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Optimal Design, Organisation and Powers of Competition Authorities – Note by Norway

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More documents related to this discussion can be found at
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1. Introduction

1.   Digitalisation contributes to extensive technological development and innovation. In many markets, access to information and the use of algorithms are essential to be competitive. The potential for increased competition is significant. At the same time, digitalisation can result in market dominance and increased risk of illegal price collusion.

2.   The development is clearly reflected in expectations expressed by the Ministry of Trade, Industry and Fisheries in the annual Letter of assignment to the NCA. Thus, since 2020, competition in the digital economy has been a key priority area in the Letter of assignment. Here, the Ministry expresses that it expects the NCA to facilitate for the digitalisation to contribute to increased competition benefit for consumers and businesses. In addition, the Ministry expects the NCA to assess how the digital development in various markets entails a need to change the structure of competition policy and whether the current enforcement tools are sufficient and up-to-date. Finally, the Ministry expects the NCA to assess how new methods must be implemented in the NCA's work.

3.   Accordingly, the NCA has expanded its digital capacity since 2020, when it prepared a targeted digital strategy. One of the aims of this strategy was to explore the possibilities of developing digital tools for the analysis of internal and external data to support the tasks of the NCA. Secondly, the strategy outlined how the NCA in its enforcement effectively could address the development of digital markets, e.g., the use of algorithms and how companies increasingly use data as part of their business strategy.

4.   In the NCA's overall strategy for 2022-2027, effective enforcement in the digital economy is a key area.

5.   Some key elements in the digital part of the strategy are: to build digital competence to conduct effective competition policy in markets characterized by digitalisation; to acquire and use a machine learning platform to aid the analysis of external and internal data and to achieve a more streamlined case processing; and finally: to supplement existing enforcement tools, meeting the challenges of a new digital reality. The latter element is crucial to more effectively respond to new and evolving business practices that has developed as part of digitalisation.

6.   For the NCA, the realisation of the various elements of this digital strategy is critical to succeed in its enforcement tasks in the medium and long term.

7.   This contribution presents the context for and the NCA's progress towards ensuring a well-designed, functional and sufficiently resourced organization, prepared to meet the challenges and opportunities presented by digital development.

8.   First follows an overview of the NCA's responsibilities, organisation and decision-making structure to provide some context for the main points of the contribution.

2. Primary responsibilities of the NCA

9.   According to the Competition Act, the primary responsibilities of the NCA are as follows:

- Monitor adherence by businesses and industry to the Competition Act's prohibitions against cooperation that restricts competition, and abuse of a dominant market position.

- Ensure that mergers, acquisitions, and other forms of concentrations do not significantly restrict competition.

- Implement measures to increase the transparency of markets.

- Enforce Articles 53 and 54 of the EEA Agreement.

- Call attention to any restrictive effects on competition of public measures and, where appropriate, submit proposals aimed at furthering competition and facilitating market access by new competitors.

10. Accordingly, the NCA's responsibilities primarily cover: i) unlawful cooperation (Section 10 of the Competition Act and Article 53 of the EEA Agreement), ii) abuse of a dominant position (Section 11 of the Competition Act and Article 55 of the EEA Agreement) and iii) control of mergers and acquisitions (Section 16 of the Competition Act). The legal provisions relating to these three main areas are to a large extent harmonized with EU competition law.[1]

11. In addition, advocacy work to increase awareness of the value of competition and the contents of the law is an important aspect of the NCA's work.

2.1. Existing organizational structure

12. The NCA is a relatively small agency. By the end of 2022, the NCA had approximately 100 employees, mostly economists and lawyers.

13. As depicted in the figure below, the NCA's case handling is primarily organized by sector. Thus, the case handlers work in market departments responsible for specific markets.

14. Specialized legal and economic support and quality assurance are provided by the legal director's team and the chief economist's team, respectively.

15. The NCA also has an investigative staff dedicated to investigations of cartel and abuse of dominance cases, as well as international network activities. The staff also includes specialist knowledge in forensic IT. The investigators support the market sections in cartel cases and other investigative measures.

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[1] The NCA can impose civil sanctions for violations, ie. administrative fines for the company or companies involved. In addition, the Competition Act contains a penal section. Infringements involving intentionally or gross negligence will normally be referred to and considered by a prosecuting authority, normally the National Authority for Investigation and Prosecution of Economic and Environmental Crime ("Økokrim"). Severe violations can result in imprisonment. The NCA do not have the authority to impose administrative sanctions on individuals involved in violations of the Competition Act.

Figure 1.
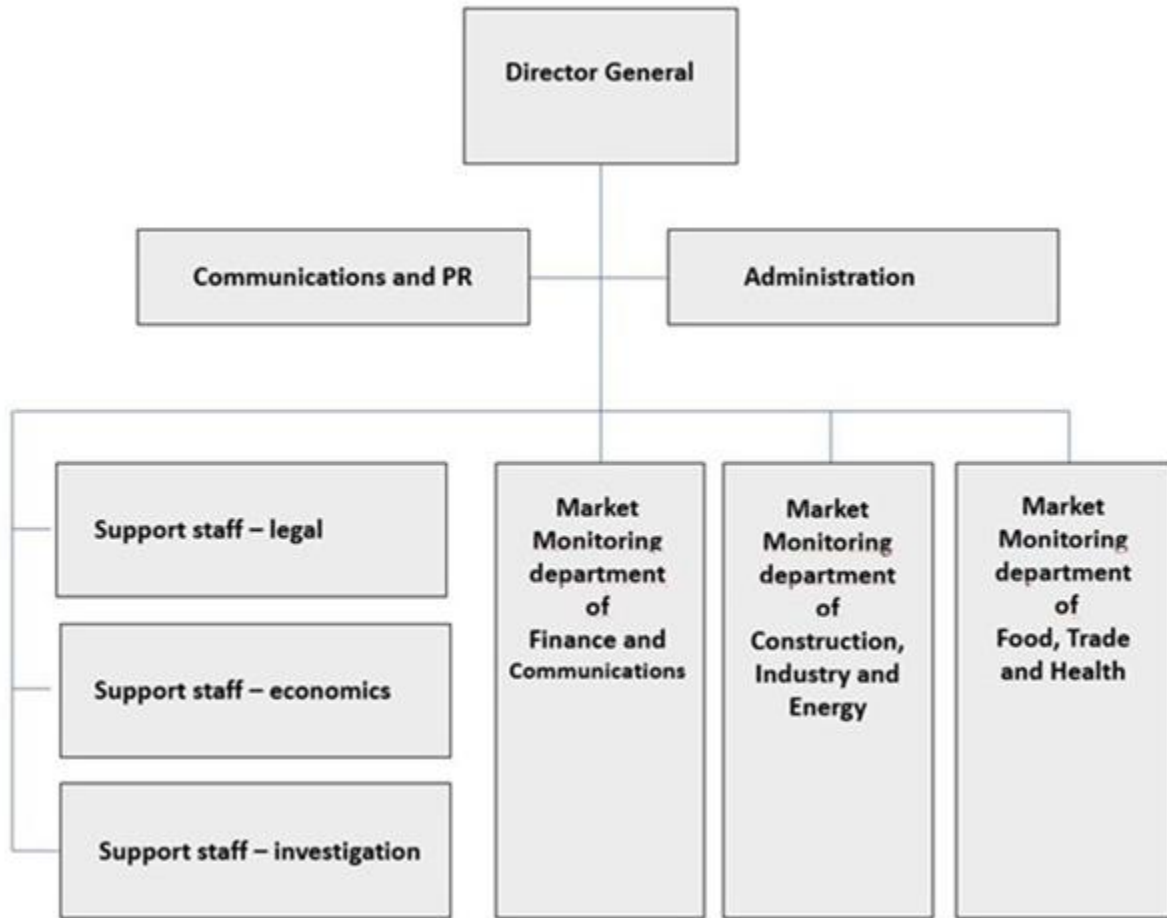
16.   Before the final decision in a case, a market department is responsible for the analyses and preparations, regardless of whether it is a cartel, abuse of dominance, or merger case.

3. Opportunities represented by digitalisation

17.   Data acquisition and a data-driven development of tools supporting enforcement creates a wide variety of new opportunities for enforcement. Below, some examples of how the merger and prohibition regulations can be enforced more effectively are presented.

3.1. Improved merger control through acquiring, connecting and analysing data

18.   One important task for the NCA is to assess concentrations and prohibit those that will significantly impede effective competition. To fulfil this task, it is crucial that the NCA can obtain information on concentrations that are potentially harmful. To this end, the NCA are equipped with three different tools:

1. the general notification rules,

2. the extended duty to notify and

3. the power to order notifications.

19. Failure to notify may be sanctioned with administrative fines. These three elements in merger control allow the NCA to obtain information on potentially harmful concentrations, even if the involved enterprises are below the turnover-based threshold for notification according to the general notification rules.

20. One way to improve information access in merger control is to interconnect already existing public databases. According to the Act on limited liability companies (the limited liability company law), all new businesses must be registered in the Register of Business Enterprises at the Brønnøysund Register Centre.

21. Mergers (and demergers) must also be notified to the Register, within one month after approval by the company's general assembly. If the merger is not notified according to the law, the merger decision is void.

22. The NCA has explored the possibility of connecting information from this register with other relevant public registers, and in this way identify 'red flags' that can be used to finetune the authority's merger control.

23. However, access to this information will only relate to mergers, not acquisitions.

24. Continuously updated information on changes in ownership and control of companies would provide a valuable addition to the NCA's merger control. At present, all private limited companies must submit a shareholder register statement to the Norwegian Tax Administration's Shareholder Register. This information is submitted electronically. The shareholder register statement must include any information of importance to the taxation of the shareholders. Shareholder register statements can be submitted after any changes that take place, but it must be submitted by no later than 31 January of the year after the income year.

25. The tasks of many public authorities relies on correct information concerning who owns what. The tax authorities, for example, need ownership information to perform key tasks such as determining the correct tax, uncovering tax and excise crime and for effective collection of taxes. Ownership information is also essential for effective crime prevention, and for safeguarding national security interests.

26. In September 2023, the Ministry of Finance, the Ministry of Trade, Industry and Fisheries and the Ministry of Local Government and Regional Development commissioned a work to survey various public authorities' potential uses of information relating to direct and indirect ownership of and control over shares and real estate.[2]

27. Notably, changes in ownership would provide information related to changes in control and company acquisitions. Thus, for the NCA, access to correct and continuously updated ownership information would be a valuable addition to current screens and tools in merger control.

3.2. Screening for cartels through access to public procurement data

28. In general, enforcement activities that increase the detection risk of illegal collusion in public procurement will encourage compliance and strengthen competition. The NCA has endeavoured a proactive approach to uncover signs of tender collusion in public procurement, including so-called "cartel screening". Cartel screening is based on economic

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[2] See e.g. https://www.skatteetaten.no/presse/nyhetsrommet/vi-ma-vite-hvem-som-eier-hva-i-norge/ (in Norwegian).

theory and empirical analysis and involves searching for patterns in tender data that are more consistent with cartel activity than competition.[3]

29.   However, this work requires access public procurement data. The competition authorities in several other European countries have gradually gained experience with the collection and analysis of public procurement data. The information basis and analysis methodology vary. Many countries face difficulties accessing structured information, particularly related to losing bids. The NCA share these experiences.

30.   To overcome the fundamental challenges related to access public procurement data, the NCA has advocated for adaptations in the procurement regulations. The NCA has argued that expanding requirements regarding data availability for public authorities would facilitate the NCA's market oversight and facilitate analysis of data on public procurement (screening). [4]

31.   In 2022, the Norwegian Government appointed a Commission to review the procurement legislation and to propose a new regulatory framework. The Commission was tasked with proposing a new legal structure for the procurement legislation, to simplify the legislation and to clarify the rules regarding sustainable procurement. In November 2023, the Commission presented the first part of the proposals amending the regulatory framework.[5]

32.   In its report, the Commission refers to the OECD Recommendation, and clearly recognizes that access to procurement data is of significance in the fight against bid rigging. The Commission recommends further exploration into how the NCA's and other public authorities need for better data from public procurement can be met.

3.3. Algorithms

33.   Technological advances have enabled firms to monitor and adapt to market conditions more effectively. Through increased data access and greater computing power, firms can use various algorithms to automate their analysis of market trends. Firms can use pricing algorithms to automatically adjust prices based on market data. By collecting and responding to new information faster than humans, the algorithms can increase firms' productivity. The downside is a risk that pricing algorithms may harm competition, for example by facilitating tacit collusion.

34.   In 2020, the NCA surveyed Norwegian retailers and software providers' use of pricing algorithms.[6] Since then, technological progress has likely made the pricing algorithms even faster and more widespread.

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[3] See eg. Joseph E. Harrington, Jr. and David Imhof, (2022) page 136, "Cartel Screening and Machine Learning, Stanford Computational Antitrust".   https://law.stanford.edu/wp-content/uploads/2022/08/harrington-imhof-2022.pdf

[4] The NCA's advocacy efforts are supported by the OECD Recommendation on Fighting Bid Rigging in Public Procurement (2023), which recommends that governments keep reliable and comprehensive procurement databases, which include data about bids (both successful and unsuccessful) and contracts (including amendments and subcontracts) and key variables (such as firm identifiers) that makes it easier to evaluate whether   bid   rigging   might   have   occurred,   see https://www.oecd.org/competition/oecdrecommendationonfightingbidrigginginpublicprocurement.htm#:~:text=On%2017%20July%202012%2C%20the,bid%20rigging%20in%20public%20tenders.

[5] See NOU 2023: 26 (regjeringen.no) (in Norwegian). The report was presented to the Ministry of Trade, Industry and Fisheries November 10, 2023, whereafter it was presented for a public hearing with a deadline February 10, 2024.

[6] Konkurransetilsynet (2021), "Hvilken effekt kan algoritmer ha på konkurransen?"

35.   To deal with competition problems arising from algorithmic pricing, the NCA employs a proactive strategy. The NCA is working actively to develop the technological expertise required to collect and audit firms' pricing algorithms in order to directly understand firms' pricing strategies. The NCA is currently working on a project to identify harmful algorithmic pricing.

3.4. New competencies brings new opportunities

36.   Bringing technical experts into the NCA's organization was a change-maker in terms of identifying opportunities that come with sophisticated data analysis.

37.   For instance, for many years, the NCA used geographic information system (GIS) mapping software. With new in-house technical skills, the potential to illuminate and analyse how competition unfolds has been extended by the development of standardised maps of static local market displaying otherwise complex information in a way that is easy to understand. This again lead to the identification of additional projects that can assist the complex data analysis done by the staff.

38.   Another example is the realisation that it is possible to visualise market price data in a new manner by animating on a map the price fluctuations of common goods throughout the day. This has facilitated the identification of national areas with high prices, but also made it possible to identify coordinated price increases in both local and national markets.

39.   For efficient analysis, it also matters how the data is being stored. Keeping all data in Excel requires a lot of resources each time an analysis is to be conducted. Large amounts of data stored in Excel spreadsheets exposes the organization to unnecessary risks.

40.   To realise the full potential of more advanced data analysis, existing and new data must be accessible for new uses and new tools. In the future, datasets can be analysed using Python, a high-level programming language, on a cloud-based machine learning platform. Data is more secure, less dependent on one single person, and the analysis itself can also be carried out with new dimensions and better quality. Most importantly, the marginal costs of such an approach can be extremely low. Coding can be repeated and adapted to new cases, which can give great efficiency gains. The NCA's aim is that all in-house developed code can either be reused or adapted to new cases, which gives great efficiency gains.

4. Organisational adaptation

41.   Like most agencies, the NCA's "inputs" are based on tip-offs, leniency applications, or ex officio analyses. The information received is analysed and considered for prioritization and further investigation. The competition analysis is traditionally structured into whether we face a "horizontal", "vertical" or hybrid concern. After assessing the legal and economic aspects, the case can eventually lead to a statement of objection and decision. This is the 'output'. The decision can be appealed to the Norwegian Competition Appeals Tribunal and the court system.

42.   However, the examples above highlights that we are on the cusp of a new digital reality that entails changes in competition authorities' work. Increasingly, enforcement will become data-driven. More cases are expectedly to be generated ex officio.

43.   Also, markets are changing. Most businesses must become 'digital' in one sense or another to survive. New data-driven business models mushroom, and the ways of doing

business are changing. The combination of big data[7], the use of algorithms and AI have already changed the business landscape.

44.   Simultaneously, agencies are faced with high expectations relating to quality of decisions, to be effective and efficient, to utilize new tools, to acquire and analyse data from various sources and to further develop the competition analysis to be relevant facing new market conditions. Moreover, major stakeholders expect that the agencies' enforcement and advocacy activities should have a real impact on competition in the markets.

45.   As the landscape and the methodology to address new market structures and business models evolves, agencies must adapt. Resources, the right competencies, and organizational adaptation are needed to fully exploit the opportunities. Moreover, the ability fully to reap the benefits hinge on close interaction and cooperation between data experts, market departments, and support staff.

4.1. Future data-centric organisation

46.   A cornerstone of the NCA's strategic plan, the new cloud-based machine learning (ML) platform, has been operational since March 2023. However, this is only one of many elements needed to achieve the goals in the NCA's digital strategy.

47.   The list below indicates some of the other goals the NCA consider important to achieve when building a data-centric environment:

- Strengthen the organisation by developing in-house digital solutions. This consists mainly of daily tasks that can either be fully, or partially automated or made accessible to a wider range of staff by developing bespoke solutions for specific needs.

- Expand capacity for automatic data gathering using various tools including web-scraping, extracts from public data sources, etc.

- Develop standard solutions for storing data that can be used across the NCA, making it possible to develop generic solutions that will benefit all the market monitoring departments and support staff.

- Integrate the data solutions with the ML platform in order to drive and further develop the NCA's use of ML modelling and AI in the NCA's daily work.

- Strengthen and complement the digital forensic capabilities of the investigation department.

- Provide expert technology advice from relatively simple systems to very complex ones.

- Establish expert knowledge on digital markets, e.g. knowledge relating to human behaviour and business models in digital markets.

- Provide expert advice on trends and future challenges in digital markets as well as new enforcement tools.

- Train and develop the overall digital competency of the NCA.

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[7] Acquisition and computational analysis of large data sets, for various purposes.

- Establish a datacentric environment that can initiate and support the generation of reusable high-quality products.

48.   As part of the implementing the digital strategy developed in 2020, the NCA recruited two data scientists.[8] A main objective was to obtain in-house expertise to identify deliverables in the digital strategy. To achieve this, a prerequisite was that the data scientists had to be well acquainted with the tasks and main work processes of NCA; specifically, availability of in-house data and how data is analysed and structured in case management in the current organisational structure.

49.   The NCA's experience over the last few years suggests that in order to ensure a highly targeted activity in line with the overarching strategic plan, and to ensure coordination of activities and development and use of technology, it is a prerequisite that there is a separate organizational unit, a "data-hub", focusing on developing and delivering services to the other parts of the organisation.

50.   The structure must facilitate good interactions with the other parts of the organisation. Through a data-centric approach, this data-hub unit can coordinate, drive, and deliver both big scale projects. It will also be able to support the other departments with day-to-day analysis and datacentric services and support that are not covered by the traditional IT department.

51.   Another thing the NCA's experiences have made clear, is that a good and evolving specialist environment must be staffed above a critical level and with competencies complementing each other. To achieve this, significant resources must be allocated to the realization of the digital strategy.

52.   The above considerations imply a "data centric" approach to organizational structure. In a datacentric environment the organisation fosters an exchange of experiences, ideas, quality control, and assistance across projects and units. The new data unit will supply a set of core data services to the other units of the organisation The goal is that the provision of these services can lead to higher quality case management or higher productivity.

53.   There are various options for how to organize the skill sets that go into this kind of unit, and it must be properly considered how digital skills can fit into the existing organisation. The NCA is now in the process of assessing how to implement a data-centric organisational approach, building on existing structures, incorporating new and necessary skill sets, and to strike the right balance on both workload and interesting projects to retain staff.

54.   A data-centric approach to organisational structure does in other words require fundamental changes in the existing structure of market departments, legal and economics support staff, nor in case ownership or the case handling procedures and responsibilities.

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[8] Many of the skills required in this regard are covered by what frequently is termed 'data scientists'. Admittedly, the term 'data scientists' covers a wide range of distinct domains sets especially , but not exclusively: daily operations (develops), data engineering, software development, database expertise, data analysis, machine learning, AI, and a general technology overview and understanding. It is implausible that a single individual will be an expert in all these domains, but generally will be knowledgeable in multiple of these and an expert of a few. This is important when trying to attract new talents to the organisation. With a critical mass of data specialists, it is possible to cross train staff ensure that the most valuable skills are maintained and transferred within the organisation.

55.   On the contrary, the data-centric approach is focused on how to deliver specific products and services to the existing marketing departments and staffs that can lead to higher quality case management or higher productivity. These products can, for example, be used to generate more cases, and better equipped the NCA for case management and analysis in both merger and prohibition cases.

4.2. Tools and powers

56.   The digital economy has shown that some practices may be insufficiently or ineffectively addressed by existing prohibition regulations and enforcement tools. If the enforcement tools in the toolbox have become less effective or insufficient, it is time to rethink the content of the toolbox in order to be able to secure a good outcome for competition and consumers.

57.   The implementation of the EU Digital Markets Act (DMA) can be viewed in this light. However, the DMA addresses the major digital players ("gatekeepers") at a European level. The same concerns and practices covered by the DMA may also apply on a national level.

58.   In March 2023, the Ministry of Trade, Industry and Fisheries published a consultation paper with proposed amendments to the Competition Act, which would give the NCA a new market investigation tool. The draft legislation outlines the scope of the NCA's powers to conduct market investigations, and to subsequently impose behavioural or structural remedies to overcome structural impediments to competition that are uncovered in the investigated markets. The market investigation tool can be used in all markets. The proposal is inspired by the market investigation tool in the UK, where the Competition and Markets Authority has the powers to conduct market investigations and impose remedies, as well as similar legislation in Iceland.

59.   The tool, if implemented, will allow the NCA to address more general competition concerns in a market, rather than focusing only on individual companies' behaviour. According to the proposal, the NCA may conduct market investigations if features of a specific market indicate that competition is restricted or at risk of being restricted. According to the proposal a draft decision to open a market investigation will be subject to a public hearing before a final decision is adopted by the NCA. Here, stakeholders may submit their comments to the NCA's preliminary assessment. If the market investigation leads to a finding of market conditions or features that significantly restricts or is capable of significantly restricting competition the NCA may decide to impose any behavioural or structural remedies considered necessary to eliminate or mitigate these restrictions. A decision by the NCA following a market investigation can be challenged by the parties before the Norwegian Competition Tribunal.

60.   If enacted, this tool can make the NCA better equipped for enforcement and addressing competition challenges encountered in digital markets. The proposal is currently under consideration in the Ministry of Trade, Industry and Fisheries.

5. Concluding remarks

61.   The challenges represented by the digital transformation are considerable. But, as illuminated by the examples in this submission, the scope for more effective enforcement is also substantial.

62.   A main goal in the NCA's digital strategy in 2020 was to pave the way for a digital transformation of the Authority's enforcement activities. The transformation implies that to

deal effectively with both challenges and opportunities of the digital age, the Authority must be equipped with new technology, the right resources, and competencies in addition to appropriate legal tools.

63.   Inevitably, digitalization may also imply organizational change. Today, the NCA is organised in market departments, supported by specialist legal, economics and investigative staff. The Authority has realized that it must also adapt its organizational structure so that it supports the effective use of these competencies in the various parts of the enforcement processes.

64.   The NCA intends to establish a data-unit, which will form the basis of the Authority's digital transformation. The actual organizational data-centric structure of the Authority is yet to be decided.