



Webinar

“Analysing Algorithms: new frontiers in anti-trust”

Thursday 3 June 2021

Dr. Kate Brand and Prof. Pinar Akman

Chair: Bruce Kilpatrick, CLA



How algorithms can reduce competition and harm consumers

Kate Brand

CLA event, 3rd June 2021

The CMA algorithms paper

Algorithms: How they can reduce competition and harm consumers:

<https://www.gov.uk/government/publications/algorithms-how-they-can-reduce-competition-and-harm-consumers>

Purpose and scope of paper

Purpose

- To publicly set out where we see the potential harms due to algos in competition and consumer space and help other international agencies who are further behind in their thinking.
- To provide the background for our CFI so that we can get intelligence on where the biggest issues lie which will then inform our programme of work.
- To build collaborations with academics, industry and wider government.

Scope

- A research paper which sets out potential harms that we think are in our remit, techniques that could be used to investigate them, and what regulators COULD do.
- Not a policy or legal paper

Consumer harms

- Personalised pricing harms
- Harms from non-price personalisation
- Algorithmic discrimination
- Unfair ranking and design

Personalised pricing

- Personalised advertised prices
- Other techniques that are harder to detect:
 - Discounts and promotional offers
 - Complex and opaque pricing techniques
 - Personalised ranking

Non-price personalisation

- Recommendation algorithms
- Manipulating user journeys

Algorithmic discrimination

- Geographical targeting
- Ad targeting

Unfair ranking and design

- Preferencing others for commercial gain
- Use of dark patterns

Competition harms

- Exclusionary practices
- Algorithmic collusion
- Ineffective platform oversight harms

Exclusionary practices

- Self-preferencing
- Unintended exclusion
- Predatory pricing

Algorithmic collusion

- Facilitating explicit coordination
- Hub-and-spoke
- Autonomous tacit coordination

Ineffective platform oversight

- The use of algorithms by firms to address harmful practices that may be partially or wholly ineffective in practice that, if accompanied by a lack of transparency, cannot be externally evaluated.

Techniques to investigate harms

Without access to firms' data or algorithms:

- Observe results of different inputs to infer how algorithm works.
- Directly observe data through web scraping.
- Employ 'mystery shoppers' to use a service and report results.
- Create fake personae to simulate diverse users.
- Use APIs to access model outputs.

With access to firms' data or algorithms:

- Look at code, the organisation's documentation, pseudo-code, and explanations of the code, training data, input and output data.
- Access data through APIs or a third-party sandbox.
- End-to-end audit through a randomised control trial.

The CMA DaTA Unit

- A team of ~35 data scientists, engineers, data and technology insight specialists, and behavioural scientists.
- We help CMA to be more effective, and efficient in dealing with cases
- Analysing algorithms programme

The wider algorithms programme

- Paper was published on 19th January alongside a call for evidence:
[Algorithms: How they can reduce competition and harm consumers - GOV.UK](https://www.gov.uk/government/consultations/algorithms-how-they-can-reduce-competition-and-harm-consumers)
www.gov.uk
- We will publish a summary of the responses and use it to inform a wider ‘analysing algorithms’ programme going forward.
- Joint work with ICO, Ofcom, FCA on ‘algorithmic processing’ more generally (DRCF).

Analysing Algorithms: New Frontiers in Antitrust – the Competition Law Perspective

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Competition Law Association, Lunchtime Webinar, 3 June 2021

Several theories of harm triggered by algorithms are recognised as such in traditional competition law analyses.



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- **Direct harm to consumers**
 - Exploitative abuse
 - Horizontal and vertical agreements
- However, competition law traditionally applied mostly to practices directly affecting competition on intermediary levels of production chain (**B2B**) rather than on final-consumer level (**B2C**).
- Traditional competition law analyses take into account effects on final consumers *indirectly*.
- Prevalence of algorithms underlying digital business models leads to challenges in application.

Several theories of harm triggered by algorithms are recognised as such in traditional competition law analyses.



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- The challenge is only partly algorithmic – partly resulting from the change in factual context.
- The use of algorithms makes these practices **more widely and easily adoptable** for businesses, and **more difficult to detect and analyse** for CAs.
- Algorithms do not bring these practices outside the scope of competition law.
- Some questions that were unanswered before remain so, such as:
 - final-consumer price discrimination as an ‘abuse’ (see Akman, European Law Review, 2007);
 - the ‘consumer’ in whose interests competition is protected.
- At the boundaries, some of these may be dealt with using **consumer protection law** powers.

Several theories of harm triggered by algorithms are recognised as such in traditional competition law analyses.



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- **Exclusionary practices** – ‘market power’.
- Many challenges arise on the back of previously unanswered questions re application:
 - limits of product/service design choices of dominant undertakings;
 - ‘competition on the merits’, ‘objective justification’ and ‘abuse’ in the context of a dominant undertaking advantaging itself to the disadvantage of its rivals;
 - ‘leveraging’ of market power from one market into another;
 - ‘tying and bundling’ efficient and procompetitive vs anticompetitive and abusive, etc.
- The questions become more complex because algorithms, when relevant, are generally at the core of the ‘business model’ – ‘not a bug, a feature’.
- At the boundaries, ex ante regulations may be preferable to policymakers.

Several theories of harm triggered by algorithms are recognised as such in traditional competition law analyses.



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- **Algorithmic collusion** – ‘straightforward’ types vs hub-and-spoke and tacit collusion.
- A lot more complicated with hub-and-spoke cartels and tacit collusion.
 - Hub-and-spoke already very difficult to establish conceptually and in practice.
 - For example, where platform **intermediates** a transaction between buyers and sellers, ‘**vertical**’ can become intertwined with ‘**horizontal**’ (see, Akman, Fordham ILJ, 2019).
 - Tacit collusion – currently outside of competition law because the line between lawful and unlawful conduct too unclear.
 - Algorithms may make tacit collusion easier and/or more likely.
 - Self-learning algorithms can collude without any human involvement.
 - Regulation possibly more effective than competition law.
 - If algorithms are **self-learning**, how does compliance work? Can they be coded not to collude?

Challenges of algorithms appear more pronounced at the boundaries where competition law and policy intersect with other laws and policies.



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- Difficult algorithmic questions arise at the boundaries of competition law.
- These questions point towards the need to adopt a **more holistic approach** rather than a siloed approach – competition, consumer protection, regulation, data protection, etc.
- Such an approach requires both **cross-cutting policy** work to develop it in practice (*à la* DRCF), and **inter-disciplinary research** to inform it – computing science, law, economics, psychology, and beyond.