CHANGES IN CONSUMER BEHAVIOR AND PREFERENCES AMID DIGITAL TRANSFORMATION: PRESENTATION AND COMPARISON OF RESEARCH RESULTS 2022-2024

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Purpose: This objective of this paper is to present the results of the consumer preference research and confront them with the results of similar research conducted in 2022.

Design/methodology/approach: A literature review and analysis of available research were conducted. Additionally, the author organized and executed a consumer preference study using online survey tools.

Findings: The 2024 survey results confirm that an increasing number of interactions with brands and services are now conducted through digital channels.

Research limitations/implications: The latest survey was conducted with a larger group of respondents from various countries. However, the majority of participants were young people with higher education, which may result in the findings not being fully representative of the entire population.

Practical implications: Technological change is essential to most industries and services. As consumer behavior shifts, there is a clear trend toward increased use of digital communication channels. Entrepreneurs must stay attuned to these changes and their pace to adapt effectively and seize the opportunities they present for business growth. This article analyzes the changes observed in recent years and offers practical recommendations.

Social implications: The essence of this work is to understand the societal changes brought about by digital transformation. It highlights the importance of the human factor in the communication between consumers and service providers.

Originality/value: This article examines contemporary consumer behavior within the context of ongoing digitalization. It presents a comparative analysis of current research findings against those of a previous iteration. This analysis, utilizing a unique dataset, provides insights into shifting consumer patterns driven by technological advancements. The article concludes by identifying potential areas for further research to expand upon these findings.

Keywords: customer experience, digitalization, consumer preferences, digital transformation.

Category of the paper: Research paper.

1. Introduction

In *Value proposition design: How to create products and services customers want* (Osterwalder et al., 2015), the authors stress the importance of understanding of customers preferences. The events of the past five years—marked by global pandemics, new armed conflicts, emerging technologies, and social changes—are increasingly leading us to realize that the world is changing faster and in more unpredictable ways than ever before. Understanding the dynamics of these changes is crucial, and further investigation into their trajectory is warranted to deepen this understanding.

The author conducted a consumer survey in 2022 and published results in a paper titled "High-tech vs High Touch-Challenges in Managing the Consumer Experience with Brands in the Digital Age" (Kordecki, 2022). The aim of the study was to identify trends and phenomena influencing consumer behavior, with a particular focus on understanding how technological advancements shape these behaviors. The findings of the research affirmed that consumers expect brands to maintain a balanced approach by integrating both technical and human factors.

In the first study, the author focused on how people's interactions with brands, companies, and services are changing. Experiences that were once personal are increasingly becoming digital, with some now being exclusively digital. This ongoing shift toward digitization remains significant, as it carries important implications for our lives, both in the short and long term. Much attention is being given to the economy (Haefner, Sternberg, 2020), sustainable development (Ionescu-Feleagă et al., 2023), technology adoption (Brodny, Tutak, 2022), societal impact (Loebbecke, Picot, 2015; Grybauskas et al., 2020) and many other aspects of life. In this paper, the aim is to examine the touchpoints and moments when individuals interact with brands and services, either through digital channels or personal interactions. This shift represents one of the most prominent effects of digitalization in our daily lives.

The evolving consumer behavior, primarily driven by rapid digitalization, necessitates continuous monitoring of consumer preferences. The author decided to repeat the study in a similar form and scope. As such, the research results offer a contemporary viewpoint and juxtapose the present situation with the past. Furthermore, the author broadened the research scope by incorporating respondents from outside Poland to investigate whether nationality and place of residence might influence consumer behavior and preferences regarding the specific use of digital tools in their daily routines.

This article presents the latest study results and compares them with those from the previous edition. The research gap in this area remains significant due to the dynamic nature of ongoing digitalization, which is drastically altering service delivery methods. The findings are also valuable to business practitioners as they reveal consumer preferences and can indicate the future direction of these trends.

2. Theoretical background

Consumer behavior, particularly in the digital age, has become a focal point for both researchers and business practitioners. A recent bibliometric analysis and systematic literature review conducted by Monoarfa et al. (2024) examined online grocery shopping trends, revealing a surge in research interest from 2015 to 2022. This study highlighted customer experience as a key area of focus within this growing body of research.

The impact of demographics on digital adoption and consumer behavior is further underscored by Conlin and Labban's (2019) study. Their survey of 14,807 US grocery shoppers found that younger demographics tend to be more engaged in online grocery shopping, highlighting the influence of age on digital preferences.

This emphasis on customer experience aligns with the observations of marketing expert Phillip Kotler (2024). Kotler argues that the digital revolution has fostered a new breed of informed and discerning consumers. This shift is largely attributed to the internet's accessibility, empowering consumers to research products, compare prices, read reviews, and engage in online communities to share experiences and opinions (Kotler, 2024).
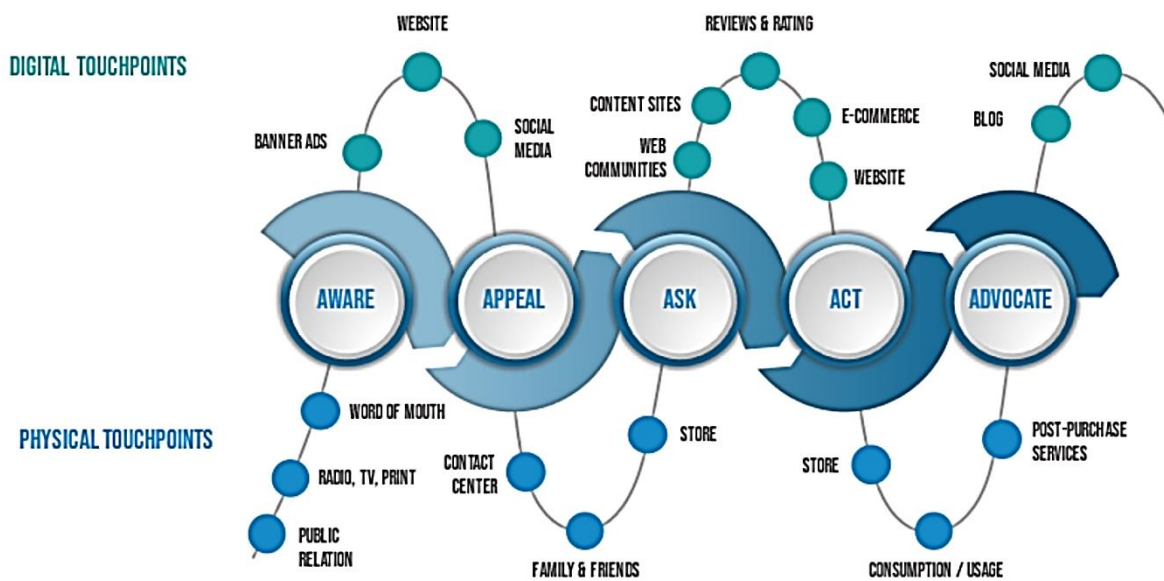
Figure 1. Physical and digital touchpoints along the 5A customer path.
Source: Kotler et al., 2021.

The evolution of marketing and digitalization has significantly altered the way consumers engage with brands and products. The consumer progresses through five stages, known as the five "A"s (Aware, Appeal, Ask, Act, and Advocate), during which they are continuously engaged with the brand. Companies have access to a variety of marketing and technical resources to engage with customers at each of these stages. Furthermore, with the aid of increasingly sophisticated IT tools, communication is becoming more coordinated across all channels throughout the consumer's entire shopping journey (Kotler et al., 2021).

What is an interesting aspect for research on the human – technology touchpoint is the Technology Acceptance Model (TAM) developed by Davis. It has been widely used as it is a well-established and proven framework for studying consumer's acceptance of new technologies. The core of this model states that Perceived Usefulness and Perceived Ease of Use, help overcome consumer resistance to the technology acceptance and adoption (Davis, 1989). The first term refers to the degree of perceived value brought by using the technology, while the second refers to the degree of ease of using it.

Customer experience (CX), encompassing cognitive, emotional, physical, sensorial, and social responses elicited by market actors (De Keyser et al., 2015), has become paramount in product development. This is particularly evident in the realm of IT and software, where rigorous testing is essential.

Testing occurs on at least two levels. First, technical functionality is assessed to ensure the application is error-free, stable, and achieves its intended purpose (Perceived Usefulness). Second, the user interface undergoes scrutiny to guarantee ease of use and effective interaction for the intended user (Perceived Ease of Use, Davis).

This emphasis on user-friendliness is where User Experience (UX) and Customer Experience (CX) converge. Borrowed from the design world, these concepts prioritize creating products and services that are intuitive and enjoyable to use. Recognizing the significant business value of positive user experiences (Ross, 2014), companies across all sectors are investing heavily in UX and CX optimization.

However, the companies should closely monitor the results of the customer focused strategy. It is important to apply a right framework and measure results (Sward, Macarthur, 2007). Research also confirms that companies need to be consistent in their efforts to understand customer behavior, and it's important for them to conduct regular customer research in the right manner (Güler-Bıyıklı, 2024).

The concept of the business model, and Business Model Innovation in particular, has been widely discussed. What is broadly acknowledged is the role of Customer Experience in innovating products and services, and therefore contributing to Business Model Innovation. Both terms are topics of high interest and importance to both managers and researchers. However, recently, more research has been conducted to investigate the impact of a customer-centric approach on an actual business model and how companies can move from products to integrated customer experiences through Business Model Innovation (Keiningham et al., 2020). The authors introduced the Customer Experience Driven Business Model Innovation (CX-BMI), a framework designed to conceptualize the relationship between both disciplines (see Figure 2). The three-step approach emphasizes understanding the Customer Profile, comprehending the strategic internal situation of the organization, and aligning both Customer Experience and Strategic Orientation profiles.
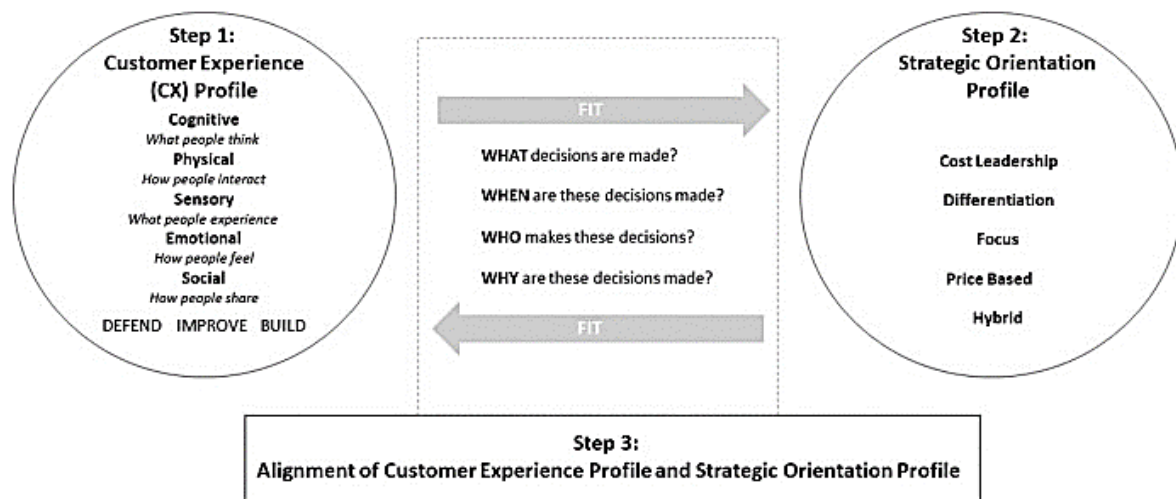
Figure 2. Customer Experience Driven Business Model Innovation (CX-BMI).

Source: Kotler et al., 2021.

Customer Experience is undoubtedly one of the disciplines that can be a source of competitive advantage because it brings real value that is appreciated by the customer. Delivering the value customers want is now easier thanks to the customer data that companies can collect. IT tools enable not only their collection but, above all, their processing. However, the challenge for companies remains how to effectively manage this information so that it can be a valuable factor supporting the activities of user experience (CX) design teams (Holmlund et al., 2020). These learnings can be confirmed by another research. The lack of personalized assistance decreases the customer experience and resellers try to substitute it with online shopping assistants (OSAs) (Singh et al., 2024).

In today's digital age, analyzing data from a single source, such as statistical data illustrating customer behavior on websites, is no longer a challenge. However, the real complexity lies in integrating this data with other sources, including brick-and-mortar sales points. The emergence of OmniChannel, particularly in retail but also in overall brand engagement across multiple channels, is a trend that profoundly influences consumer behavior (Verhoef et al., 2015).

Retail companies face a strategic decision in managing sales across multiple channels, often in competition with each other for customer attention, which can significantly impact final sales figures (Pauwels, Neslin, 2015). Therefore, a comprehensive understanding of customer behavior and preferences is crucial. By breaking down silos and prioritizing harmonization and omnichannel approaches, this task becomes more manageable.
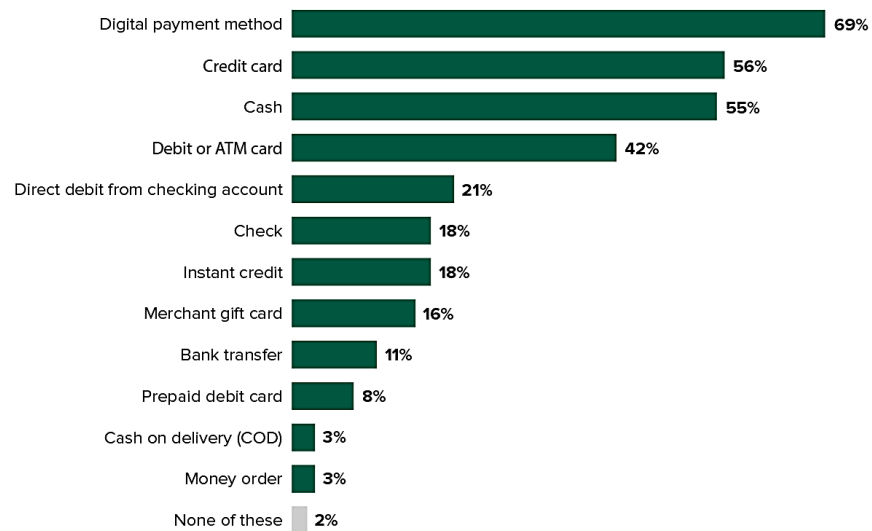
Artificial intelligence (AI) presents another significant, and rapidly growing, influence on customer experience. While automated chatbots offer a readily apparent example, they represent merely the leading edge of AI's transformative potential in this domain.

Although research on AI's impact on CX remains in its early stages, existing studies, such as Ameen et al. (2021), suggest that consumer attitudes toward AI mirror those associated with technology adoption more broadly. While consumers are drawn to the convenience and value

promised by AI tools, trust in the technology and a perceived ability to fulfill their needs are crucial factors driving adoption.

Further amplifying the technological transformation of customer experience is the rise of digital payments. As highlighted by Varon and Murgia (2024), digital payment methods have become dominant in leading global economies, including the United States, underscoring the profound shift in how consumers transact and engage in commerce.

"Which of the following payment methods did you use in the past three months to make a purchase?"
(Multiple responses accepted)

Payment method	Percentage
Digital payment method	69%
Credit card	56%
Cash	55%
Debit or ATM card	42%
Direct debit from checking account	21%
Check	18%
Instant credit	18%
Merchant gift card	16%
Bank transfer	11%
Prepaid debit card	8%
Cash on delivery (COD)	3%
Money order	3%
None of these	2%

Figure 3. Digital Payments Are the Most Commonly Used Payment Method In The US Today.
Source: Varon, Murgia, 2024.

Digitalization impacts virtually every aspect of life, including how consumers interact with brands, products, and services. This phenomenon interests researchers across various fields. The examples above illustrate areas that overlap with the scope of the presented consumer research.

3. Research and findings

The survey, titled "Changing Consumer Choices and Preferences in the Context of Digital Transformation," was conducted in March and April 2024. This year's edition had 230 participants, compared to 106 in the fall of 2022. Previous surveys were available only to native speakers, but the current survey was offered in English and Spanish as well. The vast majority of respondents chose to complete the survey in Polish or English, with only 14 opting for the Spanish version. The survey was available online, and participants were recruited via email and social media. The survey group was randomly selected and is not representative of

the overall social structure. Respondents were asked about specific activities and to indicate the extent to which they performed each activity using digital communication channels. Results from the research are presented below.

Q1: How do you use banking services?

The first question in the survey asked respondents how they use banking services. This sector has been undergoing significant transformation for several years, as reflected in the survey results. The most frequent method of accessing banking services is through a mobile app, with 83% of respondents using this option, followed by online banking via a browser. Visits to bank branches and phone calls have become less common. Notably, consumer behavior has not changed significantly since the fall 2022 survey.
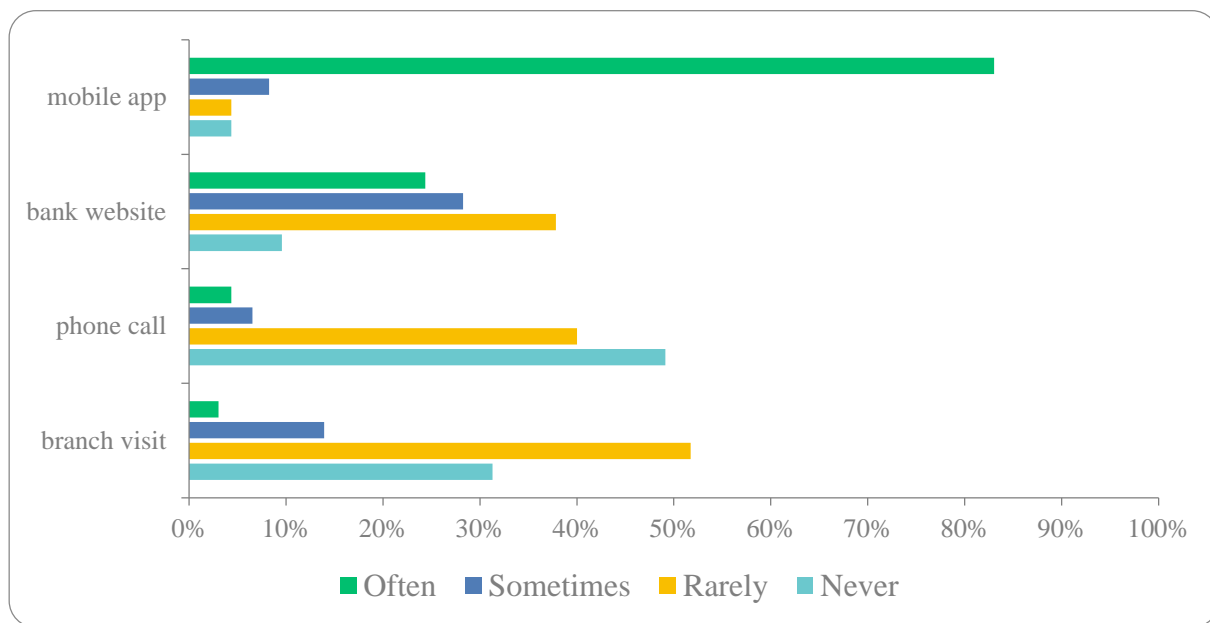
Figure 4. How do you use banking services.
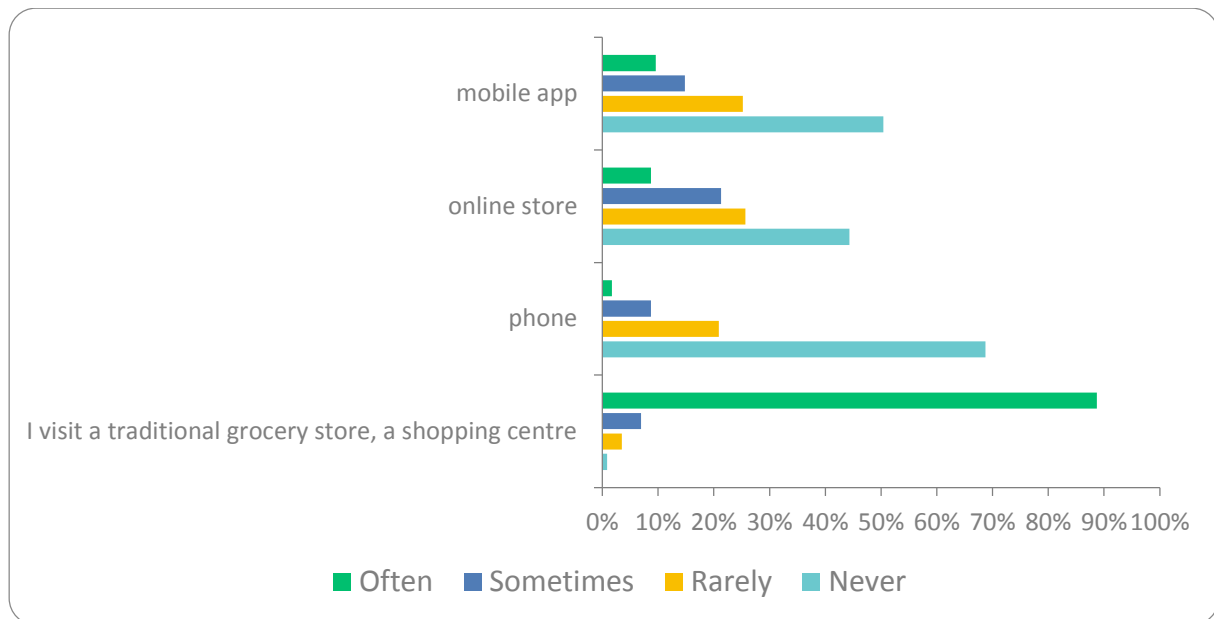
Source: Own research.

Table 1.
How do you use banking services 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	**90,57-83,04%**	4,72-8,26%	0,94-4,35%	4,72-4,35%
Bank website	30,19-24,35%	31,13-28,26%	**32,07-37,83%**	6,60-9,57%
Phone call	6,60-4,35%	0,94-6,52%	44,34-40,00%	**48,11-49,13%**
Branch visit	0,94-3,04%	8,49-13,91%	**56,60-51,74%**	33,96-31,30%

Source: Own research.

Q2: How do you shop for food?

The second question aimed to understand food purchasing habits. Nearly 90% of respondents reported shopping traditionally by visiting physical stores and food markets. Compared to the 2022 results, there is a slight shift towards digital channels. Although traditional shopping remains dominant, people are increasingly opting for online grocery shopping.

Figure 5. How do you shop for food.

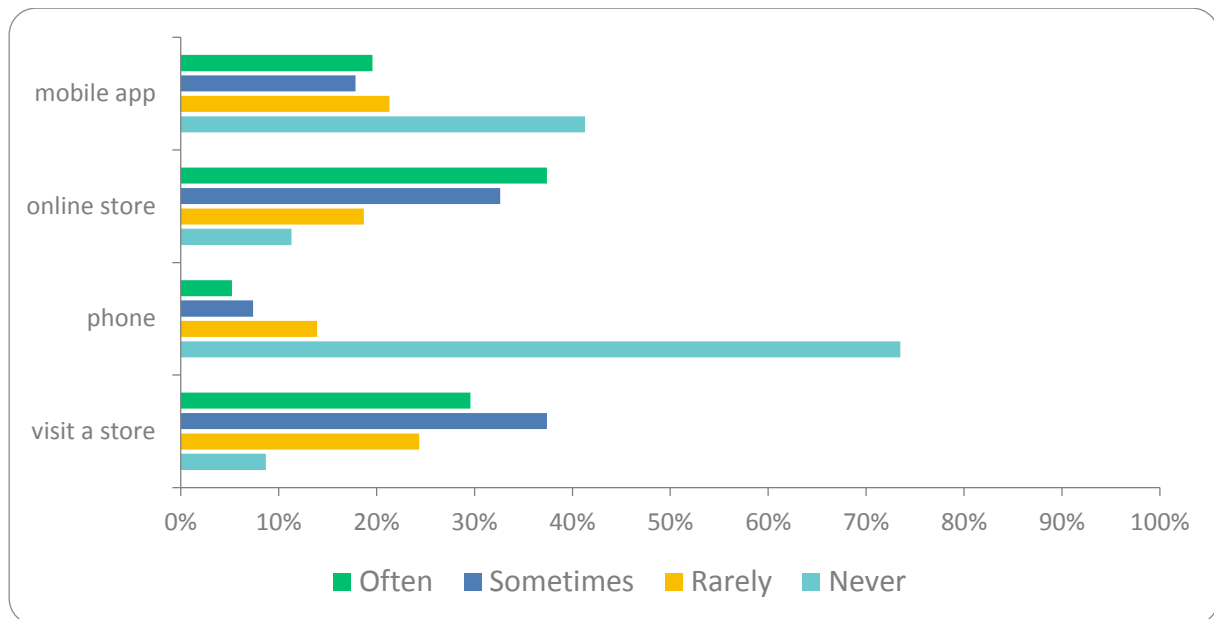Source: Own research.

Table 2.
How do you buy food 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	3,77-9,57%	10,38-14.78%	35,85-25,22%	50,00-50,43%
Online store	3,77-8,70%	14,15-21,30%	45,28-25,65%	36,79-44,35%
Phone call	0,00-1,74%	2,83-8,70%	25,47-20,87%	71,70-68,70%
Grocery store, shopping center	96,23-88,70%	4,72-6,96%	0,00-3,48%	0,00-0,87%

Source: Own research.

Q3: How do you buy books?

Buying books was one of the first online shopping experiences. Even though most commodities can now be purchased via browser or mobile phone, visiting traditional bookstores is still very popular. According to our research, nearly 30% of respondents often visit physical bookstores, whereas over 37% frequently buy books online. A phone call remains the least frequent channel for readers to purchase books. Once again, there are no significant changes in consumer behavior compared to the results of the 2022 research.

Figure 6. How do you buy books.
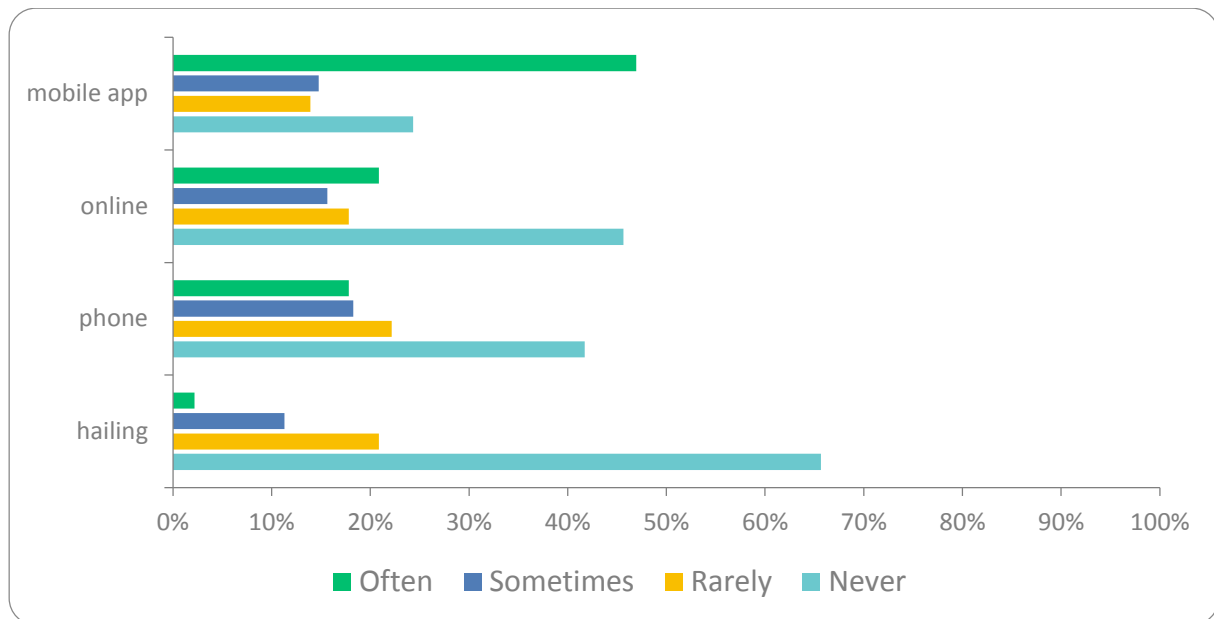
Source: Own research.

Table 3.

How do you buy books 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	14,15-19,57%	19,81-17,83%	27,36-21,30%	38,68-41,30%
Online store	49,06-37,39%	30,19-32,61%	13,21-18,70%	8,49-11,30%
Phone call	0,94-5,22%	0,00-7,39%	20,75-13,91%	78,30-73,48%
Visit a store	26,41-29,57%	34,91-37,39%	28,31-24,35%	10,38-8,70%

Source: Own research.

Q4: How do you order transport services?

The way we travel has been changing recently, especially in urban areas. Commuters now have access not only to public transport but also to car sharing, public bicycle schemes, mopeds, and other means of transport. These options are growing not only in large metropolises but are increasingly available in smaller urban areas as well. Many of these alternative means of transport are available only online, specifically via mobile apps, which makes sense as they are designed for people on the move. Mobile apps are the most popular, with nearly 47% of respondents saying they use them often—an increase from 31% in 2022. This example highlights how the boundaries between browser, desktop, and mobile experiences are becoming increasingly blurred – respondents often confuse online booking with mobile booking.

Figure 7. How do you order transport services.

Source: Own research.

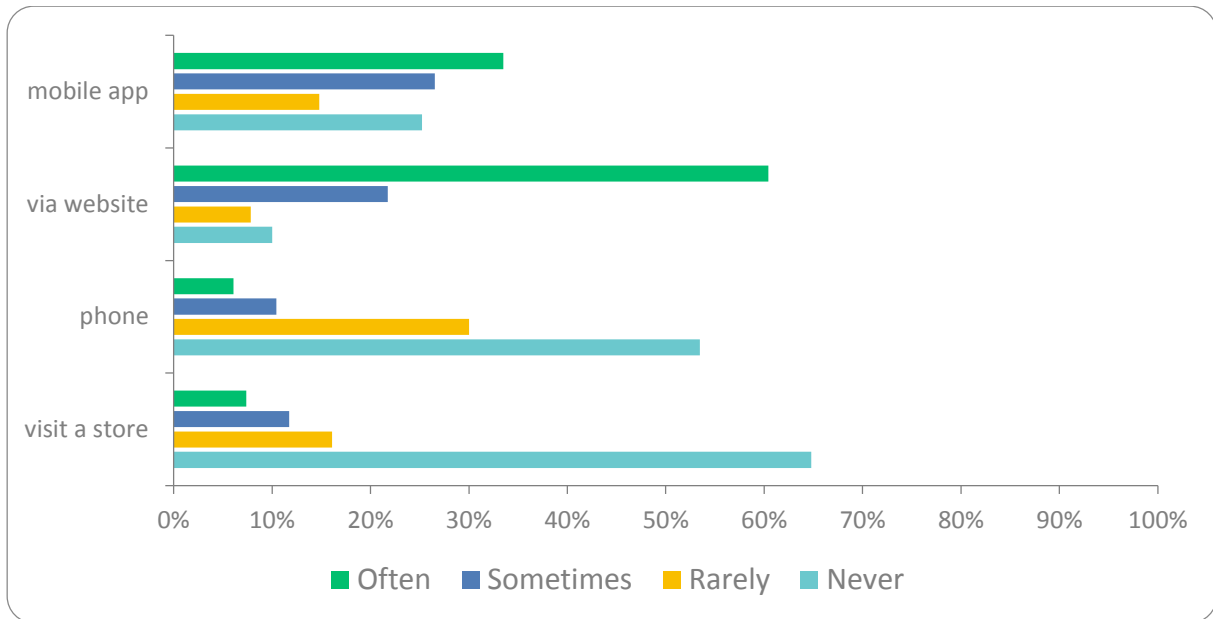**Table 4.**

How do you order transport services 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	31,07-46,96%	14,15-14,78%	22,64-13,91%	31,13-24,35%
Online store	1,89-20,87%	0,94-15,65%	18,87-17,83%	81,13-45,65%
Phone call	29,24-17,83%	17,92-18,26%	26,41-22,17%	27,36-41,74%
Hailing	4,72-2,17%	10,38-11,30%	33,02-20,87%	51,89-65,65%

Source: Own research.

Q5: How do you buy/book travel products? (holidays, flights, hotels etc)

Low-cost airlines needed an easy, effective, and cost-efficient sales channel to reach millions of new customers for whom traveling became accessible. Other means of transport followed as people's habits changed. For the travel industry, the online experience has become one of the most natural places for searching for and purchasing products. You get inspired by what you see on social media and read in online articles, you can easily browse through accommodations available around the world, check opinions, see locations on the map, and finally make a purchase.

Now, nearly 65% of people would never go to a physical store to buy holidays or book a flight (up from 49% in 2022), and those who rarely do so have dropped to 16% from 27% in 2022. In 2024, 95% of people prefer digital channels (often + sometimes), compared to 73% in 2022.

Figure 8. How do you buy/book travel products? (holidays, flights, hotels etc).
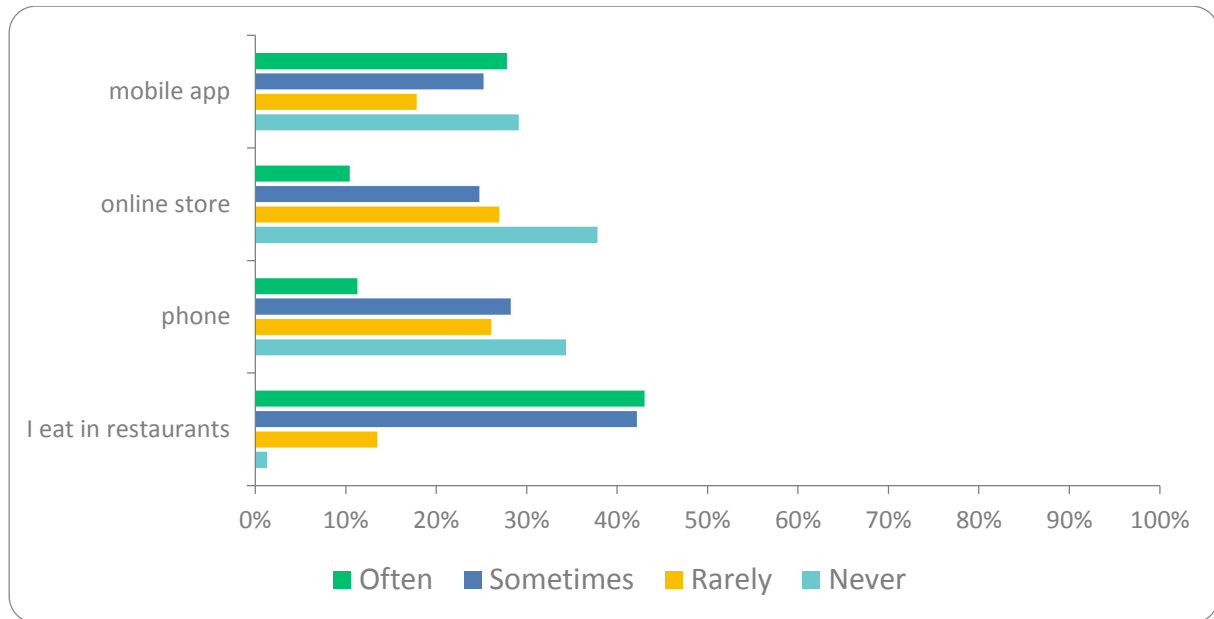
Source: Own research.

Table 5.

How do you buy travel products 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	28,30-34,45%	17,92-26,52%	18,87-14,78%	34,90-25,22%
Online store	45,45-60,43%	27,36-21,74%	16,98-7,83%	14,15-10,00%
Phone call	7,55-6,09%	8,49-10,43%	22,64-30,00%	61,32-53,48%
Visit a store	12,26-7,39%	12,26-11,74%	27,36-16,09%	49,06-64,78%

Source: Own research.

Q6: How do you order food 2022-2024

Question number two aimed to understand grocery shopping habits, while question number six focused on eating habits, specifically ordering ready-to-eat food, including dining out. Similar to transport services, recent years have shown a shift from phone orders to mobile app and browser orders. This method is more convenient as consumers can easily browse and choose the meal they want without waiting for their call to be answered. Additionally, easy online payment is another factor that has made this experience very convenient for both sides of the transaction. Despite this shift, we still love to go out and eat in restaurants, as it provides a different experience and satisfies our social needs.

Figure 9. How do you order food 2022-2024.

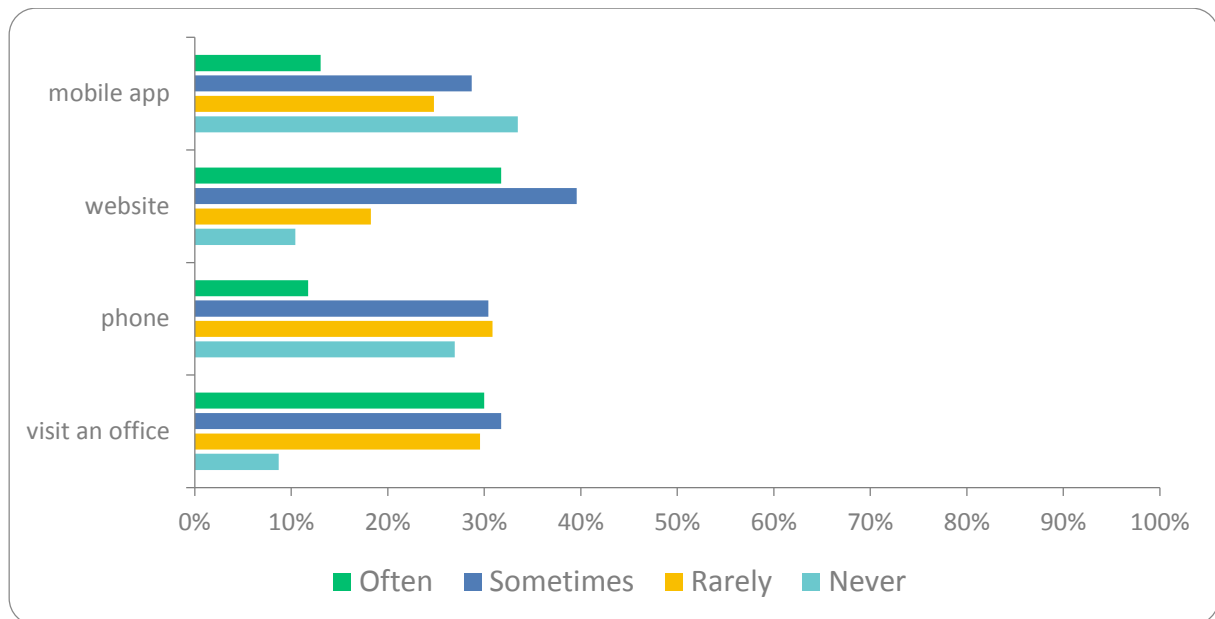Source: Own research.

Table 6.

How do you order food 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	34,91-27,83%	22,64-25,22%	15,09-17,83%	27,36-29,13%
Online store	16,98-10,43%	21,70-24,78%	25,47-26,96%	35,85-37,83%
Phone call	27,36-11,30%	33,96-28,26%	27,36-26,09%	12,26-34,35%
Visit a restaurant	34,91-43,04%	45,28-42,17%	16,04-13,48%	3,77-1,30%

Source: Own research.

Q7: How do you deal with administrative affairs?

In 2022, 48.60% of respondents said they most often handled official matters by visiting the office in person. By 2024, this had decreased to 30%, with the most common channel of contact becoming online at 31.74%. Similar to other questions, the growing popularity of the mobile channel is evident here as well. While it may not be the primary choice for contact, fewer respondents answered "never" when asked if they used mobile consultations for official matters.

Figure 10. How do you deal with administrative affairs?

Source: Own research.

Table 7.

How do you deal with administrative affairs 2022-2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile app	11,21-13,04%	14,95-28,70%	22,43-24,78%	51,40-33,48%
Online store	24,30-31,74%	30,84-39,57%	27,10-18,26%	17,76-10,43%
Phone call	10,28-11,74%	24,30-30,43%	38,32-30.87%	26,17-26,96%
Visit an office	48,60-30,00%	25,23-31,74%	25,23-29,57%	0,94-8,70%

Source: Own research.

Q8: How do consult your health matters?

The last question focused on how we contact doctors to consult about health issues. As in many other areas of life, the COVID-19 pandemic has changed our behavior. What previously seemed impossible or even irrational has now become completely natural or at least acceptable. Research conducted in 2022, although post-pandemic, shows that we haven't abandoned digital channels for health consultations. We've realized that many matters can be handled remotely, and this mode of communication remains important. In 2022, 15% of respondents indicated they occasionally used a mobile app for consultations, while by 2024, nearly 29% did so. While the nature of health problems makes it impossible to completely eliminate personal contact with healthcare providers, many issues can be resolved without direct contact.
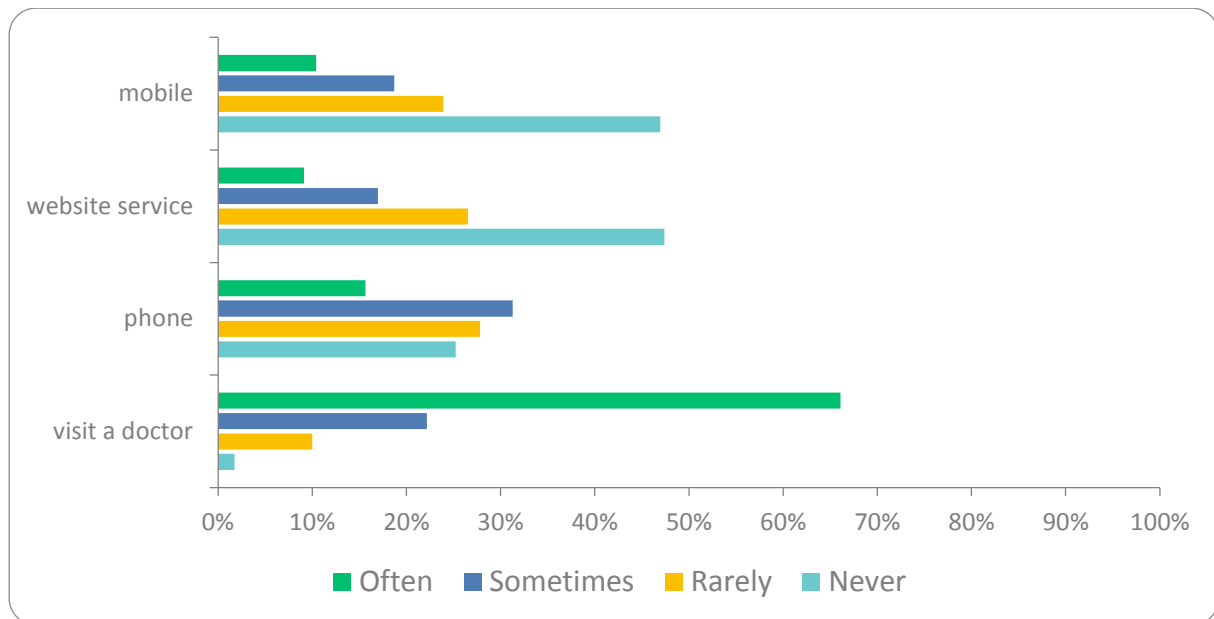
Figure 11. How do consult your health matters?
Source: Own research.

Table 8.
How do consult your health matters 2022-2024

	Often	Sometimes	Rarely	Never
Mobile app	0,00-10,43%	6,67-18,70%	29,52-23,91%	55,24-46,96%
Online	7,62-9,13%	7,62-16,96%	27,62-26,52%	57,14-47,39%
Phone call	20,75-15,65%	27,36-31,30%	37,73-27,83%	14,15-25,22%
Visit a doctor	65,42-66,09%	23,23-22,17%	6,54-10,00%	2,80-1,74%

Source: Own research.

4. Discussion

The results of this year's survey should be interpreted as maintaining the trend of the growing role of digital channels in communication between consumers and brands, products, and services. Compared to the results of a similar survey conducted in 2022, there has not been a radical change in the dynamics of digitization in the areas studied. In some areas, a slight decline in the use of digital tools in favor of more traditional channels can even be observed. One reason for this is certainly the different research sample - the number of respondents has over doubled, and respondents this time came from outside Poland (95% reside in European countries). However, the profile of the surveyed population remained very similar - mainly young and middle-aged people with higher education, students or working living in cities (Figure 12 & 13).
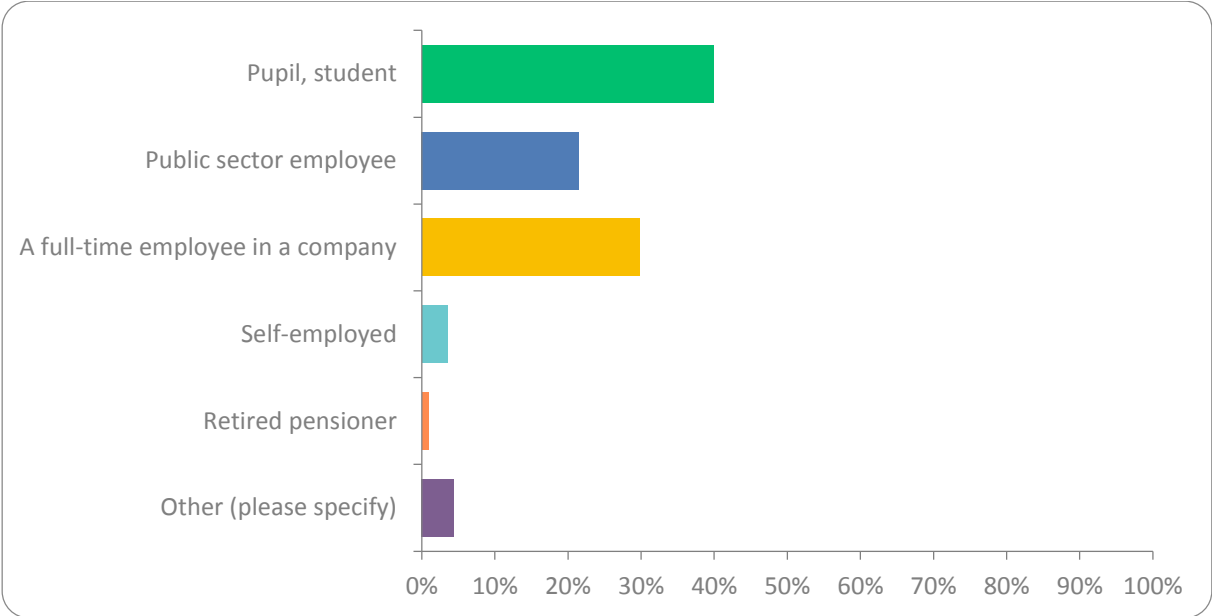
Figure 12. What is your professional situation.
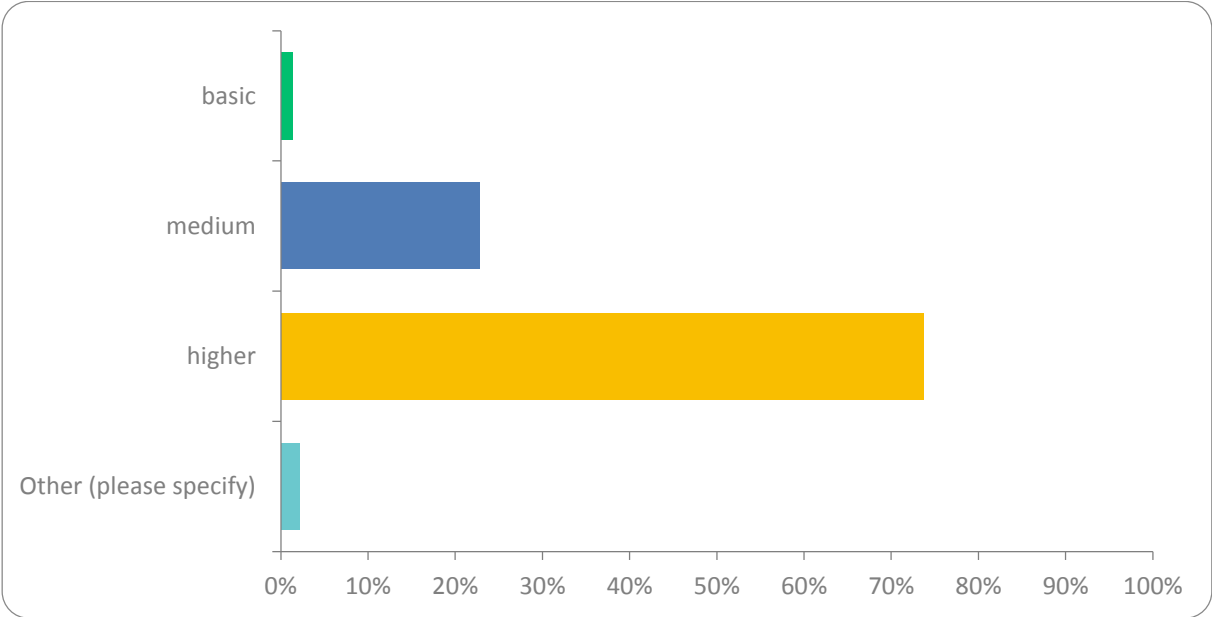
Source: Own research.

Figure 13. What is your level of education.

Source: Own research.

The questions covered the same areas in both editions and referred to typical and frequent situations, problems, and tasks faced by modern consumers. Therefore, the results of both editions' surveys can be considered comparable and illustrative of consumer attitudes in the described social group. While it is difficult to relate them to the entire population, they undoubtedly provide interesting insights for further discussion of changes taking place in society in the face of digital transformation.

Based on the comments from survey participants and an analysis of their responses, it is evident that the line between online and mobile experiences is increasingly blurred. The distinction between activities done on a computer browser and those on a phone is becoming less significant. In reality, we are constantly online, and the device we use is secondary.

Naturally, we choose devices based on convenience for specific tasks. For example, we are unlikely to use a computer to order transportation services, as it is much more convenient to use a mobile app. Conversely, for work-related tasks, a desktop computer or laptop is generally more suitable. Interestingly, even this distinction is becoming less relevant from the user's perspective.

This blurring of device boundaries is encouraged by service and product providers. The concept of an omnichannel experience allows users to seamlessly continue their online journey across different devices. Being logged in across devices ensures process continuity, enhancing convenience for users and efficiency for sellers. This continuity is a crucial aspect of user experience design and personalization. While consumers largely expect personalization, this expectation varies at different stages of interaction with a service or product. Providing the expected service requires not only the use of digital tools but also their proper integration and configuration. Developing the right software is a crucial segment of the IT industry, equipping companies with the tools to offer end customers a seamless and positive experience that combines the digital and analog worlds—or at least an acceptable experience within digital channels alone (Liu, Walsh, 2023).

Therefore, it is essential to view the survey results from this perspective. When we create only two separate experiences — online and mobile — we overlook the interconnected reality of modern digital usage. Take question number 1: How do you use banking services. The table below shows the combined results.

Table 9.
How do you use banking services 2024

	Often	**Sometimes**	**Rarely**	**Never**
Mobile + Online	191+56	19+65	10+87	10+22
Total	247	84	97	32
	53,70%	**18,26%**	**21,09%**	**6,96%**
Phone + Personal contact	10+7	15+32	92+119	113+72
Total	17	47	211	185
	3,70%	**10,22%**	**45,87%**	**40,22%**

Source: Own research.

We can clearly see that digital contact is the first choice, with 53.7% of respondents using digital experiences often. This preference becomes even more prominent when we combine the "Often" and "Sometimes" responses versus the "Rarely" and "Never" options. A total of 71.96% of respondents indicated that they either often or sometimes use digital channels for banking services, while only 28% said they either rarely or never use digital contact. The next table presents a comparable summary for 2022 and 2024 (Table 10).

Table 10.

How do you use banking services 2022-2024

	Often	Sometimes	Rarely	Never
Mobile + Online 2022	60,09%	17,84%	16,43%	5,63%
Mobile + Online 2024	**53,70%**	**18,26%**	**21,09%**	**6,96%**
Phone + Personal contact 2022	3,77%	4,72%	50,47%	41,04%
Phone + Personal contact 2024	**3,70%**	**10,22%**	**45,87%**	**40,22%**

Source: Own research.

The results indicate that there has been no significant change in our preferences, but one aspect is worth noting. In 2022, 22% of respondents answered that they rarely or never use digital contact. In 2024, by contrast, the percentage rose to 27%. This suggests that fewer respondents are now digitally excluded. This shift is likely influenced by the increasing necessity for consumers to manage their affairs online, as more services transition away from traditional, physical forms. As of the end of March 2024, there were 9,900 bank branches in Poland, 276 fewer than a year earlier (Boczoń, 2024). Despite the declining number of branches, they are not expected to disappear completely anytime soon—customers still expect a hybrid experience. This is especially true given that, despite significant investments in customer experience (CX), the perceived improvement by customers remains limited (Clarke, 2024).

The shift toward digital channels is evident to varying degrees across all areas. This trend is also supported by other publications on the topic. One of the key areas of interest in the present study is the use of digital channels for medical consultations. Similar to many other areas, there is a clear increase in the usage and trust in these tools compared to 2022. This topic has been gaining significant attention in recent years, as evidenced by the growing number of publications on Online Medical Consultation (OMC) (Lu et al., 2024). Studies that delve deeper into customer behavior during the travel purchase process and its impact on the business models of online companies provide fascinating insights. These studies help us understand how consumer preferences and habits are evolving and how online travel companies are adapting their strategies to meet these changing demands (Angeloni, Rossi, 2021).

Digitalization is progressing rapidly, benefiting companies in many areas, especially financially. A good example is the increasing use of conversational AI. Many companies, particularly in the B2C sector, are incorporating this technology into their customer service. Perhaps the most well-known tool in this context is chatbots, which automate numerous processes by replacing human interaction.

The biggest challenge for companies adopting conversational AI is maintaining a high-quality customer experience. This involves more than just managing the digital interface; AI tools mimic and replace live customer service employees, ultimately affecting brand perception. Therefore, companies must carefully choose and implement these tools to ensure their image does not suffer from poor customer interactions (Ball, 2023). According to research conducted by Forrester, AI will be one of the dominant technologies used by the banking industry in the future (Bennet, Morgan, 2024). AI is expected to revolutionize customer service,

and its presence is becoming increasingly widespread. However, there is still a lack of research that explains the effects of AI on the quality of these changes (Ameen et al., 2021).

The previous edition of the study developed a model based on Aga Szóstek's *umami strategy*. According to her, there is a 'zone of tolerance' where consumers exist, positioned between the expected and actual experience they receive. The author has extended and adapted this concept into the 'High-Tech vs. High-Touch Tolerance Zone,' where consumers experience a balance of digital innovation and human interaction. Recent research underscores the relevance of this concept—while consumers increasingly value the convenience of technology, they still expect and appreciate human contact.
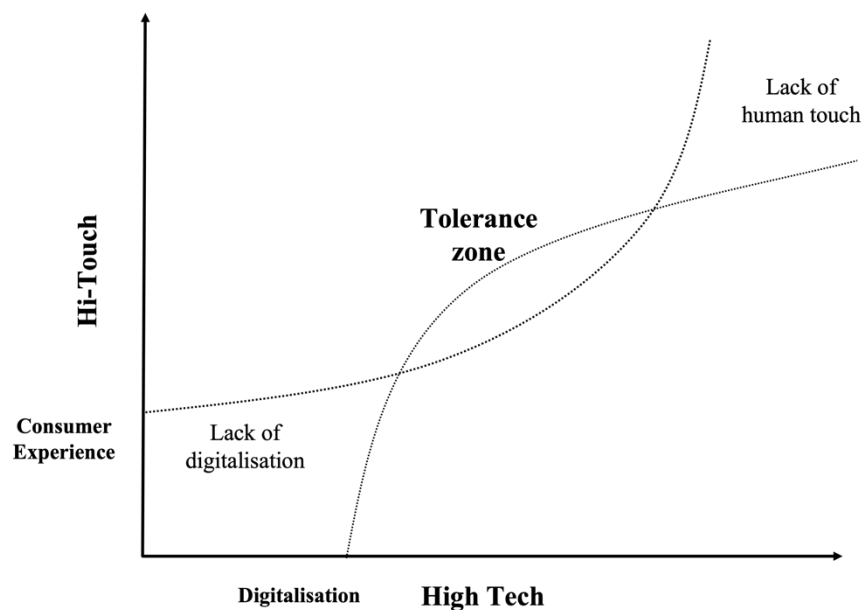
Figure 14. High-Tech vs High Touch Tolerance Zone.

Source: Kordecki, 2022.

5. Conclusion

All major findings from the 2022 study were reaffirmed in 2024. Digitalization remains an unstoppable trend affecting all aspects of life, with consumers generally favoring digital interactions with brands when they offer clear benefits. However, for more personal or complex issues, face-to-face interactions are still preferred. Companies are advised to balance digital and in-person communication, as excessive digitalization can negatively impact the customer experience.

While the trend toward digitalization is unsurprising, a notable shift has occurred in consumer behavior. The percentage of people who rarely or never use digital channels has significantly decreased, while similar responses for traditional channels like phone or in-person

contact have increased. This suggests that a growing number of people are increasingly embracing digital channels. Factors beyond demographics, such as the decline in phone use due to robocalls, fraud, and phishing attempts, are also driving this shift.

Another key finding is the evolving definition of digital channels. The distinction between digital and traditional channels is blurring, particularly between mobile device communication and traditional internet access via computer browsers. This division is losing relevance and may soon be obsolete in future studies.

The 2024 study involved a larger and more diverse group but is not representative of the general population. The survey focused on informed, frequent users of digital media, conducted online, which naturally excluded those who are digitally disconnected. This exclusion, however, aligns with the study's focus.

The results indicate that brands aiming to introduce more advanced digital services must prioritize understanding their customers. Often, transformation projects focus on design, implementation, and testing, overlooking the critical first step of deeply understanding consumer needs and behavior. Researchers and consultants from the research firm recommend using a coordinated approach to digital adaptation using a roadmap that systematizes and organizes the process (Dahlgren, 2023).

Figure 15. Roadmap for digital adoption.

Source: Dahlgren, 2023.

Digitalization is progressing, with functionalities expanding and integrating seamlessly into daily life. The process feels more evolutionary than revolutionary. The study's findings affirm its relevance while suggesting that future editions should adapt to ongoing technological and social changes.

At the same time, it's important to acknowledge the growing recognition of the negative consequences of digitization. Once viewed as an entirely positive and innovative trend, it also has its downsides, which should be mitigated. Top-down initiatives can play a significant role in addressing these issues. A notable example is the European Union's Industry 5.0 policy, which prioritizes sustainable, human-centric, and resilient industrial development across Europe.

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