B A B E Ş - B O L Y A I U N I V E R S I T Y

Faculty of Economic Sciences and Business Administration

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Doctoral Field: Marketing

Transforming the consumer experience through technologies adapted to the New Normal: a marketing approach

SUMMARY

Scientific Coordinator

Prof.univ.dr. Dan-Cristian Dabija

PhD.

Ec. Miriam Tiutiu

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Contents

The paper explores the transformation of the consumer experience through technologies adapted to the New Normal in the retail sector. Starting with an overview of the concept of AI, we identified innovative technologies used in retail and their impact on improving the consumer experience. A special emphasis was placed on the analysis of chatbot technology implemented by online stores in Romanian retail, given that it has a significant potential to bring benefits to users. To this end, we conducted a quantitative research. The results obtained are relevant both for retail managers and for those interested in this technology, while also contributing to the development of the specialized literature. This research aims to fill the gaps identified in the specialized literature by developing and presenting a conceptual model for analyzing the application of AI in retail, with a special focus on chatbot technology. Unlike existing conceptual models, which focus on other technologies in the retail sector, the new proposed model is specifically designed to examine the factors and concepts associated with chatbots. To achieve this objective, the following research directions were formulated:

- Determining the perception of study participants related to the anthropomorphic characteristics of an online store's chatbot.
- Analysis of participants' perception regarding interaction with the online commerce platform chatbot.
- Identifying the perception of study participants related to trust in the online store's chatbot.
- Identifying respondents' perceptions related to controlling interaction with an online store's chatbot.
- Identifying respondents' perception of the stress associated with interacting with an online store's chatbot.
- Evaluating respondents' perception of the sincerity of an online store's chatbot.
- Analyzing respondents' perception of loyalty towards an online store's chatbot.

In order to achieve the proposed purpose and objectives, the doctoral thesis includes a section dedicated to the review of the specialized literature, followed by a part presenting the quantitative research conducted among Romanian consumers. In the conclusion of the paper, the results are structured in three main directions: theoretical implications, managerial implications and research limits, along with proposals for future directions of study. The first part of the doctoral thesis represents the theoretical section, aiming to carry out a complete and rigorous review of the specialized literature on the application of AI in retail. For this purpose, relevant papers from

recognized academic journals were selected. The first chapter explores the conceptual delimitations of the retail field, as presented in the specialized literature. It analyzes the transition from traditional to modern retail, based on technology and AI applications. At the same time, various technological innovations and the impact of globalization on the retail industry are addressed. The second chapter explores the innovative technologies used in both online and traditional retail, through physical stores. Both the benefits and challenges that these technologies bring to the retail sector are analyzed. The chapter also highlights ethical, social and legal aspects specific to modern retail. Finally, the relationship between technology and logistics is presented, addressing topics such as transportation, warehousing and supply chain. The third chapter focuses on consumer behavior in retail, discussing behavioral models applicable to this sector, factors influencing consumer experience and demographic changes. Towards the end, the interaction between technology and customer relationships is analyzed, as well as the impact of artificial intelligence on retail in the context of new trends. The chapter concludes with the formulation of research hypotheses and the definition of the conceptual model.

The fourth chapter presents the research methodology, including all the elements necessary for conducting the investigation. Initially, the framework and design of the quantitative research are established, followed by the characteristics of the analyzed sample. The questionnaire, used as the main data collection instrument, is detailed in a separate section. Finally, the validity and accuracy of the research are verified through the analyses presented in the last part of this chapter. The fifth chapter presents the results of the quantitative research, analyzing the validity of the formulated hypotheses. These are verified and presented in the order of their enunciation, highlighting the theoretical elements that support or contradict the conclusions obtained. In this context, studies from the specialized literature that have addressed similar investigations are mentioned. Of the formulated hypotheses, all were confirmed, the results being determined by analyzing the coefficients used in the Smart PLS software, supported by tables and their interpretations. Depending on the conclusions obtained, detailed discussions are developed, included in the sixth chapter. The sixth chapter analyzes the results in relation to the specialized literature, highlighting the similarities and differences between the conclusions obtained and the existing theories. The purpose of this section is to provide a comparative perspective on the findings. The last chapter, the seventh, synthesizes the research conclusions. For a clear and complete presentation, they are structured in three main sections. The first part highlights the

theoretical implications, emphasizing the contribution made by the development of the conceptual model intended for the analysis of chatbot technology. The second section focuses on the managerial implications, offering practical recommendations for the implementation of artificial intelligence in retail. Finally, the limits of the research and future directions of investigation are presented, with the objective of expanding and deepening the study in the analyzed field.

CHAPTER 1. RETAIL - CONCEPTUAL DELIMITATIONS

1.1 From classic to modern retail based on technology and applications using AI

The retail landscape and research in this sector are constantly evolving, largely driven by technological advances (Gielens and Roggeveen, 2023). Technological progress is affecting and transforming contemporary retail, with the recent COVID-19 pandemic exacerbating the phenomenon (Tiutiu et al., 2023). The digital commerce revolution was sparked by Amazon, which sold its first book online in 1995, fundamentally changing the way consumers interact with retail (Gauri, 2021). Each new retail format puts pressure on existing ones, forcing them to evolve. Online commerce has been a major challenge for traditional retailers, offering consumers a vast selection of products and a high degree of convenience. The emergence of e-commerce has generated multiple difficulties for brick-and-mortar stores, forcing them to adapt their strategies to face competition.

Globally, e-commerce has become an essential element in the context of the COVID-19 pandemic, significantly contributing to maintaining commercial activity. In Romania, online sales recorded a significant increase, reaching 4.68 billion euros in 2019, a considerable evolution compared to the 3.54 billion euros in 2013. In 2020, under the influence of the restrictions imposed by the pandemic, social distancing and remote working, e-commerce sales increased to 5.5 billion euros. In 2024, the value of e-commerce in Romania was estimated at 11.7 billion euros (Crăciun, 2024). This rapid expansion marked a profound transformation of the retail sector in the last two decades (Gauri et al., 2021). With the advent of social networks, the daily activity of retailers has undergone significant transformations, providing them with essential tools for business development and brand consolidation (Vasiliu et al., 2023).

1.2 Technological developments

Technology plays a key role in transforming and developing the retail sector, profoundly influencing the way businesses operate and interact with consumers. Throughout history,

technological progress has been a catalyst for economic and social change, from the discovery of the wheel and the steam engine to the industrial revolutions that reshaped the production and distribution of goods (Dabija et al., 2017; Tiutiu and Dabija, 2023). The first industrial revolution, known as Industry 1.0, marked the transition from manual production to the use of machines, but products remained expensive and limited in volume. The second industrial revolution, Industry 2.0, introduced mass production, allowing for the large-scale manufacture of products at low costs (Mathur et al., 2022). With the development of information and automation technologies, Industry 3.0 brought the concept of mass customization, adapting production to the specific requirements of consumers. This phenomenon has evolved into Industry 4.0, where digitalization, AI and cyber-physical systems have created an integrated network of intelligent production. Industry 5.0 introduces a new concept of harmonious collaboration between humans and machines, focusing on the well-being of all parties involved - society, companies, employees and consumers. Technological evolution continues to shape retail, the transition from Industry 4.0 to 5.0 indicating a paradigm shift from efficiency and automation to a deeper integration of technology with the human factor, in view of a more balanced economic and social development.

1.3 The impact of globalization on retail

In recent years, the rapid evolution of information technology has profoundly transformed daily life, having a significant impact on society and influencing the social behaviors of individuals. One of the most notable achievements in this field is online commerce, which has been widely adopted globally (Shi et al., 2021; Tiutiu et al., 2025). According to Statista Research Department (2023), Romania has approximately 9.7 million consumers who purchase online, representing 48% of the population, generating annual revenues of 6.2 billion euros. In recent years, dependence on online shopping has increased significantly, being accentuated by the COVID-19 pandemic, which caused a sudden change in consumer preferences and an accelerated migration to e-commerce (Rothengatter et al., 2021). The COVID-19 pandemic has triggered major transformations in the way society accesses, distributes, and adopts information and new technologies (Tiwari, 2022). In addition to its effects on the economy and health, this global crisis has driven significant changes in consumer purchasing behaviors across numerous industries, accelerating digitalization and redefining the relationship between consumers and retailers.

CHAPTER 2. INNOVATIVE TECHNOLOGIES IN ONLINE RETAIL AND IN-STORE RETAIL

2.1 Benefits and threats of technologies in the retail sector

In recent years, chatbots have attracted considerable interest from both researchers and business and consumer behavior specialists. Currently, this topic is addressed in numerous academic papers, reports on emerging business technologies, and global news (Lee et al., 2023). AI-based chatbots provide human-like responses, using natural language processing technology to understand user intentions and resolve their requests without human intervention (Libai et al., 2020). Several studies in the field of consumer behavior have analyzed users' perceptions of the humanity of chatbots and the impact of this feature on the degree of acceptance and satisfaction. Research suggests that a chatbot with human traits can significantly improve consumers' experience and their interactions with brands (Roy and Naidoo, 2021).

2.2 Modern retail: ethical, social, legal aspects

Retailers need to adopt and promote ethical sourcing practices to build consumer trust and build a positive brand image. Embracing ethical and sustainable principles helps create a positive customer experience and differentiate themselves in the marketplace. Modern retail is a globalized and dynamic sector, constantly adapting to market changes, emerging trends and new technologies. In this context, ethical practices play an increasingly important role, enabling retailers to develop stronger relationships with customers and ensure long-term sustainable success. Personalizing the consumer experience is a priority in contemporary retail, and the industry is constantly adapting to changing consumer behavior, new global trends and technological advances. The growing consumer demand for transparency and ethical responsibility makes these practices an essential element of modern retail. With the advancement of smart technologies, they gain greater autonomy, having the ability to make independent decisions. This phenomenon redefines the relationship between man and machine, creating the need for clear regulations to ensure the ethical and responsible use of new technologies (Strătilă, 2023).

2.3 Technology and logistics: transportation, warehousing and supply chain

Technology plays a key role in optimizing logistics and supply chain operations, contributing to increasing their efficiency and profitability. Technological advances in the digital

field have revolutionized supply chain management, facilitating its digitization and the transition to an intelligent model, based on advanced technologies such as Blockchain, the Internet of Things and machine learning. These innovations significantly improve planning, sourcing and purchasing strategies, offering benefits such as faster access to information, optimization of logistics processes, real-time data collection, more efficient inventory management and increased transparency. The expansion of digital technologies, which is transforming all industries, also has an inevitable impact on logistics. Although there is no universally accepted definition of Logistics 4.0, it can be described as the use of advanced technologies to plan and optimize the storage flows of raw materials, semi-finished products and finished products, depending on customer requirements. The changes brought about by Logistics 4.0 are based on three main directions: automation, connectivity and intelligent decision-making (Helo et al., 2024). Logistics 5.0 deals not only with personalized distribution, transportation strategies, inventory management and storage decisions, but also with interconnectivity, digitalization and optimization of processes, data, people and machines in all logistics operations carried out, including transportation processes, procurement and distribution, inventory and storage spaces, maritime transport, route optimization, fleet management and payments and invoicing (Andres et al., 2024).

CHAPTER 3. CONSUMER BEHAVIOR IN RETAIL

3.1 Behavioral model applicable in retail

Consumer behavior is constantly evolving under the influence of technological progress and varies significantly from one country to another (Sharma et al., 2023). In a highly competitive retail sector, companies face the challenge of maintaining loyal customers. In this context, consumer experience has become a determining factor of competitive advantage. To ensure long-term satisfaction, retailers must continuously improve the shopping experience, adapting to the needs and expectations of consumers. Especially in the online environment, the integration of new technologies can provide different and personalized shopping experiences, which contributes to increasing customer satisfaction and loyalty. Retailers must be attentive to changes in consumer behavior and adapt their strategies to maintain a sustainable competitive advantage. In the digital age, online commerce is perceived as having multiple advantages. Mobile applications are increasingly preferred over websites, due to their ease of use and navigation. Online stores allow consumers to access and purchase products and services independently of the location of the

manufacturer or retailer, thus providing a faster and more convenient shopping experience. Romania, as an emerging economy, has seen significant growth in online commerce in recent years, reflecting global trends of digitalization and changing consumer preferences (Vinerean et al., 2022).

3.2 Behavioral antecedents that generate consumer experience

Online stores strive to present their products in an attractive way, using images from multiple angles, detailed descriptions, personalized recommendations and reviews from previous customers (Kang et al., 2020). Visual merchandising plays a key role in influencing consumer behavior, increasing their satisfaction, purchase intention and loyalty to the online store. It also contributes to creating a pleasant experience, leading customers to return (Sivakumar et al., 2023). The ambiance of the online store has a direct impact on consumer perception, influencing ease of use, perceived usefulness and the pleasure of browsing the site. A clear presentation of products, together with accurate and well-structured information, contributes to improving the shopping experience. Consumer interaction with the online store significantly influences their behavior. The online store experience is a subjective process, influenced by the consumer's repeated interactions with the digital platform. This is a multidimensional concept, which integrates cognitive, emotional, behavioral, sensory and social reactions to the available offers. Both the internal factors of the online store and the expectations of consumers play a crucial role in shaping the shopping experience. Consumers are currently more informed, more demanding and seek a high level of comfort and personalization in their shopping experience (Iancu and Iancu, 2023). Retailers must adapt their strategies to meet these demands, offering innovative solutions that respond to the specific needs of users.

3.3 Demographic changes

Millennials, formed in an era characterized by rapid technological progress and significant social changes, have a distinct mentality compared to previous generations. They have specific expectations, being oriented towards immediate results and deeply dependent on technology, digital communication and social networks (Dabija et al., 2017; Porral & Sanchez, 2020). In this context, organizations must adapt their strategies to meet the new demands of this generation. Millennials prefer companies that demonstrate social responsibility, support the community and actively contribute to environmental protection. In addition, they place particular emphasis on the

use of technology and on providing fast and quality services. This generation has profoundly influenced the retail industry, changing both the decision-making process of buyers and consumer behavior, forcing retailers to adapt to new trends and preferences. Millennials are expected to become the largest consumer group in history, making attracting them and tailoring their offerings to their preferences a strategic priority for retail companies. Research on this generation shows that millennials adopt a different lifestyle than previous generations, with specific needs, values, and consumer behaviors that are shaping the future of commerce (Porral & Sanchez, 2020). Generation Z is the youngest generation targeted by marketing strategies and, at the same time, the generation with many changes in product/service perception. Generation Z will be the biggest future challenge for marketing (Holendova et al., 2024). Generation Z represents one of the biggest challenges for future marketing. Therefore, it is essential for brands to align their strategies with the preferences of this generation in order to remain relevant in the market.

3.4 Technology and customer reporting

New technologies are transforming the retail industry, and one of the most popular applications is represented by digital voice assistants, which are revolutionizing the consumer shopping experience. However, their role in shaping the customer experience is still poorly understood. Nowadays, the customer experience has become a key differentiator for companies, and retailers recognize the importance of a deeper understanding of customer needs to increase customer satisfaction and optimize store performance. Consumers are looking for fast, convenient and efficient solutions that provide them with value in terms of both cost and time savings. As companies develop and improve algorithms to increase the value offered to consumers, users will become increasingly dependent on these technologies. In addition, AI can help consumers better understand and anticipate their own preferences, thus improving the decision-making process. Emerging technologies such as the Internet of Things, augmented reality, virtual reality, mixed reality, virtual assistants, chatbots, and robots will significantly reshape the consumer experience, providing valuable opportunities for future research. Many companies, including Amazon and IKEA, have integrated augmented reality to improve consumer interaction with their products. The impact of technology on retail is significant, and the integration of digital solutions is key to continuously improving the customer experience (Sunan et al., 2023).

3.5. The implications of AI in retail in the new normal

The advancement of AI has the potential to transform the consumer experience, providing companies with a deeper understanding of customer preferences and purchasing behaviors. By strategically integrating AI technologies at key points of interaction with consumers, retailers can increase customer satisfaction and gain competitive advantages. AI facilitates service personalization, enabling the generation of individualized recommendations based on each customer's purchase history, socio-demographic characteristics, and preferences. This tailored approach improves the shopping experience, strengthening consumer loyalty and engagement (Ameen et al., 2021).

3.6 Research hypotheses and conceptual model derivation

The anthropomorphic features of new retail technologies enhance the consumer experience, increasing perceived pleasure and intention to interact with them (Repko, 2020). Previous research on chatbots confirms that human-like features contribute positively to user satisfaction (Han, 2021). Technological advances in virtual assistants have revolutionized online retail interactions. In a context dominated by advanced conversational technologies, online retailers are looking for innovative solutions to improve customer interaction. These technologies are redefining traditional methods of consumer engagement, providing personalized, efficient, and seamless experiences (Chandra & Rahman, 2024). Chatbots simplify tasks, improve accessibility, and provide instant support, reducing consumer effort. Currently, international brands such as H&M, Tommy Hilfiger, Sephora, eBay, and Whole Foods have integrated chatbots on their platforms to increase customer engagement and provide personalized and efficient experiences (Rohit et al., 2024). Despite advances, interactions with conversational agents still fail to match the complexity and naturalness of human interactions. To improve user experience, chatbots must be equipped with effective failure management mechanisms and be able to respond appropriately in situations that require controlling inappropriate speech (Chaves & Gerosa, 2021).

Some consumers experience anxiety and stress when interacting with technology, which can lead to a lack of control and a sense of confusion. In these situations, more anxious users tend to perceive interactions with chatbots in a negative way and anticipate more pessimistic outcomes. The fulfillment of promises by the chatbot plays a key role in user loyalty. When consumers perceive that they have fast and constant access to services, relevant and up-to-date information, they are more likely to continue using the chatbot (Shao et al., 2020). Furthermore, users who

value the interactivity, connectivity and accessibility of chatbots tend to associate the brand with a high level of competence and professionalism. Chatbots with human features generate a more satisfying experience, increase consumer trust and can contribute to their loyalty. A more personal and natural approach to digital interactions has a significant impact on user perception and, implicitly, on the long-term relationship between consumers and brands (Jenneboer et al., 2022).

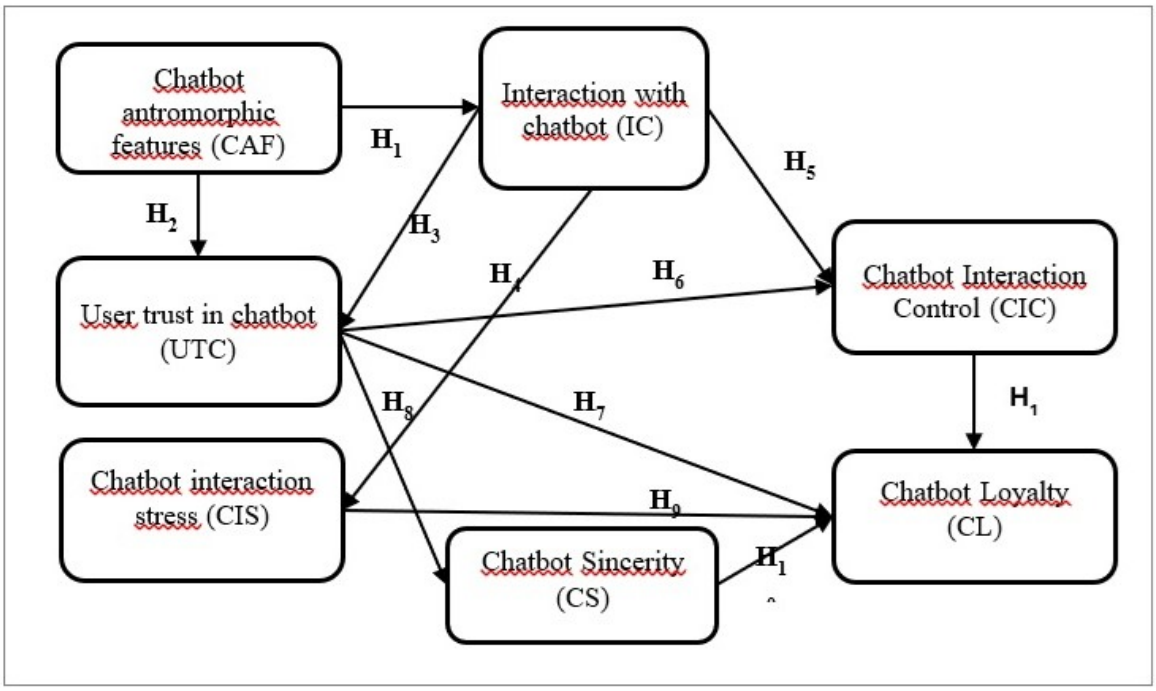

Figure 2. Research model

Source: Own research

CHAPTER 4. RESEARCH METHODOLOGY

4.1 Research context

The application of AI in retail is a relatively new concept in Romania, which is gradually starting to develop, especially in large cities. A recent research (Strătilă, 2023) conducted in the Romanian context provides relevant insights into consumers' expectations and preferences regarding future shopping experiences. Current trends indicate a significant increase in demand

for digital experiences, registering a 30% increase since 2021, as well as an emphasis on efficiency and accessibility in retail. Consumer behavior in Romania is increasingly aligned with that of consumers in developed economies, who want pleasant, fast and efficient shopping experiences. Chatbots have significant potential to transform the Romanian consumer experience in retail, contributing to streamlining operations and reducing costs for companies, while providing added convenience to users. The choice of chatbots in the context of AI is justified by their significant impact on e-commerce, where they have revolutionized interactions between customers and brands. In the literature, chatbots are increasingly used in customer service due to their ability to provide a more convenient, engaging, and efficient alternative to traditional support methods (Sheehan et al., 2020). This technology not only optimizes the user experience, but also redefines the way companies manage customer relationships, improving customer interaction and satisfaction.

4.2 Research design

This research is based on a quantitative study, starting from a clearly defined research problem, which was the basis for the formulation of hypotheses. Following a detailed analysis of the specialized literature on the use of AI in retail, the main research problem was identified and a conceptual model for the analysis was developed. Based on this model, eleven hypotheses were formulated, which will be tested by analyzing the data collected using a questionnaire, thus providing an empirical perspective on the studied subject.

4.3. Socio-demographic characteristics of respondents

The sample analyzed in this research consists of 772 respondents belonging to generations X, Y and Z. All participants are technology users and had access to the internet to complete the questionnaire. The socio-demographic characteristics of the sample were assessed using SPSS software. The average age of the respondents is 33.72 years. Of these, 495 people (64.1%) are female, and 277 (35.9%) are male. In terms of education level, most participants have higher education (461 respondents, 59.7%), followed by those with high school education (275 respondents, 35.6%). Also, 20 people (2.6%) have completed post-secondary studies, 14 respondents (1.8%) have professional studies, and 2 participants (0.3%) fall into the "other" category. In terms of environment of origin, the majority of respondents (623 people, 80.7%) live in urban areas, while 149 respondents (19.3%) come from rural areas in Romania.

4.4 Research tool

The questionnaire used in this research was built based on the developed conceptual model, including seven interdependent constructs. Their items were selected from the specialized literature and adapted to facilitate testing the formulated hypotheses. The anthropomorphic characteristics of the chatbot refer to the degree to which chatbots present human features, an aspect that contributes to improving the user experience (Ischen et al., 2020). The interaction with the chatbot highlights its ability to operate non-stop, providing users with permanent access to assistance. Trust in the chatbot plays an essential role in online interactions, influencing the willingness of users to accept the information provided, to follow the chatbot's recommendations and to capitalize on the advantages offered by the system (Lee, 2023). Interaction control reflects the extent to which users feel safe when using the chatbot. Chatbot stress refers to the anxiety or discomfort some users experience when interacting with a chatbot, which can negatively impact their experience (Rajaobelina et al., 2021). Chatbot honesty refers to users' perception of the chatbot's reliability and honesty. Chatbot loyalty contributes to strengthening the relationship between the consumer and the company, increasing user engagement and brand loyalty (Presti et al., 2021).

4.5. Analyses regarding research validity

To assess the validity of the research problem and the formulated hypotheses, a detailed analysis of the constructs and items included in the questionnaire, as well as the proposed conceptual model, is necessary. For this purpose, specific coefficients from the specialized literature, such as Cronbach's Alpha, Fornell-Larcker, Heterotrait-Monotrait (HTMT), VIF, SRMR and R square, were examined to verify the validity and reliability of the model. The analysis of these indicators confirmed that both the constructs and the items used are valid, thus demonstrating the methodological robustness of the research and supporting the testing of the formulated hypotheses.

CHAPTER 5. RESULTS OF QUANTITATIVE RESEARCH

The established hypotheses are analyzed using the correlation coefficients, standard deviation, T and P test values. Through them, it is verified whether the hypotheses are confirmed or not. Table 11 indicates the results obtained and the fact that 11 hypotheses are confirmed.

Relationship	Coupling coefficients	Standard Deviation	T - value	P - value	Significance intervals		Hypotheses
					2,5%	97,5%	
CAF à IC	0,704	0,023	29,945	0,000	0,653	0,747	H_1 - confirmed
CAF à UTC	0, 413	0,035	11,765	0,000	0,347	0,480	H_2 - confirmed
CIC à CL	0, 178	0,037	4,875	0,000	0,100	0,248	H_3 - confirmed
IC à CIC	0,534	0,054	9,898	0,000	0,430	0,633	H_4 - confirmed
IC à CIS	-0,364	0,037	9,835	0,000	-0,441	-0,296	H_5 - confirmed
IC à UTC	0,488	0,036	13,463	0,000	0,416	0,556	H_6 - confirmed
CS à CL	0,392	0,043	9,135	0,000	0,302	0,480	H_7 - confirmed
CIS àCL	-0,117	0,025	4,720	0,000	-0,166	-0,072	H_8 - confirmed
UTC à CIC	0,261	0,054	4,840	0,000	0,159	0,364	H_9 - confirmed
UTCà CL	0,265	0,047	5,646	0,000	0,174	0,357	H_{10} - confirmed
UTC àCS	0,764	0,019	40,402	0,000	0,726	0,797	H_{11} - confirmed

*Note: CAF = Anthropomorphic characteristics of the chatbot; IC = interaction with the chatbot; CIC = control of interaction with the chatbot; CL = loyalty to the chatbot; CS = sincerity of the chatbot; CIS = stress associated with interaction with the chatbot; UTC = user trust in the chatbot

Table 11. Validity of hypotheses

Source: Own research

CHAPTER 6. DISCUSSIONS

Technological advances have accelerated the use of smart electronic devices, leading retail companies to develop and deploy chatbots as essential tools for online communication and sales. In search of efficient and fast solutions, consumers have begun to adopt chatbots, preferring them over other methods of interaction. A study conducted by United Media Services in March 2024 shows that 40% of urban internet users in Romania use AI applications, including chatbots, at least

once a week. At the European Union level, 13.5% of businesses with at least 10 employees were using AI technologies in 2024, up from 8% in 2023. This expansion of the retail sector and the use of chatbots is supported by continuous technological advancement (Gielens & Roggeveen, 2023). Emerging countries, including Romania, are adopting chatbots in retail, following the trends in developed economies. Companies are using AI to offer innovative digital solutions, including chatbots, that facilitate quick access to information and improve the purchasing process (Trangle, 2024). Although traditional retail remains relevant in Romania, consumers are increasingly turning to digital platforms for various stages of the purchasing process, including documentation, returns management, and post-sales interactions (Cisodmin, 2024).

CHAPTER 7. CONCLUSIONS

7.1. Theoretical implications

The impact of this research is relevant from both theoretical and practical perspectives. The contributions to theoretical progress are reflected in the results of the study, which highlight the importance of integrating AI and chatbots in retail. The most important innovative aspect of the doctoral thesis is that the work introduces an innovative approach by treating chatbots as a multidimensional interface, integrating technology, ethics and experience. This distinct contribution is valuable, especially in the context where the existing literature treats these dimensions separately.

To have a positive effect on the consumer experience, the adoption of AI must be carried out in an ethical manner, respecting their interests and expectations. AI, defined as the science of developing systems capable of autonomously fulfilling objectives, demonstrates the significant impact that technology has on retail and the relationship between consumers and companies. The analysis of the specialized literature allowed the identification of several innovative trends in retail, one of the most prominent being the use of chatbots. These systems, based on AI technology, play an essential role in retail, contributing to the personalization and optimization of the user experience, offering them fast, efficient and intuitive interactions. To facilitate the implementation of AI-based technologies in retail, both existing marketing research and this study aim to highlight the factors that influence consumer attitudes and behaviors. According to the research results, developing countries, including Romania, present significant potential in the adoption of AI in

retail, as consumers are open to exploring new ways of shopping. Unlike previous generations, young people are more receptive to technology, having a higher level of digital literacy and an increased ability to make informed and convenient decisions.

7.2. Managerial implications

Retail marketers have the responsibility to constantly analyze chatbot performance and consumer behavior in order to develop effective strategies for their integration. The main objective of retail companies is to implement chatbots in a way that meets users' needs and provides them with positive and efficient interaction experiences. Although chatbots are a relatively new technology on the Romanian market, they have the potential to support companies in strengthening long-term relationships with customers. To maximize the impact of these technologies, retail managers should develop and implement strategies that continuously improve the quality of interactions between chatbots and consumers. The research conducted highlighted that respondents believe that chatbots do not always fail to provide an experience comparable to human interactions. Therefore, I recommend continuous improvement of chatbots, so that they come as close as possible to the experience of a natural conversation and respond as accurately and empathetically as possible to consumer expectations.

7.3. Research limitations

The literature review highlighted certain limitations in the field of research on the application of AI in retail, especially chatbot technology. Being a relatively new topic, the number of existing studies is still low, which is the main limitation of this research. Although various sources were selected, no research was identified that covered all markets in which AI is implemented in retail. The literature review was an essential step in developing the conceptual model and formulating the hypotheses that formed the basis of the quantitative research. The second part of the paper presents the quantitative analysis carried out, within which certain limitations were identified, the most important of which is the still low degree of adoption of chatbots by Romanian consumers, which made the process of identifying relevant respondents difficult. Compared to developed markets, Romania is in a continuous process of improving the implementation of AI in retail. Although companies are investing in the integration of chatbots and want to provide the most efficient and enjoyable digital experiences, their adoption remains

limited, which affects the speed of the technology's spread. To complete the questionnaire, respondents had to understand how chatbots work, which constituted an additional challenge in data collection. Thus, research in the field of AI applied in retail is both interesting and challenging, requiring adaptability from marketers, who must overcome these obstacles to achieve their goals. Despite the difficulties encountered, the study was successfully completed, providing a valuable contribution to the specialized literature and providing relevant insights into the evolution of AI in retail.

7.4. Future research directions

To expand the literature, future research could address different aspects of AI application in retail, with a particular focus on chatbots. The study analyzed consumer behavior in Romania, providing new insights into customers in Eastern Europe and emerging markets. This paper investigates the impact of AI in retail, and a detailed analysis by specific sectors could be a topic of major interest for marketers. Further research on chatbots and consumer behavior in Romania would bring valuable contributions to both the literature and retail companies seeking to optimize their digital strategies. An interesting direction for future research could be to explore differences in chatbot usage across demographic and socioeconomic segments. Future studies could also analyze how marketing efforts influence the intention to interact with chatbots and whether this intention varies according to consumers' socioeconomic status. In addition, the current research was based on a relatively homogeneous sample of users. Introducing a cultural element into a future study could highlight whether and to what extent AI applied in retail is influenced by cultural differences between consumers. Last but not least, a comparison between early and late adopters of chatbots would be relevant to understand the factors determining acceptance or reluctance towards this technology in retail.

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