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ICN CWG SG2 Project on "Big data and Cartels"
The impact of digitalization in cartel enforcement
- Scoping paper -

INTRODUCTION

1. The "Big data and Cartels" project is an initiative of the ICN Cartel Working Group Sub-Group 2, which aims at identifying in the present scoping paper the challenges raised by Big data and algorithms in cartel enforcement. As a next step, the Cartel Working Group will envisage how the discussion set out in the present scoping paper may lead to an update of certain chapters of the ICN Anti-Cartel Manual.
2. In this context, the objective of the present scoping paper is to foster discussion and debate among ICN members, without prejudice of future work conducted by the Cartel Working Group.
3. The first part of the scoping paper analyses data and algorithms as a vehicle for collusion, and the second part focuses on data and algorithms as a tool for cartel detection.
4. For all its uses as a buzzword of the Internet ecosystem, "Big data" refers mainly to the fact that the management of large and complex databases has become a commonplace feature of many, if not all, sectors of the economy. Big data is primarily a driver of productivity and innovation, in that it allows firms to monitor markets, develop new goods and services and improve quality in ways that were not possible before,: "*Using Big Data is also useful for businesses to generally improve the efficiency of production processes, forecast market trends, improve decision-making and enhance consumer segmentation, through target advertising and personalized recommendations*"[1].
5. An algorithm "*is a sequence of instructions, typically to solve a class of problems or perform a computation. Algorithms are unambiguous specifications for performing calculation, data processing, automated reasoning, and other tasks*."[2]
6. There is currently a debate[3] in academic and enforcement circles around the extent to which Big data and algorithms can be used to implement new forms of cartels or facilitate market coordination by increasing market transparency and stability, leading to outcomes such as price increases or market allocations, with no or little direct contact between firms. Moreover, because the implementation of a coordinated market behaviour could be carried out, at least in part, by algorithms and databases, detection of such conduct could become increasingly difficult.
7. Therefore, it is important for competition authorities to establish if there is a need to adapt the existing tools of proving cartels to this new reality (I). Moreover, it appears also necessary to determine how Big data could be used by the same authorities to improve the detection of such practices (II).

I. Data and algorithms as a vehicle for collusion

8. Big data and algorithms raise questions concerning the impact they may have on all traditional definitions and concepts such as agreements, concerted practices, "by object/per se" or "by effect/rule of reason" infringements and firms' liability. Therefore, an overall presentation of the main concepts (A.) is followed by developments on the challenges of Big data and algorithms as a vehicle of collusion (B.).

[1] OECD, Big data: bringing competition policy to the digital era, Background note by the Secretariat, p. 8.

[2] See: https://en.wikipedia.org/wiki/Algorithm

[3] Joint study on Algorithms and competition by the French Autorité de la concurrence and the Bundeskartellamt, November 2019; Paper on pricing algorithms, collusion and personalized pricing by the CMA; Paper on algorithms by the Portuguese Competition Agency; BRICS in the digital economy: competition policy in practice, September 2019.

A. MAIN CONCEPTS

9. This section briefly outlines the notions of Big data and algorithms (1.) and then collusion under competition law (2.). It then suggests a starting point for the debate in highlighting the possible adverse effects of Big data and algorithms on collusion (3.).

1. BIG DATA AND ALGORITHMS

a) Big data

10. There is no single definition for the term "data". In a narrower sense the term is often used for the results of scientific experiments or measurements. But in a wider sense the term is used to refer to any information, or representation of such information[4].

11. The term "Big data", for its part, refers to a dual reality:

- The fact that recent technological progress has dramatically increased computing power and storage capacity, allowing the creation and the management of huge databases. In this sense, "Big data" is often characterized by the three "V" s –Velocity, Variety and Volume – a fourth for "Value" (to be extracted from it) or for "Veracity" being sometimes added;
- The fact that economic operators rely more and more heavily on the management of large sets of data in order to analyse consumer behaviour and preferences, develop yield management programs and improve their products and services. This is achieved notably through the combination of, on one hand, massive, structured or unstructured and regularly updated databases and, on the other hand, learning algorithms.

b) Algorithms

12. The term "algorithm" can refer both to a standardized or automated method to solve a certain class of problems and to the practical application of this method, coded in a particular programming language or related to a particular recipe[5]. The modern applications are numerous: health, engineering, finance, etc. Algorithms encompass a wide range of programs[6] and can be used by business to perform different types of tasks.

13. In particular, algorithms can perform market monitoring activities better than humans could do, through data screening, allowing the immediate / near-immediate collection of information concerning competitors' business decisions (price policy, new products, promotions and rebates etc.). Algorithms can also be used to analyse consumer behaviour and segment between types of clients, thus allowing businesses to improve yield management activities.

14. Moreover, algorithms are more and more used in predictive analytics, which measures the likelihood of certain events based on the analysis of historical data. Predictive models can be used to estimate demand, forecast price changes or predict customer behaviour and preferences. Such information can be used to improve decision-making, enabling companies to plan more efficiently their business strategies.

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[4] Joint study of the French Autorité de la concurrence and the German Bundeskartellamt on Big data, 10 May 2016.

[5] OECD Roundtable on Algorithms and Collusion, Background note by the Secretariat, June 2017.

[6] ICN CWG SG1 webinar on "Digital cartels and algorithms", 16 January 2019, presentation by Antonio Capobianco (OECD).

15. Finally, algorithms enable companies to set very fast iterative actions in order to react in real time to any change on the market, be it to rivals' or consumers' behaviours. In particular, companies may use algorithms to set their prices as a function of their competitors' prices[7].

16. The most sophisticated types of algorithms ("deep learning" algorithms) are able to process complex and unstructured data (such as pictures, sounds, biological characteristics etc.) in a purportedly faster and more accurate way than the human brain. It has been proposed in academic literature that such sophisticated algorithms, if used in parallel by companies competing on the same market, could each autonomously decide that a strategy of collusion would be optimal and then 'agree' to collude with each other without human intervention[8]. However, at this stage of development of the technology, it is unclear whether the use of Big data and algorithms could allow the creation of artificial neural networks capable to make strategic decisions on their own resulting in a collusive equilibrium, without explicit directives from humans to do so.

17. All this leads to the question of whether there should be a distinction drawn between the use of algorithms as a *tool* for human actors to implement an anti-competitive agreement and the case where two (or more) algorithms autonomously collude by, for example, following a goal such as profit optimization.

2. COLLUSION

a) Cartels and collusion

18. In order to investigate and prohibit a cartel, it is necessary to demonstrate the existence of some form of collusion between the participants to the practice.

19. The term "collusion" commonly refers to any form of coordination or agreement among competing firms with the objective of raising the welfare of participants to a higher level than the non-cooperative equilibrium or reducing their losses. Economist and lawyers alike usually distinguish between two forms of collusion[9]:

    - Explicit collusion refers to conducts that are maintained with explicit agreements, whether written or oral. The most direct way for firms to achieve an explicit collusive outcome is to interact directly and agree on significant parameters of competition such as prices, production level, quality etc.

    - Tacit collusion, on the contrary, refers to forms of co-ordination which can be achieved without any need for an explicit agreement, but which competitors are able to maintain by recognizing their mutual interdependence. In a tacitly collusive context, the non-competitive outcome is achieved by each participant deciding its own profit-maximizing strategy independently of its competitors.

[7] "Digital Ecosystems, Big data and Algorithms", Issues Paper, Autoridade da Concorrência, July 2019, page 49.

[8] Joint study on Algorithms and competition by the French Autorité de la concurrence and the Bundeskartellamt, November 2019; Ezrachi, Ariel and Stucke, Maurice E., Sustainable and Unchallenged Algorithmic Tacit Collusion (November 10, 2018). University of Tennessee Legal Studies Research Paper No. 366; Oxford Legal Studies Research Paper No. 16/2019; Northwestern Journal of Technology and Intellectual Property, Forthcoming. Available at SSRN: https://ssrn.com/abstract=3282235 or http://dx.doi.org/10.2139/ssrn.3282235.

[9] OECD, Algorithms and collusion: Competition policy in the digital age, page 19.

b) The legal framework

20. Case-law states that, although explicit and tacit collusion can have similar economic consequences, in most jurisdictions, they are treated differently from a legal point of view[10].

21. In most jurisdictions, explicit collusion between firms is apprehended under general competition rules on anti-competitive agreements and concerted practices. An agreement involves a concurrence of wills between economic operators and some form of manifestation thereof, whether implicit or explicit. A concerted practice involves co-ordination between undertakings which, without having reached the stage of concluding a formal agreement, have knowingly substituted practical co-operation for the risks of competition. A concerted practice can be constituted by direct or indirect contact between firms whose intention or effect is either to influence the conduct of the market or to disclose intended future behaviour to competitors.

22. However, tacit collusion generally escapes the application of competition rules, in the sense that it refers only to parallel unilateral behaviours, in the absence of any contact between undertakings[11].

3. EFFECTS OF BIG DATA AND ALGORITHMS ON COLLUSION

23. Algorithms can affect two structural factors of collusion, i.e. the frequency of interaction and market transparency. Since conducts can be easily monitored and companies can react very quickly, pay-off from deviation equals zero, and collusion may be facilitated. As algorithms may be able to determine the price equilibrium more effectively than human intervention, they may eventually enhance the possibility of tacit collusion that could be sustainable in a wide range of circumstances in which it is otherwise unlikely, e.g. on non-oligopolistic market structures. Algorithms can further potentially be used by competitors to monitor each other's prices and programme immediate reactions to any changes. However, in most cases the conduct observed on the market is the result of individual, simultaneous use of algorithms by competitors, without any prior contact between them – something that may fall outside the scope of legal provisions prohibiting agreements between rivals.

24. Therefore, Big data and algorithm could be apprehended in the context of a larger anticompetitive agreement or coordination when such practice is facilitated or implemented through means of automated systems[12], thus raising the chance of coordination, monitoring and punishing[13]. Such collusion, supporting or facilitating "typical" anticompetitive practices, may be harder to identify and may give rise to more complex cases.

25. In addition, this method of market monitoring and adjustment of prices could arguably only be qualified as "algorithmic collusion" when the existence of an agreement on the simultaneous use of similar algorithms can be demonstrated.

B. THE CHALLENGES OF BIG DATA AND ALGORITHMS AS A MEANS FOR COLLUSION

26. Competition authorities are well-placed to address the antitrust concerns raised by pricing algorithms given the economy-wide perspective of competition law and the experience already gained in cases

[10] For example, European Court of Justice, Case C-8/08, T-Mobile, ECLI:EU:C:2009:343, para. 23; OECD: DAF/COMP/WD (2017)12 : Algorithms and Collusion - Note from the European Union, 14 June 2017, § 22.

[11] European Court of Justice, case 89/85 et al. of 27 September 1988, "Woodpulp".

[12] OECD Roundtable on Algorithms and Collusion, Background note by the Secretariat, June 2017.

[13] ICN CWG SG1 webinar on "Digital cartels and algorithms".

involving digital markets. Furthermore, in rapidly-changing or innovation-driven markets, antitrust enforcement, which has readily available means to analyse antitrust concerns, may prove more effective in preserving competition, while designing regulatory frameworks flexible enough to accommodate future technological developments may take much longer[14].

27. The changes provoked by the emergence of Big data and the widespread use of algorithms makes it necessary for competition authorities to study the implications of these technologies on the investigation and prohibition of agreements and concerted practices; in this context they may need to refine traditional concepts of cartel enforcement based on the existence of an agreement or a concerted practice, the distinction between by object/per se and by effect/rule of reason reasoning or the issue of company liability (1.).

28. Moreover, when looking at the restrictive effects resulting from Big data and algorithms, competition authorities may consider the legal distinction between explicit and tacit collusion under their own laws and how economic actors relying on smart technology may circumvent cartel prohibitions (2.).

1. THE IMPACT OF BIG DATA AND ALGORITHMS ON EXPLICIT COLLUSION/AGREEMENTS

a) Concurrence of wills / agreements

General issues

29. Competition authorities may encounter cases in which new digital forms of interaction between competitors come close to some form of conscious cooperation. However, they may not be able to find any "concurrence of wills" or "meeting of minds" between the firms which use digital tools to set and adjust prices. The existence of explicit contacts, which is an essential element to demonstrate if there is collusion under competition rules, is therefore missing[15].

30. When these principles are applied to Big data and algorithms, this leads to two main questions:

- Under the law of the jurisdiction, could the monitoring and adaptation capacities provided by Big data and algorithms be taken into account for the demonstration of the existence of a concurrence of wills, even in the absence of an explicit contact?
- How could the level of market transparency allowed by such technology alter methods for analysing documentary evidence by competition authorities, for example allowing to infer the existence of an agreement from unclear or cryptic exchanges?

Intention

31. The evidentiary standard to prove that firms have not acted independently from each other could be difficult to meet in the context of algorithm and Big data use. It therefore seems relevant to assess the following questions regarding the intentional element:

- May consciousness of the collusive outcome be sufficient to fall within the provisions on anti-competitive agreements?
- Should the engineer's consciousness or the firm's be sought for?
- Should the competition authority always bear complete burden of proof, or is there room to apply some presumptions?

[14] OECD Roundtable on Algorithms and Collusion, Summaries of Contributions, June 2017.

[15] "Big data and Innovation: Implications for Competition Policy in Canada", Canada Competition Bureau, 18 September 2017.

The specific case of parallel pricing

32. In most jurisdictions, parallel pricing falls outside the scope of antitrust laws without proof of collusion. Evidence of a common understanding that competitors will use the same pricing algorithm in order to achieve parallelism on price may constitute an agreement / concerted practice among competitors on prices which will fall under cartel prohibition[16].

33. However, evidence on common understanding may be difficult to obtain on digital markets, it could be useful to establish under which circumstances using algorithms based on the same or similar formula aligning competitors' prices will constitute a concerted practice. In this case, is it necessary to prove an additional conduct aiming to ensure the price concertation[17]?

b) Restrictive aspect

Market structures

34. Algorithms can achieve fast price matching even in markets where traditional methods of price fixing by competitors are unlikely to succeed.

35. Therefore, could/should the market structures be integrated as economic context into the definition of restriction of competition? Should market structure be considered as potential evidence used to demonstrate the manifestation of will (for example when the degree of transparency of the market is known to all economic operators)?

36. Should competition authorities systematically adopt a rule of reason/effects-based approach or should some conducts be addressed through a per se/by object approach in the context of the highly technical nature of Big data related practices?[18]

37. Conversely, could the use of Big data and/or algorithms be taken into account to assess the sustainability of a collusion, in particular in non-oligopolistic markets?

38. Finally, should we consider that under certain circumstances traditional "by effect" infringements, such as retrospective information exchange among competitors should be regarded as per se/by object

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[16] For an example where an agreement was proved *see* U.S. v. David Topkins (April 2015) : "*According to the charge, Topkins and his co-conspirators agreed to fix the prices of certain posters sold in the United States through Amazon Marketplace. To implement their agreements, the defendant and his co-conspirators adopted specific pricing algorithms for the sale of certain posters with the goal of coordinating changes to their respective prices and wrote computer code that instructed algorithm-based software to set prices in conformity with this agreement*", https://www.justice.gov/opa/pr/former-e-commerce-executive-charged-price-fixing-antitrust-divisions-first-online-marketplace ; https://www.justice.gov/atr/case-document/file/513586/download ; https://www.justice.gov/atr/case-document/file/628891/download

[17] Judgment in *Eturas UAB and others*, Case C-74/14, ECLI:EU:C:2016:42: The ECJ considered that "*where the administrator of an information system, intended to enable travel agencies to sell travel packages on their websites using a uniform booking method, sends to those economic operators, via a personal electronic mailbox, a message informing them that the discounts on products sold through that system will henceforth be capped and, following the dissemination of that message, the system in question undergoes the technical modifications necessary to implement that measure, those economic operators may — if they were aware of that message — be presumed to have participated in a concerted practice within the meaning of that provision, unless they publicly distanced themselves from that practice".*

http://curia.europa.eu/juris/document/document.jsf?text=&docid=173680&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=1981628

Finally, the Lithuanian Supreme Court dropped the charges against some of the travel agencies, previously fined by the Competition council, considering there was not enough evidence to prove that these companies were aware of discount restrictions applied in E-TURAS online booking system: http://kt.gov.lt/en/news/supreme-court-upheld-kt-decision-on-cartel-among-travel-agencies

[18] ICN CWG SG1 webinar on "Digital cartels and algorithms", presentation by Jan Block (University of Antwerp).

infringements when taking place in digital highly transparent markets and when the exchanged information will necessarily be used by competitors in the establishment of their future prices?

c) Liability

Liability and control over an algorithm

39. Since firms might apply the algorithm's autonomous decisions, when shall an algorithm be deemed to remain under the firm's control? Are the notions of "direction" or "control"[19] towards employees useful?

40. May the company that developed the algorithm and the beneficiary firm be found jointly and severally liable, providing both with an incentive to use their control over the situation to prevent violations of competition law? The company that developed the algorithm should hard code it to avoid incursions of competition law (possible by means of ethical systems design, even when this poses challenges to competition law as well) and the user should always make a conscious choice to follow algorithmic input in its own marketing decisions.

Monitoring capacities and duration/continuity of the practice

41. In most jurisdictions, case law demands the demonstration of regular contacts between participants so as to establish the duration and continuity of the practice. How do monitoring capacities induced by digital technology change the approach on this issue? Is interaction between the parties necessary from time to time or is the duration determined by the fact that one or both parties keep using Big data or algorithms which continue to align prices?

Facilitators

42. Competition authorities could also analyse the configuration where IT companies knowingly provide a group of competitors with algorithms and data management services which allow illegal coordination between them.

43. Under which conditions should conduct limiting competition involving Big data and algorithms be considered as a facilitating practice which breaches competition rules?

2. BIG DATA BEYOND EXPLICIT COLLUSION

a) Questioning the distinction between explicit and tacit collusion

44. As mentioned above, in most jurisdictions, tacit collusion generally escapes the application of competition rules.

45. However, the parallel use of identical or similar algorithms may give rise to the applications of identical prices and commercial conditions by different economic operators, in particular when algorithms include predictive features. In this case, competition authorities will be precluded from prosecuting behaviours that may have the same economic impact than a classical cartel.

46. In such a configuration, should collusion, resulting from algorithm or Big data use, give rise to an antitrust prosecution? Under which conditions?

47. Since tacit collusion remains outside the scope of competition enforcement in most jurisdictions, what evidence would distinguish tacit collusion from an illicit agreement (e.g. if competitors knowingly use same or similar algorithm in expectation it will lead to price alignment)?

48. In any case, intentionally implementing algorithms to collude tacitly should be viewed as illegal.

[19] Used in firm theory, see R. Coase, 1937.

b) The limits of cartel enforcement and other tools

49. As computation methods become more complex and "governance by algorithms" may arise, there is a debate over whether competition law, and in particular cartel enforcement, is sufficient to address existing concerns or whether some form of *ex ante* intervention would be necessary[20]. Several options have been either proposed or implemented to control algorithms, ranging from market solutions to state regulations[21]. Each option has its limitations and might be more or less appropriate to address each type of concern raised by algorithms[22].

II. Data and algorithms as a tool to detect cartels

A. OVERALL PRESENTATION

50. Digitalization of business processes offers numerous advantages with respect to cartel detection.

51. Digital evidence gathering typically allows to find more and more relevant evidence. Most competition authorities derive their power to gather digital evidence from their existing power to review books and records of the inspected undertakings (e.g. searches, dawn raids, etc.)[23]. Digital evidence may also be sometimes harder for the undertakings to destroy, compared to physical evidence. Collection, preservation and analysis of digital information constitute the most important aspects of digital inspections.

52. A number of competition authorities have created specialized cartel detection units, which comprise forensic experts able to retrieve deleted or damaged data. Yet the building of internal forensic and IT capacities is costly and some agencies may not have the means to maintain sufficient capacity on this matter.

53. In order to improve cartel detection and proof in digital markets it is important for competition authorities to share experience on how large volume of data is treated, on localization of digital information before and during inspections and on strategies to better target intervention in a constrained environment.

B. THE CHALLENGES TO DIGITAL CARTELS DETECTION AND INVESTIGATION

1. MANAGING BIG DATA DURING INVESTIGATIONS

a) Dealing with large volumes of data

54. The potential gathering of a large volume of data during inspections (e.g. searches, dawn raids, etc.) is a challenging process. To alleviate this difficulty, competition authorities would often pre-plan and

[20] OECD Roundtable on Algorithms and Collusion, Background note by the Secretariat, June 2017.

[21] Saurwein et al. (2015).

[22] Price algorithms could be submitted to FAT's tests (Fairness, Accountability and Transparency) in an antitrust perspective, see https://fatconference.org/index.html.

[23] OECD Global Forum, Breakout session no.1 on "Unannounced inspections in the digital age", 30 November 2018, moderation by Sophie Bresny (French Autorité de la concurrence).

prepare unannounced inspections, by identifying the key targets and using key words to identify the prima facie relevant devices or files.

55. Once the data is gathered, competition authorities need significant IT capacities to store, index and search efficiently the information that has been obtained. Moreover, the seizure of large sets of data creates issues regarding the treatment of legal privilege or the protection of privacy/personal data, notably in the context of reinforced regulation on this matter. This implies the allocation of significant budgetary means.

56. Should members share good practice concerning data targeting and data management techniques? Should members share experience concerning the optimal use of financial means?

b) Localization of digital information

57. During the planning phase, the location of the digital information is also important. Knowing in advance whether prima facie relevant electronic data is situated, either on the premises or outside, may prevent legal and practical difficulties. Many competition authorities adopt an "access approach", data that is accessible to the company has to be rendered accessible to the investigators, and failure to do so may be subject to charges of obstruction and possible prison terms and/or fines (depending on the jurisdiction).

58. Other competition authorities adopt a "location approach", whereby they can only search data located within the premises or in specific places provided under the search warrant. The latter approach presents certain procedural difficulties (e.g., the search warrant must be drafted in broad terms and the judge may have to be contacted to add premises). In addition, it may not allow data stored on clouds to be seized.

59. Should an access approach be promoted? How such an approach could fit with legal systems based on a location approach?

c) Cartel screening and fight against bid-rigging

60. Data screening is used by national competition authorities in order to detect cartels: "*A screen is a method to flag indications of collusive behavior in industries and markets through the use of economic theory and statistical analysis of data. The purpose can either be to confirm an existing suspicion of illegal collusive behavior in a certain industry or market, or to screen all markets when there is no prior suspicion of illegal behavior in order to get indications of cartel activity. Flags are generated if there are significant deviations from the expected outcome in the data. For example, there may be anomalies in the bidding structure in procurements or in the price patterns in certain markets*"[24].

61. As such, data screening tools (based on algorithms) can be of use in the fight against cartels in some countries, notably in connection with public procurement because the specifics of offers made by bidders would be made publicly available. Data screening may improve the fight against bid-rigging through sharing public procurement data. Various interesting initiatives were reported[25].

62. Should competition authorities share projects and discuss the most efficient features of existing initiatives?

2. BIG DATA AND COOPERATION WITH ACTORS OUTSIDE COMPETITION AUTHORITIES

a) Cooperation between public authorities

63. Cooperation between public procurement authorities and competition enforcers can be reinforced through various means. It can include entering into a memorandum of understanding between the

[24] Ålander J., *Screening for Cartels in Procurement Procedures – Lessons Learned*, Competition Policy International, 2014.

[25] ICN CWG SG1, webinar on "Cooperation between NCA and public procurement authorities", 6 February 2019.

authorities concerned, especially relevant insofar as the procurement authority has competence to manage the procurement database, or through a change in the legislation enacting an obligation for the procurement authorities to collaborate with the competition agency, in particular by ensuring direct access to databases and presenting the requested records.

64. Competition authorities may also be granted the right to use the dataset gathered by another government agency with respect to tenders to launch a screening, in order to detect anticompetitive conduct.

65. Similarly, competition authorities could develop collaborations with national anti-corruption/anti-fraud bodies in particular regarding the transfer and use of data gathered during their respective investigations.

66. In order to increase their data management capacities, competition authorities could make contacts with other regulators (e.g. data privacy agencies and financial supervision bodies) that also have experience in gathering and analysing large sets of data.

67. Finally, some competition authorities have developed structured cooperation with criminal enforcement authorities (Public Prosecutors and Police) and internal/external control bodies concerning data analytics techniques, in order to share techniques and methodologies in the area of economic filters.

68. Should similar initiatives be proposed at the ICN level?

b) Advocacy and training toward greater cartel awareness

69. Disseminating a competition culture to those who design and use tenders is an effective avenue for averting the risk of bid-rigging. Recommendations can be issued by competition experts to colleagues in procurement authorities on the underlying principles of pro-competitive tenders, opinions can be issued on specific tenders, training material can be supplied, etc.

70. Moreover, as the use of Big data as a tool for investigation necessitates the availability of data, efforts could be made to foster the development of electronic procurement policies by national authorities. In particular, competition authorities could discuss with public authorities in charge of managing electronic procurement what types of data could be useful for the purpose of bid rigging investigations.

71. Should initiatives in this regard be proposed at the ICN level?

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