A Framework for Effective Public Enforcement of Cartels: A Study of Four Nordic Countries[1]

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Ingrid Margrethe Halvorsen Barlund[2]
Faculty of Law, University of Bergen

Joseph E. Harrington, Jr.[3]
Department of Business Economics & Public Policy, The Wharton School, University of Pennsylvania

Lars Sørgard[4]
Department of Economics, Norwegian School of Economics

Abstract:

We present a framework for analyzing cartel enforcement which focuses on (i) detection, (ii) investigation, prosecution and conviction, and (iii) penalization. The framework is used to evaluate the cartel enforcement in the four Nordic countries Denmark, Finland, Norway and Sweden. Our findings demonstrate that those countries have shortcomings in all three stages of enforcement. To improve the identified weaknesses, we propose policy changes that can strengthen the public enforcement of cartels.

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[2] Email: ingrid.halvorsen@uib.no
[3] Email: harrij@wharton.upenn.edu.
[4] Email: lars.sorgard@nhh.no. I have been the Chief Economist (2004-7 and 2015) and the Director General (2016-22) of the Norwegian Competition Authority. These views are my own, and not necessarily in line with the views of the Norwegian Competition Authority.

1. Introduction

It is well known that collusion harms consumers, such as through price fixing leading to higher prices. A critical role for competition authorities is to detect and then shut down collusive activities, and to deter firms from adopting collusive practices.

In recent decades, we have witnessed an active enforcement of the competition laws against collusion by many competition authorities. The fight against cartels involves three essential enforcement stages: (i) detection; (ii) investigation, prosecution and conviction; and (iii) penalization. Enforcement success is the result of a combination of the performance at each of these stages. For example, the prospect of collusion being detected can deter firms from forming cartels but only when the sanctions for violating the law are sufficiently severe. To fully understand the fight against cartel, one must consider all these aspects and how they can work together to deliver effective enforcement.

In this article we present a framework for describing how cartel enforcement is conducted and analyzing the effectiveness of cartel enforcement in each of those three stages. We then apply this framework to evaluate enforcement in the four largest Nordic countries: Denmark, Finland, Norway, and Sweden. The analyses are based on conducting original surveys of the competition agencies along with publicly-accessible data. The primary deliverables of these analyses are to take stock on the state of enforcement in these four Nordic countries, identify areas for improvement, and make recommendations based on the practices of competition agencies at large.

In Section 2, we discuss the framework for effective cartel enforcement. Bearing this framework in mind, we describe in Section 3 the cartel enforcement systems in the four Nordic countries with emphasis on public enforcement. With the aim to learn about best practices, we have collected and scrutinized data from each of the three enforcement stages, contributing to highlight similarities and discrepancies between the four countries, and comparing with other jurisdictions on some important policy areas. In Section 4 we offer some comments on the effectiveness of cartel enforcement in the four countries. Finally, in Section 5 we present some recommendations for improvements in cartel enforcement and deliver some final remarks.

2. Framework

What are the objective and constraints of public enforcement of cartels, and what are the main enforcement stages? In this section we discuss these fundamental issues, and we let this discussion provide guidance for our information gathering concerning the four Nordic countries.

2.1 Objective and Constraints

When it comes to battling collusion, the objective of enforcement from an economic point of view, which is underpinning the cartel prohibition from a legal point of view, is to minimize the harm created by cartels while taking into account enforcement and error costs subject to an (inevitably binding) resource constraint. Enforcement costs comprise the resources used to pursue a cartel case or engage in some preventive activity and is typically the opportunity cost of using those resources in some other enforcement activity. Error costs can be associated with a false positive; pursuing a case when there is not collusion, or at least not unlawful collusion. These costs included wasted resources and unnecessarily disrupting the competitive process by causing firms to engage in a burdensome and disruptive legal process. Error costs can also be

those from a false negative, which means cartels go undiscovered or unconvicted in which case consumer harm is not abated.

The focus of this study is on the effectiveness of enforcement in terms of reducing cartel activity. While most policies that reduce cartel activity are efficient in the sense of raising social welfare, that is not universal. For example, bidder exclusion – whereby a convicted member of a bidding ring at government procurements is excluded from future tenders – may be effective in deterring cartels but could reduce welfare by lessening competition at tenders due to the exclusion of some prospective bidders. The welfare implications of laws and policies will not be addressed here as we instead focus on how they affect cartel activity.

In assessing the performance of a competition authority, we would ideally want to know how many cartels it has shut down, how many cartels it deterred from forming, and the reduction in harm either by preventing a cartel from operating (due to shutdown or deterrence) or while operating (e.g., by not setting as high a price or the cartel not being as inclusive of a market's suppliers). Such an assessment requires observing the cartel rate (how many cartels are operating at any moment in time) and a measure of cartel effect such as the overcharge (how much higher price is but for collusion).

As a first approximation towards achieving optimal enforcement, a competition authority should then strive to minimize how many cartels exist, and its performance could be assessed by measuring the number of cartels operating. There are two impediments, however. First, as with any government agency (and any organization where there is a separation of ownership and control), career concerns could cause a competition authority to diverge from the ideal objective as they seek to enhance their perceived performance, either for continued advancement within government or a job outside of government. Even if that is true, as long as a competition authority's performance can be properly measured, it could, in principle, be incentivized to achieve the ideal objective in spite of career concerns. This leads us to the second impediment which is a measurement problem: the population of cartels is not observed, only discovered cartels are observed. If society wants a competition authority to, say, minimize the cartel rate, their performance cannot be directly measured as the true cartel rate is latent. If the competition authority convicts few cartels, it could be because there is a low cartel rate (and thereby high performance) or a high cartel rate and it is ineffective in catching cartels (and thereby low performance).

Competition authorities should be presumed to be interested in enhancing observable (not ideal) performance metrics and that is pertinent to properly interpreting a competition authority's conduct and considering alternative policies. A competition authority may focus on how many cartels it discovers and convicts, the magnitude of fines it levies, how many people it puts in jail, and other observable outcomes. All these measures provide relevant information to assess performance but a focus on them alone could lead to skewed priorities. In particular, a competition authority may give higher priority to shutting down cartels than deterring them – though both contribute to reducing the cartel rate and consumer harm - which could lead to underdeterrence.[5]

[5] A discussion of the underdeterrence problem is provided in Joseph E. Harrington, Jr., "Developing More Vigorous Anti-Cartel Enforcement by Promoting Deterrence," (August, 2022) (1), *Competition Policy International Antitrust Chronicle.*

Finally, when interpreting a competition authority's policies and actions, it is crucial to be mindful of the resource constraint it faces. It is rare to hear of a competition authority that is not underfunded especially when one compares them to the defendants they go up against. This resource constraint can affect many decisions, as will be seen in the ensuing discussion. Note that by «decisions» we are not merely referring to an agency decision, i.e. an administrative decision, but more broadly to the stage where an infringement is established followed by the imposition of sanctions, whoever holds that power, whether it is the administrative authorities, the civil court or the criminal court. This means that if it is the court that has the initial power to impose sanctions, formally this will be decided in a judgment and not in an administrative decision. When considering possible departures from the ideal, we should be mindful that they could either be explained by career concerns or budget constraints (or both). Which of those is the driving force matters because if it is a lack of resources, the solution is obvious: a bigger budget. If it is career concerns then it requires altering incentives for which the solution is not obvious and would certainly be more subtle than adding resources.

2.2 Overview of Enforcement Stages

Anti-cartel enforcement involves laws set by legislators and interpreted by judges and policies designed and implemented by a competition authority. Laws define what is illegal collusion (and, to be clear, collusion is the economic phenomenon of coordinating to reduce competition, which may or may not be legal), what evidence is required to prove a violation, who has standing to sue for damages, what penalties can be imposed, and the like. Policies include the criteria used in case selection, penalty formulas, leniency programs, screening, and so on.

Laws and policies operate through three enforcement stages to determine the presence and effect of cartels: detection; investigation, prosecution, and conviction; and penalization. The initial step in shutting down a cartel is detecting it (as is the initial component to deterrence being a cartel's recognition that it could be detected). Upon having discovered a suspected cartel, a competition authority engages in an investigation, which will provide the information needed to decide whether to prosecute, and prosecution will result in an administrative or judicial determination of a violation of competition law (i.e., conviction). Finally, convicted cartelists are penalized.

We will elaborate on each of these three stages and in doing so provide the rubric for evaluating the policies and conduct of competition authorities in the Nordic countries. But before moving to that task, let us note an additional dynamic stage of enforcement: innovation and evaluation. Effective enforcement requires developing and implementing new ideas (innovation) but also measuring the effect of adopted policies and laws and using that information to determine whether to modify or continue with a program or law (evaluation). A competition authority can contribute by devoting resources to innovation and evaluation (which is no easy task given there is often a lack of adequate resources to pursue existing cases) and having an organizational structure that encourages the development and adoption of new ideas. In our discussion, we will mention some past innovations including leniency programs, whistleblower rewards, a damages directive, and cartel screening.

2.2.1 Detection

Enforcing competition law's prohibition against some forms of collusion involves many steps but it all begins with first finding a cartel. One of the most common avenues through which a competition authority learns of a cartel is by the filing of a complaint by a customer, a current or former employee of a cartel member, or a competitor (i.e., a firm in the cartel's market who is not a member of the cartel). A competition authority can also learn of a cartel through another investigation such as a prospective merger. A merger review may uncover documents indicating the existence of a cartel, or a merger partner may, through due diligence, learn of the other party's participation in a cartel and report it. Detection has also come from investigation by independent parties such as journalists, who found collusion in the interbank loan market[6], and scholars, who found collusion in a stock exchange[7] and very likely in government procurement auctions in Japan.[8]

After the Antitrust Division of the U.S. Department of Justice (DOJ) revised the corporate and individual leniency programs in 1993 to great effect, leniency programs have proliferated with leniency applications becoming a critical source of detection in many jurisdictions. Here, it is a cartel member who is informing the competition authority of the existence of a cartel. In recent years, cartel screening – the examination of market data to find evidence of collusion – is a method of detection which is of increasing interest to competition authorities.[9] In the US, private litigants commonly bring cases that are not pursued by the public enforcer, and consequently have discovered many cartels.[10]

While competition authorities can and do actively engage in detection, a critical government role is to incentivize other agents to detect and report suspected cartels. One can view many programs through this lens. A leniency program incentivizes cartel members to report a cartel by providing reduced penalties in exchange for their cooperation. A whistleblower program incentivizes uninvolved employees and competitors to report by providing anonymity, protecting whistleblowers (especially employees) from retaliation, and even offering financial rewards, as is done in Hungary, Pakistan, South Korea, Taiwan, and the United Kingdom.[11] Customer damages incentivizes a cartel's buyers (or sellers when the cartel is among input suppliers) to file a complaint or pursue private litigation so that they can collect compensation for the harm they incurred.

In addition to incentivizing others to detect, a competition authority can support the detection activities of other agents. Of particular note is assisting government procurers in uncovering

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[6] Carrick Mollenkamp and Mark Whitehouse, "Study casts doubt on key rate; WSJ analysis suggests banks may have reported flawed interest rate data for Libor," *Wall Street Journal*, (29 May 2008).
[7] William G. Christie and Paul H. Schultze, "Why do NASDAQ Market Makers Avoid Odd-Eighth Quotes?," *Journal of Finance*, (1994) 49(5), 1813-1840.
[8] Kei Kawai and Jun Nakabayashi, "A Field Experiment on Antitrust Compliance," (April 2024), working paper available at: *http://www.nber.org/papers/w32347*.
[9] For an overview of screening, see Joseph E. Harrington, Jr. and David Imhof, "Cartel Screening and Machine Learning," *Stanford Computational Antitrust*, (2022) 2(7), 133-154.
[10] In a study of 60 large private US antitrust suits, 40% of them were initiated by plaintiffs and not the competition authority; Josh Paul Davis & Robert H. Lande, "Defying Conventional Wisdom: the Case for Private Antitrust Enforcement," *Georgia Law Review*, (2013) 48(1), 1-81.
[11] Based on a speech in March 2024 by Deputy Attorney General Lisa Monaco of the Antitrust Division, it appears the US will soon be offering rewards. Transcript available at: *https://www.justice.gov/opa/speech/deputy-attorney-general-lisa-monaco-delivers-keynote-remarks-american-bar-associations.*

bidding rigs at tenders that they oversee. A notable recent program is the DOJ's Procurement Collusion Strike Force which supports federal, state, and local government procurers in discovering and prosecuting bidding rings. Since 2019, it is reported to have assisted in more than 120 investigations which have yielded more than 60 guilty pleas and convictions with fines exceeding US$65 million.[12]

2.2.2 Investigation, Prosecution, and Conviction

Having learned of a possible cartel, a competition authority decides whether to investigate it and, upon completion of that investigation, whether to prosecute the engaged firms. This critical stage of enforcement involves deciding which cases to pursue (case selection), how to pursue a case (e.g., whether to conduct a dawn raid), and how much resources to commit to a case. These decisions are made in the context of often highly incomplete information about whether there is a cartel with challenges coming from the firms defending themselves, often with far more resources than the competition authority, and procedural hurdles associated with administrative and judicial processes.

There is little public knowledge about how a competition authority engages in case selection, perhaps appropriately so as they do not want firms to be able to game the system by colluding in a manner not to induce prosecution (just like a tax authority does not want accountants to know what triggers an audit). Nevertheless, we can speculate about relevant factors in the case selection process.

Based on the initial evidence associated with discovery (e.g., a complaint), first and foremost is a competition authority's perceived likelihood that there is a cartel and, if there is, of obtaining a conviction. This likelihood is quite high if there is a leniency application and could be relatively low if there is just a customer complaint based only on suspicious price movements. However, it should be noted that even an investigation that fails to result in convictions can be of value because the opening of an investigation could cause a cartel to shut down which would also contribute to deterrence.

Relevant to the case selection decision is the candidate theory of collusion. If firms are suspected of engaging in direct, express, and private communications to coordinate prices (or bids) or institute a market allocation scheme then there is potentially compelling evidence to be discovered, which makes it a promising case to pursue. If instead the more likely theory involves indirect, non-express, or public communications – such as advance price announcements or using a third party – then there needs to be assessment whether this is a prudent use of scarce resources. Here, career concerns can also intervene as the high likelihood of losing the case may deter its pursuit even when harmful collusion is viewed to be likely. More broadly, concerns over the pursuit of only straightforward cases involving explicit collusion have been expressed for some time, especially since the adoption of leniency programs.[13]

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[12] These numbers are as of May 31, 2024. Updated numbers are available at: *https://www.justice.gov/atr/procurement-collusion-strike-force.*

[13] "The fear or apprehension - in other words, the deterrent effect of past prosecution - is what drives the Leniency Program at the end of the day. And my concern is that most of the cases that are brought today … are generated exclusively from firms that have decided to come forward and seek leniency applications. … I am worried that the success of the Leniency Program combined with budget constraints that your Division faces will in effect give you

Cases should be more likely to be pursued when the magnitude of consumer harm is greater, because society gains more from the collusive conduct ending. The size of harm is largely determined by two variables: market size and the overcharge. At the time that an investigation is being considered, market size is easy to measure but the overcharge would generally not be known and can be difficult to measure even after all the evidence is in. However, if the cartel is suspected to have been operating for some time, it is appropriate to assume it must be delivering sufficient value to cartel members so as to justify engaging in a risky, illegal activity; hence, the overcharge is likely to be non-trivial.

Another rationale for pursuing a case is to establish legal precedent regarding some form of collusive practice. Determining whether a specific practice is in violation of competition law (or bringing clarity as to the evidence required to establish a violation) is intrinsically of value to both the enforcement of competition law and the functioning of the competitive process. If the practice is shown to be a violation then it will serve to deter future use of that practice and make it easier to prosecute such cases, both of which will avoid consumer harm. When it is shown not to be a violation, it supports the competitive process as firms can act in a less constrained manner knowing they will not be mired in litigation.

An example of a practice in need of such clarity is advance price announcements. In spite of cases going back to the US airlines market in 1994[14] and more recently in the EU container shipping market in 2016,[15] their legal status remains unresolved because those cases were settled by consent decree or commitment. While such an outcome may prevent continued consumer harm in that particular market for a few years, it fails to clarify the legal status of advance price announcements. Another practice in need of legal clarity are public announcements by a firm regarding rival firms' or industry conduct.[16] As these cases are inherently risky and their value comes from resolving their legal status and not necessarily obtaining a conviction, career concerns could be determinative as a competition authority may want to avoid difficult and risky cases.

2.2.3 Penalization

Judge and scholar Frank Easterbrook noted: "Deterrence is … the first, and probably the only goal of antitrust penalties."[17] While deterrence may be the primary purpose, penalties can also be instrumental in detection – as the incentive to apply for leniency is enhanced when it means avoiding larger penalties – and prosecution – as a competition authority has greater leverage in negotiating guilty pleas when it can threaten more severe penalties. With the rise of litigation to collect customer damages, private litigants have increasingly become part of the penalization

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incentives to pursue only the companies that come forward. ... [A]s I know from personal experience, some of the most egregious and harmful of the cartels may have nobody coming forward." Senator Bill Blumenthal. U.S. Senate, Committee on the Judiciary, "Cartel Prosecution: Stopping Price Fixers and Protecting Consumers" Hearing before the Subcommittee on Antitrust, Competition Policy, and Consumer Rights (statement of Senator Bill Blumenthal). 113th Cong., 1st sess., November 14, 2013.

[14] Severin Borenstein, "Rapid Price Communication and Coordination: The Airline Tariff Publishing Case (1994)," in *The Antitrust Revolution*, 4th ed., (J. E. Kwoka, Jr. and L. J. White, eds., 2004).

[15] Lily Fielder and Nicholas Frey, "Price Signaling: Deciphering the Shipping Forecast," (2016) 1(1). *Competition Policy International*.

[16] For many examples of this practice, see Joseph E. Harrington, Jr., "Collusion in Plain Sight: Firms' Use of Public Announcements to Restrain Competition," (2022) 84(2), *Antitrust Law Journal*, 521-563.

[17] Frank H. Easterbrook, "Predatory Strategies and Counterstrategies," (1981) *University of Chicago Law Review*, 48(2), 263-337; p. 318. Available at: *https://chicagounbound.uchicago.edu/uclrev/vol48/iss2/3*

equation. Though the intended purpose in the EU and many other countries is compensating harmed customers, damages add to the financial cost of collusion to firms and thereby also serve to deter cartel formation.

There are several dimensions to consider when assessing the contribution of penalties to enforcement. First and foremost are their size and severity. Obviously, larger penalties enhance deterrence (at least as long as firms assign some chance of being caught and convicted). This force always supports raising the maximum penalty allowed by law. However, a competition authority must decide on the magnitude of the penalty it will set in any case, while recognizing that higher penalties will make firms more inclined to appeal and courts to question those penalties. Consequently, a competition authority could be inclined to settle on lower penalties in order to close a case, perhaps justified to save resources that could be used on other cases or instead motivated by a desire to declare victory and move on. However, any reduction in penalties will reduce the deterrence of future collusive conduct by other firms. For example, if penalties result in collusion being ex post profitable, collusion is encouraged. It is not clear that competition authorities take into account the effect on deterrence when determining penalties.

A second relevant dimension is how the penalty is determined and to what extent it is predictable. The goal is to have prospective penalties feed into a manager's calculus regarding whether to form and participate in a cartel and hopefully dissuade them from doing so. That is best done by calibrating the penalty to the incremental profit from collusion. However, basing penalties on the incremental profit makes them less predictable compared to when they depend on turnover. How a penalty is determined is also essential to having it approved by the courts who want to see proportionality and other criteria satisfied. With regards to customer damages, courts will require the calculation of overcharges to be based on accepted economic and empirical methods and appropriate data, which is always a source of contention between plaintiffs and defendants.

A third dimension is the bearer of the penalty. Is it shareholders (who profit from collusion) or managers (who either engage in it for the benefit of shareholders or to enhance their own perceived performance)? Taking into account the probability of ultimately incurring penalties, effective deterrence either requires corporate penalties large enough to make collusion ex ante unprofitable or individual penalties large enough that a manager does not want to collude even when collusion benefits shareholders.

Corporate financial penalties comprise government fines and customer damages. In most jurisdictions, government fines are related to a firm's revenue (or turnover) with a cap of 10% of revenue being quite common. While it is straightforward to calculate, this formula fails to directly link the fine to the incremental profit from collusion which undermines its potential to deter collusion.[18] While the awarding of leniency reduces the government fines paid, it augments deterrence by enhancing cartel detection. However, this feature starts to become a bug when leniency is given to too many members of a cartel in which case penalties are reduced without a compensating benefit in detecting and prosecuting a cartel. This concern appears to be growing as a recent study found the average leniency reduction per individual fine has risen

[18] For a study of how different penalty formulas perform from an enforcement perspective, see Yannis Katsoulacos, Evgenia Motchenkova, and David Ulph, "Penalizing of Cartels – A Spectrum of Regimes," (2019) 7(3), *Journal of Antitrust Enforcement*, 339-351. Available at: *https://academic.oup.com/antitrust/article/7/3/339/5511742*

significantly in the last 20 years.[19] Competition authorities may be overly generous with leniency to get firms to admit their guilt and close cases but in doing so penalties are reduced and deterrence is weakened. It is also reducing the power of the leniency program as there will be less of a race to be the first to apply if a firm knows it can get partial leniency even when it is late to the competition authority and has little to offer in terms of additional evidence.

Until a significant rise in government fines starting in the 1990s, the primary corporate penalty in the US was customer damages. Even with the subsequent rise in government fines to hundreds of millions of dollars in some cases, customer damages remain the bigger financial threat to a cartel. Aiding in that is the rule of treble damages. Should a court find firms guilty of violating Section 1 of the Sherman Act then damages are determined and firms are required to pay triple their amount. US courts have expressly recognized that a basis for more than single damages is deterrence because, given there is always a chance that firms will not be caught, collusion would not be deterred if a convicted firm was only required to return its ill-begotten gains. However, in practice, a very high fraction of cases are settled and damages are closer to being single.[20] Still, it is the prospect of going to court and facing treble damages which gives plaintiffs the leverage to induce defendants to agree to single damages. In the EU, single damages is the standard on the grounds that their purpose is compensation and while they do contribute to deterrence, that goal is primarily served by government fines.

Customer damages have been growing in importance internationally and especially in Europe since the EU's Damage Directive in 2014. While there are many benefits from the collection of customer damages, it has also been viewed as a possible reason for a declining number of leniency applications.[21] A firm who is first to receive leniency will avoid all government fines but still be liable for customer damages, which makes it less attractive to report a cartel to the competition authority.[22] In the US, the Antitrust Criminal Penalty Enhancement and Reform Act of 2004 (ACPERA) sought to deal with this problem by reducing a leniency awardee's liability from treble to single damages (with the missing double damages to be covered by the other cartel members). However, firms seem to rarely avail themselves of the protection of ACPERA.[23]

In addition to variation in the damage multiple, legal regimes differ regarding the breadth of customer damages and, more specifically, whether only direct purchasers from the cartel have standing to sue. Indirect purchasers have standing in the EU and some states in the US but not at the federal level. There is also the volume effect[24] – consumers harmed by the units they did

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[19] Catarina Marvão and Giancarlo Spagnolo, "Leniency Inflation, Cartel Damages, and Criminalization," (2023) 63(2) *Review of Industrial Organization*, 155-186. Available at: *https://link.springer.com/article/10.1007/s11151-023-09920-2*

[20] John M. Connor and Robert H. Lande, "Not Treble Damages: Cartel Recoveries Are Mostly Less Than Single Damages," (1997) 100, *University of Iowa Law Review*, 1997-2023.

[21] OECD, "The Future of Effective Leniency Programmes: Advancing Detection and Deterrence of Cartels," (2023), Competition Policy Roundtable Background Note.

[22] While this may be a contributing factor to the decline in leniency applications, more must be going on because the US has also experienced fewer leniency applications without firms experiencing a rise in exposure to customer damages.

[23] Eric Mahr and Sarah Licht, "Making ACPERA Work," (2015) 29(3) *Antitrust*, 31-36.

[24] Franziska Weber, "The Volume Effect in Cartel Cases – A Special Challenge for Damage Quantification?," (2020) 9(3), *Journal of Antitrust Enforcement*, 436-458.

not purchase because of the higher collusive price – and the umbrella effect[25] – purchasers from non-cartel suppliers harmed by the higher prices they paid because non-cartel suppliers responded by also raising their prices. Though various courts have recognized the volume and umbrella effects, collecting damages on them is apparently rare.

In concluding our coverage of corporate penalties, two other types of penalties will be mentioned. For a bidding ring at a government procurement auction, bidder exclusion is sometimes an option. This penalty excludes a ring member from participating in government tenders for some specified period. While shutting a firm out of a market is clearly a serious penalty, it causes collateral consumer harm as competition is weaker with the firm's absence. Finally, it has been suggested that competition authorities ought to consider structural remedies – such as asset divestiture - for particularly egregious cartels or when there is a concern of recidivism.[26]

For the individual employees involved in unlawful collusion, there is a wide array of penalties used by various jurisdictions. There are individual fines though, anecdotally, they do not seem large in practice. A more significant penalty is director disqualification whereby an individual is prohibited from serving as a manager. As this strikes at an individual's livelihood, it has the potential to be quite severe. The United Kingdom's Competition & Markets Authority has the right to impose director disqualification for up to 15 years and has been actively using this power. Beginning with its initial use in December 2016, the CMA has secured 25 disqualifications through February 2023.[27] An employee's company may also choose to penalize them through dismissal or imposing a monetary penalty. In association with a cartel among four insurance companies in Japan, 132 employees found their pay reduced including a 50% pay reduction for three months for the presidents of Tokio Marine & Nichido Fire Insurance and Mitsui Sumitomo Insurance and for six months for the chairman of Sompo Japan Insurance.[28]

Of course, the most severe penalty for individuals is incarceration. Criminalization of collusion has been growing and now 38 countries have the power to impose prison sentences.[29] However, criminalization is necessary but not sufficient for price fixers to find themselves behind bars. Outside of a few countries such as the US, Israel, and Germany (for bid rigging), incarceration is rare. Prison sentences are common for cartelists in the US where the average sentence over the last twenty years is around 18 months.[30]

3. Public enforcement of cartels in four Nordic countries

How is competition law regarding cartels enforced throughout Denmark, Finland, Norway and Sweden? What are the enforcement instruments available for each of the enforcement stages,

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[25] Roman Inderst, Frank P. Maier-Rigaud, and Ulrich Schwalbe, "Umbrella Effects," (2014) 10(3), *Journal of Competition Law & Economics*, 739-763.

[26] Joseph E. Harrington, Jr., "A Proposal for a Structural Remedy for Illegal Collusion," (2018) 82(1), *Antitrust Law Journal*, 335-359.

[27] Terry Calvani and Rory Jones, "Why Do Countries with Criminal Antitrust Sanctions Fail to Incarcerate Price Fixers?" (2024) 12(3) *Journal of Antitrust Enforcement*, 438-478

[28] "Four Japanese Insurers Penalize Officials Over Price-Fixing Scandal," *Competition Policy International* (17 June 2024). Available at: *https://www.pymnts.com/cpi-posts/four-japanese-insurers-penalize-officials-over-price-fixing-scandal*

[29] Calvani and Jones, "Why Do Countries with Criminal Antitrust Sanctions Fail to Incarcerate Price Fixers?"

[30] U.S Department of Justice Antitrust Division, *Criminal Enforcement Trend Charts,* available at: *https://www.justice.gov/atr/criminal-enforcement-fine-and-jail-charts*

and how have they been used by national competition authorities since the EU competition law enforcement was decentralized in 2003?

In Section 2 we explained the object and constraints of public enforcement of cartels, and we outlined a framework for how to systematize our analyses, namely according to the three enforcement stages a competition authority pursues: 1) detection; 2) investigation, prosecution, and conviction; and 3) penalization. For each stage, different enforcement issues and instruments were highlighted to provide insight into how a competition authority works to determine the presence and effect of cartels.

In the following, this framework is applied as we present and explain some of the laws and policies employed by the four Nordic competition authorities in their fight against cartels. This will be done as an integral part of conveying our findings from the data we have gathered about the three enforcement stages in Denmark, Finland, Norway and Sweden. An important disclaimer is that some of the laws and policies have changed since the period from which we have collected data. One piece of legislation in Europe which has had significant impact on public anti-cartel enforcement is the ECN+ Directive about the strengthening of national competition authorities.[31] Although declared EEA-relevant, the directive has not been made part of the EEA Agreement yet and therefore does not apply to Norway. Due to this Directive, some countries have changed how their enforcement systems towards cartels are organized; for example, providing their national competition agencies with more enforcement powers. The Directive has also altered the range and operationalization of enforcement instruments throughout the EU Member States.[32]

3.1 The Nordic enforcement as part of the European enforcement

As Member States of the EU, the competition authorities of the Nordic countries of Denmark, Finland and Sweden take part in the decentralized enforcement of the EU's cartel prohibition, that is Article 101 of the Treaty on the Functioning of the European Union (TFEU), together with the European Commission (the Commission). When there may be an effect on trade between Member States, this EU provision is triggered, meaning that most of the cases we have examined in this study concerns the enforcement of either the national cartel prohibitions of Article 6 of the Danish Competition Law Act, Article 1, Chapter 2, of the Swedish Competition Law Act, or Article 5 of the Finnish Competition Law Act, *together* with the mirroring provision of Article 101 TFEU.[33] Note that the cartel prohibitions referred to here are not limited to what is often understood by the term "cartels" but cover in addition other horizontal collaborations as well as vertical collaborations that are considered anticompetitive. This study is, however, limited to horizontal anticompetitive collaborations, such as price fixing, market sharing, information exchange and bid rigging which often take place in secrecy. This system where

[31] Directive (EU) 2019/1 of the European Parliament and of the Council of 11 December 2018 to empower the competition authorities of the Member States to be more effective enforcers and to ensure the proper functioning of the internal market, OJ L 11, 14.1.2019, p. 3–33.
[32] The ECN+ Directive will not be elaborated on as such in this article.
[33] See Article 3 of Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, [2003] OJ L 1/1 (Regulation 1/2003).

national competition authorities fully partake in the EU anti-cartel enforcement was introduced with Regulation 1/2003 which also gave rise to the European Competition Network (ECN).[34]

Since Norway is not a member of the EU, but of the European Free Trade Association (EFTA) and thus only a member to the Agreement on the European Economic Area (the EEA Agreement), Norway does not participate in this decentralized enforcement system and only has an observatory status within the ECN. EFTA was established in 1960 and consists today of four countries: Norway, Iceland, Luxembourg and Switzerland. The EEA agreement came into force in 1994 and integrates Norway, together with the two other EEA/EFTA-states of Iceland and Liechtenstein, into the internal market in Europe without having to give up sovereignty to the EU institutions in the same manner as the EU Member States do. The EEA Agreement allows the EEA/EFTA States to participate in the internal market of the EU where free movement of goods, capital, services and people creates the world's largest common market on trade. Pursuant to Article 1A of Protocol 23 of the EEA Agreement, Norway is only allowed to participate in network meetings of public authorities referred to in recital 15 of Regulation 1/2003 for "the purposes of discussion of general policy issues only".

A similar decentralized enforcement system applies, however, where the Norwegian competition agency enforces its own cartel prohibition of Article 10 of the Competition Act together with Article 53 EEA (both mirroring Article 101 TFEU), the latter being enforced by the EFTA Surveillance Authority (ESA) and the Commission. Although Regulation 1/2003 was considered EEA-relevant and was made part of the EEA Agreement, decentralized enforcement of Articles 53 and 54 EEA, which mirror Articles 101 and 102 TFEU, does not follow from this Regulation, but from Protocol 4 of the Surveillance and Court Agreement (SCA). The Commission deals with all infringements of the EEA competition rules which have an appreciable effect on trade between EU Member States, whilst ESA is left to deal with cases where only trade between EFTA States is affected or where the effects on intra-EU trade are not appreciable. As for the enforcement against public authorities, however, ESA has exclusive jurisdiction to take action against any EEA/EFTA State that enacts or maintains in force measures that are contrary to Articles 53 EEA.

A parallel decentralized enforcement regime therefore applies between the four Nordic countries, though without a cross-pillar collaboration under the EU and EFTA-pillars.[35] In addition to a European Competition Network there is, however, a Nordic Competition Network, which compensates to some degree. This network enables inter alia the competition agencies of Norway, Iceland, Sweden, Denmark, Finland, the Faroe Islands and Greenland to exchange information and conduct inspections between each other in a similar manner as pursuant to Regulation 1/2003. The Nordic collaboration started between Norway, Iceland and Denmark back in 2001, then Sweden joined in 2003 and the rest in 2017.[36]

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[34] About the network, see *https://competition-policy.ec.europa.eu/antitrust-and-cartels/european-competition-network_en*, [last accessed 30/08-2024].

[35] For more information about this, see Franklin CNK, Fredriksen HH and Barlund IMH, "the Norwegian Report in Bándi G et al.", (2016). Gjendemsjø R, 'Article 56 EEA', in Arnesen F et. al (editors), Agreement on the European Economic Area: A Commentary, (C.H. Beck/Hart/Nomos/Universitetsforlaget, 2018), pp. 555-560.

[36] For more about the collaboration see*: https://konkurransetilsynet.no/norwegian-competition-authority/cooperation-with-other-organisations/?lang=en* [last accessed 30/08-2024].

The enforcement systems towards cartels amongst the Nordic countries have thus approached one another both due to European and Nordic collaborations. Even if the substantive prohibitions against cartels are almost identical and all the Nordic competition authorities partake in the fight against cartels in Europe, there are, however, still differences amongst the four countries when it comes to the rules on enforcement. This is largely attributed to the principle of procedural autonomy, stipulating that Member States have the freedom to design their own procedural systems for enforcing EU (and EEA) law, in this context the realization of the cartel prohibitions of Article 101 TFEU and Article 53 EEA, as long as those rules respect the principles of effectiveness and equivalence of EU law. The principle of effectiveness seeks to prevent a situation in which the national procedural rules would make the exercise of the rights derived from EU law impossible or excessively difficult. The principle of equivalence requires that the Member State shall not discriminate between claims based on national law and claims arising out of EU law.[37] Note that the ECN+ directive (and the Damages directive) intervene in this procedural autonomy by harmonizing to a larger degree the public and private enforcement systems throughout Member States. For the largest part of the project period, however, it is important to bear in mind that these directives were not implemented throughout the Member States and are still today not made part of the EEA Agreement.

3.2. The observed public enforcement towards cartels from 2004 to 2022

In this section we will apply the framework presented in Section 2 to compare the public enforcement of cartels in four Nordic countries. The differences amongst the four countries concern both laws and policies. More specifically, there are differences in how the competition authorities are organized (for example, which public body holds the power to decide that there has been a cartel infringement or to impose sanctions), as well as the enforcement instruments at disposal in each of the enforcement stages (for example, leniency programs and penalties). We will emphasize such differences when of relevance for the presentation of information concerning the three different enforcement stages in the four countries below. The information is partly from public sources, and partly from a survey conducted where we asked the competition agencies of Denmark, Finland, Norway and Sweden a range of questions related to their anti-cartel enforcement.

3.2.1 How are cartels detected?

Figure 1 reports how potential cartel cases have been detected in Norway and Finland during 2004-22, and compare that with a corresponding but older study from the US 1963-72 and a study of international cartels 1990-2007. We use the same categories as in the US study, except for including leniency which was not an option prior to the late 1970s. Note that for Norway investigations include those ending in a decision and those closed without reaching a decision, while the three other studies only concern cases with a cartel decision.

[37] Case-33/76, *Rewe-Zentralfinanz eG and Rewe-Zentral AG v Landwirtschaftskammer für das Saarland*, EU:C:1976:188; [1976].

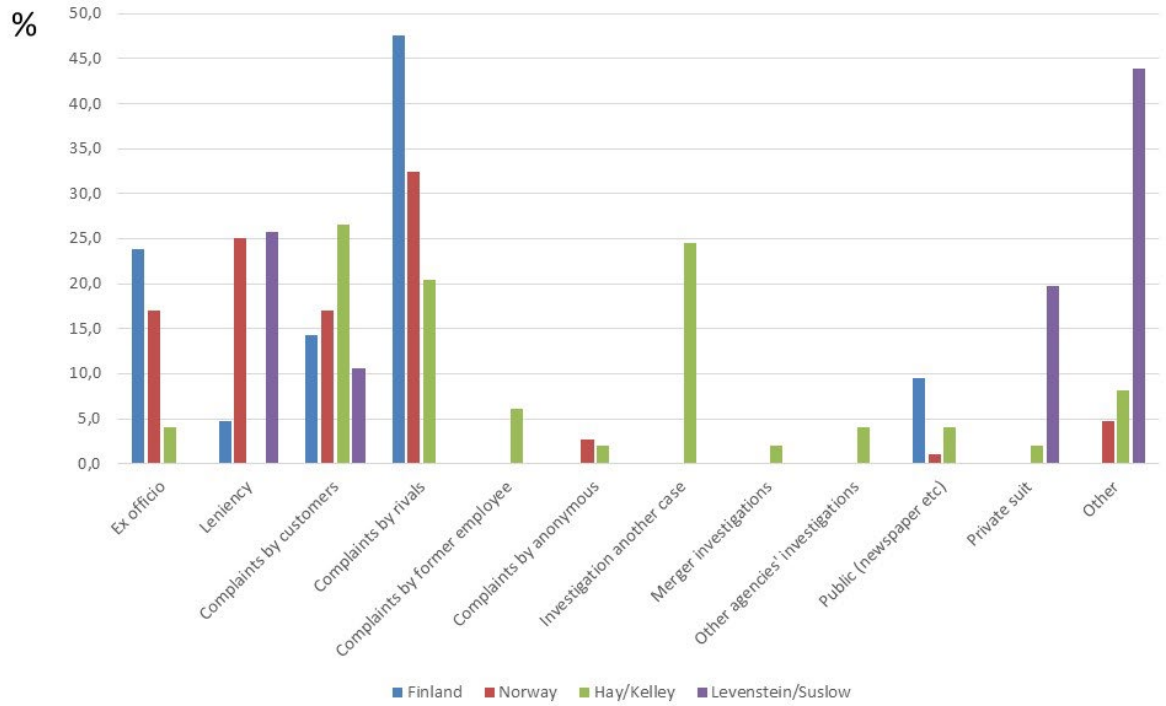

Figure 1: Sources of investigations and cartel detection
Norway: 188 potential cartels detected 2004-2022 (source: survey)
Finland: 22 convicted cartels 2004-2022 (source: survey)
Hay/Kelley: 49 convicted cartels in the US 1963-72[38]
Levenstein/Suslow: 81 international EU/US convicted cartels 1990-2007[39]

In line with what is observed for the US study, we see that there are numerous ways potential cartels are detected in the two Nordic countries. The broad approach to cartel detection in the Nordic countries is at the outset a good thing, since it means that cartelists risk detection through several channels. In particular, it could be problematic if a large majority of cases were initiated by leniency, which would inform cartel members that avoiding detection just requires preventing cartelists from reporting. It is then a good sign that a larger fraction of potential cases are initiated by ex officio investigation in the Nordic countries than what was the case in the US in the 1960s and 70s. Note that ex officio in the Nordic countries is defined more widely than only economic screening, i.e., economic analysis of prices or other data in a market. It can also be, for example, surveillance of a market, where investigators at the agency monitor meetings in an industry and other types of joint activities. (Though it is not clear that the ex officio category is defined exactly the same across the studies.) On the other hand, we see that there is a limited spillover from other cases that are investigated or from other agencies' investigations compared to what we have seen in the US historically.

Two quite important channels for detecting a potential cartel are complaints from customers and rival companies. Those two sources are distinctly different, since cartels that fix prices typically hurt customers but benefit rivals. The exception is cartels that intend to also exclude

[38] See George A. Hay and Daniel Kelley: 'An empirical survey of price fixing conspiracies', (1974) 17(1), *Journal of Law & Economics*, Table 1.
[39] See Margareth C. Levenstein and Valerie Y. Suslow: 'Breaking up is hard to do: Determinants of cartel duration' (2011) 54(2), *Journal of Law & Economics*, Table 2.

rivals. Initially, we should therefore expect that it is more plausible to initiate an investigation due to a complaint from a customer than from a rival. While in the US there are more complaints from customers than from rivals, the opposite is true in the Nordic countries.

In both Finland and Norway, complaints by a rival is the most common source for detecting a potential cartel, while in the US this is the third most common source. The observation from the two Nordic countries is a surprise, since rival firms normally are not harmed by other firms forming a cartel and we have no information indicating that cartels act to exclude rivals. Consequently, we question whether it is effective for the agencies to give priority to such complaints, rather than using resources on other detection activities. We will return to this issue in Section 5 when making policy recommendations. The role of competitors' complaints requires further investigation.

Leniency

Leniency is one way a cartel can be detected, and this has been an option in the Nordic countries during the last 15-20 years. It was introduced in 2004 in Norway and Finland, in 2007 in Denmark, and in 2009 in Sweden. Although having such an enforcement instrument in place is largely inspired by the EU antitrust enforcement system, the leniency programs of the four countries vary in terms of who is eligible for leniency (i.e., corporations and/or individuals) and from which types of sanctions leniency is offered (i.e., corporate fines, individual fines, and/or imprisonment). This is because the leniency programs operate within different national enforcement systems. For the period under scrutiny, the public enforcement towards cartels in Denmark was largely attributed to the Danish Prosecuting Authority. In Denmark it has been the Prosecuting Authority alone that has held the power to prosecute a case and claim both individual and corporate penalties in front of the courts. This has impacted how leniency operates.

Amongst the Nordic countries, it is only Norway and Denmark that have criminalized cartels.[40] At the outset, all three NCAs have aligned their systems with the requirements pursuant to Articles 10 (1) and 13 (1) of the Directive. This means that today, all three Nordic NCAs who also are EU Member States have the power to terminate a cartel (and for that matter impose structural or behavioural remedies). The Norwegian NCA also holds such powers pursuant to Article 12 of the Norwegian Competition Act. Two of the four Nordic NCAs have the power to issue administrative corporate fines. Norway has held such powers since 2004, whereas the Swedish NCA was given this power to fulfil the minimum standards of Article 13 of the ECN+ Directive. The Finnish and Danish NCAs have also aligned themselves with Article 13, but it remains for the courts to have such powers. Finland had this system prior to the ECN+ Directive as well and has thus not made changes in response to the ECN+ Directive, whereas in Denmark, corporate fines are now issued in civil proceedings litigated by the Danish NCA and not in criminal proceedings prosecuted by the Prosecuting Authority. The exclusive sanctioning powers in cartel cases for the Prosecuting Authority has therefore come to an end in Denmark.

Interesting to note is that it follows from the Finnish survey response that there have been discussions on granting the Finnish NCA the judicial power to work as a first instance decision-making body in a manner similar to that in Sweden. In the survey it is stated that such a change "could create more robust and efficient decision-making processes to combat cartels". A similar

[40] See Article 30 of the Norwegian Competition Act and Article 23 of the Danish Competition Act.

answer was provided by the Swedish NCA who, prior to the ECN+ Directive, had a similar system to Finland where the Swedish NCA had to claim fines in front of the Patent and Market Court. The pros and cons with changing the system and providing the Swedish NCA with the power to issue fines was highly debated in Sweden, since it provides the agency with the powers to act both as an investigator, a first-instance decision maker and a prosecutor with the power to impose corporate fines. But as opposed to the (previous) one channel system of Denmark, Norway has a two-channel system: Corporate fines are imposed in the administrative channel by the competition agency, whereas individual fines and imprisonment are imposed in the criminal channel by the Norwegian Prosecuting Authority. For both countries individual sanctions have rarely been used, but corporate fines are common and leniency from such fines is available. But in Denmark, in addition to criminal corporate fines, leniency is also offered from criminal individual fines and imprisonment.[41] In Norway, conversely, leniency is only available for administrative corporate fines.[42] Whereas Denmark recently reformed their sanctioning regime enabling the imposition of civil corporate fines due to the ECN+ Directive,[43] Norway recently had a hearing about introducing individual administrative fines.[44] No legislative proposals have yet been made, though. If Norway was to maintain the criminal individual sanctioning regime or introduce a new administrative individual regime and the ECN+ Directive becomes part of the EEA Agreement, Norway would have to update its leniency program to include protection of individuals covered by corporate immunity applications pursuant to Article 23 of the Directive.

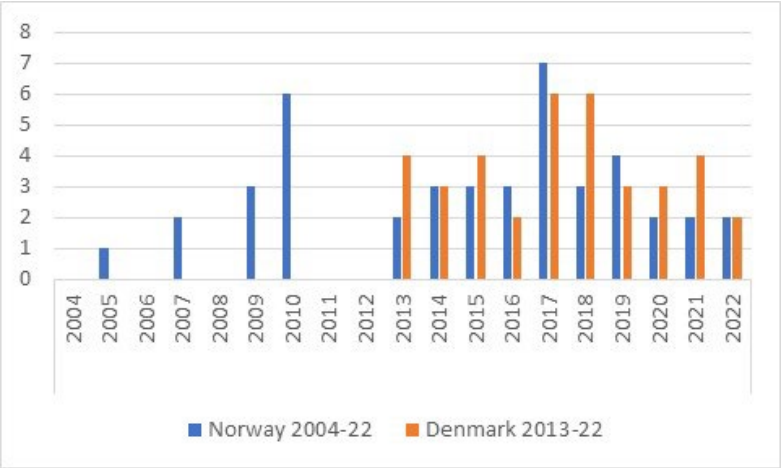

Figure 2: Leniency applications in Norway and Denmark

Denmark: Survey. Note that 2007-11 it is reported that there are 6 leniency applications, and they are not included in Table 2.

Norway: Annual report and survey

Figure 2 reports the number of annual leniency applications in Denmark (2013-22) and Norway (2004-22).

[41] See Article 23 a) of the Danish Competition Act.

[42] See Articles 29, 30 and 31 of the Norwegian Competition Act.

[43] See Article 13 of Directive 2019/1 to empower the competition authorities of the Member States to be more effective enforcers and to ensure the proper functioning of the internal market [2018] OJ L 11/3 (the ECN+ Directive)

[44] To access the report, please follow this link (only in Norwegian): *https://www.regjeringen.no/no/aktuelt/ny-utredning-vil-la-konkurransetilsynet-botelegge-enkeltpersoner/id2970762/*

Finland and Sweden have similar leniency programs to that in Norway as leniency is applicable to civil and administrative corporate fines, respectively (for the project period both countries operated with civil corporate fines). By "civil fines" we refer to the imposition of fines in a civil procedure in front of the courts (as opposed to a criminal procedure). By "administrative fines" we refer to the imposition of fines by a competition agency.

Since it was introduced and until 2022, 43 leniency application have been submitted in Norway and Denmark with an average annual rate of 2.4 and 2.5, respectively. For comparison, the average number of leniency applications for a jurisdiction in Europe was 9 in 2015 and then fell gradually to 3 in 2021 and 4 in 2022.[45] .

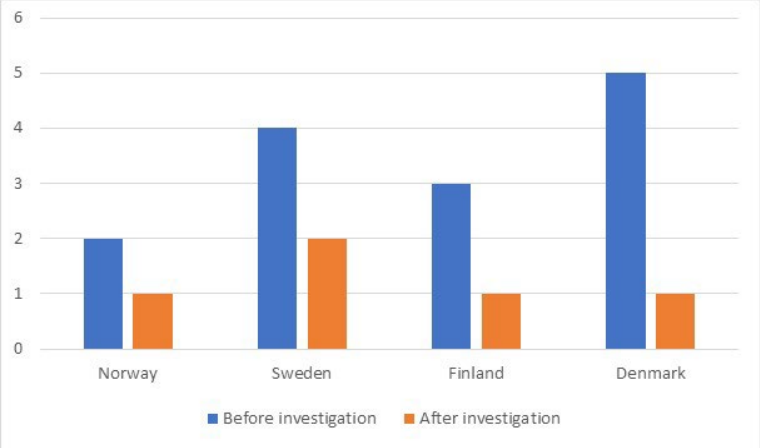

Figure 3: Leniency applications submitted before and after investigation in cases with a decision
Sources: Survey as well as home pages

More interestingly, Figure 3 reports a rather low number of cartel decisions in all four countries which were initiated by a leniency application. During 2004-22 the number of cartel decisions initiated by a leniency application in each of the four Nordic countries varies from 2 to 5, with the lowest number in Norway and the highest number in Denmark. The difference between Norway and Denmark is a surprise, given that the number of received leniency applications are identical for those two countries in this period. However, it might partly be explained by priority decisions in those two countries, since less than 20 % of the leniency applications in Norway were investigated while the corresponding figure for Denmark was almost 80 %.[46] An important feature to bear in mind when reporting the Norwegian numbers here is the fact that the Norwegian leniency program does not only target cartels, but all horizontal and vertical anti-competitive collaborations. This difference in scope between the Danish and Norwegian leniency programs may contribute to explain the striking difference in these percentages since the Norwegian agency is likely to receive less pursuable leniency applications.

If we compare the number of leniency applications that led to cartel decisions with the total number of cartel decisions in each of those four Nordic countries, we see that it varies between

[45] See the background data for OECD Competition Trend 2024, available at:
https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html
[46] The numbers are reported in surveys from Denmark and Norway, respectively. The figure from Norway is drawn from a sub-sample of 27 leniency applications, while the Danish figure is drawn from a subsample of 39 leniency applications.

13 % (Norway) and 26 % (Denmark). Even the higher number for Denmark is low when compared to other countries. For example, in the EU more than 80 % of the cartel decisions during 2006-2010 and more than 90 % of the cartel decisions during 2011-16 stemmed from leniency applications.[47] In the Netherlands during 2004-23, 30 % of the cartel decisions were initiated by a leniency application.

All four countries have the option to award leniency for applications submitted after an investigation is started, for example, subsequent to a dawn raid. However, rather few leniency applications are received after any dawn raid in the Nordic countries; Figure 3 reports only one in each of the four countries since 2004 (except for Sweden with two). That few firms apply for leniency even after a dawn raid is indirect evidence that penalties are weak. When we come to examining penalization, fines are in some time periods and/or some countries documented to be quite low which supports this claim.

Ex officio investigations

As explained in Section 2.2.1, an alternative to initiating an investigation based on complaints or leniency applications is for an ex officio investigation to be the basis for initiating a case.

We see from Figure 1 that almost one out of five investigations that led to a decision in Finland was initiated by an ex officio investigation, while one out of seven investigations (whether or not they led to a decision) in Norway was ex officio. This is higher than the corresponding number for the US for the 1960s and 70s. But if we look at the absolute number of ex officio investigations, the picture is different. While Norway had less than two ex officio investigations annually during 2004-22, each European jurisdiction had 9-16 annually in the years 2015-22.[48] Given the rather low number of leniency applications in the Nordic countries, there is the potential for – and good reasons for – even more detection of cartels through such a channel.

One specific type of ex officio investigation is screening. Cartels can be found by screening market data for evidence that a cartel is operating (behavioral screening) or that cartel formation is likely (structural screening). All four countries report that they have spent resources on screening, and in particular with regards to public procurements. Denmark has for some years had a separate data unit, and they have used public procurement data to develop methods to flag suspicious bids and potentially coordinating companies.[49] However, a challenge in the three remaining Nordic countries has been that public procurement data is incomplete which makes it difficult to use for screening. But all the Nordic NCAs have cooperated with public agencies responsible for public procurement, both to improve the data availability and to inform public procurers how to detect bid rigging.

Despite the screening activities in all four countries, we have no information about cartel investigations (which ultimately led to a decision) that were initiated by screening. Finland and Sweden report that they do not have any such cases, while Denmark and Norway have not disclosed this information.

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[47] See Wouter P. J. Wils: 'The use of leniency in EU cartel enforcement: An assessment after twenty years' (2016) 39(3), *World Competition*, 327-388

[48] See background data for OECD (2024), available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html*

[49] Their method is described in Konkurrence- og Forbrukerstyrelsen: 'Kontrolundersøgelser', Report 16, 2018, available at: *https://kfst.dk/media/50736/16_kontrolundersøgelser.pdf.*

As explained in Section 2.2.1, it is within the scope of NCAs to incentivize other actors to report cartels and to support other agencies to detect cartels. Unfortunately, such instruments are seldom or ever used in the Nordic countries. Although there is an option for anonymous complaints, there is no program that rewards whistleblowers, even if they are not involved in the illegal activity. Bidder exclusion in future public procurements for cartelists is not an instrument for competition authorities in the Nordic countries. However, in Sweden and Norway the agency in charge of public procurement has enforced exclusion in individual tender procedures. Furthermore, there is no reduction in damages for a firm that is granted leniency, which can reduce the incentive of firms to apply for leniency.

3.2.2 Investigation, prosecution and conviction

Competition agencies inevitably face a resource constraint. Their criteria for prioritization can then be crucial for the fight against cartels, since it should affect whether a cartel investigation is initiated. In all four countries the criteria for prioritization are rather broad. In the survey each of the four Nordic countries report several factors they consider when they make priorities. These factors are rather general - for example, the suspected cartel's effect on consumers - and this leaves room for discretion for the competition agency.

Case selection

Which sectors that are investigated might give an indication concerning which type of market is given priority by the competition authority. Table 1 reports data concerning which markets were investigated. The data from Norway and Sweden concerns dawn raids during 2004-22, while the OECD data is based on cartel decisions in 2022. For Norway before 1992, it is based on cartels that are registered (when collusion was legal).

If we consider Norway and Sweden after 2004, we see from Table 1 that construction is the most investigated sector. In contrast, in Norway when cartels were legal, manufacturing was the sector with the largest fraction of registered cartels. The presence of many manufacturing cartels is consistent with that observed in the EU and US (though these cartels are illegal). In the period 1961-2013, almost 80 % of the cartels that were investigated and convicted in the US were in manufacturing. In the EU 1957-2004, more than 60 % of antitrust decisions was in manufacturing.[50] Note that the figure for EU includes both abuse of dominance and cartel decisions, although the majority of decisions are cartel decisions.

[50] See Margaret C. Levenstein and Valerie Y. Suslow: 'Price fixing hits home: An empirical study of US price-fixing conspiracies' (2016) (48), *Review of Industrial Organization,* see table 2 and Maarten Carree, Andrea Günster and Maarten Pieter Schinkel: 'European antitrust policy 1957-2004: An analysis of Commission decisions', (2010) (36), *Review of Industrial Organization*, 97-131

Sectors:	Norway -1992		Norway 2004-22		Sweden 2004-22	OECD 2022
Primary		12		0	3	8
Manufacturing	24	40	15	16	11	21
Electicitry and heating		0		3	11	1
Water and waste		0		8	5	5
Construction	7	7	9	24	18	14
Wholesale and retail	17	26	8	11	13	16
Transport and storage	17	12	7	19	13	7
Accommodation and food		2		0	5	3
Information and communication		0		5	0	4
Finance and insurance		0		3	3	4
Media		0		5	5	2
Admin and support		0		5	8	6
Health and social work		0		0	5	3

Table 1: Types of markets investigated (percentage)
Numbers in green: Sector's share of GDP[51]
Norway 2004-22: Markets with dawn raids (37). Survey 2004-16 and www.kt.no 2017-22
Norway before 1992: Data from registered cartels[52]
Sweden 2004-22: Markets with dawn raids (38). From www.kkv.se
OECD 2022: OECD Competition Trend 2024, Figure 2.9 (from cartel decisions)

If we control for a sector's fraction of GDP (see green numbers in Table 1), manufacturing is overrepresented in Norway when cartels were legal and construction is overrepresented when cartels are illegal. Of course, there is the usual caveat that we observe only detected cartels during the illegal regime. Hence, inter-industry heterogeneity in detected cartels could be due to variation in detection rates as well as the latent (unobserved) cartel rate.

In light of the importance of construction procurement, Figure 4 reports the fraction of cartel decisions that are bid rigging cases.

[51] See Statistics Norway: 'National Account 1954-70' where we report numbers from 1960 for the period before 1992, and see Statistics Norway: 'National Account 2013' for the number we report 2004-2022.
[52] See Ari Hyytinen, Frode Steen and Otto Toivanen: 'Norske karteller: de var mange og de var fremdeles lovlige så sent som i 1992' (2020) (1), *Samfunnsøkonomen*, Table 2.

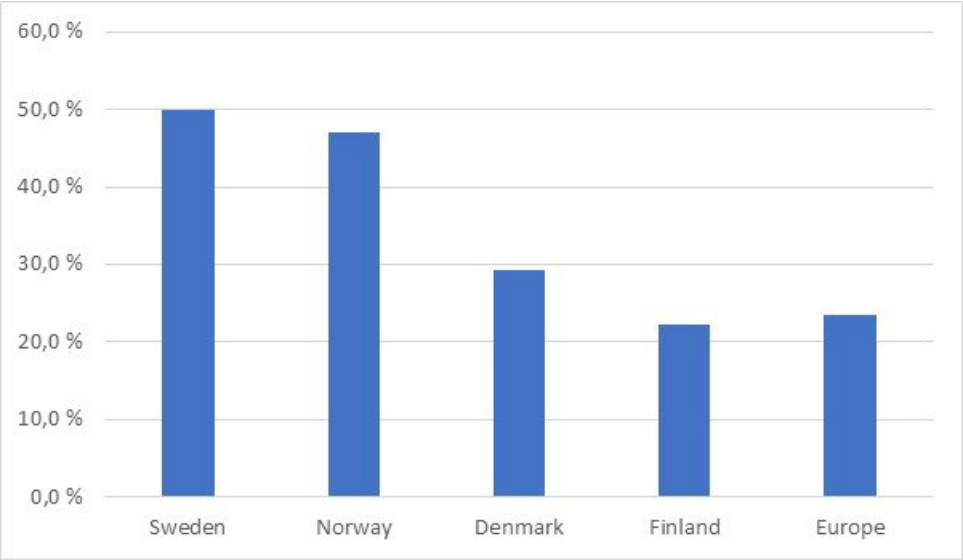

Figure 4: Fraction of cartel decisions that are bid rigging cases
Source: Nordic countries: Master thesis for the Nordic countries and home pages
Europe: Data for Europe 2021/2022[53]

We see that the relative number of bid rigging cases is rather high in Sweden and Norway, and also above the average for Denmark and, more broadly, Europe. Note, however, that public procurement is often at a national level, and thereby not as relevant for the EU.[54] Bid rigging cases can be examples of straightforward violations of competition law, for example when firms have explicit communication prior to bid rigging. Note that there are some examples of so-called open bid rigging cases, both in Denmark and Norway, where the bidders are open about their direct communication and cooperation. These cases have been disputed; for example, one case in Norway was appealed to the Supreme Court and the Supreme Court asked for the opinion of the EFTA Court.

Dawn raids

Figure 5 reports the annual number of dawn raids in Norway and Sweden since 2004, and Denmark since 2017. In total the numbers are quite comparable in Norway and Sweden; 42 dawn raids in Norway and 38 in Sweden with an average of approximately two per year. We see also that the trend is quite comparable in those two countries. While Denmark had in total 66 dawn raids over 2006-23 which amounts to 3,7 dawn raids annually. Denmark had 32 dawn raids during 2006-16 and 34 dawn raids during 2017-23. We do not have the number of dawn raids for each year in Denmark before 2017. Finland reported they have 2-5 dawn raids each year.

[53] See OECD Competition Trend 2024, Figure 2.8, available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en/full-report.html*
[54] Martin Hellwig and Kai Huschelrath: 'Cartel cases and the cartel process in the European Union 2001-15: A quantitative assessment' (2017) 62(2), *Antitrust Bulletin*, 400-438 (2017) report that in EU only 4 out of 113 decisions 2001-15 are bid rigging cases (less than 4 %).

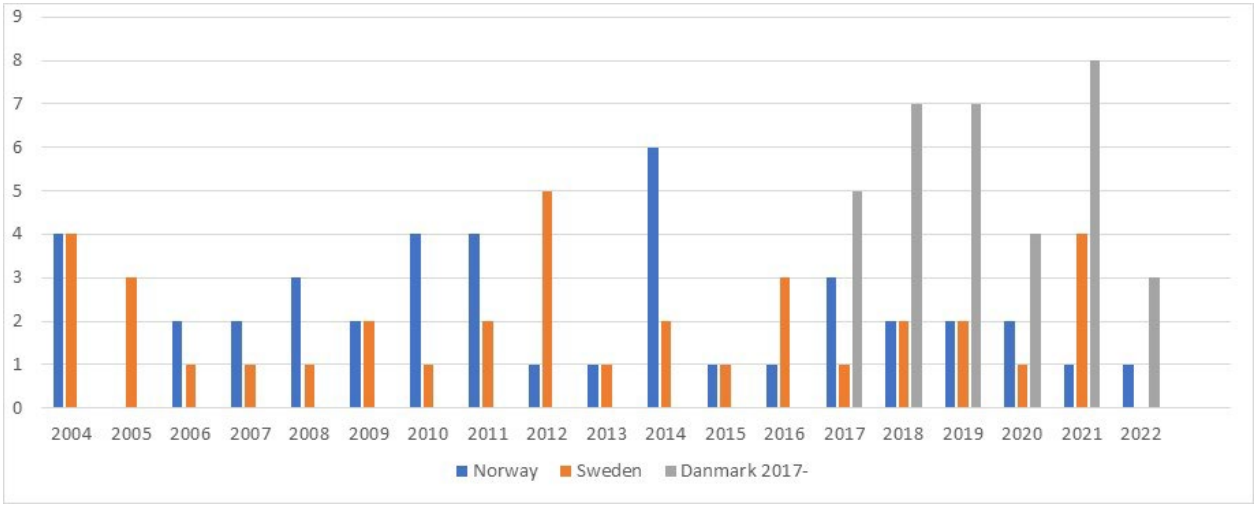

Figure 5: Annual number of dawn raids in Norway, Sweden and Denmark
Norway: Survey and web page (after 2016)
Sweden: web page
Denmark: Survey

If we compare with other countries, we see for the period 2017-23 that the average number of annual dawn raids is below one for some of the small countries in Europe.[55] Norway and Sweden in the same time period had 1,8 dawn raids annually. In contrast, large countries in Europe had on average more than four dawn raids annually in that time period.[56] The Netherlands conducted 130 dawn raids over 2005-23 which is 6,8 on an annual basis. Denmark had a rather large number of dawn raids, even when compared to large European countries, with almost six dawn raids annually during 2017-23.

We do not have detailed information about whether a dawn raid led to a cartel decision. But the Danish competition authority reports that the fraction of dawn raids that led to a case increased from 40-60 % during 2006-2009 to more than 70 % over 2013-17.[57] They argue that this was the result of the establishment of a special unit on investigation and cartels in 2009. We do not have comparable data for other Nordic countries, but in both Sweden and Norway a comparison of the number of dawn raids with the number of cartel decisions indicates that the rate of dawn raids leading to a cartel decision is lower than in Denmark. If we compare the number of cartel decisions 2004-22 with the corresponding number of dawn raids in the same time period, we find that the fraction of dawn raids relative to cartel decisions for the period 2004-23 are 38 % and 45 % for Norway and Sweden, respectively. Since there can be cartel decisions with no dawn raids, these figures overestimate the fraction of cartel decision with a dawn raid.

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[55] These small countries are (ranked after number of dawn raids 2017-23, see parenthesis): Slovakia (16), Portugal (9), Austria (8), Belgium (8), Cyprus (7), Bulgaria (6), Hungary (6), Switzerland (5), Netherlands (4), Latvia (2), Slovenia (2), Estonia (1) and Lithuania (1). Source: White & Case, available at: *https://www.whitecase.com/insight-our-thinking/dawn-raid-analysis-quarterly.*

[56] These large countries are (ranked after dawn raids 2017-23): Greece (39), Spain (36), Germany (31), Poland (25), Romania (25), France (24), EU (22), Italy (21 and UK (8). Source: White & Case, available at: *https://www.whitecase.com/insight-our-thinking/dawn-raid-analysis-quarterly*. See also OECD 2023, which reports on average 4 dawn raids annually for each jurisdiction in Europe 2015-21.

[57] Se Koncurrence- og Forbrukerstyrelsen: 'Kontrolundersøgelser', report 16, 2018, Table 2, available at: *https://kfst.dk/media/50736/16_kontrolundersøgelser.pdf*.

Cartel decisions

To inform some of our findings below, a natural starting point is a simplified explanation of how the decisional powers were organized concerning the finding of an infringement and the imposition of corporate fines in the period for our data collection.

During the period covered by our study, it is only the Norwegian agency that has had the power to take decisions involving a finding of an infringement and to impose administrative fines. The other agencies needed to bring actions in front of the courts to achieve the same during this period, and some of them still do. As already mentioned, the Danish agency has a long tradition of leaving the filing for criminal corporate fines in the hands of the National Prosecuting Authority with an important exception: A firm may admit its cartel participation and accept a fine from the agency (in agreement with the Prosecuting Authority) to settle the case and avoid trial. The Finnish and Swedish competition authorities have themselves filed for civil corporate fines in front of the courts, but also in Sweden there used to be a settlement option where a firm could accept a fine to avoid trial. This option was in place from 2008 to 2021.

Today, due to the ECN+ Directive, Denmark has left the criminal channel for corporate fines (individual fines and imprisonment remain in this channel), and it is the competition agency itself that files for civil corporate fines in front of the courts. The settlement option remains, however (without the need for consent from the Prosecuting Authority), but amendments in legislation has brought the calculation of fines in line with the fining guidelines of the Commission, making this option potentially less attractive in the future. These amendments entered into force in summer 2024. After the ECN+ Directive, Sweden has implemented the same system as Norway, meaning that the agency now has the power to take decisions involving a finding of an infringement and to impose administrative corporate fines. The option for settlement (fine order) has been removed in Sweden. We distinguish between settlements where the undertaking accepts the fines to avoid trial, and so-called "cartel settlements" where in addition to avoiding trial, the undertaking receives a 10 % reduction of fines. The cartel settlement procedure was introduced by the Commission in 2008 as an enforcement instrument with the aim of streamlining the Commission's case handling, thus freeing up resources to take on more cases and in that respect contribute to increased deterrence.[58] It adds to leniency in the sense that undertakings not eligible for immunity but reduced fines pursuant to the leniency procedure may under the cartel settlement procedure additionally receive a 10 % reduction of the fines. Amongst the four Nordic countries, only Norway offers cartel settlements. Remember that Denmark still offers settlements where fines are not reduced, but merely accepted by the undertaking to avoid trial.

As reported in Figure 6, on average three of the Nordic countries had slightly less than one decision per year (with averages of 0.89 for Sweden and 0.84 for Finland and Norway), while Denmark exceeded one decision per year in that period (1.3). This is a lower annual number of cartel decisions than in many other jurisdictions. For example, for the period 2015-22, in Europe

[58] Commission Regulation (EC) No 622/2008 of 30 June 2008 amending Regulation (EC) No 773/2004, as regards the conduct of settlement procedures in cartel cases [2008] OJ L 171/3. Commission Notice on the conduct of settlement procedures in view of the adoption of Decisions pursuant to Article 7 and Article 23 of Council Regulation (EC) No 1/2003 in cartel cases, [2008], OJ C 167/1.

each jurisdiction had almost 5 cartel decisions each year.[59] The Netherlands, a jurisdiction of a comparable size to the Nordic countries, the number of cartel decisions was 3,4 annually over 2004-23.

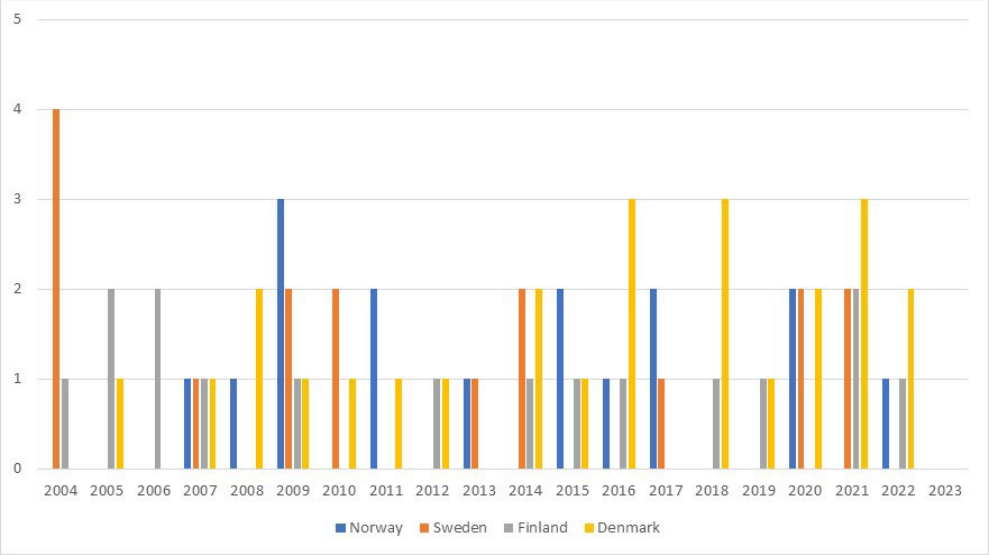

Figure 6: Annual number of cartel decisions
Source: Collected from master thesis as well as home pages

A closer look indicates some changes over time in some of the countries. First, we see there are no cartel decisions in Norway in the early years of this time period. This might be explained by two factors. In 2004 the ban against abuse of dominance was introduced in Norway, which led to many complaints about abuse in subsequent years. The resulting investigations may have led to reduced resources for cartel cases. In the time period 2004-06 the agency gradually moved from Oslo to Bergen. An almost complete turnover of the staff during those years might have reduced the efficacy of the agency. Due to the lack of cartel decisions, the ministry in its annual letter of governance ('tildelingsbrev') in 2008 and in the subsequent year wrote that the agency should 'annually over three years on average stop two antitrust violations'. When we look at the time period 2008-11, we see several cartel cases in rather small markets, and the majority of those decision were not appealed by the parties. One interpretation is that they gave priority to rather straightforward cases in that time period, when they were asked to bring forward a certain number of antitrust decisions.[60]

Second, we see that Sweden has a lower growth in accumulated number of decisions in two time periods, the years after 2004 and the years after 2013/14. In 2004 and 2013, respectively, three proposed decisions were overturned by the court. It might be that such defeats in the court system had a negative impact on the number of cartel decisions in the following years. The Swedish Competition Authority asked two researchers to analyze the reason for these decisions being overturned after appeal. Among other things, they pointed out that the NCA should to a larger degree refer to case law from the European Court of Justice and ask for a preliminary

[59] See background data for OECD (2024), where it is reported 4.7 average number of cartel decisions per country in that period, available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html*
[60] See Lars Sørgard: 'Måling og prioriteringer i konkurransepolitikken' (2013) 16(4), *Magma*, 60-71

ruling from the ECJ about the applicable standard of evidence to safeguard the effectiveness of EU competition law.[61]

Third, as reported in Figure 6, Denmark has a larger number of decisions starting in 2015 than the other three Nordic countries. One possible explanation for the larger number of cartel decisions in Denmark after 2017 is that they investigated more cases by having dawn raids and are more effective in picking cases that turn out to be a violation of the law. This explanation is in line with what the Danish Competition Authority has said in public.[62] An alternative explanation is that the population of cartel cases is larger in Denmark than in the other Nordic countries.

Win/loss ratio

In Figure 7 we have shown the fraction of cases that were upheld in each country during 2004-22. Note that this includes cases that were not appealed to the court system. In particular, 36 % of the cases in Denmark were resolved by all the involved parties accepting the fine (no judgement in the court). This indicates that the fines are at a low level in Denmark (as we show below), since such a high fraction of cases are not brought to court by any of the parties.

85-91 % of cartel decisions were upheld in the Nordic countries, with the exception of Sweden where only 65 % of cartel decisions were upheld. The decisions that were reversed by court did not meet the evidentiary standards.

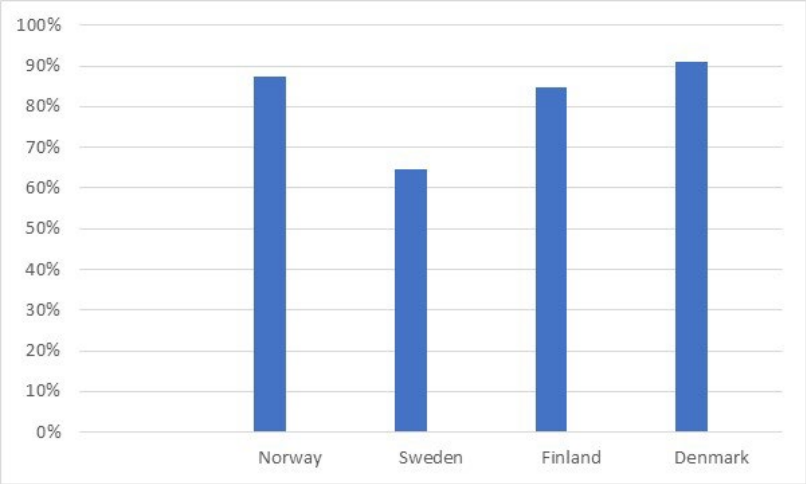

Figure 7: Percentage of decisions upheld
Source: Master thesis and home pages

However, it is of interest to look at the fraction of firms that appeal the decision. This is shown in Figure 8.

[61] See Torbjørn Andersson and Magnus Strand: 'Konkurrensverkets domstolsprocesser', (2021) *Konkurrenseverket,* available at: *https://www.konkurrensverket.se/informationsmaterial/rapportlista/konkurrensverkets-domstolsprocesser/*
[62] See Koncurrence- og Forbrugerstyrelsen (2018): 'Kontrolundersøgelser', report 16, 2018, Table 2, available at: *https://kfst.dk/media/50736/16_kontrolundersøgelser.pdf*.

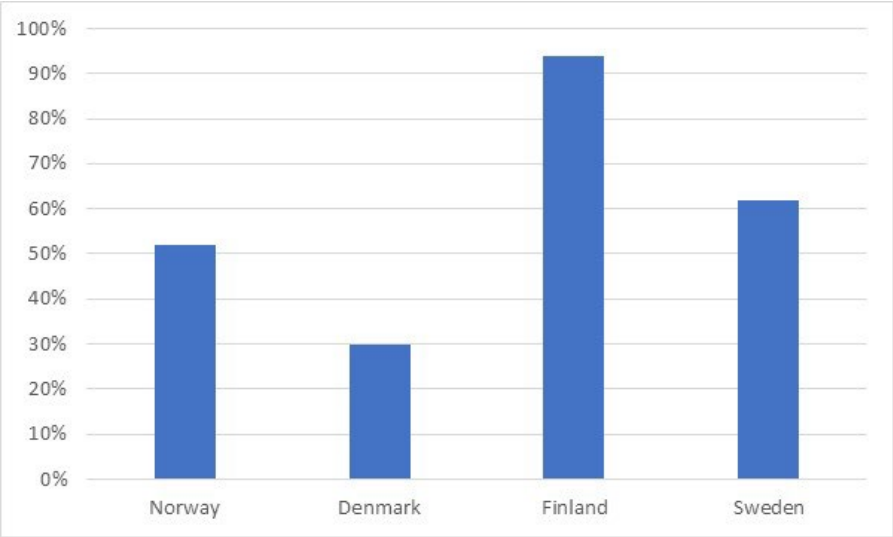

Figure 8: Percentage of convicted firms that appeal
Source: Master thesis and home pages

We see that Denmark and Finland stand out, with a low and high appeal rate, respectively. As we will comment on below, this might be due to very low fines in Denmark, and relatively high fines in Finland compared to the average of the Nordic countries. In the EU, the fraction of cartelists that appeal varies a lot over time. While 60 % appealed during 2001-10, only 21 % appealed over 2011-15. It is argued that this drop is to a large extent due to the cartel settlement procedure becoming more frequently used in the EU.[63] Note that the 10 % cartel settlement procedure in public antitrust enforcement has not been used in the Nordic countries. Denmark, Finland and Sweden do not have cartel settlements as an available instrument, while in Norway the instrument has not been used after it was introduced in 2017. Sweden used to have its own settlement procedure, and as far as we know there are only three cases where it was used.[64] In a study of ten European jurisdictions for the period until 2018, it is found that the appeal rate varies from 30 % (Germany) to more than 80 % (The Netherlands and Croatia). Note that these data consists of both horizontal and vertical cases and the time period used varies from country to country, and therefore that study is not directly comparable to our study.[65]

Turning to whether firms that appeal win in court, Figure 9 shows the fraction of firms that appeal for which decisions are upheld.

[63] See Michael Hellwig and Kai Hüschelrath: "Cartel cases and cartel enforcement process in the European Union 2001-2015: A quantitative assessment," (2017) 62(2), *Antitrust Bulletin*, 400-438. In particular, see the discussion concerning Figure 29.
[64] See Annalies Outhuisje: "Effective public enforcement of cartels: rates of challenged and annulled cartel fines in ten European member states" (2019) 42(2), Josè Rivas (ed.): *World Competition Law and Economics Review*, Kluwer Law International, 171-204
[65] See Annalies Outhuisje: "Effective public enforcement of cartels: rates of challenged and annulled cartel fines in ten European member states" (2019) 42(2), Josè Rivas (ed.): *World Competition Law and Economics Review*, Kluwer Law International

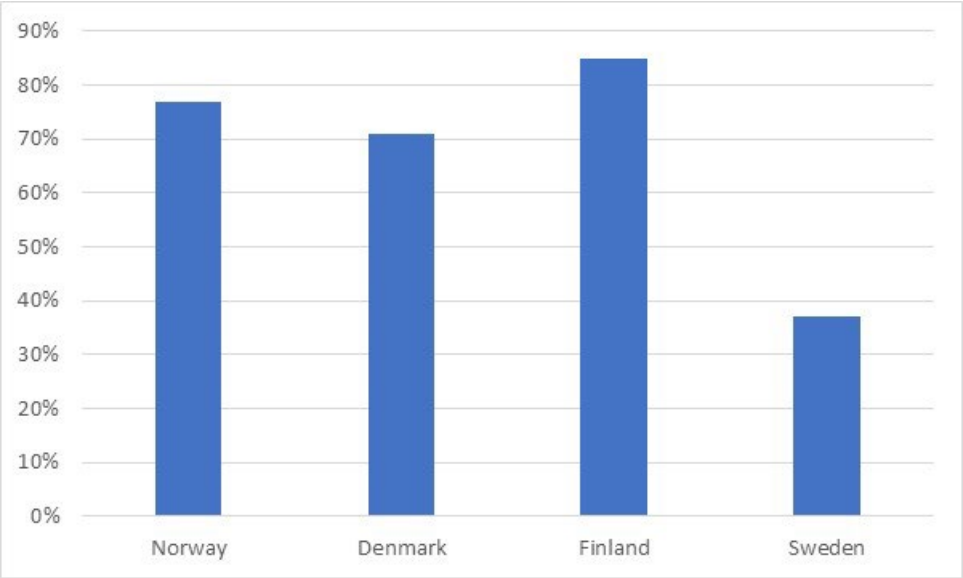

Figure 9: Decisions upheld as a percentage of cases appealed
Source: Master thesis and home pages

Sweden stands out with an upheld rate of less than 40 %, which is partially explained by the fact that the Swedish competition authority has struggled with building solid enough cases to convince the courts due to inter alia budget constraints.[66] In contrast, the three other Nordic countries have an upheld ratio of 70 % or higher. A study of ten European countries found that only one country (Germany) had a higher upheld ratio then 70 %.[67] This indicates that the upheld rate in three of the four Nordic countries is rather high compared to other countries.

3.2.3 Penalization

All the Nordic countries' anti-cartel enforcement rules are harmonized with the EU rules (see Section 3.1). Despite this, there are some notable differences between the four Nordic countries concerning which instruments that are available. The main instruments available in each country during the period of investigation is shown in Table 2.

[66] See Torbjørn Andersson and Magnus Strand: 'Konkurrensverkets domstolsprocesser', (2021) *Konkurrenseverket* English summary found on p. 7., available at: *https://www.konkurrensverket.se/informationsmaterial/rapportlista/konkurrensverkets-domstolsprocesser/*

[67] See Annalies Outhuisje: "Effective public enforcement of cartels: rates of challenged and annulled cartel fines in ten European member states" (2019) 42(2), Josè Rivas (ed.): *World Competition Law and Economics Review*, Kluwer Law International.

	Norway	Sweden	Denmark	Finland
Administrative corporate fines	✓			
Civil corporate fines		✓		✓
Criminal corporate fines			✓	
Corporate fines from turnover	✓	✓		✓
Individual criminal fines and imprisonment	✓		✓	
Individual administrative fines				
Director disqualification		✓		
Leniency for firms	✓	✓	✓	✓
Leniency for individuals			✓	
Settlements	✓	✓	✓	
Damages directive		✓	✓	✓

Table 2: Enforcement instruments in the Nordic countries in 2022

As seen from Table 2 there are various instruments that are available in each of the four countries. However, it turns out that the main instrument in all four countries are corporate fines.

Corporate sanctions

Figures 10 and 11 report the fines per firm in each of the four countries, as well as the fine as a percentage of a firm's turnover.

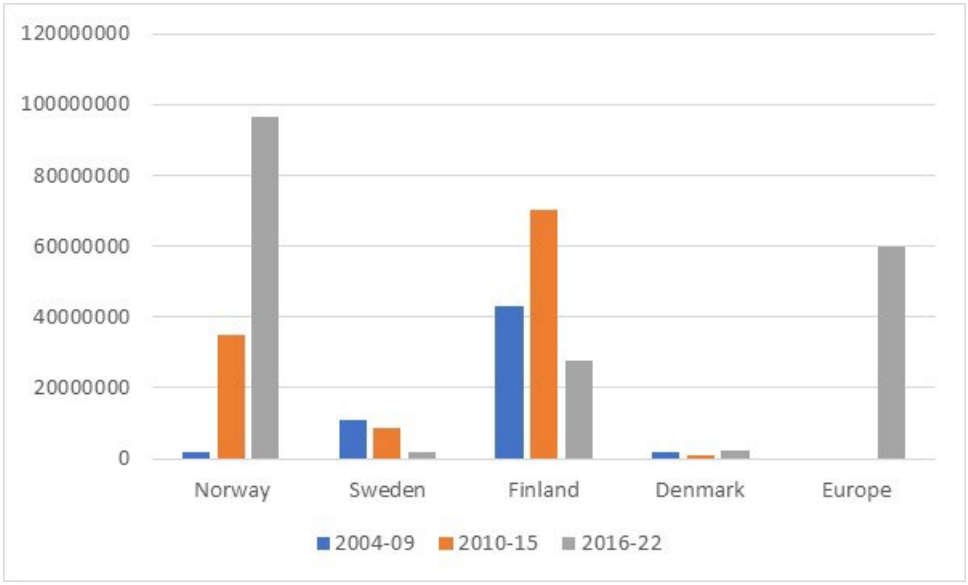

Figure 10: Fine per firm
Source: Master thesis and home page. Absolute number in kroner except for Finland (Euro), where 1 Euro = 0.1 krone. For Europe, data from OECD.

Figure 10 reveals a large variation across countries and across time for some countries. The absolute fine level is very low in Denmark over the entire time period, while it is decreasing in

Sweden during the last twenty years. In contrast, in Norway the absolute fine level has increased over time due to its alignment with the Commission and, more recently, is higher than other Nordic countries.

In Denmark, the level of a fine depended on whether a cartel violation was categorized as either less serious, serious or very serious. In each of the categories they set an interval for the fine rather low, although they were increased from 2012. Until 2012 the fine interval was maximum 0,4 MDKK for less serious, 0,4-15 MDKK for serious, and above 15 MDKK for very serious. In 2012 those intervals were increased to maximum 4 MDKK, 4-20 MDKK, and above 20 MDKK, respectively. In contrast to the fine setting in the other three Nordic countries, the fines were neither related to value of relevant sales or annual turnover. In those three countries (and the EU) the fine is set as a percentage of value of relevant sales each year (typically 15-20 %), multiplied by the number of years. However, there is a 10 % of annual turnover cap on the total fine.

For comparison, each firm in Europe that was fined during 2016-22 was levied, on average, a fine of 6,3 million Euro, which corresponds to slightly more than 60 million kroner.[68] This amount is approximately 60 % of the corresponding fine per firm in that time period in Norway, and slightly less than half the average absolute fine per firm in Finland. In contrast, the average fine per firm is approximately 30 times higher in European jurisdictions than in Denmark and Sweden. Note, however, that the data for Europe includes large countries as well as the EU, and in that respect the numbers are not directly comparable to rather small Nordic countries.

Let us contrast the fine setting in the Nordic countries and the harmonization with the EU. As explained, Denmark in the project period stands out with its fine setting not linked to turnover. In 2013, Norway introduced rules on fine setting which were fully harmonized with the EU.[69] When we investigate the cartel decisions in Norway, we find that in all cases before 2013 there was no reference to EU case law concerning the setting of fines, either in the initial decisions or in the courts' decisions, while the opposite was true for cartel decisions after 2013. In Sweden, as already explained, it is claimed that they could have referred more to EU case law. Quite recently they introduced rules on fine setting, very much the same as those introduced in Norway in 2013.[70] We observe that the fines increased in Norway after 2013, while they did not increase in Sweden (not even in relative terms, see Figure 11). However, it is an open question how much the harmonization with the EU case law affected the change in fine setting over time in Norway.

Since fines in Denmark for the project period were not set according to turnover, we do not have data for the fine as a fraction of annual turnover for Denmark. In Figure 11 we show the fine as a fraction of annual turnover for the three other Nordic countries along with the corresponding numbers for the EU.

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[68] See background data for OECD (2024), where we have divided the total nominal fines with the number of cartel members that were fined, available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html*

[69] See the Ministry of Trade, Industry and Fisheries: 'Forskrift om utmåling og lempning av overtredelsegebyr', December 11 2013.

[70] See Konkurrensverket: 'Method for determining the administrative fine', *Policy Statement.* 2021:2.

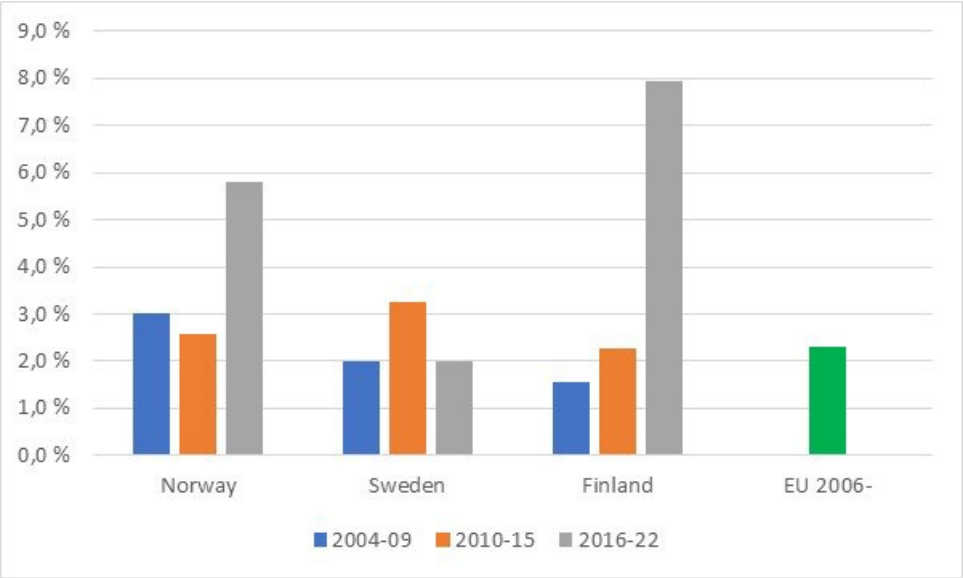

Figure 11: Fine as a percentage of annual turnover
Data: Master thesis and home page for Nordic countries. For EU, statistics on cartel decisions[71]

Figure 11 shows that until 2015 the fine as a percentage of annual turnover is quite comparable in Norway, Sweden and Finland. But after 2016, Norway and Finland have higher relative fines than in Sweden. In particular, Finland has had the largest increase in relative fines. Note also that the average for the EU after 2006 is comparable to the Nordic countries until 2015. After 2015 the relative fine is higher in Norway and Finland than for the EU.

However, there is a large variation in the fine setting. Figure 12 reports the percentage of firms with a fine equal to the cap (10 %) and the firms with less than 1 %.

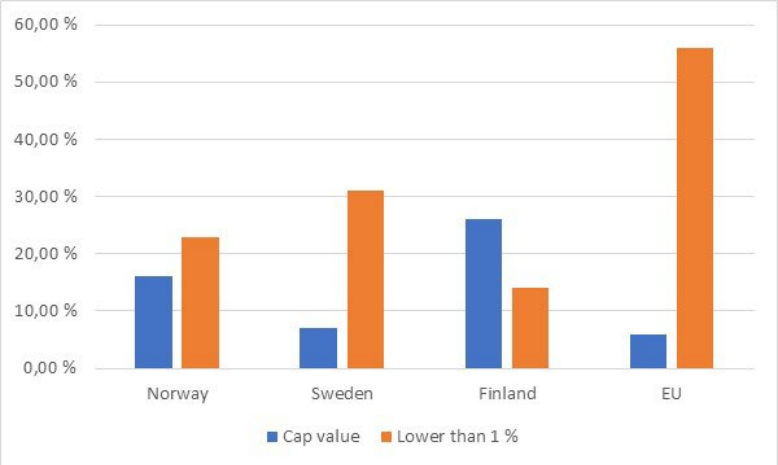

Figure 12: Percentage of firms with fine equal to 10 % cap and less than 1 %
Source: Master thesis and home pages for Nordic countries. Cartel statistics for EU.

[71] See European Commission: 'Cartel Statistics', available at: *https://competition-policy.ec.europa.eu/document/download/b19175c3-c693-410b-b669-27d4360d359c_en?filename=cartels_cases_statistics.pdf*. Calculated from last Table on page 10 (excluding immunity applicants), by taking the average fine in each interval weighted with the number of firms in each interval.

We see that the rather low average fine reported in Figure 11 for the EU is to a large extent driven by the large number of firms with a fine below 1 % of annual turnover. The comparison of the average fine in Figure 11 may then not be very informative concerning the toughness of fine setting in Finland and Norway for the most hardcore cartels, since the composition of cartel cases may differ between the EU and the Nordic countries.

The outcome of the appeal system is important for deterrence. As shown above, a fraction of the decisions is reversed during the appeal (see Figure 7). In addition, for those decisions that are upheld, the fine might be changed during the appeal. It turns out that in all four countries an appeal leads to a substantial reduction in fines on average, as shown in Figure 13.

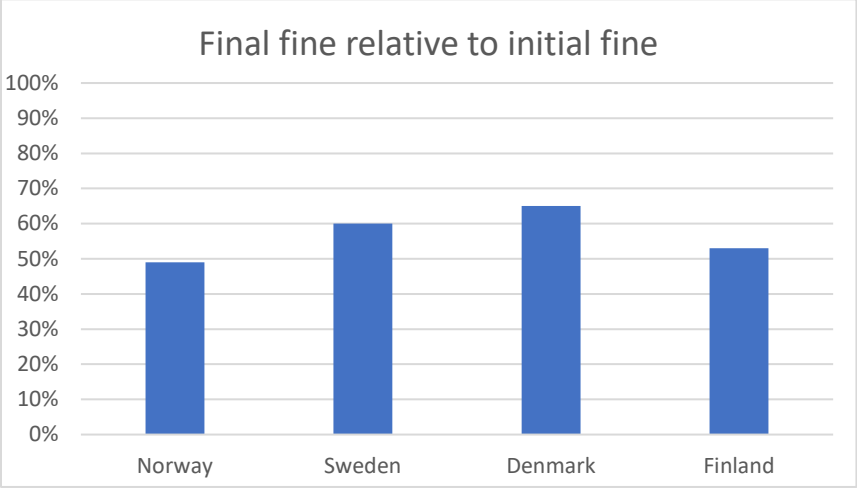

Figure 13: Final fine as a percentage of initial fine
Source: Master thesis and home pages

The fine reduction on average is above 50 % in Norway, but also quite high for the other Nordic countries. Those two countries with the highest initial fine – Norway and Finland – have the largest reduction in the fine during the appeal. But even for Denmark, where the initial fine is very low, the fine reduction is substantial. It illustrates that, whatever is the initial fine, the appeal system has the tendency to lower fines in cartel cases even though they in principle could increase fines. One example of increased fines is the cartel in the asphalt market in Norway, where the Appeal Court increased the fine from 140 to 150 MNOK. The reason was that they took into account that the firm had previously violated the competition law[72] Cartel cases are often comprehensive complex cases, and factors such as application of the substantive laws, economic evidence, case duration and evidentiary requirements may contribute to explain these fine reductions. For comparison, the fine reduction is lower in the EU. For the period 2001-12, it was less than 15 % in 9 out of 12 years.[73]

[72] Borgarting Appeal Court, LB-2014-76039, available at: *https://lovdata.no/dokument/LBSIV/avgjorelse/lb-2014-76039?q=LB-2014-76039*
[73] See Michael Hellwig and Kai Hüschelrath: "Cartel cases and cartel enforcement process in the European Union 2001-2015: A quantitative assessment," (2017)

Individual sanctions

For a long time, individual fines and imprisonment have been an option in Norway and Denmark, while it is not an instrument available either in Sweden or Finland. As opposed to in the US, in Europe individual penalties are not common in cartel cases. In the period 2015-22, individual fines were levied in less than 20 % of the cartel cases in Europe.[74]

In Norway both individual fines and imprisonment are available enforcement instruments. From the end of the 1980s to the end of the 1990s, individual fines were imposed on 61 people in eight different cartel cases. But after the end of the 1990s, not a single person has been sanctioned with fines or imprisonment in Norway. This indicates that the deterrent effect of such a rule has been very low the last 25 years in Norway. Since individual fines are not in practice imposed by the Prosecuting Authority (on the initiative of the Norwegian agency), there are now discussions on empowering the agency with the possibility to impose administrative individual fines and director disqualification.

In Denmark they have had individual fines as an instrument for many years (before 2004), for various violations of the ban on anticompetitive agreements including hard core cartels. In 2012 individual penalties were strengthened. First, the basic amount for a personal fine was increased. The indicative fine was raised to 50.000 DKK for a less serious violation, 100.000 DKK for a serious violation, and 200.000 DKK for a very serious violation. In addition, imprisonment up to six years was introduced. Figure 13 reports the number of fines and annual average size of the personal fines in the period after 2004.

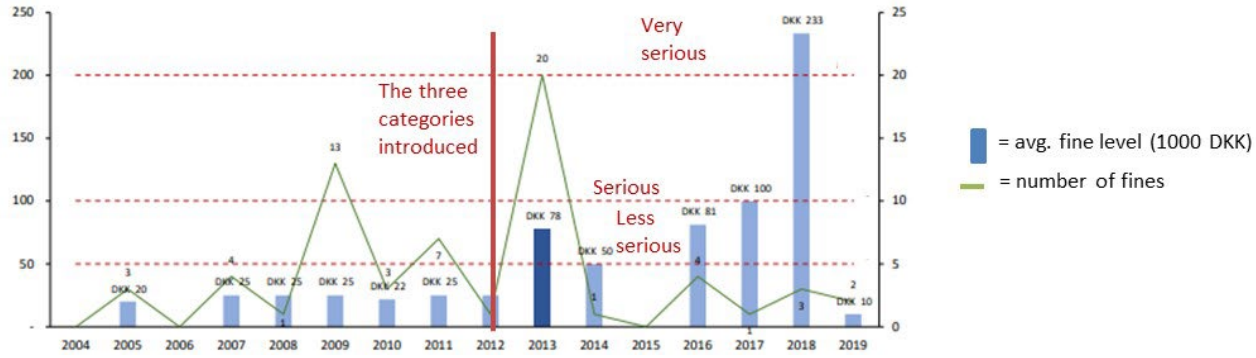

Figure 13: The number and level of individual fines in Denmark, 2004-19
Source: Master thesis

As reported in Table 12, in total 63 people have been given individual fines in this time period. Until 2012 the fines were very low, with a median value of 25.000 DKK. After 2012 the median value increased to 100.000 DKK, which is still a rather low amount. The red lines illustrate the indicative amount for less serious, serious and very serious violations, respectively. The highest individual fines are 300.000 DKK, but have only been given to two persons (both for bid rigging cases). The third highest fine is 125.000 DKK.

[74] See background data for OECD (2024), which have separate tables for total number of cartel decisions and those cases where individuals were imposed fines, available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html*

An individual fine might be reimbursed by the firm, and in that case the deterrence effect is negated. We have no information about whether the individual fine was directly or indirectly paid by the firm. Furthermore, those individual fines, even an amount of 300.000 DKK, is typically very low compared to the potential gain for a large firm taking part in a cartel.

Imprisonment is expected to have a larger deterrent effect on individuals. Imprisonment was a sanction proposed in only three cartel decisions in Denmark. Those were either bid rigging cases or price fixing cases. However, all of them were annulled by the court after appeal. During 2015-22, there were only three cartel decisions in Europe with imprisonment as one of the sanctions used.[75]

In Sweden they have had the option to disqualify directors since 2014, Though it is yet to be used.

Available sanctions today

In Table 3 we have made an updated overview of the enforcement instruments available throughout the four Nordic countries today. Since the project period there have already been some developments, which we will return to in Section 5 on policy recommendations and final remarks.

	Norway	Sweden	Denmark	Finland
Administrative corporate fines	✓	●		
Civil corporate fines			●	✓
Criminal corporate fines				
Corporate fines from turnover	✓	✓	●	✓
Individual criminal fines and imprisonment	✓		✓	
Individual administrative fines	H			
Director disqualification	H	✓		
Leniency for firms	✓	✓	✓	✓
Leniency for individuals			✓	
Settlements	✓		✓	
Damages directive		✓	✓	✓
ECN+ Directive		●	●	●

Table 3: Enforcement instruments in the Nordic countries in 2024

H= Expert report on hearing, but no legislative proposal has been made so far.
● = Legislative change recently

[75] See background data for OECD (2024), available at: *https://www.oecd.org/en/publications/oecd-competition-trends-2024_e69018f9-en.html*

4. Overall Evaluation of Anti-cartel Enforcement in the Nordic countries

Effective enforcement of the laws prohibiting collusion requires all three stages to be strong: detection; investigation, prosecution, and conviction; and penalization. If cartels are not detected then collusion continues unabated regardless of how effective a competition authority is in prosecuting cartels and how severe the penalties are. If cartels are detected but convictions are rare – whether due to a competition authority avoiding risky cases or a lack of resources to effectively prosecute them or courts' reluctance to enforce the law - again deterrence will not be achieved. And even if cartels are detected and convicted, cartels will continue to form unless sufficiently severe penalties are imposed.

It is difficult to directly measure the efficacy of enforcement since we do not know how many cartels there are. Nevertheless, we can examine the three stages of enforcement and assess how effectively they are operating and to what extent they could credibly deter cartels from forming and detect those cartels that do form. For that purpose, we summarize here the survey output reviewed in Section 3. As will be made clear, there are clear shortcomings in all four countries' enforcement when it comes to fighting cartels.

A primary concern about detection is that leniency programs are not as active a source of cases in the four Nordic countries as they are for competition agencies in many other jurisdictions such as the European Commission. That a critical method for detecting cartels is de facto not very vibrant raises concerns that detection may be relatively ineffective. Furthermore, the lack of leniency applications is not offset by more ex officio investigations for they are also of limited importance. Even though screening has been used in all four Nordic countries, to our knowledge there are few if any cartel decisions for which the original investigation was the product of screening. This is true in spite of a strong presence of bid rigging cases where screening is especially likely to be effective.

Turning to the investigation, prosecution and conviction of cartels, it is encouraging that dawn raids are commonly used in the four Nordic countries, and it even exceeds their use by the European Commission. Furthermore, with the notable exception of Sweden, few decisions are overturned on appeal. In the case of Denmark, however, the fact that very few cases are appealed could be due to low penalties resulting in convicted firms being content to pay them and move on. The high rate with which appealed cases are overturned in Sweden is a major concern and surely weakens enforcement and must be demoralizing for the competition agency.

Probably the weakest dimension to enforcement is penalization. The primary penalty in all four countries has been corporate fines, while other instruments are either unavailable or very seldom used. Corporate fines have generally been quite low, with a large variation between the countries in the recent years. The fines have been very low in Denmark for the entire time period and also rather low in Sweden, while there has been an increase over time in Finland and Norway with several examples of cases where the 10 % annual turnover cap has kicked in. Furthermore, low corporate fines set by the competition agency are often substantially reduced upon appeal. Making low fines even lower is not a way to deter cartels from forming.[76]

[76] The Norwegian Competition Authority had surveys among business leaders in 2017 and 2021 about competition law compliance, where slightly more than 3000 business leaders in 2017 and slightly less than 3000 responded in 2021. While 59 % reported that fines were very or quite important (svært viktig eller ganske viktig) in 2017, the corresponding figure in 2021 was 69 %. One reason for the increased importance of fines for deterrence, according to business leaders, was that between 2017 and 2021 there had been some examples of a substantial increase in

Furthermore, weak corporate penalties are not offset by strong individual penalties; indeed, any punishment of individuals is minimal and rare. While individual fines are available in Denmark and Norway, they are excessively low in Denmark and have gone out of favor in Norway where they have not been used for more than two decades. Imprisonment is possible in those two countries but has not happened. No prison sentences have been imposed in Norway and when used in Denmark it has been overturned by the court. Director disqualification is another form of individual penalty which, while available in Sweden, has not been used. The primary purpose of penalties is to deter unlawful conduct, yet the penalties are too weak in all four Nordic countries to be an effective deterrent of cartel activities.

The overall assessment is not encouraging. There is no reason to think that detection is effective, especially in light of the low number of leniency applications. Regarding investigation, prosecution, and conviction, the primary concern is the high rate with which cases are annulled in Sweden. Finally, the low corporate penalties and the absence of individual penalties are woefully inadequate to deter. In light of these low penalties, one suspects that cartels are not rare and that the sparsity of leniency applications is due to cartelists not coming forward rather than the absence of cartels. In conclusion, the evidence is that anti-cartel enforcement is likely to be weak.

5. Policy recommendations and final remarks

Given the shortcomings in anti-cartel enforcement which we have pointed out, there is scope for improvement along several dimensions.

5.1. Some recommendations

First and foremost, corporate fines should be increased. To do so requires identifying the impediment to higher fines; is it the competition authorities or the courts? In either case, it is crucial to remember that the role of penalties is to deter unlawful conduct and there is little point in having them if they are not of a magnitude that could credibly contribute to dissuade some cartels from forming. A good starting point in this regard could be to provide the agencies with the power to impose fines themselves, a power Norway has had for many years and which was recently introduced in Sweden. Being at the forefront as anti-cartel enforcers, the agencies know the importance of deterrence, making them eligible to push for higher fines.

Given the rising role of customer damages in the aftermath of the implementation of the Damages Directive and concerns that they may be a cause of declining leniency applications in the EU and some other jurisdictions, it is recommended that leniency cover both customer damages and government fines. Customer damages caused by the leniency awardee would be paid by other convicted cartelists. This recommendation is in the spirit of the U.S. Antitrust Criminal Penalty Enhancement and Reform Act (ACPERA) which resulted in reduced liability for customer damages (from treble to single damages) for a firm receiving amnesty. However, ACPERA has not been as effective as it could be and it is important to learn from the errors in its implementation.[77] Given that leniency is also offered for customer damages, more private

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the fine level in antitrust cases. Available on *https://konkurransetilsynet.no/tydelig-okt-kjennskap-til-konkurransereglene/*

[77] For a discussion of the problem along with a proposed fix, see John M. Taladay, "Why ACPERA Isn't Working and How to Fix It," (2019) 1(2), *CPI Antitrust Chronicle,* 30-35.

litigation could add to the deterrence effect of corporate fines imposed by the competition authorities.

Cartels are formed by managers, not shareholders, so it is vital to ensure that managers, and not just shareholders, are penalized from engaging in this unlawful activity. As noted, individual penalization is largely absent in the four Nordic countries. Individual fines should be increased. While imprisonment is an option in some of the Nordic countries, it has not been used and that seems unlikely to change in the near future. As noted in Section 2, only a few countries – perhaps as few as three – have imprisoned convicted cartelists in spite of it being criminalized in almost 40 countries. If imprisonment is, in effect, not an option and given there may be a limit to the role of individual fines (especially if companies compensate employees), we recommend the adoption and use of director disqualification. Preventing a convicted cartelist from continuing his or her career as a manager would seem to be the type of penalty that could well deter. Its frequent use in the United Kingdom offers a model for Nordic countries.

Turning to detection, it was documented that the leniency programs of the four Nordic countries have not been particularly active. Increasing government fines and having leniency encompass customer damages, as recommended above, would help energize leniency programs by enhancing the incentives for a cartelist to apply. We also recommend putting in place a structure that would give competition authorities access to public procurement data so they can engage in screening. The common presence of bidding rings in procurement auctions along with the developed methods for screening for bidding rings makes public procurement fertile ground to use screening to open ex officio investigations. A challenge for some jurisdictions has been for a competition authority to gain access to public procurement data and for public procurers to collect, retain, and share the data that is needed for screening. A model for the Nordic countries is Spain where legislation resulted in public procurers providing the data, and it is reported to have led to some screening success by the Comisión Nacional de los Mercados y al Competencia.[78]

Complaints from customers and competitors were found to be an important source of cartel cases in some Nordic countries. That source could be enhanced through financial incentives. This could take the form of financial rewards to whistleblowers (who are not part of the illegal activity) as has been adopted by at least five countries and could soon be adopted in the United States. If that policy is adopted, the rewards should be of a magnitude that an employee of a cartelist would be incentivized to report, even if it meant losing their position. An intriguing source of complaints is competitors to the firms who are operating the cartel. Understanding why they are filing a complaint could help identify ways to produce more whistleblowing by them. In the context of bidding rings at public procurement auctions, temporary exclusion of ring members in future tenders would give a lucrative advantage to non-ring members and could greatly enhance their incentive to report a bidding ring.

Concerning corporate fines, Sweden and especially Denmark have very low fines. It is good news, though, that the procedure for corporate fine setting is changed in Denmark and harmonized with the EU, and it is also good news that there has been introduced clearer guidelines for fine setting in Sweden. To avoid the substantial reduction of the corporate fines

[78] As reported by Marisa Tierno Centella (CNMC - General Director for Competition) at the panel on "Cartel Screening and Machine Learning" at the 18th International Conference on Competition and Regulation (CRESSE), Chania, Crete, July 5-7, 2024.

after appeal, it might help to refer more to the guidelines and case law from the Court of Justice of the European Union. Additionally, for the EU Member States, when faced with complex competition law cases, a useful resource could be to ask the Court of Justice for a preliminary ruling on the matter.[79] For Norway, as an EEA/EFTA-state, such a resource would be to ask the EFTA Court for its advisory opinion.[80]

5.2 Some final remarks

Anit-cartel enforcement is active in all four Nordic countries, although it varies between countries and over time. Nevertheless, we have argued that there is scope for strengthening public enforcement towards cartels along several dimensions in all four countries. Some proposals would only be possible with more resources, while other proposals call for more instruments for combating cartels or a redirection of the existing effort, and other challenges can be partly solved by organizational changes.

Our recommendations are general and related to what we observed in those four countries during the last two decades. We are therefore not able to take into account recent developments in public enforcement towards cartels in the Nordic countries. But we do observe that there are some recent changes that are consistent with our proposals. For example, the institutional changes in Denmark concerning fine setting, the detailed guidelines in Sweden concerning fine setting, and the proposals for more individual sanction in Norway. Hopefully, our recommendations can help further improve the public enforcement towards cartels in all four countries.

It could be argued that many of our observations are not unique for the Nordic countries. This does not imply that what we recommend is not relevant for the Nordic countries, but rather that the recommendations can be relevant for other jurisdictions as well. However, if many jurisdictions struggle with the same problems, it indicates that it is challenging to redirect the public enforcement towards cartels. Hopefully, each country can learn from practices in any of the Nordic countries as described in Section 3, but also from experiences from non-Nordic countries as we have referred to in Section 2 concerning various types of anti-cartel enforcement instruments that is at present not available or in use in the Nordic countries.

[79] See for a similar recommendation Torbjørn Andersson and Magnus Strand: 'Konkurrensverkets domstolsprocesser,' (2021)

[80] Note that the opinions of the EFTA Court are formally not binding, as opposed to the preliminary ruling of the ECJ.