



## Chapter 2

# Impact of Artificial Intelligence on Marketing Research: Challenges and Ethical Considerations

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### ABSTRACT

*This chapter explores the use of artificial intelligence (AI) in market research and its potential impact on the field. Discuss how AI can be used for data collection, filtering, analysis, and prediction, and how it can help companies develop more accurate predictive models and personalized marketing strategies. Highlight the drawbacks of AI, such as the need to ensure diverse and unbiased data and the importance of monitoring and interpreting results and covers various AI techniques used in market research, including machine learning, natural language processing, computer vision, deep learning, and rule-based systems. The applications of AI in marketing research are also discussed, including sentiment analysis, market segmentation, predictive analytics, and adaptive recommendation engines and personalization systems. The chapter concludes that while AI presents many benefits, it also presents several challenges related to data quality and accuracy, algorithmic biases and fairness issues, as well as ethical considerations that need to be carefully considered.*

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## **1. INTRODUCTION**

The advent of new technologies has gradually transformed the customer journey into an experiential process (Batat and Hammedi, 2022; Hadi and Valenzuela, 2019). This journey involves consumers engaging with a continuous flow of information about a product or service across multiple touchpoints and channels, starting before purchase, continuing during purchase, and culminating after purchase (Lemon & Verhoef, 2016). For instance, thanks to digital devices, consumers can instantly access details in the prepurchase phase about any product, its substitutes and complements, read customer reviews, and even find out opinions of peers through social networks (El-Shamandi Ahmed et al., 2022; Hill et al., 2015). The assumption is that with all this readily available information, consumers will make fully informed decisions. However, the digital environment has limitations, and not all the information consulted is reliable. It also provides such a large volume of information that it can lead to consumer fatigue (Moon et al., 2021).

As a result of this dynamic transformation, market researchers must reflect on whether there is a paradigm shift and, consequently, whether traditional methodologies are still viable (Batat & Hammedi, 2022) or, on the contrary, if they need to find new tools better suited to the new context. This is a scenario in which consumers can combine information from the online environment to finalize a purchase decision in a physical store or vice versa (Batat, 2022).

This chapter discusses the need to incorporate new market research tools based on Artificial Intelligence (AI) to scrutinize the consumer journey and experience in online and hybrid environments. Unlike the physical environment, where capturing information requires the use of standardized protocols such as questionnaires, the online environment generates information spontaneously through comments posted on blogs, social networks, platforms, etc. Much of this information is of an unstructured typology. Thus, an initial task for market researchers is to update information acquisition protocols and adapt them to informal environments. For this purpose, AI-based protocols have been adopted (Sáez-Ortuño et al., 2023a). In other words, the new protocols must collect information from different sources and formats, which must then be sifted and structured (e.g. by coding) so that analytical tools can be applied (Sáez-Ortuño et al., 2023b). Although online and hybrid market research allows academics and practitioners to obtain valuable information, only a few studies in the marketing field have utilized AI methodologies. This chapter details some of them.

This chapter outlines procedures for adapting information collection protocols in online environments using artificial intelligence, as well as proposed tools for analyzing the data. Taking a holistic approach to online market research, it provides an overview of methodologies that market researchers can implement, the most pertinent applications, and challenges that may arise in the future. Specifically, this chapter addresses three important areas: a description of artificial intelligence tools for data collection and analysis, the areas of the customer experience journey where these tools have been applied, and some future challenges. The aim is to serve as a starting point for future research on utilizing artificial intelligence for market research in digital or hybrid environments.

## **2. THE EVOLUTION OF MARKETING RESEARCH WITH AI**

Modern market research is an integral part of marketing management and contributes to a greater understanding of the process that runs through the customer journey to experience (Lemon & Verhoef,

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