Chapter 7
Transformation of Marketing With Technology:
Case Approach for Artificial Intelligence

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ABSTRACT

Marketing lives as a living organism with its competitive environment and several internal conditions. Marketing functions should adapt to the world they are bound to and develop their activities by taking into account the changes and developments in micro and macro factors. With the increase in technology and the spread of social media, transformation in marketing has become inevitable. Advances in business applications have better results about understanding customer and markets. As previous studies examine artificial intelligence concept with different contexts, there is lack of integrated study which examine marketing and artificial intelligence together. This study proposes three-steps plan for implementing AI with marketing while it includes nine scenarios from different marketing goals. Study also has suggestions for implementing AI methodologies into business processes.

INTRODUCTION

In recent years, the marketing and business world has been undergoing a major change due to technological developments. These changes affect the decision-making processes of the enterprises as well as the consumers and their behaviors. Changing consumption patterns and decision-making processes of consumers and enterprises affect each other, cause market conditions and competition to become difficult. In this study, the effects of artificial intelligence concept, which is one of the important factors of the recent and next years, on marketing concept and its applications will be emphasized.

With the increase of digitalization in the world, a huge amount of data flow is provided. People could not have guessed that there was a data increase and input in this way in the past years. According to the report published by Smart Insight (2017), in the world in sixty seconds, 500 hours of video is uploaded, 29 million messages are sent in Whatsapp, 1,440 new content is published in wordpress, 448,800 tweets are posted in twitter, 65,972 photos are shared in Instagram. 3.8 billion searches on google, 3.3 million new posts are shared on facebook, 149,513 e-mails are sent. These figures will increase in the near future by increasing their growth rates. According to the latest report published by We Are Social (2018) about individuals' digital media usage habits; the number of internet users in the world was found to be 4.5 billion. According to the data of 5 years ago, the number of internet users is 2.5 billion. This tremendous increase is one of the most important points in the increase of big data with the use of internet. When we evaluate the situation from a different perspective, 7 billion of the world's population does not use the internet. We can say that the big data will increase more when people use the internet.

While the concept of artificial intelligence is a technical-based concept, it has been studied in various fields in the business world in terms of applications. In this study, these fields will be analyzed from a marketing point of view and will be presented as case studies. From the first point of view of marketing, it will be focused on examining existing consumers in different contexts and making inferences about them. In this perspective, in addition to the fundamental statistical analyzes, which are generally "summative", different methodologies are used as "interpretative". For example, in a service company evaluating consumer complaints; variables such as the number of monthly complaints, total number of complaints "summative" quality. Issues such as the discovery of the text patterns in the complaints and the detection of the emotions in the text are "interpretive". In the second perspective on marketing, inferences are made for the future about consumers. Various statistical methods are used in this perspective in which the future is estimated through the available information. In the third point of view of marketing, it is possible to support the processes related to consumer experience with a business-oriented approach. There are improvements in robotic technologies and production / distribution channels.

The machine learning part, which is an important component of the concept of artificial intelligence, has a lot of benefits especially in the field of decision support systems and business intelligence. Today, it is important to understand and interpret the mass of data called "big data". Large amounts of data produced by consumers and the market could contain specific patterns and meanings. It will be useful for companies to discover these specific patterns and meanings and turn them into usable information for businesses. For example, the decision-making team of a business providing services in the field of tourism can conduct market research for the region where it serves, and can monitor the trends of consumers in real time and periodically. In terms of marketing communication and crisis management, consumers' reactions to social media can be observed. One of the basic functions of machine learning is the technical determination of the characteristics of the current situation.

One of other function of machine learning continues with determined characteristics to predict future events. Similar to statistical concepts, for example a normal distribution detected regarding to customer reaction to specific brand campaign, would follow same normal distribution. This assumption is supported with "large" quantity of data in today's social media. This second function also helps to improving service quality for consumers as they include customer and market insights. Second function of machine learning and improving customer experience are included as three cases in this study.

Previous researches on two main concepts (marketing and artificial intelligences) examine phenomenons with specific contexts including classification of reviews, predicting future consumer behaviors

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