

Abstract

What benefits does the use of algorithms bring to competition, and is Article 101 TFEU equipped to address the so-called algorithmic collusion?

This thesis provides a comprehensive overview of how digitalization contributes to the development of competition law and how competition authorities apply Article 101 of the Treaty on the Functioning of the European Union to algorithmic behavior of market participants. The main objectives of this thesis are: an analysis of the benefits of algorithms for competition and the application of Article 101 of the Treaty on the Functioning of the European Union to the actions of market participants driven by algorithms.

The first part of the thesis is divided into two sections. In the first section, I define the concept of an algorithm, its historical development, and the types of algorithms relevant to competition law. In the second section, I examine how digitalization affects various parameters of competition and then evaluate their overall impact on competition. This overview focuses on the positive impacts of algorithms, their influence on market participants and consumers. At the end of the first part, I highlight the risk of misuse of the benefits of algorithms when competition law is not effectively applied.

In the second part of the thesis, I investigate, how algorithms can be used for anti-competitive conduct, referred to as "algorithmic collusion", and how such conduct can be addressed under Article 101 of the Treaty on the Functioning of the European Union. I categorize the use of algorithms for algorithmic collusion into various models: 1) Messenger, 2) Hub and Spoke, 3) Predictable Agent, and 4) Digital Eye. For each model, I describe how an algorithm can be used, how it harms competition, and how Article 101 of the Treaty on the Functioning of the European Union can be applied to it. In cases where Article 101 of the Treaty on the Functioning of the European Union cannot be effectively applied, I propose potential tools that could address this shortcoming.

This thesis enables individuals familiar with competition law to understand the impact of digitalization on competition and to comprehend how competition law tools can be applied to technically specific algorithmic behavior, as well as the shortcomings of the current legal framework. This thesis may also serve as a practical guide for market participants considering the implementation of algorithms.

Keywords

Competition law, A. 101 TFEU, Algorithmic collusion