POLISH CONSUMERS' ATTITUDES TOWARDS ONLINE GROCERY SHOPPING

Dr. Gabriela Hanus
University of Economics, Katowice, Poland

ABSTRACT

The primary focus of this study was to explore the attitudes of consumers in Poland towards online grocery shopping, and the impact of the COVID-19 pandemic on the e-grocery market. A direct survey was conducted on a sample of 800 respondents from across Poland in the first quarter of 2020. A questionnaire was used as a research tool. As revealed by data analysis, in 2020 more than a half (60%) of consumers in Poland shopped for groceries in online stores run by brick-and-mortar grocery chains. The respondents usually shopped for groceries several times a month, preferably choosing products with a long shelf life, and home delivery options, each time spending around PLN 201-300. Convenience was found to be the key driver that encouraged consumers to shop for groceries online, and concerns about the quality of products purchased online was the major disincentive. Moreover, the coronavirus pandemic, and the resulting health concerns, were shown to have the least effect on the willingness of respondents to shop for groceries online, or the frequency of online grocery shopping. From a practical point of view, this research can be used to create marketing strategies for enterprises operating in the food retail industry, as well as to expand knowledge about the dynamically developing e-grocery market in Poland.

Keywords: *COVID-19, online grocery shopping, food behavior, Polish consumers; food behavior*

INTRODUCTION

The rapidly growing e-commerce fuels changes in the consumers' shopping behaviors [3], [5]. In addition, the COVID-19 pandemic that has had a global impact last year has accelerated these processes on many levels. According to Euromonitor International data, the e-grocery industry grew by an average of 15-20% year on year [10].

A literature review revealed that consumers' attitudes towards online grocery shopping have been studied by researchers from various countries [1],[2],[3],[4],[6],[8], [9],[12],[13]. The research conducted so far has focused on online consumer shopping habits, mainly on the conditions that encourage consumers to embrace online shopping [4], the factors that drive consumers to shop for groceries online [2], [7], [9], [12], Sheng et al., 2020;), product categories intentionally avoided in online grocery shopping [6], as well as the customer profile of online food grocers [3]. The e-grocery market in Poland reported the fastest ever growth in 2020. The surge in grocers of 112% [14] in 2020 compared to 2019 was the highest in the e-commerce industry, and was attributed to the restrictions imposed to contain the spread of the COVID-19 pandemic.

As a result, the current research on consumer attitudes towards e-grocery fills the research gap in this area. The primary focus of this study was to explore the attitudes of consumers in Poland towards online grocery shopping, and the impact of the COVID-19 pandemic on the e-grocery market. The author decided to address several research questions: What is the profile of e-consumers in online grocers? What food do they buy, how much do they usually spend, and where do they shop? What are the incentives and disincentives to shop for groceries online? What forms of delivery are most often preferred? Has the COVID-19 pandemic increased the frequency of online grocery shopping?

Several research hypotheses have been proposed: H1: Online grocery shopping is hypothesized to be preferred by young women with higher education and at least a good financial standing; H2: Convenience, time savings and a wide choice of products are hypothesized to be the main incentives that encourage consumers to shop for groceries online; H3: Concerns about the quality of products shopped online and an extra delivery fee are hypothesized to be the main disincentives that discourage consumers from online grocery shopping; H4: Home delivery by courier and pickup from a parcel locker are hypothesized to be the most common forms of delivery; H5: It is hypothesized that Poles shop online for food products with a long shelf life and no more often than once a month; H6: It is hypothesized that Poles most often shop on auction portals, such as Allegro; H7: The restrictions introduced and the health concerns are hypothesized to be the main reasons for the increased interest in online grocery shopping in 2020.

The results of this research can help marketers and retailers define their marketing strategies and broaden their knowledge about the emerging e-grocery market.

This paper is divided into two sections. The first section presents the current research concerning the online grocery market. The next section discusses the research methodology used. Next, the research findings are presented and discussed. The paper closes with key conclusions, study limitations and recommendations on further research.

LITERATURE REVIEW

There is ample scientific literature discussing online grocery shopping [1], [2], [3], [4], [6], [8], [9], [12], [13].

According to A. Stolecka-Makowska [13], about 28% and 16% of Internet users, respectively, shopped for groceries online at least once or regularly in 2017 in Poland. 27% of e-consumers were planning to buy food online in the future.

K. Jach and A. Miniewicz [6] conducted a pilot study to determine the specific patterns of consumer behavior when shopping for groceries online. This study focused on the dominant shopping styles, determinants of consumer choices, and product categories that are deliberately avoided in e-shopping. A survey of 30 Polish e-consumers revealed that most of the respondents shopped for groceries online once a week and tended to avoid certain products, such as fish, cold cuts and meat. Special discounts were found to be the main factor driving customer buying decisions.

Driediger and V. Bhatiasevi [4] demonstrated that consumers who perceive online grocery shopping as easy to use find it useful, quickly embrace online grocery shopping and use it more often. Moreover, the individual's environment, i.e. family, friends and acquaintances, was demonstrated to have a significant impact on the perceived usefulness of online grocery shopping.

In a study by de Magalhães [2], the satisfaction with how the order was processed, including the delivery fees, was ranked among the key determinants of the decision to buy food online. Interestingly, short delivery times were not considered the top priority for those who regularly shopped for groceries online.

Pauzi et al. [9] distinguished five main factors influencing the willingness of consumers to shop for groceries online. These include social influences, favorable conditions, hedonistic motivations, perceived risk and trust. Social influences are defined as an individual's adaptation to the environment (parents, peers, idols), as well as the influence of social media on the individual's behavior. Favorable conditions are defined as the degree to which new technological solutions are embraced by an individual. Hedonic motivations are defined as benefits such as pleasure, and the perceived risk is extremely important to online buyers, especially when buyers lack any information about the online shop they intend to use for the first time. Moreover, the perceived risk is subjective, and varies among individuals, as each person has their own thoughts and experiences. Confidence and trust are generally considered essential in online transactions due to the different types of risk consumers face throughout the shopping process. Without trust, the online transactions cannot take place.

Sreeram et al. [12] demonstrated that the comprehensiveness of online shopping, mainly in terms of the wide choice of products offered by e-grocers, is a very important factor that affects the willingness to shop for groceries online. The importance of entertainment aspects and economic value as the key variables that shape buyer satisfaction and consumer loyalty was also highlighted.

Based on a logit model and a sample of 34,488 respondents from Italy, Dominici et al. [3] created a profile of a typical customer of online grocery stores. An average e-consumer was a young, well-educated woman, living in a small family, with an income that was reported as "very good" or "good". The incentives to shop for groceries online included such lifestyle-related factors as working hours, obesity, health problems and regular sports activities. Distance to brick-and-mortar stores and car ownership were not found to have any predictive value in terms of preferences for online shopping. These findings can help marketers and retailers define their marketing strategies and broaden their knowledge about the emerging e-grocery market.

The main contribution of this study is to fill the research gap identified in the literature on the attitudes of consumers in Poland towards online grocery shopping during the Covid-19 pandemic and to determine its impact on the development of this market sector. A relatively large research sample and its diversity are the added values of the research.

RESEARCH METHODOLOGY

The main objective of the study was to examine the influence of COVID-19 on Polish consumers' attitudes towards online grocery shopping.

The data were collected through direct surveys using quantitative methods. That approach was chosen based on its frequent use in studies with similar topics [1],[8]. The survey included a sample of 800 adult Poles, participants in the Opinion Research Internet panel. This condition was necessary due to the chosen sampling method. The sample was representative in terms of age and gender, based on the structure of the Polish population by age and gender (as of 30 June 2020). In order to establish weights that would allow for the parameters representative of the population of users of the Internet research panel, the percentage of people using Internet users by age and gender. The conversion factors were then used to adjust the population by multiplying the number of individuals in a given age group or gender by the corresponding conversion factor. The research was conducted in 2021 throughout Poland.

The measuring tool was a questionnaire. It was prepared on the basis of a literature review. It consisted of a short introduction, instructions for the respondents, sixteen relevant questions, and five background-data questions.

The direct surveys included 409 women (51.1%) and 391 men (48.9%). Those aged 18-34 accounted for about 36.5% of the respondents, those aged 35-54 – for 42.4%, and people over 55 – 21.2% of the respondents. There were also other adopted characteristics of the research sample: place of residence, income situation and education. The detailed characteristics of consumers participating in the survey are presented in Table 1.

Structure indices and correlations were used to analyze the data.

Table 1. *Characteristics of consumers participating in the survey (n=800)*

Characteristics of respondents	**Respondents**	
	Number	**%**
Gender		
Female	409	51.1%
Male	391	48.9%
Age		
18–24	101	12.6%
25–34	191	23.9%
35–44	205	25.6%
45–54	134	16.8%
55–64	107	13.4%
65 years and above	62	7.8%
Education		
Elementary	8	1.0%
Lower secondary	11	1.4%
Vocational	79	9.9%
Secondary	376	47.0%
Higher	326	40.8%
Income situation		
Very bad	12	1.6%
Bad	34	4.3%
Average	367	45.9%
Okay	330	41.3%
Very good	56	7.0%
Place of residence		
City	634	79.3%
Village	166	20.8%

Source: own elaboration based on primary research results.

RESULTS

In 2020, over 60% of consumers shopped for groceries on the Internet (Fig. 1). This group mainly consisted of women, people aged 25-34, with higher education, and a positive self-perception of their financial standing.

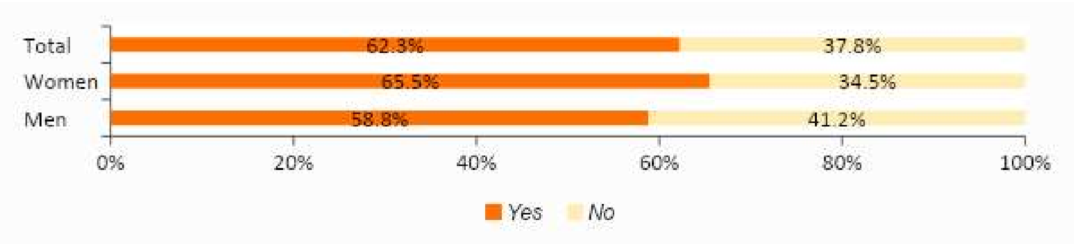

Fig. 1. *Consumers attitudes towards online grocery shopping.*
Source: Own study based on direct surveys.

The respondents declared that they most often shopped online for groceries several times a month (28.3%), and among the most commonly selected products were coffee and tea (69.1%), dry products, e.g. flour, pasta, oats, and also sweets (60.8%), drinks (54.8%), spices and canned food (53.6%) (Fig. 2).

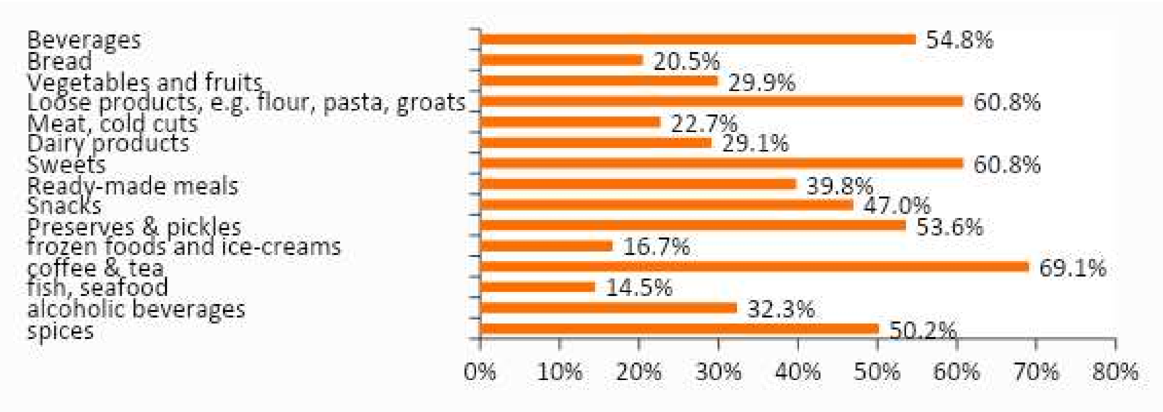

Fig. 2. *Food products bought on the Internet by consumers in Poland*

Source: Own study based on direct surveys.

Research has shown that 42.2% of consumers spend between PLN 101-200 each time they shop for groceries online, 23.3% spend PLN 201-300, one fifth of respondents spend PLN 100, and only every tenth respondent spends over PLN 300 (Fig. 3).

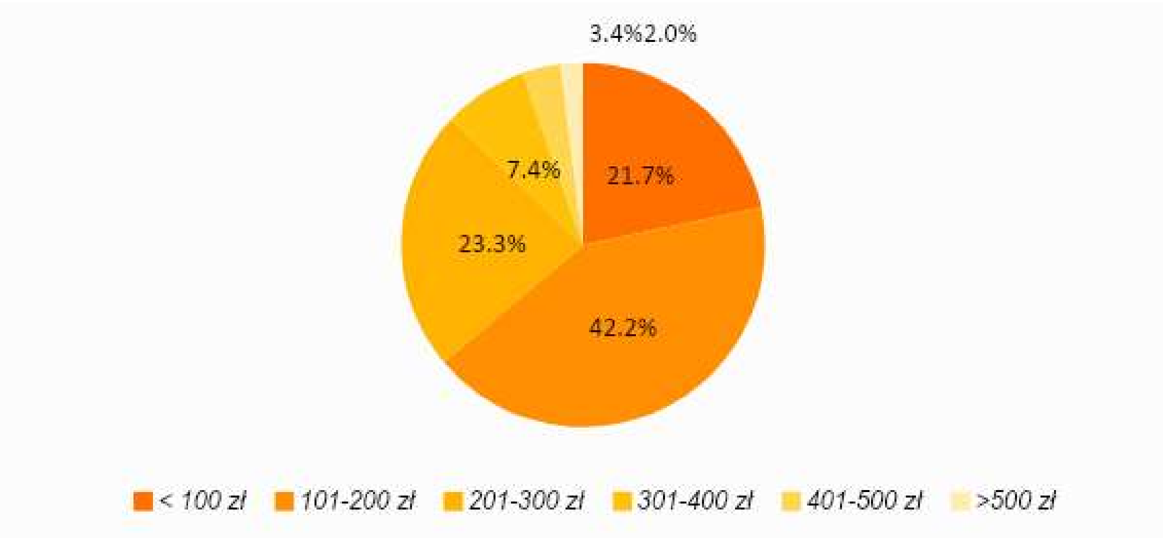

Fig. 3. *The amount consumers usually spend with each order when shopping for groceries online.*

Source: Own study based on direct surveys.

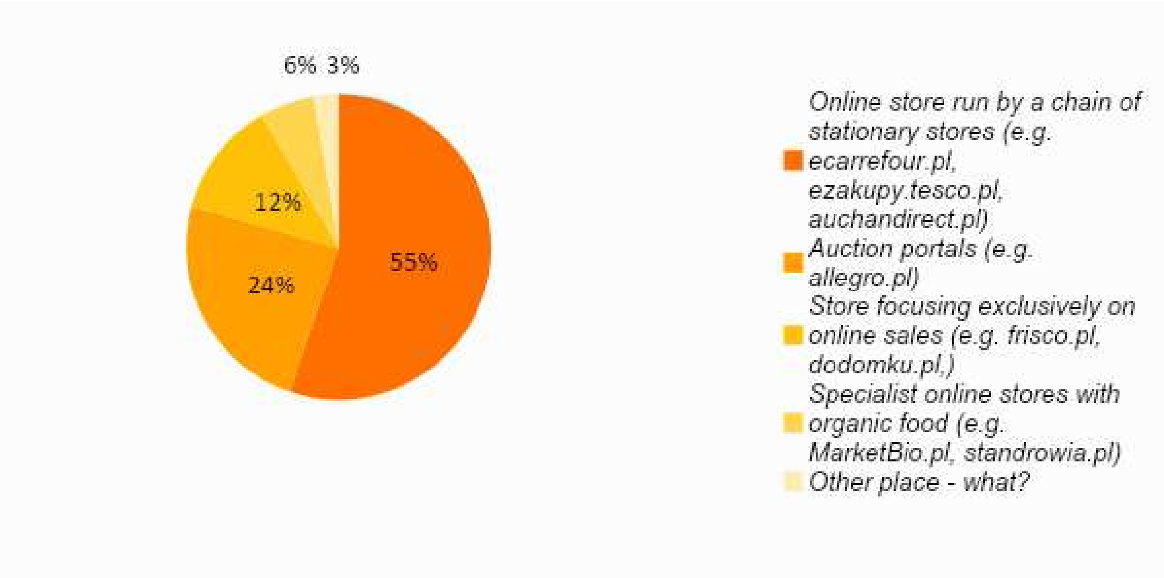

Fig. 4. *Places where consumers in Poland buy food online*

Source: Own study based on direct surveys.

The most common places to buy food online were online stores run by brick-and-mortar grocery chains (brick-and-click retailers, such as ecarrefour, auchandirect.pl) (55.2% of responses). Almost a quarter of all respondents shopped for groceries on auction portals (e.g. allegro.pl), 12.2% – in stores operating solely online, and 5.8% – in specialty e-retailers offering organic food. 2.5% of the respondents indicated other places, e.g. Empik, or a local store offering home delivery (Fig. 4).

Table 2. Factors incentivizing consumers to shop for groceries online in 2020 (%)

	Irrelevant	Not very important	Hard to say	Important	Very important
Coronavirus pandemic and the resulting health concerns	13.9	20.9	12	34.7	18.5
Convenience	2.8	10	12.2	49.0	25.9
Wide choice of products	4.8	11.8	17.1	41	25.3
Time savings	4.4	10.4	11.6	42.2	31.3
Cheaper products	7.2	17.1	23.7	33.5	18.5
Delivery fee	6.4	21.7	23.3	33.1	15.5
Free choice of delivery method	6.4	11.8	16.9	47.8	17.1
Delivery time	4.8	16.5	17.9	43.4	17.5
Access to unique products	8.4	11.6	19.9	37.1	22.9
Ability to correct the order	10.2	16.3	21.1	37.6	14.9
Ability to shop 24/7	6	8.4	11.8	41.8	31.9
Loyalty programs	12.4	22.9	17.3	35.7	11.6
Ability to track the order	9.4	20.3	13.3	37.3	19.7

Source: Own study based on direct surveys.

The respondents were asked to rate various factors related to online shopping to compare their relevance. A uniform system of preferences was created (Table 2). Convenience was shown to be the key factor that prompted respondents to shop for groceries online in 2020. As much as 74.9% of respondents considered convenience to be highly important. 73.7% of respondents opted for the ability to shop 24/7. 73.4% of respondents decided that time savings also incentivized them to buy food online. The following factors were also ranked high: wide choice of products (66.3%), free choice of delivery method (64.9%), delivery time (60.9%), access to unique products (60%), traceability of the order (57%), coronavirus pandemic and the resulting health concerns (53.2%), ability to correct the order (52.5%), cheaper product prices (52%), delivery fee (48.6%), and loyalty programs (47.3%). The coronavirus pandemic and the resulting health concerns proved to be the least important factor that affected the respondents' decision to buy food online. Every 11th respondent declared that the pandemic did not really influence their choice to shop for groceries online. Respondents considered loyalty programs (12.4%) and the ability to correct the order (10.2%) irrelevant.

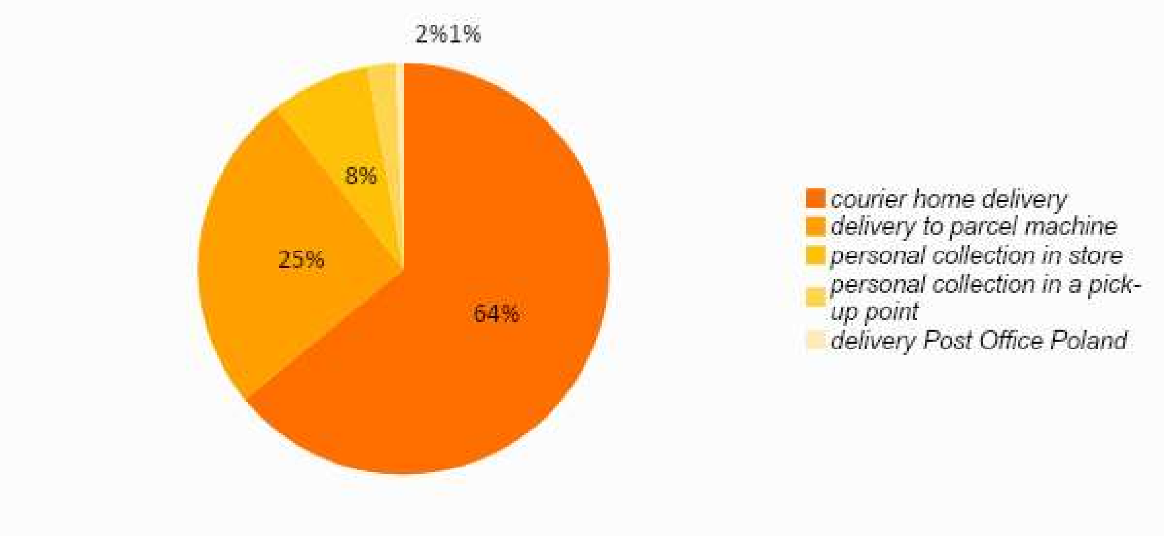

Fig. 5. *The most popular forms of food delivery in e-shopping*

Source: Own study based on direct surveys.

Respondents most often chose home delivery by courier (64.1%) and pick up from a parcel locker (25.3%). 39 respondents preferred in-store pickup, and 2.2% preferred to pick up their groceries at a pickup point. The smallest number of respondents opted for Poczta Polska delivery services (0.6% of responses).

Table 3. *Factors that disincentivize consumers from online delivery shopping (%)*

Rating 1 – no disincentivizing effect, and 5 – very strong disincentivizing effect	1	2	3	4	5
Inability to physically check the product – quality concerns	4.6	6.6	20.2	25.2	43.4
Long delivery time	7.6	7.9	29.8	32.5	22.2
Concerns about the security of the transaction	17.5	17.5	31.8	18.9	14.2
Difficulties with using new technologies to place the order	43.7	14.6	23.2	13.2	6.3
No online grocery shopping options in my area	19.9	11.9	29.8	15.2	23.2
Too high delivery fees or free shipping thresholds	7.9	8.6	25.2	30.5	27.8
Concern about the quality of logistics services, e.g. product defrosting, food damage	3.3	6.6	26.2	34.4	29.5
Concerns for health and safety related to COVID-19	26.2	14.9	25.8	16.9	16.2

Source: Own study based on direct surveys.

The respondents were asked to rate on a scale of 1-5 (1 – no disincentivizing effect, 5 - very strong disincentivizing effect) the factors that discourage them from buying food online. Not being able to check the product physically was ranked as the key disincentive related to the quality concerns. Almost 70% of respondents assigned a score of 4 or 5 to this factor. Concerns about the quality of logistics services (e.g. product defrosting, food damage) was another important disincentive pointed out by nearly 64% of respondents. Respondents also felt discouraged from online grocery shopping by excessively high delivery fee or free shipping thresholds (58.3%). No less important was the long delivery time (54.7%), as well as the inability to buy food online in the local area (38.4%). About a third of respondents felt concerned about the security of the transaction, as well as health and safety concerns related to the COVID-19 pandemic.

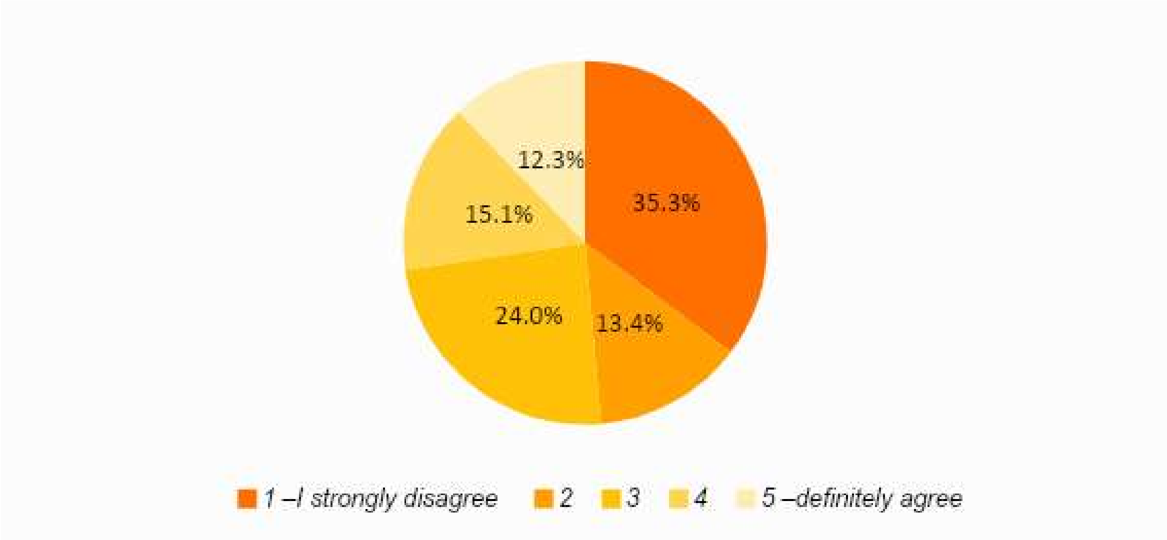

Fig. 6. *Respondents' attitude to the impact of the coronavirus pandemic on the frequency of online grocery shopping.*

Source: Own study based on direct surveys.

27.4% of respondents admitted that the COVID-19 pandemic prompted them to shop for groceries online more often. However, almost half of the respondents did not agree with this statement.

DISCUSSION

According to the Shopper report "New world of e-commerce", the e-grocery market in Poland reported the fastest ever growth in 2020 [14]. Based on a study conducted in the first quarter of 2021, more than half (60%) of the consumers in Poland shopped for groceries online in 2020, which marks a sharp increase compared to data from earlier research [13]. This group included mainly women, people aged 25-34, with higher education, and a positive self-perception of their financial standing, as reflected in a study by A. Dominici et al. [3] concerning Italy. These findings conflict with those of M. Grzywińska-Rąpca & M. Grzybowska-Brzezińska (2016) concerning consumers in Poland, which showed that men shop for groceries online much more often than women. This study confirmed the first research hypothesis to be true.

Consumers were shown to shop for groceries online usually several times a month, mainly for products with a long shelf life, such as coffee, tea, or dry products, which confirms the fifth working hypothesis. These findings conflict with the results of studies conducted in Poland by M. Grzywińska-Rąpca & M. Grzybowska-Brzezińska (2016), in which e-consumers declared they only shopped for groceries online a few times a year. This means that the frequency of online grocery shopping among Poles has increased significantly over the period of 4 years.

In terms of the type of groceries purchased, the findings of this study are consistent with that of K. Jach and A. Miniewicz [6]. According to a study by Etumnu & Widmar conducted in 2020 in the US [5], which has the largest (in terms of revenues) food market in the world [5], consumers most often purchased snacks and sweets, vegetables, dairy and milk, fruit and spices in the 'recent week' segment. The top-of-the-list categories in the 'never' segment are baby foods and infant formulas (69%), alcoholic beverages (51%), and mixed meals and water. Contrary to the results of research conducted in Poland, American e-consumers appear to buy both fresh and processed foods online. For example, respondents who had previously shopped for groceries online often bought milk and dairy products (50%), vegetables (51%), and fruit (48%) in the recent month. These differences may be attributed to the limited confidence of consumers in Poland in the quality of groceries shopped online compared to Western countries, as evidenced in the results of this study.

This study has also helped identify the incentives and disincentives to online grocery shopping as perceived by consumers. Convenience, the ability to shop 24/7 and time savings were found to be the key factors that encouraged respondents to shop for groceries online in 2020. The findings partly confirmed the second working hypothesis (in terms of convenience and time savings); albeit important for two-thirds of respondents, a wide choice of products proved to be less relevant than the ability to shop 24/7. This study is consistent with the findings of Sreeram et al. [12], M. Grzywińska-Rąpca and M. Grzybowska-Brzezińska (2016), who highlighted the comprehensiveness of online food shopping as the most important factor inherently associated with convenience, time savings, and a wide choice of products. These findings conflict with a study by K. Jach and A. Miniewicz [6], who found that special discounts resulting in lower product prices were the main incentive for online grocery shopping. Accordingly, it can be concluded that price is no longer the most important factor determining the food habits of consumers in Poland, which was also confirmed by K. Jach and A. Miniewicz [6].

Moreover, the coronavirus pandemic and the resulting health concerns were shown to have the least effect on the willingness of respondents to shop for groceries online, or the frequency of online grocery shopping. Therefore, the seventh hypothesis has been rejected.

The strongest disincentives to buy food online are the inability to physically check the product, which is associated with product quality concerns, the concern about the quality of logistics services, and the excessive high delivery fees or free shipping thresholds. Based on these findings, the third working hypothesis can be confirmed to be true. These findings are consistent with the results of J. Gębski et al. [7], it can therefore be assumed that consumers in Poland are still not fully confident about online grocery shopping.

Home delivery by courier and pickup from a parcel locker are the most popular delivery options, which confirms the fourth working hypothesis and is consistent with other studies [11].

The most common place to buy food online was an online store run by brick-and-mortar grocery chains (brick-and-click retailers), which contradicts the sixth working hypothesis. In a study by the Chamber of Electronic Economy (2018), auction portals, e.g. Allegro, were the most popular place for online grocery shopping. These conflicting findings can be attributed to the rapid increase in the number of delicatessen and grocery supermarkets that introduced online shopping options in 2020 [15], promoted by restrictions related to the COVID-19 pandemic.

CONCLUSION

The primary focus of this study was to explore the attitudes of consumers in Poland towards online grocery shopping and the impact of the COVID-19 pandemic on the e-grocery market.

Our findings shed light on several issues. Firstly, it was demonstrated that an increasing number of Poles welcome online grocery shopping. Moreover, the profile of a typical e-grocer customer in Poland was described. The study showed that over half (60%) of consumers in Poland shopped for groceries online in 2020. This group included mainly women, people aged 25-34, with higher education, and a positive self-perception of their financial status.

Secondly, the frequency of online grocery shopping and the most and least frequently chosen products were determined. Consumers were shown to shop for groceries online usually several times a month, mainly for products with a long shelf life. These findings suggest that Poles are still not fully comfortable with buying fresh grocery products online.

This study has also helped identify the incentives and disincentives to online grocery shopping as perceived by consumers in Poland. Convenience, the ability to shop 24/7 and time savings were found to be the key factors that encouraged respondents to shop for groceries online in 2020. Moreover, the coronavirus pandemic and the resulting health concerns were shown to have the least effect on the willingness of respondents to shop for groceries online, or the frequency of online grocery shopping. The strongest disincentives to buy food online are the inability to physically check the product, which is associated with product quality concerns, the concern about the quality of logistics services, and the excessive high delivery fees or free shipping thresholds.

We also identified the delivery options most often preferred by e-consumers. These include home delivery by courier and pickup from a parcel locker. This may point to a growing demand for refrigerated lockers and the very important role of logistics operators on the e-grocery market.

The study also showed where consumers most often shop for groceries online. The most common place to buy food online was an online store run by brick-and-mortar grocery chains (brick-and-click retailers), which is clearly related to the rapid development of this market sector during the coronavirus pandemic.

The results of this study have some limitations. Firstly, the study was non-exhaustive, and therefore the extent to which these results can be generalized to the entire population may be limited. Secondly, the survey method has some disadvantages, such superficiality and the inability to look in more depth at the subject. Time constraints are the third limitation of this study. The study was conducted during the COVID-19 pandemic, therefore the question arises whether consumers' behavior are likely to change after the pandemic.

From a practical point of view, these results will be very interesting for all economic entities operating in the e-grocery sector in Poland. The study can be used to create marketing strategies for enterprises in the e-grocery market.

Future research should focus on the typology of consumers in the e-grocery market and their behavior patterns after the COVID-19 pandemic.

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