Article

The Use of Artificial Intelligence in the Future of Competition Law Enforcement

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In a future in which the evidential underpinnings for initiating competition law investigations could begin to shift towards a reliance upon the use of artificial intelligence, this paper outlines some of the key opportunities and risks for businesses and regulators.

In October 2017, the European Commission (the *Commission*) published a consultancy tender seeking advice on how artificial intelligence (*AI*) could improve its processes of evidence management, legal drafting and—as is the focus of this paper—its market intelligence gathering.[1] More recently, in its AI White Paper of February 2020, the Commission again expressed an intention to understand how AI can equip 'law enforcement authorities with appropriate tools'.[2]

The utility of AI in the processing of large amounts of data and pattern recognition—particularly against the backdrop of a rapidly digitalising European economy—offers considerable opportunities for the future of European competition law enforcement. One only needs to look at the duration of, and scale of evidence gathered in, the Commission's *Google* investigations to understand the potentially significant benefits to the Commission of future proofing its enforcement powers with AI-powered analytical tools.[3]

For market intelligence gathering and the subsequent initiation of enforcement procedures in particular, the use of AI could provide the Commission with an unrivalled ability to uncover—and conclude—those cases where it appears most 'likely that an infringement may be found . . . cases with the most significant impact on the functioning of competition in the internal market and risk of consumer harm . . . [and] cases which are likely to contribute to defining EU competition policy'.[4] Indeed, such an approach could prove to be an especially relevant accompaniment to the Commission's recent 'New Competition Tool' proposal.[5]

This paper outlines the opportunities and risks which businesses and regulators will have to be aware of if and when antitrust authorities use AI to decide on the initiation of investigations or to gather evidence in those investigations.

I. The potential benefits: AI can make competition enforcement more effective

The initiation of a competition investigation by the Commission can originate in a number of different ways: a complaint made to it by an undertaking or Member State, the provision of market information by undertakings or citizens, and/or information gathered of the Commission's own initiative, including 'when certain facts have been brought to its attention' or as a result of the Commission's 'monitoring of markets'.[6]

When deciding against which undertakings to initiate its investigative procedures, the Commission has significant discretion.[7] With finite resources and an overriding

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1 Commission tender COMP/2017/017 dated October 2017. <https://ec.europa.eu/competition/calls/exante_en.html> Last accessed October 12, 2020.

2 Commission White Paper, Artificial Intelligence: A European approach to excellence and trust, dated 19 February 2020 (*AI White Paper*).

3 In Case AT.39740—*Google Shopping*, the Commission's decision of 27 June 2017 came almost seven years after proceedings were opened on 30 November 2010. The Commission's press release (available online at: https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39740) notes that in reaching its decision, the Commission had gathered and analysed '5.2 Terabytes of actual search results from Google (around 1.7 billion search queries)', 'financial and traffic data which outline the commercial importance of visibility in Google's search results and impact of being demoted', 'experiments and surveys, analysing in particular the impact of visibility in search results on consumer behaviour and click-through rates', 'contemporary documents from Google and other market players', and 'an extensive market investigation of customers and competitors in the markets concerned (the Commission addressed questionnaires to several hundred companies)'. The Commission's *Google Shopping* decision is currently on appeal to the General Court. It comprises one of three decisions issued against Google by the Commission since 2017.

4 Commission notice on best practices for the conduct of proceedings concerning Articles 101 and 102 TFEU, 2011/C 308/06 (*Best Practices Notice*).

5 Commission Initiative, *New Competition Tool Inception Impact Assessment June 2020.* <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12416-New-competition-tool> Last accessed October 12, 2020.

6 Best Practices Notice, paragraphs 9–11.

7 Judgment of 18 September 1992, *Automec v Commission*, T-24/90, EU:T:1992:97, paragraph 66.

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public interest duty, the Commission will weigh the significance of any alleged infringement against the likelihood of finding—and the extent of investigative measures required to prove—any breach.[8]

AI offers the promise of increased investigative efficiencies, i.e. an ability for the Commission to process—and identify market trends across—larger sets of data more quickly and accurately at the outset of an investigation than might otherwise be possible when relying only on human intelligence. Indeed, as available data grows exponentially, AI could help the Commission spot developments that might be early indicators of competitive deficiencies in markets. And, as more and more businesses deploy data monetisation strategies, AI may provide the Commission with the only way of ensuring that it is opening the 'right' investigations and keeping pace with a rapidly digitalising economy.

For addressees of investigative procedures, the use of more sophisticated AI analytics by the Commission could also be helpful. It could, for example, lead to shorter and/or more targeted investigative processes, which reduce the burden of resource-intensive requests for information. Indeed, a broader and deeper evidence-based approach in the earlier stages of an enforcement procedure could also provide the Commission with a robust basis for deciding *not* to initiate (or to drop) a particular investigation. This kind of 'filtering tool' could be especially helpful in the context of digital markets in circumstances where, for example, any evidence of competitive harm (whether in relation to pricing, innovation and/or market entry or expansion) is otherwise lacking. In such circumstances, AI could go on to form part of the legal evidential standard which the Commission could be required to meet in order to initiate (or continue) an investigation.

II. The potential risks: the use of AI can erode procedural safeguards

In at least the short to medium term, however, realising the benefits of AI as a tool for competition enforcement must be managed carefully to avoid the potential erosion of a number of fundamental EU law protections. For these purposes, we have assumed a future in which the Commission could use AI to analyse public and/or requested information, in order to determine which entities and/or practices to start investigating.

A. An enforcement bias?

First, care will need to be taken to ensure that any reliance upon AI for the initiation of competition investigations does not give rise to an 'enforcement bias'.

This is because while the Commission is under no obligation to initiate investigative procedures—and is also not bound by a strict statutory test when deciding whether and when particular information can/should result in the initiation of a competition investigation—its discretion is not unlimited. Rather, in the case of anti-competitive complaints for example, the Courts have made clear that the Commission must:

- consider the factual and legal elements of any complaint to decide whether, if established, the facts would constitute an infringement;[9] and
- undertake a diligent and impartial examination of any complaint in accordance with the principle of sound administration.[10]

Any premature (or indeed, undue) reliance upon pure AI-derived market intelligence as the basis upon which to initiate a competition investigation thus has the potential to undermine these important disciplining principles.

It is also unclear how the Commission would, for example, safeguard against any potential 'enforcement bias', e.g. in certain industries or practices for which data may be more readily available and/or in industries in which a sufficiently broad or deep dataset is not available.[11] The result could be a somewhat 'lumpy'

8 Case AT.39784 *Omnis/Microsoft* [2016], paragraph 16. The Commission took into account that a full investigation would have been a very complex and expensive process and disproportionate to any potential Article 102 TFEU infringement finding. See also paragraph 13 of the Best Practices Notice.

9 Judgment of 18 September 1992, *Automec v Commission*, T-24/90, EU:T:1992:97, Judgment of 4 March 1999, *Ufex*, C-119/97P, EU:C:1999:116 and Judgment of 12 May 2010, *EMC Development v Commission*, T-432/05, EU:T:2010:189. In *Automec* the Court of First Instance (as it was then) held that 'although the Commission cannot be compelled to conduct an investigation, the procedural safeguards [. . .] oblige it nevertheless to examine carefully the factual and legal particulars brought to its notice by the complainant in order to decide whether they disclose conduct of such a kind as to distort competition in the common market and affect trade between Member States' (paragraph 79).

10 In Judgment of 30 January 2002, *max.mobil v Commission*, T-54/99, EU:T:2002:20, this was held to mean that 'the Commission must be in a position to decide as to the "necessity" of its intervention, which in turn implies that it has a duty to undertake a diligent and impartial examination of complaints, on completion of which it regains its discretion as to whether there are grounds for conducting an investigation' (paragraph 54).

11 See, for example, the criticisms of the UK Competition and Markets Authority's 'Screening for Cartels' algorithmic tool, intended to help procurers screen their tender data for signs of illegal bid rigging activity. Commentators have suggested that the absence of sufficient data led to poor training of meta-algorithms which, in turn, led to arbitrary thresholds prompting further investigations. Critics have argued that the tool raises serious concerns as to its ability to accurately identify instances of potential collusion in public procurement. See A Sanchez-Graells,

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competition law enforcement landscape, which could risk stifling businesses' incentives to innovate and inadvertently *create* consumer harm.[12]

B. A right to a fair trial?

Second, Article 37 of Regulation 1/2003 makes clear that it should be interpreted and applied in accordance with the Charter of Fundamental Rights of the European Union. This includes the right to a fair trial,[13] which is underpinned by a principle of 'equality of arms',[14] as well as the protection of an addressee's rights of defence.[15]

In relation to the principle of 'equality of arms', the Court has made clear that 'the undertaking concerned must have been afforded the opportunity, during the administrative procedure, to make known its views on the truth of and relevance of the facts and circumstances alleged and on the documents used by the Commission to support its claim that there has been an infringement of the Treaty'.[16]

The use of AI by the Commission in the initiation and/or evidential underpinnings of competition investigations could, however, give rise to a material imbalance of information vis-à-vis the addressee of an investigation and the Commission[17]. The importance of this point is only amplified when one considers the potential for criminal liability as result of engaging in particular anticompetitive conduct.

While the safeguarding of these fundamental protections is achieved by the legal requirement on the Commission to issue a Statement of Objections (*SO*) and to grant addressees of an SO access to the Commission's file comprising all documents which have been obtained, produced, and/or assembled by the Commission during an investigation (irrespective of storage medium and including any electronically stored data),[18] it is unclear whether such an approach could ever be practicable in the case of AI-derived evidence.

For example, it is reasonable to expect that the use of AI will result in a potentially significant volume of 'additional documents' (i.e. documents which have not been provided to the Commission by the addressee) on the Commission's file, including as a result of automated evidence gathering processes yielding deeper results than 'traditional fact-finding' processes. In such circumstances—and in addition to a need for potentially extending the time granted to addresses for responding to an SO—such an approach could give rise to at least the following questions:

- to what extent, for example, could the Commission ever provide full access to its 'AI file' in order for an addressee's rights of defence—and the principle of equality of arms—to be protected?
- even if full access were possible, to what extent would it be possible to overcome the complexity and opacity of machine learning—sometimes referred to as the 'black box effect'—so as to enable an addressee to fully understand the Commission's evidence and processes in a sufficiently transparent manner?
- and, even if that too were possible, to what extent would (or, should) an addressee be able to benefit from its fundamental rights of defence without, for example, potentially exposing itself to further competition law risk (e.g. were it to seek to analyse and/or replicate the Commission's 'AI file')?

C. A right to privacy?

Third, Article 8 ECHR requires that 'everyone has the right to respect for his private and family life, his home and his correspondence' and that 'there shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others'.

'Screening for Cartels' in Public Procurement: Cheating at Solitaire to Sell Fool's Gold?' (2019) Journal of European Competition Law & Practice. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3382270. Last accessed October 12, 2020.

12 Recital 38 of Regulation 1/2003 makes clear that '[l]egal certainty for undertakings operating under the Community competition rules contributes to the promotion of innovation and investment'.

13 Article 6 of the European Convention on Human Rights *(ECHR)*.

14 Judgment of 29 June 1995, *Solvay v Commission*, T-30/91, EU:T:1995:115 and Judgment of 29 June 1995, *ICI v Commission*, T-36/91, EU:T:1995:118.

15 See Article 27(2) of Regulation 1/2003, which makes clear that the 'rights of defence of the parties concerned shall be fully respected'. See also Judgment of 17 December 1998, *Baustahlgewebe v Commission*, C-185/95P, EU:C:1998:608, paragraph 21 and Judgment of 8 February 2007, *Group Danone v Commission*, C-3/06P, EU:C:2007:88, paragraph 33.

16 Judgment of 7 June 1983, *Musique Diffusion Française v Commission ('Pioneer')*, 100/80 etc., EU:C:1983:158, paragraph 10, Judgment of 13 February 1979, *Hoffmann-La Roche v Commission*, 85/76, EU:C:1979:36, paragraph 11 and Judgment of 9 November 1983, *Michelin v Commission*, 322/81, EU:C:1983:313, paragraph 11.

17 The Commission holds information from thousands of past merger and antitrust cases, which if used to train AI what to look for' in publicly available data is likely to give the Commission a head-start that no potential addressee could match. See, for example, DG Competition Privacy Statement. https://ec.europa.eu/competition/contacts/ps_mergers_en.pdf. Last accessed October 12, 2020.

18 Access to File Notice, OJ 2005 C-325/7, paragraph 1; Articles 7, 8, 23 and 24(2) of Regulation 1/2003; Judgment of 20 April 1999, *Limburgse Vinyl Maatschappij v Commission ('PVC II')*, T-305/94, EU:T:1999:80, paragraph 1012 and Judgment of 29 June 1995, *Solvay v Commission*, T-30/91, EU:T:1995:115.

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This high threshold of protection is recognised in the Commission's recent AI White paper, which notes the need to ensure that 'European AI is grounded in our values and fundamental rights such as human dignity and privacy protection'.[19] It also emphasises the need for AI systems to comply with EU legislation, principles and values, which is all the more important in applications where citizens' rights may be affected, for example law enforcement and the judiciary.[20]

And so this raises another important question: to what extent can the Commission ensure that it in trying to develop a successful AI competition law enforcement tool, it does not deteriorate citizens' fundamental rights to privacy and/or potentially expose itself to the same fairness and transparency policy concerns which it (or other DGs) may be seeking to remedy?[21]

Indeed, the accuracy of any machine-learning tool is directly correlated to the volume of data upon which it has been 'taught'; and the success of any AI tool for the detection of potentially anti-competitive conduct will rely, at least to some extent, on an ability to 'get ahead' of any parties under investigation (i.e. as is the case in a dawn raid). However,

- to the extent that such information includes personal data, it is unclear whether the Commission would ever be able to obtain the necessary consents from the relevant individuals concerned in the context of broad 'market intelligence gathering' activities; and
- to what extent could the Commission share any such personal and/or private information with its regulatory counterparts? Or, put differently, to what extent could an addressee of an investigation 'waive' the confidentiality protections of information relating to other individuals using its services, particularly in cases where it is not possible for an addressee to understand the full extent of the information gathered and processed by any AI tool to which it may not itself be able to receive access?[22]

In conclusion, it is clear that a greater use of AI in the future of competition law enforcement is capable of delivering potentially significant future-proofing and efficiency benefits, both to the Commission and also to addressees of such investigations. It is important, however, that such gains do not come at the expense of addresses' fundamental rights, the wider benefits of legal certainty to Europe's growing digital economy and the sanctity of the Commission's own practices. From this perspective, at least the questions identified in this paper will need to be explored further.

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19 AI White Paper, page 3.

20 *Ibid.*, page 11.

21 See, for example, Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, *Competition policy for the digital era*, Final Report for DG Competition dated 4 April 2019 which notes 'there is a notable interdependency between competition law and data protection law as the latter affects competition and as market power affects both the choices that data subjects realistically have and the privacy risks they are exposed to' (page 73).

22 See, for example, Recitals 6 and 7 of the General Data Protection Regulation (*GDPR*), which emphasises the need to ensure a high level of personal data protection despite the increased exchange of data brought about by technological developments and globalisation, noting that these 'developments require a strong and more coherent data protection framework in the Union, backed by strong enforcement, given the importance of creating the trust that will allow the digital economy to develop across the internal market. Natural persons should have control of their own personal data. Legal and practical certainty for natural persons, economic operators and public authorities should be enhanced'.

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