

Chapter 1

A Better Understanding of Big Data and Marketing Analytics: A Review

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ABSTRACT

Data mining and analysis is consolidating as a crucial practice in economic, educational, social, and business sectors. In this context, this study aims to identify and categorize the main strategies, metrics, and concepts that are derived from big data analytics (BDA) and marketing analytics (MA). This study follows a systematic literature review (SLR) of important scientific contributions made so far in this research area. The authors have identified through this study 13 key concepts related to big data analytics and 13 related to marketing analytics, which are classified and categorized according to their application in technologies or actions in digital marketing. The chapter concludes with a discussion between theoretical and practical implications on the results for future researchers.

INTRODUCTION

Undeniably, the environment in which society is living is increasingly dynamic and changing, which according to many studies is called VUCA. This acronym is used to reflect the Volatility, Uncertainty, Complexity and Ambiguity of the world we live in (Kaivo-oja and Lauraeus, 2018; van Tulder et al., 2019; Patnaik, 2020).

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In this context, the study and analysis of data is acquiring significant importance in most sectors, especially when they occur in a digital environment. Big Data is known as the large amount of data that it is generated in these ecosystems, and it is characterized by the accessibility to them, making data a valuable material for those who are able to interpret and use them optimally (Fosso Wamba et al., 2018).

On the other hand, the field of data science and analysis are areas that are in continuous growth and evolution. There is an increasing demand for analytical and data science profiles in most companies and even institutions (Saura, 2020). Therefore, it could be said that the so-called Big Data Analytics (BDA) is considered an important element of differentiation and competitive advantage over competitors when analytics and data interpretation is done correctly (Akter et al., 2019).

However, the quantity of information collected by organizations is so large which make it sometimes difficult to manage and obtain conclusive results. These results favor for the implementation of corporate strategies, decision making, innovation or the improvement of user experience (Dudycz, et al., 2019).

The benefits of extracting data, analyzing them and obtaining the so-called insights have a very significant impact on many areas and departments of companies, both large and SMEs (Saura et al., 2021). In contrast, either for reasons of ignorance, or little interest, data analysis still does not have the consideration it requires in the daily tasks and strategies of organizations (Camargo et al., 2018).

Understanding consumer needs and transmitting correct message to the right people is one of the main tasks of Marketing, a simple but at the same time quite complex task. Consumers' tastes, interests, needs and concerns are constantly changing, closely linked to the aforementioned VUCA ecosystem in which the society is living (Saura et al., 2019). Through data analysis it is possible to obtain insights and make better strategic decisions focusing on the consumer as the main target, an important feature of the so-called Marketing Intelligence (Lies, 2019).

It is through social networks, smart devices and other devices where most users provide a large amount of data and expose personal information such as their interests or location (Anshari et al, 2019). From a business point of view, these channels are key to be able to keep up with what to offer, how to offer it and especially how to improve consumers' lives in a more personalized way (Zhang et al., 2019)

Users are spending more and more time on the Internet, shopping online, but above all using social networks as channel of interaction with friends, family and even with the brands (Kang and Yang, 2021). Through these channels, it is possible to analyze and better understand customers or potential customers based on two important drivers: User-Generated Content (UGC) (Saura et al., 2019) and User-Generated Data (UGD). According to some studies, these concepts are key to the development of advanced digital marketing strategies, therefore this explains the importance of effective data analysis (Saura, 2020).

As technology advances, new methods, techniques, or processes focused on data analysis such as machine learning or data mining appear (Gutnik, 2021). This is a challenge for companies, who should understand what the type of data most useful and which techniques are the most effective according to the companies' objectives and products/services offered (Akter et al., 2019). However, overcoming this barrier is decisive, for example for the optimization of resources, content personalization and for the creation of just-in-time strategies to differentiate themselves from the competition, hence the importance of studying this topic.

The main gap that this chapter aims to cover is to provide contrasted and relevant information on the main techniques used in data analysis in digital environments, as well as the most relevant indicators, metrics or concepts that play a determining role in companies.

The chapter will be developed in the form of a Systematic Literature Review and will follow the following structure: In the second section, a theoretical framework will be developed where the relationship

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