Original Paper

A Theoretical Approach to Artificial Intelligence in Consumer Behavior

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Abstract

The main purpose of this research is to investigate the effects of artificial intelligence, which has increased its popularity in recent years, on the purchasing behaviors of consumers, which have existed since the first ages, in order to meet their needs. In the study, primarily consumer behaviors are explained. Afterward, a literature search was conducted on the emergence and development of artificial intelligence. Finally, the effects of these two concepts on each other were analyzed.

Keywords

Consumer Behavior, Artificial Intelligence, Consumer

1. Introduction

It is predicted that Artificial Intelligence (AI) will be a concept that is mentioned more often in the future and that can change our lives more. AI provides the power to integrate human-specific features (sight, hearing, touch, speech, flying, learning, taste and smell, etc.) into machines with computer support. It is emphasized that the use of AI products with these features in businesses' customer relations, smart products and services, and automation of processes can increase the performance and productivity of businesses (Marr & Matt, 2019). It is essential that this concept, which has become so popular around the world and is called the "new oil", should be taken seriously (Wirth, 2018). AI has been described as a revolution in many studies and it has been predicted that it will have an impact on most of our lives (Makridakis, 2017). With the function of reading, interpreting and analyzing data-based information, YZ can predict that individual A is interested in product B or that person X can buy Y mount for Z price. This situation actually shows that there is an AI effect on consumer behavior (Wirth, 2018).

2. Conceptual Framework

2.1 Consumer Purchasing Behaviors

Recently, the field of marketing has witnessed many new developments all over the world. Unstable consumer profiles have led to changes in purchasing behaviors and habits. In short, the consumer is the person who buys the product or service and uses them (Ivanovic, 2003). Consumer behavior shows the final purchasing behavior of the individual or household that buys the product or service for personal consumption. All the channels where the final purchase of the consumers is made constitute the consumer markets (Kotler, 2005). Purchasing behavior is the decision-making processes and behaviors of consumers that involve purchasing and using products and services. Consumer purchasing behavior, on the other hand, is the act of purchasing products or services for personal use or household use without any business purpose (Pride & Ferrell, 2000).

Consumer behavior is an undefined field of study. However, in order to be more quantitative or more definable and to determine the needs of their customers, marketers should try to reveal who they are, their behavior patterns, what influences their purchasing decision and what processes they follow when choosing a product / service. There are many factors that trigger consumer buying behavior. As an example of these; social factors such as reference groups, family, subculture and culture, human factors such as learning, personality, perception and motivation, and factors such as political, technological and economic (Oktay, 2006). The Covid-19 pandemic process affects purchasing behavior mostly in terms of economic factors. As the word crisis; It can be conceptualized as an unplanned and unexpected situation that occurs inside or outside the organization, causes problems in the activities of the organization, and causes the customers and employees to perceive threats both physically and mentally. It can also contain the concepts of uncertainty, surprise, panic, fear and shock, which have similar meanings (Yılmaz et al., 2019).

Consumer behavior has been exposed to a trend of differentiation with the effect of the pandemic process. Consumers have started to stay away from crowded environments, especially retail outlets, in order to be protected from the risk of virus by focusing on basic needs along with isolation and quarantine measures. For this reason, many businesses have lost their economic power due to the bans and had to lower their shutters, and accordingly, consumers have made some changes in their consumption routines. Increasing concerns about the exhaustibility of products caused panic and also triggered uncontrolled, wholesale buying behavior. In this process, consumers tend to exhibit more wholesale buying, less contact shopping, digital shopping (online shopping) and avoiding crowded environments in order to survive.

2.2 Artificial Intelligence

Intelligence; It is defined as all of human's ability to think, reason, perceive objective facts, judge and draw conclusions (Turkish Language Institution [TDK], 2021). Artificial intelligence (AI) is the transfer of these characteristics unique to human beings to machines after analysis. McCarty, who is accepted as the first to use the concept of artificial intelligence in the literature, defined it as "the

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science and engineering of making intelligent machines, especially intelligent computer programs" (McCarty, 2007). Winston (1992) briefly defined artificial intelligence as the imitation of human virtues such as perceiving, thinking and acting with computer models. The goal of artificial intelligence is to produce machines that tend to be better than humans by imitating what humans can do (Nilsson, 1998). We live in a technological age where what is produced, discovered, innovation and popularity is in high demand. The feeling of need, curiosity and satisfaction from the existence of humanity to the present; They have been the keys to discoveries or inventions. Just as the invention of fire was accepted as a leap of age in the early ages, artificial intelligence has taken its place in the literature as an era-skipping invention for today (Aydın & Değirmenci, 2018).

Robotics is increasingly turning towards cognitive and intelligent evolutionary organisms. Robots also have complex bodies in which they develop their experience and thus their type of intelligence. To cope with the increasing complexity of the human environment, technical systems need to become more adaptive, more autonomous and smarter (Mainzer, 2010). It is predicted that artificial intelligence will change more than expected day by day. Because AI can provide machines with human-specific powers such as seeing, hearing, tasting, touching, speaking, walking, flying and learning with computer support. These features of AI can open a different window for businesses at the point of communication with customers. It can offer them smarter, professional, less error-prone products and services. In parallel with these, it means that business performances will gain positive value with the digitalization of processes (Marr & Ward, 2019).

AI, which has gained a place in our lives with digitalization, provides institutions and businesses with sustainable competitive advantages in the new world economy, while also providing the opportunity for branding and rapid adaptation in new markets (Gülşen, 2019). Lovelock and Wirtz (2004), to have functions such as speeding up the automation process with digital transformation, reducing cost items, offering products and services in accordance with customer demands and expectations, adding attractiveness to the existing product understanding and improving the service understanding are the requirements for an enterprise to be innovative. According to Solomon (2007), the emerging new order of digitalization is one of the factors that seriously affect consumer purchasing behavior. It is predicted that the increase in the number of internet users all over the world will increase the interest in this field. The rapid increase in digitalization in all sectors maintains the popularity of AI applications in innovative businesses.

2.3 Artificial Intelligence and Consumer Behaviors

AI systems are increasingly used to organize and select relevant information such as the ranking of search results, the news online users read, the multimedia content they access, or suggestions for future purchases. Such a function is particularly beneficial to consumers, as machines are more efficient and objective than humans in selecting relevant and quality information, potentially leading to better matching and lower search costs. In this context, algorithms can help overcome the problem of information overload by taking responsibility for information processing. Indeed, they can change the

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decision-making process by allowing consumers to outsource their purchasing decisions to algorithms, thus introducing the concept of "algorithmic consumer" (Gal & Elkin, 2017). In this way, algorithms help consumers overcome behavioral biases and cognitive boundaries, make more rational choices, and empower them against manipulative marketing techniques. Bundorf et al. (2019) run a randomized controlled trial in which they offered access to a decision support tool with algorithmic recommendations for selecting the cost-minimizing insurance plan. They found that algorithmic advice significantly increased the probability of changing plans. However, the authors in particular also find that self-selection in software use is quantitatively significant. In fact, many people who accept algorithmic support plan to change their insurance plan anyway, while those who refuse will benefit most from this type of decision-making support. This shows that simply having access to AI support is not enough to internalize the benefits.

3. Conclusıon

Modern marketing aims at meeting the demands and needs of consumers correctly. Analyzing and knowing whether consumers are satisfied is an important factor. At this point, consistent exploration of consumer behavior is the main philosophy of marketing strategies.

AI technology can create a new market or customer potential by analyzing the data obtained by providing businesses with an effective interaction with customers. AI also supports the acceleration of the consumer decision-making process by performing rapid analysis of information or data.

While surfing the web, AI collects and analyzes information about their online behavior using the customer's demographics and psychometry, thanks to its digital footprint. A lot of information such as the user's purchasing frequency and brand preferences is revealed by the data obtained with artificial intelligence. With the influence of AI, sellers are helped to understand the needs and preferences of the consumer. AI helps companies understand what their customers want by segmenting the audience. AI helps predict the buying behavior of its target customers in the easiest way possible.

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