

Legal Challenges of Big Data

Edited by Joe Cannataci, Valeria Falce and Oreste Pollicino

Reviewed by *Silvia Bessa Venda**

1. Introduction

As the title suggests, the implications of big data are far from being completely understood and involve several areas of law. This book brings together seventeen authors from Italy, the Netherlands, Israel, Portugal, United Kingdom, Germany and Brazil –mainly renowned academics, lawyers, and members of the Organization for Economic Co-operation and Development (Competition Division) and of the European Union Agency for Fundamental Rights, among other entities. Digital era and big data are addressed in this book transnationally under the perspectives of competition law, intellectual property, data protection, consumer law and fundamental rights, combining both private and public interests.

2. Description¹

This book begins with an introduction by its Editors, Joe Cannataci, Valeria Falce and Oreste Pollicino. They first address the big data phenomenon and its implications, and then frame the key ideas of the contributors. Given the various perspectives presented in this book (which makes it a little dense), and despite the ability of the Editors to synthesize them, it would have benefited the reader's understanding if the last paragraph

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¹ Due to the substantial number of articles included in this book (11), the description focuses on key points, and not necessarily in the same order presented by the authors.

of the introduction, in which the Editors include the book's aims, came before the summary of the chapters.

The first contribution is by Sofia Oliveira Pais, who starts by describing the most relevant EU legal solutions to big data challenges adopted in view of the insufficient protection conferred by intellectual property rights, and then draws on EU decision-practice to defend that competition assessments may consider data protection and privacy issues, therefore addressing the decision of the German competition authority in the Facebook case. From efficiency to fairness, the Author addresses the abuse of economic dependence as a solution to the competition concerns in digital markets, together with exploitative abuses. The article ends with a very innovative proposal from Japan in this field, which, according to the Author's opinion, should be considered at European level. Pais concludes with the various layers of data protection, stating that a holistic approach is necessary.

The second article (chapter 3) is written by Antonio Capobianco and Pedro Gonzaga. They begin with the concept of big data to consider its positive and negative impacts on the market, highlighting its uncertain nature and advocating caution about major policies to be adopted, in order not to compromise innovation and, ultimately, harm final consumers. Afterwards, they explore what they consider to be three of the most important potential consequences of big data: algorithm collusion, personalized pricing, and privacy violation, citing the best-known US price-fixing case involving Amazon's marketplace and cases involving the use of algorithms to share sensitive data or enforce agreements in the UK and in Russia. Finally, the Authors identify the appropriate fields of law to address these risks.

In chapter 4, Renato Nazzini addresses the question of the role that standard privacy protection on online platforms play in competition enforcement. According to the Author, and based both on EU case-law and the above-mentioned German ruling on Facebook, these standards can be considered qualitative parameters of competition. In this context, cases involving anticompetitive agreements, mergers and abuses of dominant position were developed, involving, for example, companies which simultaneously intermediate digital services and sell to consumers, like Amazon. Nazzini explores theories of harm involving GDPR infringements and market power exercise. Despite the above, the Author draws a clear line between data protection and competition law, and addresses the problem of a simultaneous violation of these two fields of law.

Damiano Canapa devotes chapter 5 to the assessment of mergers involving big data and to determining their role in the various stages of the control procedure. To this end, the Author explores the following sub-themes: definition and categories of data; data as an economic asset; and how data is likely to increase the market power of its owner or even put it in a dominant position, in particular in digital markets, which are usually two-sided. Canapa then addresses this issue in the light of the EU Merger Regulation and the decision-making practice of the Commission, discussing under what circumstances the transfer of data can constitute a merger and how the relevant markets can be defined in this context, taking into account that multi-sided platforms typically offer products/services at zero-price to one side of the platform.

In the next chapter, Vicente Bagnoli focuses on platforms and their network effects. A substantial part of the article is devoted to understanding how digital platforms operate in often multi-asset markets. For competition analysis purposes, the Author mentions case study companies such as eBay, Google and Uber. After exploring the characteristics of the digital economy, Bagnoli addresses personal data from both commercial and consumer perspectives and goes through the challenges that these platforms bring to competition authorities, namely with regard to the definition of the big data market structure, which can be divided into three parts identified in the article. In the Author's opinion, under competition law, dominant platforms are subject to a special responsibility.

In chapter 7, Mateja Durovic and Franciszek Lech address the challenges generated by big data in the context of consumer law and the fundamental right to privacy, protected by the EU Treaties and the ECHR (essential to the ideals of democracy and human welfare). After defining big data, the Authors discuss how it threatens consumers' rights in terms of breaches of security and consent and discrimination. For Durovic and Lech, violations of the right to privacy may be at stake in terms of self-determination and control of one's own data. Furthermore, they question the fact that EU legal tools presuppose the idea of smart digital consumers, which may be far from reality. Lastly, the Authors defend a coordinated response of both data and consumer protection law to big data challenges.

Chapter 8 is about the request and analysis of large quantities of data by the Commission in EU merger control procedures. Rupprecht Podszun and Sarah Langenstein start by highlighting the exhaustiveness of both the notifications, currently around 500 pages, and the decisions, which

in Phase II mergers may exceed 1000 pages. The Authors then refer to the understanding and control exercised by the Court of Justice of the EU in this regard. After listing the problems faced by competition authorities in the use of data, they focus on the various mistakes that can occur during its collection and analysis, which can lead to distorted conclusions on the part of said authorities.

In the next chapter, Giovanni de Gregorio and Sofia Ranchordás refer to those who are probably the biggest data collectors in the world, namely States. First, they define basic data concepts and distinguish between personal data and public-sector information, and address the benefits and risks of dismantling data silos, which prevent the sharing of information between various public sector departments. It is in this context that the protection of citizens' privacy under EU law is explored. At the end of the article, the Authors explain why they consider the above-mentioned information silos' dismantling to be a real Pandora's box. According to Gregorio and Ranchordás, this entails additional risks to those posed by digital markets, namely related to equality of arms and treatment. Since EU data protection law does not respond to these challenges, they suggest alternative models to be applied to the public sector.

Chapter 10 focuses on the challenges to freedom of expression brought about by big data technologies. In this context, Oleg Soldatov explores the (possible) existence of a right to online anonymity – although in most democracies de-anonymization only occurs in case of unlawful behaviour, this is not the case in authoritarian States. The Author addresses several problematic issues, such as mass surveillance and digital blackmail, naming the example of China, which created a programme based on the information collected about its citizens to score their behaviour, and that of Bahrain and the use of spyware to collect information on human rights activists.

In chapter 11, Shulamit Almog and Liat Franco interconnect data protection and the rights of children, who are now born into the digital era. Firstly, the Authors explore children's right to dignity, advocating that the Internet and related technologies such as big data, although facilitating the violation of children's rights, can also be used to enhance the protection of those rights, particularly in the context of social networks. In this context, they address the problem of cyberbullying, list the various risks created by big data to the welfare of children, whose digital identity begins at birth, and discuss some of the solutions approved in the US and the

EU for establishing new ethical parameters for big data collection in this area. At the end, Almog and Franco call for the use of big data to protect children and give examples such as the UK, which uses data to improve children's health.

In the last chapter, Francesca Lagioia and Giovanni Sartor address the risks and opportunities created by the application of artificial intelligence to big data, which can be used to increase citizens' quality of life, but also to limit their self-determination. Before exploring such consequences, the Authors define basic concepts such as artificial intelligence and algorithms, showing that there is a very strong link between artificial intelligence applications and big data, as the prediction of a certain outcome relies on known variables, particularly exploring automated assessment and decision-making processes and their ability to serve or constrain legitimate public and private interests. Given the extent of its impact on citizens, Lagioia and Sartor are of the opinion that artificial intelligence falls within the scope of various legal regimes, such as data protection, competition and consumer law.

3. Critical analysis²

This book benefits and suffers from the fact that it brings together so many different articles by authors with different backgrounds around a complex issue such as big data.

If, on the one hand, readers benefit from various legal perspectives, on the other hand, they are faced with repeated concepts, cases, and even conclusions.

This book provides ground-breaking research. Although it raises more questions than it provides answers, it is highly instructive, especially for those who wish to enter the digital world and understand the implications of collecting large amounts of data and using algorithms.

In the end, the main idea that remains is that these dynamic technologies carry as many benefits as risks, and that there are different perspectives regarding the separation and the complementarity of the application of the various legislative instruments addressed by the authors.

The truth is that these markets are in constant development and, despite the scarce existing case-law, these authors have managed to present some solutions and undeniably many paths to consider.

² To ease contextualization, some of the critics were made in the previous parts.

The book is definitely innovative and a must-read for those interested in the “*Legal Challenges of Big Data*”.

Bibliography

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