purchasing decisions, and as a result they perceive their financial situation as stable. Furthermore, limited possibilities with respect to socializing, traveling or going out, either because of the restrictions imposed by the government or the respondents' own need to take precautions and limit the risk of potential exposure to COVID-19, could contribute to reduced spending and more reasonable choices. The COVID-19 pandemic has forced many people to stay home. This kind of behavior,

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sometimes referred to as cocooning, might be enforced by external bans or an internal need to take precautions or reduce the risk of infection. This dichotomy is quoted in multiple literary sources: "unprecedented numbers of people have either willingly entered social isolation or been compelled to do so by orders from local, state, and federal officials to prevent the virus from spreading" [33]. By necessity, the Internet has become a source of both information and entertainment.

The first question included in the next section of the survey questionnaire distributed among students at the University of Warsaw was related to consumer behavior. The respondents were asked about the frequency with which they searched for information on the Internet before and during the COVID-19 pandemic (before March 2020) and in November 2021. According to the declarations, before the pandemic, 90.6% of the sample searched for online information every day, and during the pandemic the percentage was slightly higher, 93.8%. However, the changes with regard to other frequencies were more distinct. Before the pandemic, 7.3% of the people looked for information on the Internet every few days, and during the pandemic, the respondents who did so every few days amounted to 5.2%. A small proportion, 2.1%, of the survey participants looked for information online once a week, and during the pandemic, this ratio decreased to 1%. Although the changes were not significant, one may note that the frequency of accessing information on the Internet increased. It is important to note that the daily use of the Internet as a source of information was already very popular before March 2020.

Moreover, customers started to pay special attention to security issues in terms of potential coronavirus exposure. According to Electronic Economy Chamber Report 2020, "despite the moderate level of anxiety declared by Polish internet users regarding the coronavirus, as many as 64% of respondents believe that the COVID-19 virus will not cease to be active in Poland". As the report states, "in the context of the coronavirus, Poles are most afraid of their own or their loved ones getting sick (22%), but—immediately afterwards—of an economic recession (17%) and restrictions on freedom (15%)" [41]. This has led to more frequent online purchases as well as the choice of cashless transactions in traditional brick-and-mortar stores [27]. According to the Chamber of Electronic Economy Report 2020, "in the face of the threat, online shopping has become for many Poles a much better alternative to traditional ones". In that report, 38% of consumers declared that they had obtained the necessary food, hygiene and chemical supplies on the web; 37% considered this form of shopping to be safer, and among people who used online shopping to secure their supplies of basic necessities, this percentage was as high as 70% [41]. According to the same report, 38% of the respondents participated in online shopping during the quarantine period. Almost half of the respondents aged 35-44 focused on the online channel. In addition, residents of smaller cities chose online channels to stock up on hygiene products or detergents. Such activity with a view to securing supplies for the period of quarantine was more popular among Internet users who buy online than in traditional stores. Already 55% of e-shoppers made larger purchases of cleaning products, and 48% took care of food supplies. In addition to household chemicals and food products, the most frequently purchased categories on the Internet during the quarantine period were clothing, footwear and products from the health-related categories [41]. The sense of danger instigated by the COVID-19 pandemic has led to many seemingly irrational behaviors, such as panic buying [42]. However, in a situation of uncertainty and potential threat, people may resort to making purchases in a way that offers them a sense of being in control of reality. As Schwab and Malleret state, "the high degree of ongoing uncertainty surrounding COVID-19 makes it incredibly difficult to precisely assess the risk it poses". Moreover, as the authors indicate, "as with all new risks that are agents of fear, this creates a lot of social anxiety that impacts economic behavior" [12]. In the second half of the year, the fear of the coronavirus was replaced by concerns related to consumers' financial situation. The latter was associated with the threat of unemployment and rising inflation in relation to the COVID-19 pandemic as well as the present geopolitical situation [43].

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The need to take precautions and ensure safety against infection among consumers is also reflected in the surveys carried out by Samuk and Sidorowicz (2020) [9] and the work by Tarasiuk and Dłużniewska [44]. Increasing expectations regarding e-commerce and higher levels of ICT skills do not only concern younger consumer groups. The report indicates that "consumers of all ages are keen for this [trend] to continue" [15]. Moreover, The pandemic also contributed to the expectations regarding the very high quality of services, including their technology-related aspects, and to changes in the purchasing preferences of a part of the society and the choice of the Internet sales channel in times of post-pandemic reality. The number and value of transactions has increased. There is also a growing group of customers who prefer to buy exclusively online, and the sudden onset of the COVID-19 disease has moved some of the previously held stationary commerce to the Internet. In March and April 2020, there was a jump in sales dynamics in each group of goods [27].

According to *E-commerce in the Times of COVID-19*, "for individuals, e-commerce enables physical distancing while retaining access to the full product variety". Before the pandemic, for many consumer groups, e-commerce "was centred on high tech goods, toys or books". At the time of the COVID-19 pandemic, it "increasingly involves goods for which availability is critical to a large share of the population, including groceries, medicine and other necessities" [28]. Furthermore, the shift related to the type of goods purchased on the Internet may result from the fact that the pandemic adversely affected the financial/material situations of consumers.

Interestingly, as the KPMG report also indicates, "consumers increasingly purchase from organizations they trust, at a time where trust is becoming more complex to build." The first aspect, trust, which is particularly significant for consumers, is related to whether companies will continue to put consumer needs first. The second is connected with the sense of security, i.e., related to consumers' confidence that they will be safe dealing with the enterprises as well as the trust that their data will be secure and protected. Additionally, "younger respondents in particular are concerned about the environmental and social practices of a company" [45]. As Post-Nord Report E-Commerce in Europe 2020 indicates, the current crisis of the COVID-19 pandemic shows "the importance of sustainable business practice" [28]. M. Eisenbardt and E. Ziemba stress that consumers' relationships with a company or a brand, as well as their engagement in the production or knowledge sharing process, are also increasingly important for individuals who aspire to be prosumers rather than simply consumers of goods or services [46].

Considering the increasing tendency to resort to online shopping instead of visiting traditional brick-and-mortar shops, the next question posed in the survey was related to the frequency with which respondents shopped online before and during the COVID-19 pandemic. Interestingly, before the pandemic, there were respondents who never shopped on the Internet. During the pandemic, all survey participants engaged in online shopping to a lesser or greater extent. The most common choice was shopping once a month. As many as 38.5% of the people surveyed indicated that they shopped online once a month before the COVID-19 pandemic, and 41.7% engaged in online purchases during the pandemic. The number of people who shop online clearly increased during the pandemic. The differences were as follows: making online purchases every few days recorded an increase from 7.3% before the pandemic to 19.8% during the pandemic; once a week online shopping rose from 21.9% to 29.2% since the outbreak of the COVID-19. The most significant change was observed less than once a month; that frequency fell from 29.2% to 9.4%. As can be noted, there is a slight increase in high frequency. There is a sharp fall in terms of the purchases made less than once a month.

According to *E-commerce in the Times of COVID-19* 2020, by the OECD, "e-commerce has further enabled continued access, either online or physical, to certain areas of public life, such as concerts, museums" [28]. The same tendency may be observed with regard to entertainment, that is, listening to music, watching films and series, and playing online games. According to Laudon and Traver, "smartphones, tablet computers, and e-readers

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together create a rich mobile entertainment environment" [45], which also contributes to the increasing number of people who resort to using the Internet in search of relaxation, distraction, and entertainment. Bearing this in mind, the next question in the set concerned the use of social media among university students before the COVID-19 pandemic and during its course. Answering the question: "How often did you use social media before the COVID-19 pandemic (before March 2020) and during the pandemic?", 89.6% indicated that they did so on a daily basis, and that tendency increased during the pandemic to 92.7%. Every few days was the response selected by 9.4% of survey participants to describe their activity before the pandemic, and during the pandemic, the trend to use social media every few days decreased. Once a week was the option chosen by respondents to refer to the period before the pandemic, and during the pandemic, as stated by the survey participants, no one used social media with such frequency.

In the next stage of the study, the survey participants were asked about their preferences concerning watching films and series online. The largest group of respondents indicated that they watch films and series online every few days before the pandemic, and they engaged in this activity with the same frequency during the pandemic. However, other indications changed markedly. The group of respondents who watched online films and series every day amounted to 18.8% before the pandemic outbreak, and 37.5% indicated that they watched them every day during the pandemic. Furthermore, 21.9% of respondents watched films and series on the Internet once a week, and during the pandemic, the number decreased to 7.3%. Those who watched them once a month constituted 7.3% of the sample, and more recently, i.e., during the pandemic, 2.1% of individuals watched films and series online once a month. The indications related to watching digital content in the form of films and series have shown an opposite tendency. Those who watched them less frequently than once a month accounted for 1% of the sample. During the pandemic, the number increased to 2%.

The Deloitte report entitled *Digital Consumer Trends Report 2021* indicated that among all activities respondents had engaged in more intensively during the first period of the COVID-19 pandemic, i.e., in 2020, than they had in 2019, none reported engaging in the same activities as intensively in 2021. Interestingly, more than half of the respondents (51%) in 2020 admitted that they read more news online than before COVID-19. However, in 2021, just 25% of individuals declared that they spend more time searching for and reading information than before COVID-19. This change affects young people (18–24) to the greatest extent. Only 15% declared more frequent searches for information this year than they did before COVID-19. Similarly, the use of social media platforms (a decline from 41% to 24%) was indicated as an activity that they undertake less often than a year ago. No declared changes in frequency were observed in the case of watching movies and series over the Internet (a small decrease from 25% to 23% year-on-year). However, it is worth noting that a significant decrease in this category (from 51% to 32%) was recorded in the case of the youngest study group (18–24).

If we compare activities such as using the Internet to look for information, using social media platforms or home-based entertainment in the form of watching films and series online or playing games, one may observe an interesting tendency. Initially, following the outbreak of the COVID-19 pandemic, the use of the Internet for the abovementioned purposes intensified. As Gerlich stated, excessive media consumption was seen as one of the significant trends triggered by the pandemic [42]. However, after nearly two years of the pandemic, searching the Internet for information, networking through social media, watching digital content or playing online games lost its appeal. In multiple publications, sociologists and social behavior experts predicted that "changes in behavior and everyday life, that is, the intensification of digital solutions, will be long-term or even permanent." However, as the Digital Consumer Trends 2021 study shows, at least some of them did not persist in the second half of 2021.

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5. Conclusions

The purpose of this study was to determine whether the digital behavior and opinions of young consumers in Poland are in line with the general global trends observed during the pandemic and to fill a kind of knowledge gap in this area. The findings of the survey questionnaires carried out in March 2020, December 2020 and November 2021 indicate that the behavior of the respondents is generally consistent with consumer trends established and described in several reports on the impacts of the COVID-19 pandemic on people's perceptions of globalization and consumer behavior. Thus, the working hypothesis H_1 can be verified. However, the answer to the next research question and verification of the second working hypothesis is not clear-cut. Definitely, convergence trends are noticeable, but due to the characteristics of the research sample, they cannot be generalized to the entire population. There are noticeable trends in digital consumer behavior trends and globalization processes (understood here as the convergence of consumer behavior in different countries and regions), resulting from the COVID-19 pandemic. However, in the case of the population under study, these trends are neither rapid nor abrupt (contrary to expectations, these tendencies do not develop in leaps and bounds). The authors wish to consider the reasons for this with the consideration of both conclusions from the analysis of the literature presented in the previous sections and the findings of the present cycle of studies, and their findings are included below.

As the study findings indicate, the financial/material situations of the survey participants did not change to a significant degree, at least their subjective perceptions of them. However, this could have been caused by more reasonable consumption behavior, a tendency that was frequently indicated and described in literary output on the subject. Among those who stated that their situation was affected by COVID-19, 54.2% stated that the pandemic had rather affected their current financial circumstances. The frequency of resorting to the Internet to search for information did not increase to a high degree, but one may notice a change in terms of the increased frequency of such activity. The reason for such a situation might be the fact that the authors applied the method of convenience sampling among university students and students, and young people in general, are already digital natives who use the Internet on a daily basis. The increase was not significant, but the level of Internet use for this purpose even before the COVID-19 outbreak was already 90.6%. During the pandemic the share was even higher, 93.8%. The same tendencies could be observed in terms of online purchases; the increase was not very significant, but the frequency of purchases over the Internet did increase. A similar trend can be observed in the case of using social media. Interestingly, the number of people watching films and series every few days on the Internet did not change. The consistency was surprising: Exactly 51% of the respondents watched films and series on the Internet every few days both before and during the pandemic. In the case of other frequencies, the tendency was similar to the situations described above. The rise in numbers was not very impressive, but the frequency did increase. The desk research findings and analysis of the empirical data point to the need to further explore the reasons why so many respondents, contrary to expectations, indicated that their financial situation improved. For instance, is the situation caused by the change in their approach, i.e., more reasonable consumption choices, orientation toward sustainability or environmental protection, resigning from less essential purchases, limiting their entertainment options (e.g., travel, cultural events, meals eaten in restaurants, sports clubs)? Another intriguing issue to explore further is the analysis of the shift that was described in some of the reports [13,45]. After lockdown and enforced isolation, individuals were less interested in online entertainment; they now want to engage in traditional activities, not the ones that are available remotely.

The economic implications of the present research for companies selling products and services on the Internet relate to forecasting, assessing and describing long-term changes in terms of the behavior of young people. This, in turn, can help to identify and address the needs of new customer groups, providing opportunities for industries preparing for the economy after the pandemic. In addition, our study offers the implications for

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promoting habits to prevent the transmission of COVID-19 by using ICT to increase public safety [47–49]. Digital technology helps people reduce threat and exposure to risk during a pandemic by engaging in health-protective behaviors such as avoiding crowds and direct human contact [50].

As indicated above, the main limitation of the conducted research consisted in the fact that it was carried out in an academic environment, among people most actively participating in the globalization processes and their manifestations such as e-commerce and social media. On the one hand, this was, naturally, a disadvantage since it narrowed down the diversity of views in the study. On the other hand, as a result of analyzing the opinions of the population that was the most active group on the Internet and one that includes both proficient and experienced users of ICT solutions, the authors had the opportunity to draw conclusions about the future with greater certainty and confidence. The second limitation was the specific conditions of pandemic restrictions in Poland, which were subject to dynamic changes, similar to other countries all over the world. Due to the rapid and ongoing changes that the authors hoped to establish and properly evaluate as part of this study, the research was repeated in November 2021. Taking the above into account, the research presented in this paper suggests an agenda for the future.

First, the sample should be extended to include respondents outside the university community representing different age groups. Second, because the situation before and during the pandemic has been thoroughly investigated, the subject of the study is self-imposed. The authors intend to examine how the trends observed during the COVID-19 pandemic will affect the perceptions of globalization and consumer behavior in the future. It is also essential to assess whether the changes observed in the study will be permanent and will lead to the creation of new habits in consumption or if they are only temporary. Third, the purpose of the next research is to investigate whether the trends observed regionally in Central Europe are the same as, for example, in the Middle East, with centuries of traditions in traditional trade, or in China, which is undergoing deep social changes during the COVID-19 pandemic caused by a significant increase in online activities using mobile devices.

Author Contributions: Conceptualization, A.F., W.C. and M.Z.; methodology, A.F., W.C. and M.Z.; software, A.F., W.C. and M.Z.; validation, A.F., W.C. and M.Z.; formal analysis, A.F., W.C. and M.Z.; investigation, A.F., W.C. and M.Z.; resources, A.F., W.C. and M.Z.; data curation, A.F., W.C. and M.Z.; writing—original draft preparation, A.F., W.C. and M.Z.; writing—review and editing, A.F., W.C. and M.Z.; visualization, A.F., W.C. and M.Z.; supervision, A.F., W.C. and M.Z.; project administration, A.F., W.C. and M.Z.; funding acquisition, A.F., W.C. and M.Z. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

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