



Environmental Considerations in Competition Enforcement



Please cite this paper as:

OECD (2021), *Environmental considerations in competition enforcement*, OECD Competition Committee Discussion Paper,
<https://www.oecd.org/daf/competition/environmental-considerations-in-competition-enforcement.htm>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD or of the governments of its member countries or those of the European Union.

This document and any map included herein are without prejudice to the status or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city, or area.

© OECD 2021

Foreword

Climate change is one of the most pressing issues of this century. Due to the urgency of the issue and the pressure on governments to act, the debate on climate change is moving quickly from the political level to focused conversations on policy choices and implementation options.

This background paper discusses the role of competition policy and enforcement in supporting and incentivising sustainable and pro-competitive business practices. It analyses the practical approaches that competition authorities may take when assessing cases with an environmental dimension.

Looking at past experiences in cartels, co-operation agreements, abuses of dominance and merger control, the paper explores the question how competition authorities can integrate economic and non-economic environmental effects into the competitive assessment from the legal and economic perspective. It also identifies the challenges posed by the current legal and economic frameworks, highlighting best practices to overcome them.

This background paper was prepared by Cristina Volpin with Gaetano Lapenta (OECD Competition Division). The paper benefited from input and comments by Robert Horney, Pedro Caro de Sousa, Ruben Maximiano, Mariia Melnyk, Antonio Capobianco and Ori Schwartz. It was prepared as a background note to discussions on environmental considerations in competition enforcement at the December 2021 session of the OECD Competition Committee, <https://www.oecd.org/daf/competition/environmental-considerations-in-competition-enforcement.htm>.

Table of contents

Foreword	3
Introduction	7
1. The Relationship between Sustainability and Competition	9
1.1. The role of regulation in fighting climate change	9
1.2. The role of firms and consumers in fighting climate change	10
1.3. Competition as a driver of environmental protection	10
1.4. Market failures affecting environmental goals	11
1.4.1. Supply-side market failures	11
1.4.2. Demand-side market failures	12
1.5. The risks of legal uncertainty and chilling sustainable initiatives	13
2. Competitive assessment and economic efficiency	14
2.1. Main challenges arising in the competitive assessment	15
2.1.1. Challenge 1: Which Type of Effects Can Be Considered?	15
2.1.2. Challenge 2: Which Consumers Can Be Considered?	17
2.1.3. Challenge 3: What Timeframe to Adopt for the Consideration of Environmental Effects?	19
2.1.4. Challenge 4: How to Balance Environmental Effects with Other Types of Effects	20
2.2. Compatibility and conflict between competition and environmental protection	21
3. Environmental Considerations in Anti-competitive and Co-operation Agreements	22
3.1. Compatibility between competition and environmental protection	22
3.1.1. Pro-competitive agreements associated with environmental benefits	22
3.1.2. Anticompetitive agreements associated with environmental damage	22
3.2. Conflict between competition and environmental protection	24
3.2.1. Potentially anticompetitive agreements associated with environmental benefits	24
3.2.2. Competition concerns and efficiency considerations	24
3.3. Environmental Considerations in Vertical Agreements	29
3.4. Evidence	30
4. Environmental Considerations in Abuse of Dominance Cases	31
4.1. Compatibility between competition and environmental protection	31
4.1.1. Abuses of dominance associated with environmental damage	31
4.2. Conflict between competition and environmental protection	32
4.2.1. Potential abuses of dominance associated with environmental benefits	32
4.2.2. Green pro-competitive justifications	32

5. Environmental Considerations in Merger Control	34
5.1. Market definition	34
5.2. Compatibility between competition and environmental protection	35
5.2.1. Mergers associated with environmental damage	35
5.3. Conflict between competition and environmental protection	38
5.3.1. Potentially anticompetitive mergers associated with environmental benefits	38
5.3.2. Green Efficiencies	38
5.4. Timeframe for the assessment	39
5.5. Evidence	39
5.6. Remedies	41
6. Alternative approaches to environmental considerations	42
6.1. State action defence-type of cases	42
6.2. Public interest considerations by a different governmental body	42
6.3. Public benefit test by the competition authority	43
6.4. Prioritisation and agency discretion	44
6.5. Competition advocacy efforts	45
6.5.1. Market Studies	45
6.5.2. Public Procurement	46
7. Conclusions	47
Boxes	
Box 1. European Commission - Car Emissions	23
Box 2. French Competition Authority – Hard-wearing floor coverings	24
Box 3. ACM – Chicken of Tomorrow	26
Box 4. US DoJ – Car Emissions	27
Box 5. European Commission - CECED	28
Box 6. European Commission – Aurubis/Metallo	35
Box 7. European Commission – Dow/Dupont	37
Box 8. Public interest considerations in merger control	43
Box 9. ACCC – Battery Stewardship	44

Key Considerations

- A combination of regulation, policy, technology and well-functioning markets is the most effective way to reach carbon-neutrality targets. Given the fundamental role of private and collective initiatives by businesses, competition policy is key to ensure the efficient allocation of capital, which will also contribute to achieving the technological breakthroughs that are needed to reach environmental goals.
- To the extent that investing in a green direction can gain companies a competitive advantage, increasing their market shares, cutting their costs, increasing returns of scale, or making them more innovative, competition is an organic driver of the fight against climate change.
- In some situations, market failures may exist that make co-operation and synergies between businesses the best way to achieve economic efficiency or reach scale in alignment with environmental goals. These include, for instance, coordination problems, first-mover disadvantage, and information asymmetries.
- In applying the traditional competitive assessment framework, competition authorities face four main types of challenges:
 - determining which and to what extent environmental effects may be taken into account;
 - deciding whether it is possible to take into account environmental efficiencies that benefit consumers other than those directly affected by the anticompetitive conduct or transaction (including future consumers);
 - knowing which timeframe to adopt for the consideration of environmental effects or efficiencies; and
 - quantifying and balancing environmental effects with other types of effects or efficiencies.
- Competition authorities may wish to adjust their analytical tools to best consider environmental effects and efficiencies in the competitive assessment. Given the importance of green quality improvements, or more sustainable and clean process and product innovation, cases with an environmental dimension can play an important role in shifting competition authorities' attention from an exclusive focus on price effects to a more holistic analysis of both static and dynamic effects.
- Particularly in relation to the assessment of green quality, choice and innovation harm and efficiencies, authorities may need to build expertise in-house or via co-operation with other competition authorities, environmental agencies or environmental economics experts. They also may need to continue to refine best practices of internal document collection.
- Guidance to businesses via decisional practice or soft law tools of how environmental considerations are expected to enter the competition assessment will be crucial to avoid chilling effects on private investment and initiatives.
- Competition authorities can direct enforcement priorities as well as their advocacy efforts towards key markets to enable the green transition or stimulate sustainable innovation.

Introduction

A recent report by the United Nation's (UN) Intergovernmental Panel on Climate Change (the 2021 IPCC Report) noted that limiting global temperature increases to 1.5 °C can only be attained with fast and extensive reductions in greenhouse gas (GHG) emissions across the board. The consequences of exceeding this limit are notoriously severe and in some cases irreversible. They span from extreme heat and droughts, compromising health and agriculture, to disruptions in rainfall patterns, which will lead to violent storms and flooding in various regions (IPCC, 2021^[1]).

The consequences of global warming and climate change are well recognised by the international community and governments have long been called to take action. Already in 1972, the Stockholm UN Conference focused on the long term effects of human activity on the environment, discussing the interplay between pollution and economic growth. The 17 United Nations Sustainable Development Goals (SDGs) included fighting climate change and transitioning to clean energy as objectives for governments in 2015.¹

While governmental policy interventions and public investment play a leading role in reaching environmental objectives, an important role can also be played by private actors.

Companies may choose to commit individually to reach net-zero objectives, switch to recyclable materials, scale up recycling of waste materials, or invest in green technology to cut costs or to meet consumers' demand. As consumers become more sensitive to climate change and information asymmetry is reduced in various ways, the green features of a product will increasingly be preferred and drive competition between competitors. A recent survey conducted in 17 wealthy economies across North America, Asia Pacific and Europe showed that consumers are willing to adapt the way they live and work to minimise the negative impact of global warming.² This phenomenon, however, may be more prominent in certain markets, depending on how well-informed consumers are, how transparent the production and distribution process are or how much weight that competitive parameter is given compared to others, such as price or other aspects of the quality of the product.

Commentators have thus noted that, in some markets, individual initiatives may be limited or ineffective. In the words of business magnate and co-founder of Microsoft Corporation Bill Gates,

Simply adopting a policy – say, a zero-emissions standard for cars – won't do much good if you don't have the technology to eliminate emissions or if there aren't any companies willing to manufacture and sell cars that meet the standard. On the other hand, having a low-emissions technology – say, a device that captures carbon from a coal plant's exhaust – won't do much good if you don't create the financial incentive for power companies to install it. And few companies will make a bet on inventing zero-emissions technology if their competitors can undersell them with fossil-fuel products. That's why markets, policy, and technology have to work in complementary ways (Gates, 2021, pp. 189-190^[2]).

For markets where consumers are less informed or less sensitive to the green features of the product, for instance, companies are unlikely to voluntarily pay the green premium (i.e. the additional cost or costs incurred for a less polluting process or more sustainable materials). Similarly, in markets with reduced profit margins, it will be rarer for companies to adopt greener production processes, especially where competitors opt for the cheaper ones (Gates, 2021, pp. 107-108^[2]).

Given the existence of cases where individual efforts may not be profitable for businesses, some companies have put forward that collaborations may yield significant benefits. Some have also raised the issue that competition law may risk hindering, rather than supporting, sustainable and pro-competitive business combinations or practices. This ‘chilling effect’ may push companies to refrain from collaborating on sustainable initiatives by fear of falling foul of competition provisions (ICC, 2020^[3]; Holmes, 2020^[4]).

A lively debate, supported by businesses, has therefore emerged, particularly in the European competition community, regarding the need to provide clarification on the extent to which competition authorities may need to take environmental considerations into account in their competitive assessment. Initiatives to address this issue and provide guidance to businesses have been taken or are being examined, for instance, in the Netherlands,³ Greece,⁴ Germany,⁵ UK,⁶ Austria,⁷ and by the European Commission.⁸

At the international level, in 2015, the United Nations Conference on Trade and Development (UNCTAD) published a note on the role of competition in achieving sustainable and inclusive economic development (UNCTAD, 2015^[5]), while the International Competition Network (ICN) recently explored the issue with a survey in a special project led by the Hungarian Competition Authority.⁹

The OECD explored the relationship between competition and environmental protection in detail in three roundtables on [Competition Policy and the Environment](#) (1995), [Horizontal Agreements in the Environmental Context](#) (2010), and [Competition Law and Responsible Business Conduct](#) (2015). It also recently examined various aspects of [Sustainability and Competition](#) in 2020.

Building on this research and related discussions, this paper explores how in practice competition authorities can integrate environmental considerations into the competitive assessment when enforcing competition law within their existing legal and analytical frameworks. This paper is organised as follows:

- **Section 1.** examines the role of regulation and the relationship with competition policy in relation to climate change. It looks at whether competition is a driver of environmental protection and discusses the factors that may prevent competition from delivering the most desirable sustainable outcomes.
- **Section 2.** delves into the challenges that competition authorities may face when integrating environmental considerations into the competitive assessment and analysing efficiency claims.
- **Section 3.** explores the specific challenges of this assessment in relation to anticompetitive (horizontal and vertical) agreements and co-operation agreements.
- **Section 4.** examines how such considerations may enter the assessment in abuse of dominance cases.
- **Section 5.** discusses the merger control analysis and how it can be adjusted to integrate such considerations.
- **Section 6.** looks at different ways in which competition regimes and competition authorities may take environmental impacts into account.

1. The Relationship between Sustainability and Competition

1.1. The role of regulation in fighting climate change

An integrated approach including a meaningful price on GHG emissions, regulation considerate of social impacts and targeted technology support provides the highest likelihood of a successful net-zero transition (OECD, 2015^[6]).

As regards investments, the green recovery packages adopted during the Covid-19 pandemic provided an important opportunity to contribute to climate-neutrality innovation goals. Data from the OECD Green Recovery Database suggests that Covid-19 policies with likely positive environmental impact amounted to around USD 336 billion in 43 countries (OECD, 2021^[7]), estimated to correspond to around 17% of recovery spending or 2% of total Covid-19-related investments. Globally, only 12% of spending on economic rescue packages has been directed to green recovery (Harvey, 2021^[8]).

Perhaps the most important part, however, is played by regulation and policy measures. Banning polluting materials and productions, granting tax credits to businesses adopting cleaner technologies, introducing green standards in Governments' procurement schemes, feed-in tariffs for renewable energy systems, and carbon taxation can all support the achievement of environmental objectives. Their effectiveness, however, tends to be limited by the fact that they lack international coordination and are characterised by free rider issues. The OECD is collecting data and perfecting measurements to compare carbon pricing and tax policies in different countries so as to determine what works best and coordinate action in reducing GHG emissions (OECD, 2021^[9]).

Regulation may also be slow and expensive to implement and, in certain cases, it may be insufficient to reach the desired outcomes (Dolmans, 2020^[10]). In any event, even when there is regulation in place, competition can still play an important role. Environmental regulation limits the space within which companies compete and even shape business models. However, competition may still occur within that space. In the recent EU Car Emissions case (see Box 1 below), Executive Vice-President Vestager noted

The law fixes minimum cleaning standards, which all producers have to respect. But it still leaves ample room for manufacturers to compete on doing better than the minimum required.

This was also recognised by a recent policy brief by the European Commission's staff, observing that "the impact of regulations pushing for more sustainable objectives in the markets analysed will be reflected in the competitive assessment" (Badea et al., 2021^[11]).¹⁰ This may be increasingly relevant for competition authorities, as they will be required to understand the impact of the evolving regulatory landscape in the green space in the following years.

1.2. The role of firms and consumers in fighting climate change

Many stress the important contribution of the private sector to reaching environmental objectives (ICC, 2020^[3]; Gates, 2021^[2]; Polman and Winston, 2021^[12]). As new technologies are required to achieve environmental objectives for a sustainable development, the involvement of private actors will be necessary to provide additional R&Ds capacity, infrastructure, resources, and commercialisation know-how.

In turn, government or private initiatives may be short-lived if there is no long-term alignment of the 'common good' objectives or companies strategies with consumers' demand.

As consumers' preferences shift toward environmentally-friendly goods and services,¹¹ the green quality of these products increasingly becomes a parameter of competition and consumers' demand increasingly drives competition. In some industries, consumers are more and more willing to direct their purchasing decisions to environmental-friendly companies and around 60% of consumers affirm that they would change their purchasing habits to meet environmental goals (Haller, Lee and Cheung, 2020, p. 5^[13]).

The importance of market dynamics and the role of market players in supporting the fight to climate change raises the question of how competition policy can contribute to creating the most conducive environment to promoting pro-competitive and sustainable business conduct. While important action may be undertaken by businesses individually, committing to reach self-imposed targets in terms of emissions, recycling, or green R&D investments (OECD, 2011^[14]), these actions may be necessarily limited. Some, therefore, consider that more ambitious goals could be reached by companies co-operating with each other or joining their assets and know-how via joint-ventures and mergers (ICC, 2020^[3]; Holmes, 2020^[15]; Dolmans, 2020^[16]; Unilever, 2020^[17]).

1.3. Competition as a driver of environmental protection

One may see competition policies as intrinsically at odds with environmental protection, because their economic objectives are usually associated with increasing output and lowering prices, which supports overconsumption of limited environmental resources.

Competition policies, however, also aim at improving quality (including the sustainable quality of products), increasing choice (including choice of more environmentally-friendly products), and stimulating innovation (including green innovation).

Competition can play an important role in fighting climate change in at least three situations.

First, competition supports environmental protection goals where consumers' preferences are oriented towards environmentally-friendly products or services, which means that companies will likely adapt their supply of environmentally-friendly products and gear their investments to reap that demand. When there is willingness to pay on the part of consumers for more sustainable products, competition leads to the most efficient outcomes (Schinkel and Spiegel, 2017^[18]) and stimulates companies to invest in product differentiation in a green direction (Aghion et al., 2020^[19]).

Studies¹² show that competition incentivises investments in environmental, social and corporate governance, including on parameters like the preservation of natural resources, the reduction of GHG and the investments in green technology (Ding et al., 2020^[20]; Schinkel and Treuren, 2021^[21]).

Second, competition and environmental protection goals are organically interdependent when anti-competitive harm and environmental damage align. Examples are greenwashing cartels, whereby companies may collectively overcharge consumers under the excuse of environmental protection, or cases where companies together soften or eliminate competition on the parameter of product differentiation that is the one of sustainable quality or innovation. This can happen when companies collude to slow down or

stagger the introduction in the market of green technology or when they agree not to advertise the environmental performance of a product (Volpin, 2020^[22]).

Third, competition law also supports environmental protection when it admits public policy benefits, exemptions, or efficiency defences in relation to environmentally-positive behaviour that is also pro-competitive. The pro-competitiveness of the conduct would include an analysis of its full economic effects, including its non-price effects on quality, choice and innovation, such as green quality improvements, or more sustainable and clean process and product innovation as efficiencies that may outweigh price effects.

To the extent that investing in a green direction can gain companies a competitive advantage, increasing their market shares, cutting their costs, increasing returns of scale, or making them more innovative, competition is an organic driver of the fight against climate change.

1.4. Market failures affecting environmental goals

Some commentators have noted, however, that competition may not always guarantee the most sustainable market outcomes in all markets, due to the characteristics of the market or to supply or demand issues.

As noted by Aghion, Antonin and Bunel (2021^[23]), for example,

In an economy where consumers are more concerned with the price of goods than with their environmental impact, increased competition will not stimulate green innovation and will instead aggravate the environmental problem [...].

There may be at least three kinds of scenarios where unilateral sustainability initiatives may not take place or be very effective:

- cases where a tragedy of the commons-type of scenario, or lack of coordination between market players, is not adequately addressed by government regulation (Stigler, 1974^[24]). This means that companies face a ‘first-mover disadvantage’ and will not invest in greener production or process if they fear they will be undercut by their rivals. Co-operation between businesses in these situations may address this market failure (Snoep, 2021^[25]; Dolmans, 2020^[10]).
- cases where consumers, albeit potentially caring for the environment, still opt for less sustainable available alternatives, counting on other consumers to make more sustainable choices and free-riding on other consumers’ behaviour (Unilever, 2020^[17]; van Dijk, 2021^[26]).
- cases where demand for a sustainable alternative may exist but it is not high enough to cover the fixed costs of a more sustainable production or distribution process or to allow it to achieve scale (van Dijk, 2021^[26]).

These scenarios involve a number of market failures, better described below.

1.4.1. Supply-side market failures

A first example of supply-side market failure that makes competitive outcomes not necessarily desirable are coordination problems. As mentioned above, there may be cases where companies will not see it as profitable to invest in greener production or processes, if they think that consumers will not buy those products or if they fear they will be undercut by rivals.

The immediate consequence is that firms may see limited incentives in investing in sustainable objectives. Companies are more likely to be willing to make significant investments in greener inputs, processes and technologies and sustain important fixed costs or R&D investments if these promise to be profitable. While objectives of “shared value” (Porter and Kramer, 2011^[27]) or “net positive” (Polman and Winston, 2021^[12])

are becoming progressively more widespread, companies still focus on delivering to shareholders on the financial value proposition.

Problems arise, in particular, in connection with the ‘first-mover disadvantage’, when consumers value the environmental features of the products but still opt for the cheaper alternative. This is a situation where consumers would opt for the greener product if there was no cheaper alternative available or if they were convinced other consumers would also opt for it (and therefore they would be reassured that their monetary sacrifice would be meaningful because compounded with that of others to drive supply) (van Dijk, 2021^[26]).

A second example of supply-side market failures are environmental negative externalities. A negative externality (or external diseconomy) exists when the effect of production or consumption of goods and services imposes costs on others which are not reflected in the prices charged for the goods and services being provided. One of the most important examples of such a market failure is environmental pollution as a side-effect of production (Helbling, 2020^[28]).

1.4.2. Demand-side market failures

A number of demand-side market failures may determine why consumers’ preferences are not fully expressed in their purchases (ICC, 2020^[3]).

A first reason why consumers’ demand may not drive competition for green products is that the willingness to pay for greener products does not cover the fixed costs incurred by companies to produce them (van Dijk, 2021^[26]). This may be due to the fact that there is a high green premium or a low willingness to pay on the part of the consumers of the goods or services. While consumers’ demand is changing in many markets, there are many products for which consumers may struggle to get information about the production and distribution processes, they may have difficulties to determine their sustainability level, or they may struggle to compare it with those of other products (Volpin, 2020^[22]).

For example, for some input products, such as ethylene, steel and cement, which are used in a broad range of different markets, there are not at present commercially viable green alternatives. To become zero-carbon, these products require their manufacturers to commit to recapturing the emissions with which they are produced (Gates, 2021, p. 107^[2]). This means that their ‘sustainable quality’ is much less likely to have an impact on the preference of the intermediary manufacturer or final consumer, which is likely to give greater consideration to price or performance in its evaluation of the product.

It is legitimate to assume that final consumers can put pressure on manufacturers to engage in the greening of their products, by informing themselves and giving preference to retailers that are known to work with greener manufacturers (Aghion, Antonin and Bunel, 2021^[23]). This, however, may work well for products that are at the end of the supply chain and close to consumers (e.g. cars, clothing, personal care products, food and drinks) but may be complex to attain for commodities and input materials, which are likely to have a higher impact on a wider range of markets. It may not necessarily work, for instance, for those inputs that are homogeneous, highly refined and transformed before reaching consumers (e.g. steel for the purchaser of a car), or sold in markets with low profit margins. In addition, it is less likely to work effectively for those inputs that have a high green premium, such as cement, which at present is in the range of 75-140% over the non-zero carbon price (Gates, 2021, p. 107^[2]).

If consumers do not manifestly prefer greener products, and if procurement bids do not require green standards, some large manufacturers may still decide to invest in greening their production and distribution, but they are unlikely to drive a significant industry shift (Gates, 2021, p. 108^[2]).

Also in product markets, consumers may encounter some difficulties driving change in the supply of lower environmental impact products. There may be significant information asymmetry between suppliers and consumers as regards the environmental impact of the production and distribution process of a certain product. An excess of information may be equally difficult to navigate, in particular for products with more

complex production or distribution processes for which it is hard to understand the net impact on the environment (Pucker, 2021^[29]; Volpin, 2020^[22]).

A second reason why consumers' preferences may not find full expression in their purchasing decisions is the presence of some behavioural biases that may create a mismatch between what consumers want and what consumers buy, thus impeding market players efficiently competing on the 'green' parameter from being rewarded by consumers. In the words of Nobel Laureates Duflo and Banerjee:

If people don't know how they feel about something as quotidian as a box of chocolate or a bottle of wine, why do we expect them to have clear preferences about climate change? Or what kind of world their grandchildren should live in? Or whether the people of the Maldives deserve to have their islands washed away by a rising sea? And to know how much they are willing to alter their own lifestyles to prevent those disasters? [...] Many of us probably do care about a whole range of outcomes that don't affect us directly, even if we have a hard time assigning money values to them (Banerjee and Duflo, 2019, p. 218^[30]).

These behavioural biases may include, for instance (Dolmans, 2020^[10]; Volpin, 2020^[22]):

1. the rule of thumb bias or heuristics, whereby consumers, even in situations where information is available, may struggle to process it and will opt for a simplified reasoning mostly based on one or two criteria. It is often complex to make a determination when different aspects of the product, such as its manufacturing, its packaging, its transport and distribution processes, have different impacts on the environment and the metrics are not necessarily easy to grasp.
2. the coordination failure bias, according to which consumers are led to think that their sacrifice for a certain common objective is but a drop in the ocean. Well-informed consumers that care about the environment may still consider that their decision-making makes no difference and therefore opt for the more polluting and less expensive option.
3. hyperbolic discounting, which is a bias leading individuals to underestimate the negative consequences of future events, such as climate change, that they perceive as far away in time.
4. the status quo bias may also affect consumers decisions, making them stick to familiar products, either because they have a price they are used to (which does not include the green premium) or they have characteristics they are accustomed to.

While these demand-side problems may be ideally addressed by means of government policies to nudge consumers towards greener choices or to increase their awareness of environmental problems, such solutions may not always exist or be effective. Demand-side issues may have to be taken into account by competition authorities when analysing market dynamics. Not doing so may distort the assessment, underestimating consumers' appreciation for environmentally-friendly products, which may not be fully measured by looking at actual purchasing decisions (Inderst and Thomas, 2021^[31]).

1.5. The risks of legal uncertainty and chilling sustainable initiatives

While, as mentioned above, in many situations there is no conflict between competition and environmental protection goals, the recently rekindled debate around the role of competition policy in environmental protection is strongly centred on the possibility that companies may not enter into pro-competitive green co-operation in fear of competition law enforcement (ICC, 2020^[3]; Holmes, 2020^[15])

Concerns about regulatory capture have quickly polarised the debate and led some commentators to warn against corporate claims in defence of 'green cartels' (Schinkel and Treuren, 2021^[32]). Several competition authorities, however, are inviting explorative dialogues with business operators and some expressed the intention to ensure that a wrong interpretation of the rules does not chill environmentally-positive initiatives by business that are also pro-competitive. The Austrian legislative amendment, the initiative of the European Commission, the UK guidance, the Dutch draft guidelines and the Bundeskartellamt and the Greek Staff paper similarly seek to provide clarification on the matter.¹³

2. Competitive assessment and economic efficiency

Competition authorities can take into account environmental considerations in the context of their traditional competitive assessment focused on economic efficiency and consumer welfare standard.¹⁴ This may take the form of an analysis of the harm to competition that also negatively impacts environmental protection or of an efficiency or justification to an otherwise anticompetitive conduct or merger. This type of analysis is examined here and will be looked at in more detail in Sections 3. 4. 5. , respectively as regards agreements, abuse of dominance and merger control.

One of the main criticisms levelled at a competitive assessment encompassing an analysis of environmental considerations within the competitive assessment is based on that the analysis of non-economic harm and benefits would be, strictly speaking, outside the mandate of competition authorities and, broadening its scope, would taint the ‘purity’ of the assessment.¹⁵ This observation has led some commentators to also associate proposals to integrate environmental considerations in the competitive analysis with a populist or neo-brandeisian view of antitrust.¹⁶

It is often noted, however, that competition policy may need to reflect constitutional values, and there may be even be a legal obligation to align different policies, like it is considered to be the case in the EU, for instance, for the environmental integration obligation of Article 11 TFEU (Nowag, 2016_[33]). More generally, competition policy may need to take into account the political considerations of the society to which it strives to bring welfare (Whish and Bailey, 2021_[34]). In those countries where a public benefit test is allowed, like in Australia and New Zealand, the application of that test has not raised concerns of democratic accountability or authority’s independence (Nowag, 2016_[33]).

It should also be considered that the assessment of sustainability, to the extent that it identifies or impacts on any price or non-price dimension of competition (quality, choice or innovation) falls squarely within the traditional interpretation of the consumer welfare standard. To the extent that the non-use value of sustainability for consumers is recognised, the impact on sustainability of conduct or transactions can be considered in the traditional analysis of non-price effects, either as anticompetitive harm or as an efficiency (van Dijk, 2021_[26]; Peepkorn, 2021_[35]; Volpin, 2020_[22]).

To this purpose, it is extremely important for competition authorities to understand fully the economic incentives of the parties involved, but also the factors affecting the market supply and demand and the static and dynamic effects of the conduct or transaction with an environmental impact. It is submitted that this analysis might require an in-depth understanding of the market dynamics that can be run within an effects or an efficiency analysis framework. These frameworks allow sufficient flexibility to perform a holistic analysis, for instance, considering:

- market power and static and dynamic effects when looking at anticompetitive harm or at the necessity of the conduct or transaction to yield benefits;
- supply-side market failures and the existence of a first mover disadvantage when looking at efficiency gains;
- demand-side behavioural biases affecting consumers’ purchases when looking at whether benefits are passed on to consumers (Volpin, 2021_[36]).

This also means that competition authorities may have to endow themselves with staff (CNMC, 2020^[37]) that is professionally trained to analyse data for the assessment of quality and innovation effects or consumer behavioural biases issues, as well as to apply environmental economics methodologies.

2.1. Main challenges arising in the competitive assessment

In those cases where the effect on environmental protection of a conduct or transaction does not correspond to any traditional static or dynamic effect on the consumer welfare standard, integrating the analysis in the competitive assessment may be more controversial. According to a strict interpretation of the consumer welfare standard, any consideration of environmental effects that i) produces an impact on the relevant consumers but such impact is of non-immediate economic nature or ‘unquantifiable’ in economic terms (direct effects of non-immediate economic nature); or ii) does not produce an impact on the relevant ‘consumers’, intended as the category of consumers in the relevant geographic and product market affected by the conduct (indirect effects); would not find a place.

Competition authorities may, therefore, in these cases face some challenges in applying the traditional competitive assessment framework to environmental considerations. These challenges include:

1. determining the extent to which environmental effects may be taken into account, for example, when they are not directly affecting competition between market players, or they are of non-immediate economic nature;
2. deciding whether it is possible to take into account environmental efficiencies that benefit consumers other than those affected by the anticompetitive restriction (including future consumers);
3. knowing which timeframe to adopt for the consideration of environmental effects or efficiencies; and
4. assessing how to balance these environmental effects with other types of effects or efficiencies, when present.

2.1.1. Challenge 1: Which Type of Effects Can Be Considered?

The first challenge that may be faced by a competition authority analysing a conduct or transaction with an environmental impact is linked to which environmental effects should be considered. This is because competition authorities have traditionally focused on the assessment of relatively short-term price effects (Holmes, 2020^[4]).

Some commentators note that environmental externalities would also have to be considered in the assessment to ensure its completeness. To the extent that prices are not “true” prices, because they do not reflect environmental costs of production and distribution (Dolmans, 2021^[38]), market players are incentivised to “*compete on the future of humanity*” (Polman and Winston, 2021^[12]) and that triggers a race to the bottom which rewards a reckless overconsumption and waste of natural resources.

A first obstacle to subsuming environmental considerations under the consumer welfare analysis, however, is that these may be of non-immediate (or non-immediately apparent) economic nature.

As mentioned above, there are relatively limited (at least conceptual) difficulties when the environmental effects are captured by looking at the non-price dimension of competition. There are cases where environmental effects are easily categorised as economic in nature, like for a conduct or transaction that reduces incentives to invest in greener technology or that improves the environmental quality of a product (such as its biodegradability, fair trade source, etc.) or its environmental performance in a way that is appreciated by consumers.

The consideration of effects as economic may include also any other effect that brings value to the consumers (Badea et al., 2021^[11]). Whilst these effects may be more complex to quantify and monetise, being typically non-pecuniary and subjective, they may nonetheless be considered as economic. To the extent that consumers value these features of the product, even when the value is not derived by consuming the product, businesses can be expected to compete to offer them and they are similar to other increases in quality or choice that would be considered to benefit consumers. These may include, for instance, impacts on the level of GHG emissions, use of polluting chemicals, protection of biodiversity, water pollution, deforestation or landscape preservation.

It should also be noted that, whilst sophisticated, there are well-accepted methods of quantification, drawn from environmental cost-benefit analysis based on shadow pricing. The OECD, for instance, published cost-benefit analysis guidelines specifically for environmental initiatives, which define how to quantify costs and benefits of environmental impacts, including when they accrue in the distant future, and taking into account intergenerational context and uncertainty (OECD, 2018^[39]). Methodologies for the competition assessment are set out also in the Technical Report recently published by the Dutch and Greek competition authorities,¹⁷ and in the OECD Competition Committee Discussion Paper by Nadine Watson (OECD, 2021^[40]).

The difficulties in assessing consumers' appreciation for these effects could be considered, for certain aspects, quite similar to the ones faced in relation to privacy in digital markets. Even if it may not always be reflected in consumers' purchasing choices, it has nonetheless begun to be recognised by some competition authorities that conduct or transactions that reduce the quality of privacy may be as harmful to consumer welfare as those that lead to price increases. This has been acknowledged by the European Commission, for instance, in *Facebook/WhatsApp*¹⁸ and *Microsoft/LinkedIn*,¹⁹ where privacy was identified as a parameter of competition that may be negatively affected as a result of a merger.

If the gap between the true price and market price had to be corrected for within the competitive assessment, competition authorities would have to consider the benefits deriving from a conduct or transactions with positive environmental impact, estimating and monetising it, in order to compare it with anticompetitive harm, for instance, in the form of price impact on consumers.

This approach, which is similar to the one adopted by the European Commission in past cases, such as *Philips/Osram*²⁰ and *CECED*²¹ (see Box 5 below), is also currently championed by the Dutch draft guidelines in relation to sustainability agreements. The draft Guidelines provide for an interpretation of the consumer welfare standard that allows to take into account reductions in negative environmental externalities, if the parties are able to articulate their nature, amount, timeframe and likelihood of the materialisation.²²

The time dimension is one key point of this analysis (see, for more details, 2.1.3 Challenge 3 below). The ACM points out in the draft Guidelines that environmental co-operations tend to generate long-term benefits, which must be taken into account in the analysis and can have a significant impact on the final assessment.²³

Some commentators, however, noted that taking into account these environmental effects may expand the authority's analysis considerably, unnecessarily overburdening authorities and opening the door to manipulation by companies (Peeperkorn, 2020^[41]; Schinkel and Treuren, 2021^[42]). At the same time, however, the assessment of non-price effects is part of the standard competitive assessment, and the fact that it is more complex to operationalise does not make it less relevant to fulfil the mandate of competition authorities (Badea et al., 2021^[11]; OECD, 2018^[43]). In addition, when environmental considerations need to be analysed as potential efficiencies, they would only have to be assessed when indispensable to the achievement of the desired environmental purpose, in the lack of any less restrictive alternative, which should reserve the full assessment to a reduced number of agreements or transactions, thus theoretically making the analysis more administrable.

More complex to reconcile with economic efficiency are the cases where consumers do not express their preferences for the relevant product but i) they likely would value it, in the absence of information asymmetries or consumers' bias; or ii) other individuals who are not the consumers of the good likely would value it (e.g. non-buyers of meat for environmental and animal welfare effects or future consumers who may be more susceptible to the effects of climate change than present ones).

2.1.2. Challenge 2: Which Consumers Can Be Considered?

A second important challenge competition authorities face in applying the usual framework for analysis to environmental considerations is, therefore, that of determining the category of consumers that can be considered as benefiting from any positive environmental effects and, in turn, whether benefits arising to other categories of consumers can be accounted for.

This challenge would not manifest itself in those cases where positive environmental effects would arise as direct non-price effects benefiting the relevant consumers, for instance, as increases in the sustainable quality of the products or new green technologies. In other cases, however, benefits may arise, in full or for the most part, to individuals outside the relevant market. It also may happen, if the conduct or transaction tackles a very complex aspect of climate change or biodiversity (e.g. co-operation to limit leather production from endangered species), that tangible benefits will be only felt by the relevant consumers in the future or by future generations.

Jurisdictions which adopt a public benefit balancing requirement for assessing the compatibility of agreements with competition law, like New Zealand or Australia, can consider positive effects deriving from environmental initiatives on society, if they outweigh any detriments deriving from a loss of competition.²⁴ In other jurisdictions, a strict interpretation of the consumer welfare standard may exclude the consideration of these environmental effects (i.e. environmental effects of non-immediate economic impact benefiting consumers that are outside the relevant geographic, temporal and product market).

The US case law in *Amex* seems to have left open the possibility to consider harm and benefits arising in different sides of the same two-sided transaction market.²⁵ The dissenting opinion by Justice Breyer in that judgment, however, hints at the risks and complexities of weighing effects on different markets by quoting *Topco*:²⁶

[a] Sherman Act §1 defendant can rarely, if ever, show that a procompetitive benefit in the market for one product offsets an anticompetitive harm in the market for another. In [...] Topco [...], this Court wrote: "If a decision is to be made to sacrifice competition in one portion of the economy for greater competition in another portion, this [...] is a decision that must be made by Congress and not by private forces or by the courts".

The case law of the CJEU²⁷ and the current Guidelines on the application of Article 101(3) TFEU,²⁸ indicate that out-of-market efficiencies could not normally compensate negative effects in the relevant market. In *MasterCard*, the CJEU also noted that "*the interrelated nature of the markets in the two-sided scheme does not weaken the general rule that a fair share of efficiency gains must at least accrue to the customers harmed by the restriction in question*".²⁹

Therefore it seems that, in some jurisdictions, out-of-market effects could normally be taken into account only where there is significant overlap between the category of consumers affected by an agreement and those benefiting from the efficiency.³⁰

It is observed, however, that in certain cases positive externalities may affect also, although not exclusively, the relevant consumers, as part of society and, as such, may be considered under a traditional analysis. Recently the door seems to have been left ajar for this kind of interpretation by a policy brief by the EU Commission's staff. On the one hand, it confirmed that, in order to ensure the respect of the consumer welfare standard, out-of-market benefits can in principle be considered only when they accrue 'substantially' to the same group of consumers that is harmed by the anticompetitive conduct or transaction. On the other hand, it further stated that

if an agreement leads to a reduction in pollution to the benefit of society, and assuming the benefits are significant, a fair share of them can be apportioned to the harmed consumers – the latter being part of society – and fully compensate them for the harm (Badea et al., 2021^[11]).

The Staff discussion paper published by the Hellenic Competition Commission supports an even wider definition of consumers as users, noting that

Users are simultaneously active in various social spheres, and have wider interests than their narrow financial ones in the specific relevant market. The current approach, which merely assesses the effect of a specific agreement on the prices on a relevant market, does not take into account the complexity of social interactions and the overlapping games to which each of these users participates to [...].³¹

A separate, but connected, problem is whether full compensation may be required, in the sense that environmental positive benefits need to outweigh entirely the harm created by the anticompetitive conduct or transaction. To this purpose, the Dutch draft guidelines notes, for environmental agreements³² concerning the reduction of negative environmental externalities, it would be possible to forego full compensation. The positive effects that such agreements bring to society as a whole could be considered, since

it can be fair not to compensate users fully for the harm that the agreement causes because their demand for the products in question essentially creates the problem for which society needs to find solutions. Moreover, they enjoy the same benefits as the rest of society.

The amendment of the Austrian Cartel Act entered into force in September 2021 seems to go also in a similar direction, explicitly extending the efficiency defence for anticompetitive agreements that improve the production or distribution of goods or promoting technical or economic progress for environmental purposes. The amended provision allows to presume that a fair share of efficiency benefits arises for the consumers, and therefore that consumers have been fairly compensated for the harm caused by the agreement, whenever the agreement contributes significantly to an environmentally sustainable or climate-neutral economy (including by yielding out-of-market effects).³³

According to commentators (Peepkorn, 2020^[41]; Schinkel and Treuren, 2021^[42]; Veljanovski, 2021^[44]), the considerations of out-of-market effects is fundamentally incompatible with the nature of the competitive assessment. The assessment may become highly impracticable, requiring complex offsetting exercises, including across-jurisdictions, burdening competition authorities with prioritisation choices that are of political nature, as well as eroding legal certainty. The *ad hoc* nature of competition enforcement interventions would also make it an unsuitable tool to deal with externalities, which do not arise in parallel to the presence of market power and would therefore give rise to patchy enforcement interventions.³⁴

It is also true that other methods of internalisation of externality costs may be more effective (regulation in particular) also because they guarantee a less patchy application. Via competition enforcement, one would only internalise costs in those markets where competitors decide they want to cooperate or merge and take initiative in that regard. Such approach may lead to advancing environmental goals only in specific sectors or to setting a level of cost internalisation that is not the optimal one and still may be prone to abuses.

It has been noted (Dolmans, 2020^[10]; Holmes, 2020^[4]), however, that environmental agreements may be significantly different from other types of agreements aiming at different policy targets. It is an area of special public policy interest and urgency, as it is linked to an existential crisis of society and humanity. It is also an area characterised by significant negative externalities, the magnitude of which is also characteristic. Additionally, it is also distinctive how direct the causal link is between a certain conduct or transaction and its positive environmental externalities (as opposed to, for instance, a merger between tobacco manufacturers or fast food chains and their impact on public health).

First, as regards the impracticability of the assessment and the offsetting exercise between in-market and out-of-market effects, it should be considered that complex questions arise in many areas of competition law, such as digital markets, which are nonetheless a priority for competition authorities. The necessity of the assessment is not a function of its complexity, although it may lead competition authorities to adjust their analytical tools in these cases (see Sections 3.4 and 5.5 below on evidence). Inderst and Thomas (2021^[45]) recently proposed how to operationalise a prospective welfare analysis, for example, taking into account future changes in consumers' willingness to pay, due to a change in preferences of existing consumers or predicting those of new consumers.

In relation to jurisdictional aspects, while the assessment may be quite thorny, so are discussions about the coordination of enforcement activities in a globalised economy, such as, for instance, as regards the implications of different leniency policies or collection of digital evidence. In this respect, international co-operation could go a long way and may be an area of further engagement.³⁵

Second, as regards the fact that encompassing out-of-market effects would require an arbitrary value judgment on the part of the authority, which would lack the democratic legitimacy to attribute value to an outcome that has not emerged as consumers' revealed preferences, it must be noted that only considering consumers' revealed preferences, without taking into account asymmetries of information or possible behavioural biases, may lead to underestimating the value consumers attribute to environmental effects (Inderst and Thomas, 2021^[31]) and it may lead to equally arbitrary decisions. Further, competition authorities already exercise discretion on the choice of sectors and cases they prioritise (particularly in jurisdictions where private enforcement is not very developed).

A middle way that might be explored, although not without complexities, could be to take into account out-of-market effects arising to categories of "wanna-be-consumers", i.e. consumers that do not currently have a preference for the product but would likely buy it if there were no information asymmetries or behavioural biases preventing them from doing so and who receive and appreciate the benefits.

Third, regarding the patchiness of the approach, whilst it is undoubtedly true that regulation ensures a more comprehensive approach, it should be noted that regulation too most often has national boundaries which lead to possible conflict between different frameworks. Additionally, competition policy deals with market power and conduct and transactions that impact markets significantly. This means that their intervention is likely to yield important benefits and that they can be directed to sectors of the economy where such positive effects are most pronounced.

It seems possible to conclude, therefore, that, from the legal viewpoint, an approach looking to consider some out-of-market effects, to the extent that they can be apportioned also to the relevant consumers or category of consumers, would not be outside the traditional interpretation of the consumer welfare standard. Operationalising this interpretation would, however, require a better understanding of various possible connected challenges, namely as regards:

- what timeframe should be adopted for the consideration of the environmental effects;
- how to balance the environmental effects with other types of effects, if existing (e.g. effects on prices, quality, choice or innovation);
- how to assess and quantify the environmental effects.

The first two questions are explored in the section that follows. The last question is discussed in (OECD, 2021^[40]).

2.1.3. Challenge 3: What Timeframe to Adopt for the Consideration of Environmental Effects?

Another significant challenge that competition authorities may face in the consideration of environmental effects is to determine the right timeframe that may be relevant to the assessment. Oftentimes, depending

on the chosen timeframe, the outcome of the assessment may vary. To give an example, in the US Car Emissions case mentioned below (see Box 4), the US Department of Justice (DoJ) opened an investigation against four vehicles producers who had signed a voluntary agreement with the State of California, going beyond the legal requirements imposed at the federal level.

If one were to consider a short timeframe for this assessment, the focus of the analysis might have been on the increase in prices and elimination of choice for consumers wanting to buy the cheaper, more polluting cars. In a longer reference timeframe, however, the competition authority may have had to consider also, for instance, the reduction in harmful emissions from the use of less polluting cars as well as the cost savings for individuals from the reduced use of fuel and the positive impact on innovation in a green direction.

A factor to be taken into account is that usually adopted timeframes may not be apt to capture reality in relation to environmental effects. The question competition authorities should ask themselves is when the conduct or transaction will likely yield its benefits to consumers or society. There may be a need to devise different timeframes for e.g. the analysis of quality improvements, which may be perceived relatively soon by consumers, and for e.g. innovation effects, which may take much longer to materialise. This issue is very similar to the one arising in relation to the assessment of potential competition and killer acquisitions, and will be discussed further in Section 5.4.

Important risks may arise, for instance, when limiting the time of an allowed collaboration between competitors, both when allowing an undue extension of the co-operation and in demanding its early termination. Competition authorities may opt for periodically monitoring the co-operation, whilst imposing transparency and reporting obligations on the parties, but also setting fixed deadlines with possibility of revision or renewal or conditioning the validity of the authorisation to the presence of extraordinary circumstances (OECD, 2020^[46]). Co-operation offers, of course, the advantage that the competition authority may allow itself the possibility to review its approach at a later date (see, for instance, OECD (2020^[47]) for more details on the UK CMA's interim measures in the Atlantic Joint Business Agreement on UK-US international flight routes). This option is not present in merger control.

In relation to the timeframe for the assessment, another important issue that emerges is connected to whether expected future benefits should be 'weighted', i.e. attributed less substantial value than benefits realised earlier. This is typically done by applying an annual discount rate compounded over time (OECD, 2010^[48]; OECD, 2021^[49]).

The identification of criteria for setting the adequate timeframe and weighting for the assessment of these effects is one of the emerging most complex issue on which competition authorities may benefit from exchanging on each other's experience.

2.1.4. Challenge 4: How to Balance Environmental Effects with Other Types of Effects

A final challenge relates to the difficulties of balancing environmental effects with other types of effects, when present. This challenge arises also when environmental effects are related to non-price dimensions of competition, because the authority may have to balance, for example, an increase in quality on environmental performance with a decrease in quality on another parameter (for instance, overall technical performance).

Case law and decisional practice of competition authorities where this type of balancing has been conducted are very limited.³⁶ However, a number of economic tools may be adapted to assist in monetising quality and other non-price parameters, as well as, where needed, environmental effects. Different sets of methodologies for the quantification of environmental costs drawn from environmental economics may be referred to by competition authorities and parties (see also (OECD, 2021^[40])).³⁷

Cognizant of the complexities of this assessment, the Dutch draft guidelines admit the possibility that companies may benefit from some safe harbours. Quantification would therefore not be needed and a qualitative assessment will be sufficient in two cases: first, when the combined market shares of the companies in the agreement is 30% or less; second, when it is in the first instance apparent that estimated benefits are significantly larger than anticompetitive harm.³⁸

2.2. Compatibility and conflict between competition and environmental protection

As mentioned in the previous sections, environmental considerations can be integrated into competition authorities' assessment by looking at them as relevant effects within the competitive assessment on economic welfare. There are a number of situations in which competition and environmental considerations go in the same direction and situations where they are in conflict, in relation to agreements, abuse of dominance and merger control.

Four types of conduct or mergers may therefore arise:

Situations of compatibility between competition and environmental protection:

- A conduct or merger that is anti-competitive and harmful to the environment
- A conduct or merger that is pro-competitive and beneficial to the environment

Situations of potential conflict between competition and environmental protection:

- A conduct or merger that is anti-competitive but beneficial for the environment
- A conduct or merger that is pro-competitive and harmful to the environment

The remainder of the paper will focus in particular on the first and the third categories, which represent the cases where competition authorities can have either more impact on the achievement of environmental outcomes falling within their competition mandate or where discussion has been more advanced. The currently most debated of these four categories is the one where a conflict emerges between the two policy areas of competition and environmental protection, due to the conduct or merger being potentially anti-competitive but generating significant benefits to the environment that may lead them to being cleared or justified.

3. Environmental Considerations in Anti-competitive and Co-operation Agreements

This section will provide some examples of categories of pro-competitive agreements associated with environmental benefits or cases where environmental effects coincide with anticompetitive harm. It will then look at anticompetitive agreements and co-operation agreements where environmental efficiencies were considered or may be considered by competition authorities, and discuss how such analyses have been or may be performed.

3.1. Compatibility between competition and environmental protection

3.1.1. Pro-competitive agreements associated with environmental benefits

Examples of agreements that may be associated with environmental benefits and are unlikely to be found in breach of competition law rules may include the following:

- agreements or statements of intentions to voluntarily set common objectives, such as collective intentions to reduce CO₂ emissions, where the specific contribution of each of the participants is not binding;
- agreements to voluntarily set standards or labelling systems on fair, reasonable and non-discriminatory terms;
- agreements to improve the quality of products, without cost increases or choice reduction, and that phase out the more polluting or less sustainable products;
- agreements that are needed for the development of a new product, achieving scale or creating of a new market;
- agreements with which one company ensures that businesses it interacts with along its supply chain abide by international or national standards that applies to it (for instance, preservation of natural resources).³⁹

3.1.2. Anticompetitive agreements associated with environmental damage

There are a number of cases where competition law may prohibit agreements that are also harmful for the environment.⁴⁰ This is the case, for example, for greenwashing cartels whereby companies may mask anticompetitive intentions with sustainability claims or for anticompetitive agreements that reduce companies' incentives to invest in recycling,⁴¹ waste reduction or green innovation. It is also the case for all situations where the environmental value of a product is a dimension of competition and its degradation is considered harmful to economic welfare.

In its recent *Car Emissions* case, for instance, the European Commission fined five carmakers for colluding on slowing down the entering in the market of the technology for nitrogen oxide emissions cleaning for diesel cars. The selective catalytic reduction technology, developed thanks to co-operation between the parties, would have reduced harmful emissions beyond the legal requirements in the EU. In spite of the technology being available to them, the competitors agreed not to implement it in order to stagger its release to the market to maintain their competitive advantage and extract more profit from it.

Importantly, in this cartel, the European Commission found that this type of collusion on a non-price dimension of competition (technical development) was a by object cartel, the harmful nature of which does not require an examination of the effects of the agreement on the market.⁴² Since this was the first time that such a case was brought, the Commission provided guidance to the parties on which aspects of the collusion did not raise any concerns.

Box 1. European Commission - Car Emissions

The European Commission investigated and fined Daimler, BMW and Volkswagen Group (Volkswagen, Audi and Porsche) for colluding to prevent the development of advanced nitrogen oxide cleaning technologies.

The investigation centred on the development of the selective catalytic reduction (SCR) technology used to treat the exhaust emissions of diesel-powered cars before they are released from the car into the environment. For this purpose urea (also known as “AdBlue”) is stored in a special tank inside the car and injected in the exhaust gas stream to reduce pollution.

The car manufacturers met regularly between 2009 and 2014 to develop together SCR systems for diesel passenger cars meeting EU regulatory requirements. They, however, went beyond the limits of the allowed co-operation, colluding to standardise the AdBlue tank sizes, ranges and average AdBlue-consumption and exchanging sensitive information. They refrained from competing to innovate on emission treatment technologies beyond the legal requirements.

The Commission found this agreement to constitute an infringement by object in the form of a limitation of technical development under Article 101(1)(b) TFEU.

The car manufacturers settled with the Commission acknowledging their participation to the cartel and were imposed an overall fine of EUR 875 million. The Commission took it into account for this final fine amount that this was the first cartel prohibition decision based on a restriction of technical development, and also issued comprehensive guidance for the parties setting out which aspects of the cooperation it saw as unproblematic, like the standardisation of filler necks, AdBlue quality standards and the joint development of an AdBlue dosing software platform.

Source: European Commission, Press Release 8 July 2021 ‘Antitrust: Commission fines car manufacturers €875 million for restricting competition in emission cleaning for new diesel passenger cars’.

Analogous infringements of competition law may arise when competitors agree not to advertise the product’s characteristics, reducing competition on product differentiation. In a case in the hard-wearing floor coverings sectors, the French competition authority found that competitors and their trade association had entered into an agreement to limit advertising on the individual environmental performance of their floor coverings, to the extent that it was going beyond what was required by the law. While the parties claimed that the agreement was meant to curb reckless green-washing marketing, the French competition authority expressed concerns that the practice would distort customers’ purchasing decisions, as well as discourage manufacturers from offering more innovative and environmentally performing products.⁴³

Box 2. French Competition Authority – Hard-wearing floor coverings

The French Competition Authority (FCA) investigated in 2017 the main manufacturers of PVC and linoleum floor coverings for infringing competition law.

The FCA found that the firms discussed confidential sales strategies and information, engaged in price-fixing and entered into an agreement preventing participants from advertising the different environmental impacts of their products. The parties only communicated environmental performances through joint data sheets produced by the trade association.

The FCA considered that the agreement, among other things, reduced incentives to innovate and produce more sustainable products. The FCA also investigated the sectoral trade association for its active role in facilitating the conduct. It fined the manufacturers and the trade association a combined EUR 302 million.

Source: French Competition Authority (2017), Decision 17-D-20 of 19 October 2017 regarding practices implemented in the hard-wearing floor covering sector, <https://www.autoritedelaconurrence.fr/en/decision/regarding-practices-implemented-hard-wearing-floor-covering-sector>.

It is easy to see that authorities may further environmental protection objectives by taking into account the full impact of dynamic effects. Cases with an environmental dimension can therefore play an important role in shifting competition authorities' attention from an exclusive focus on price effects to a more holistic analysis of both static and dynamic effects, without requiring any change to the current framework (Volpin, 2021^[36]).

3.2. Conflict between competition and environmental protection

3.2.1. Potentially anticompetitive agreements associated with environmental benefits

There are also agreements that, albeit anticompetitive in a first analysis, may be considered to meet the requirements to benefit from an exemption or to generate beneficial effects that outweigh the competition restriction or otherwise meet the requirement of providing benefits to the consumers.

These kinds of agreements are the ones that attracted more attention in the current debate, because they are those that may be more complex to self-assess in the regimes that do not provide for *ex ante* authorization. The perceived uncertainty about their legality has been pointed to as one of the reasons why companies may refrain from considering entering into such co-operation.

When assessing the compatibility with competition law of these agreements, competition authorities should at the outset be wary of any risks that legitimate co-operation may spill-over into a restriction of competition, such as price-fixing or quality-fixing cartels, or an exchange of commercially sensitive information (OECD, 2015^[50]). The analysis might include looking at the nature of the agreement, the restriction of actual or potential competition entailed by the agreement, the market power of the parties involved, and the impact on companies' incentives to compete.

3.2.2. Competition concerns and efficiency considerations

To determine the legality of such agreements, the analysis will have to involve an individual assessment of the effects and efficiencies yielded by the agreement (OECD, 2015^[50]). Many jurisdictions adopt a

framework whereby i) efficiencies may be considered; and ii) if certain criteria are met, the anticompetitive restriction may be allowed. The criteria typically include that the agreement:

- benefits consumers (for instance, by way of improvements in the production or distribution of goods or technical or economic progress);
- is necessary to achieve the objective or the objective cannot be achieved through less restrictive means;
- does not restrict competition substantially in respect of the product.

For example, in *Philips/Osram*, the European Commission accepted that the joint venture would result in direct and indirect benefits for consumers from reduced air pollution. This was based, among other things, on the parties' argument that the joint venture would lead to savings from

*extended production range, rationalization, decreased overhead costs, flexible furnace utilization, reduced energy and environmental costs, and shared R&D on substitutes for lead glass.*⁴⁴

While the conditions may all have to be satisfied for an agreement to be allowed, the debate, particularly in the EU, has mostly focused on the first criterion (benefits to the consumers) which is seen as particularly problematic when looking at environmental agreements (see section 2.1.2).

The following sections provide three examples of possibly anticompetitive agreements that may have a positive offsetting impact on the environment.

Horizontal co-operation to bind participants to a more stringent environmental standard than the set legal one

Environmental standardisation agreements can help overcome a first-mover disadvantage, because without the agreement, market participants would likely not shift their production, distribution and marketing activities towards higher environmental standards.⁴⁵ They may lead to increased prices, prevent effective access to the standard and may be problematic when they correspond to fixing the level of quality of innovation brought to the market by competitors in a specific industry, which may slow down investment, innovation or quality improvements (OECD, 2014^[51]; OECD, 2010^[52]). Competition authorities, therefore, need to be on the lookout for potential anti-competitive effects in the form of restricting market entry, raising barriers to entry and facilitating information-sharing and coordination.

They can, however, also have pro-competitive effects, for instance, by lowering switching costs, saving resources, addressing information asymmetries for purchasers, or addressing coordination problems.

A standard-setting type of analysis to determine whether the agreement is compatible with competition law might include looking, *inter alia*, at:

- Market shares
- Coverage of the agreement
- Existence of competitive pressure from actual or potential competitors
- Existence of alternative standards

Standardisation agreements can be designed to meet environmental objectives while maintaining a competitive market structure and increasing consumer welfare. Although sometimes mandatory standards will be more effective, the necessity requirement tends to rule out all agreements that may not be needed where a voluntary environmental standard or common quality label would reach the same result. Standardisation agreements which have a voluntary, transparent, open, and non-exclusive structure are more likely to be compatible with competition law.

One often-mentioned example of such agreements, in relation primarily to animal welfare but with some spill-overs on environmental protection and health, is the Dutch case *Chicken of Tomorrow* (see Box 3).

The *Chicken of Tomorrow* initiative consisted in an agreement between organisations in the poultry industry, broiler meat processing industry and supermarket industry to replace conventionally raised chicken with chicken raised according to higher animal welfare standards.⁴⁶ The Dutch competition authority found that consumers were willing to pay more for both the chicken raised under better welfare conditions and the associated environmental benefit, but only for around half the estimated cost increase.

Box 3. ACM – Chicken of Tomorrow

In 2013 Dutch retailers and producers of broiler chicken meat reached an agreement to only produce and sell chicken raised according to higher animal welfare and sustainability standards. The initiative would mandate minimum requirements regarding slower growth rates, cage space, dark times, limits to the use of antibiotics, sustainable feed and emission reduction initiatives.

The ACM found that the agreement would restrict choice for consumers, since non-conforming producers could no longer sell to supermarkets, and raise the price of chicken by an estimated EUR 1.46 per kilogram. The participating retailers represented the majority of the Dutch supermarkets with a combined market share of 95% for all chicken meat sold to consumers in the Netherlands.

To assess willingness to pay, the ACM ran a survey and asked consumers how much they valued animal welfare and sustainability criteria as well as public health in their purchasing decisions (“conjoint analysis”).

The investigation revealed that consumers valued animal welfare and sustainability criteria, but not to the extent that this would offset the price increase. Consumers declared that they would pay EUR 0.68 per kilogram more for better animal welfare standards and EUR 0.14 per kilogram more for positive environmental effects. The total benefit to consumers of the initiative of EUR 0.82 per kilogram was around half the estimated price increase of EUR 1.46 per kilogram resulting from the initiative.

Further, the ACM considered that other less restrictive forms of competition to increase the sale of sustainability produced chicken were available and doubted that the initiative was necessary and the least restrictive available to achieve the goals.

Source: ACM (2014), ‘Analysis of the sustainability arrangements concerning the ‘Chicken of Tomorrow’, ACM/DM/2014/206028, https://www.acm.nl/sites/default/files/old_publication/publicaties/13789_analysis-chicken-of-tomorrow-acm-2015-01-26.pdf.

A recent investigation by the US DoJ (Box 4 below) looked into whether a voluntary agreement between four vehicles producers with the State of California could raise concerns.⁴⁷ While the case did not lead to a decision, competition authorities may have to assess carefully analogous concerns in cases where standards are imposed to eliminate the use of specific inputs or substances that may be harmful for the environment, pollute air or freshwater, or require significant waste of natural resources. Competition authorities may have to consider whether these kinds of agreements have a foreclosure effect on suppliers and customers and whether they are, in practice, outweighed by the positive effects on the environment. Importantly, the timeframe used as a reference for the assessment may significantly affect its outcome (see also Section 5.4).

Box 4. US DoJ – Car Emissions

In July 2019, the State of California and four car manufacturers entered into a California Air Resources Board framework agreement on fuel efficiency standards. The agreement would lower the average fuel consumption from 37 miles per gallon to 51 miles per gallon by 2026 and also reduce average emissions below the national emissions standard.

The DoJ opened an investigation into the agreement for a possible cartel infringement in September 2019, due to concerns that it might increase prices by limiting the range of cars that could be driven in California. In February 2020 the DOJ closed its investigation without levelling charges against the car manufactures.

Source: Davenport, C. (2020), “Justice Department Drops Antitrust Probe Against Automakers That Sided With California on Emissions”, The New York Times, <https://www.nytimes.com/2020/02/07/climate/trump-california-automakers-antitrust.html>.

Horizontal co-operations to phase out a less environmental-friendly type of product

Another category of agreements that may give rise to concerns is that of agreements aimed at jointly discontinuing a more polluting or less environmental friendly category of products. This type of agreement may reduce consumers’ choice, increase prices and, according to some, may negatively affect prices of high-end products even when they target low-end products.⁴⁸

The archetypal example is the *CECED* case (Box 5 below), where the European Commission gave the greenlight to an agreement to phase out and block import into the European Union of washing machines with low energy performance rates.⁴⁹ In doing so, the European Commission balanced out the cost increases of the new appliances with both the individual cost-saving benefits and societal benefits in reduced emissions. The Commission concluded that the “*benefits to society brought about by the CECED agreement appear to be more than seven times greater than the increased purchase costs of more energy-efficient washing machines.*”⁵⁰

Box 5. European Commission - CECED

European manufacturers of domestic appliances and their national trade associations coordinated at the European level through the association Conseil Européen de la Construction d'Appareils Domestiques (CECED). The members set up an agreement to jointly improve the energy efficiency of domestic washing machines in the European market. The participants to the agreement had a combined market share over 90%.

Washing machines sold within the European market are labelled based on their energy efficiency on a scale from A to G pursuant to criteria laid out in a Commission Directive. The parties to the agreement committed themselves to only import and produce washing machines from 1998 onwards with a rating of at least D and after 2000 with a rating of at least C. Exemptions were allowed for specific types of smaller washing machines. Participating parties would also increase consumer education and promote energy-saving technology. The agreement tasked CECED with monitoring compliance and reporting on the implementation.

The more energy efficient washing machines had higher production costs, but, as washing machines are durable goods, electricity usage over the operating life of the product is an important cost component. The parties estimated the agreement would generate energy savings of 7.5 terawatt-hours (TWh) out of an estimated total energy consumption of 38 TWh for washing machines in 1995. Importers and producers not subject to the agreement could continue to sell less energy efficient washing machines.

The agreement was notified to the Commission in 1997 under the former notification regime. The Commission found that the agreement reduced consumer choice, forcing consumers to choose between a limited set of more energy-efficient and more expensive washing machines.

The Commission found that the agreement would also create efficiencies for consumers and society. Consumers would benefit from lower electricity costs over the operating life of the product. They would be able to recoup the higher costs within nine to 40 months, depending on frequency of use and electricity price. The agreement would also be likely to stimulate further research in energy efficient washing machines and increase future product differentiation in the long run.

The Commission also assessed the collective environmental benefits. CECED submitted that the emissions savings from the reduction in electricity usage would amount to 3.5 million tons of carbon dioxide, 17 000 tons of sulphur dioxide and 6 000 tons of nitrous oxide per year in 2010. These savings were estimated by the Commission to be worth between EUR 41 to EUR 61 per tonne of carbon dioxide, EUR 4 000 to EUR 7 000 per tonne of sulphur dioxide and EUR 3 000 to EUR 5 000 per tonne of nitrous oxide in avoided environmental damage.

The Commission found that the efficiency benefits outweighed the harm. It also found that the agreement could not be replaced by less restrictive alternatives, such as the setting of an industry-wide target, information campaigns or an EU eco-label. It therefore approved the initiative until end of 2001 based on the individual economic and collective environmental benefits.

Source: Commission Decision, *CECED*, Case IV.F.1/36.718, 2000/475/EC (2000) OJ L 187/47, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000D0475&from=EN>.

The analysis should take into account whether the elimination of a range of products reduces the incentives to invest in innovation or act as a mandatory capping of the quality standards in a certain market. This may depend on the market shares covered by the companies participating in the agreement, and whether strong

competitive pressure still may exist in the market or for the market. Generally, the greater the restriction of competition entailed by the agreement, the more significant the efficiencies must be.

Horizontal co-operation to set joint schemes and sharing of infrastructures for an environmental goal

This type of agreements is aimed at overcoming coordination problems and creating the right scale to achieve an environmental objective. They may consist in networks, certification or other types of schemes to share the costs of setting up a new environmental initiative between participants. These include the collection and recycling of plastic packaging or other waste material, used batteries, or electronic devices that may be dangerous for the environment if not disposed of correctly.

These initiatives can fall in the category of R&D agreements, specialisation agreements or agreements that are necessary for the development of a new service or for creating a new market. They may, however, in some cases, raise anticompetitive concerns when they lead to a reduction or slower pace of innovation, to market foreclosure, or if the service is provided by a single operator that serves a large market share.⁵¹

The Swiss Federal Competition Commission investigated a specialisation agreement between Swico and Sens for electronic waste recycling. The two firms had agreed to focus on the recycling of different types of electronic equipment and established a mandatory fee for manufacturers and retailers of electronic products to cover the costs of recycling. The competition authority found that the agreement reduced transaction costs and created economies of scale for more effective recycling. The decision emphasised that potential market entry by other recycling firms provided sufficient competitive pressure on the companies (OECD, 2012^[53]).

3.3. Environmental Considerations in Vertical Agreements

Environmental considerations may arise in relation to vertical agreements, since one of the most complex sustainability challenges faced by businesses nowadays is how to ensure that sustainability standards are respected along their supply chains. However, vertical agreements have not been a significant part of the debate so far and this has been confirmed by the Commission's Staff Working Document Evaluation of the Vertical Block Exemption Regulation from 2020. The report noted that "[...] no specific issue in relation to sustainability agreements in the vertical supply chain was identified during the evaluation".⁵²

These agreements are usually less problematic than horizontal co-operation, although they may in specific circumstances lead to the foreclosure of suppliers, softening of competition and facilitation of collusion (OECD, 2021^[54]).

An example of vertical environmental agreements could arise in a case where manufacturers or suppliers, trying to protect or subsidise investments into higher environmental standards for their products, decide to impose minimum sales prices on resellers. Such an agreement, by protecting the distributor's margins, could lead to higher volumes of sales for the greener product, potentially benefiting the environment and consumers, but it could also harm consumers if it leads to a significant price increase that is not offset by a corresponding increase in green quality of the product. RPM cases, however, tend to be considered a serious infringement of competition law, so it is likely that very significant beneficial effects on the environment would be needed to eventually meet the efficiency requirement in such cases.

In relation to selective distribution, the question whether a selection criteria based on environmental sustainability may be one of the criteria for admitting a distributor to a selective distribution system, when it is not necessary for the sale of a product but objectively socially beneficial, has been raised in the context of the CMA consultation on the Vertical Agreements Block Exemption Regulation.⁵³

Some recent theoretical research work seems to suggest that vertical coordination on green technology investments driven by the retailer, due to proximity with consumers' demand, might be potentially leading to higher efficiencies than investments driven by the manufacturer (Wang et al., 2020^[55]). An example might be an agreement whereby a retailer pays some investment costs for the manufacturer to comply with its environmental standards in return for a long-term exclusivity arrangement.

3.4. Evidence

The competitive assessment must be conducted with the usual rigour, even if competition authorities may be required to take into account the specific social and economic context in which the co-operation takes place, as well as the specific market failures affecting the market. The parallel with the market shocks due to the Covid-19 crisis has been drawn to highlight how this sort of contextual approach can take place in exceptional circumstances (OECD, 2020^[47]).

As mentioned before in Section 2. and later in Section 5. , a different approach to the assessment of the likelihood of the environmental effects, to the timeframe as well as to the requirement of quantification of harms and efficiencies may be required.

While the allocation of the burden of proof requires parties to bring forward the evidence to substantiate their allegations, including credible metrics for the quantification of environmental benefits,⁵⁴ the standard of proof applied by the competition authorities, i.e. the amount and strength of the evidence that is required to convince the authority of the existence of harm or of specific efficiency allegations, may be adjusted to respond to this need.

This may be required, for instance, when assessing dynamic effects or efficiencies relating to green quality, choice and innovation.

In relation to efficiencies, it has been noted that, in the same way in which authorities should not overlook innovation concerns because they are harder to prove, they also may be open to considering that innovation efficiencies may require an adjusted standard of proof. Richard J. Gilbert (2020^[56]) recently wrote:

Antitrust authorities may dismiss R&D cost-savings because they are savings in fixed costs, and they may regard them as unacceptably speculative because any consumers' benefits from the savings occur in the distant future – and maybe never. However, just as antitrust authorities should not dismiss innovation concerns merely because they cannot be proven with a high degree of certainty, they also should not apply an unreasonable standard of proof to acknowledge R&D cost-savings and related efficiencies [...]

4. Environmental Considerations in Abuse of Dominance Cases

So far, the debate concerning environmental considerations in competition enforcement has largely focused on horizontal agreements and co-operation. However, commentators have observed that, on the one hand, it would be possible to imagine some instances where harmful abuses of dominant position also cause damage to the environment.⁵⁵ On the other hand, it has been argued that environmental considerations could integrate the assessment of unilateral conduct as pro-competitive or objective justifications (Holmes, 2020^[4]).⁵⁶

4.1. Compatibility between competition and environmental protection

4.1.1. Abuses of dominance associated with environmental damage

A situation where there is an alignment between competition and environmental protection is, for instance, an exploitative conduct where a dominant firm sets unfair prices (e.g. excessively low prices for coffee or cocoa) by imposing environmental costs on society (e.g. local communities) and these low prices are not passed on to consumers. Such an analysis, however, would pose significant issues as regards determining what a fair price for the input is and what the true price might be.⁵⁷

Exclusionary abuses may be also envisaged, where, for instance, a dominant incumbent with a polluting technology abuses its dominant position by foreclosing a rival firm with a greener technology (Dolmans and Mostyn, 2021^[57]).

Predatory bidding strategies may be also used to foreclose a competitor. An investigation has been opened recently by the European Commission, for instance, to assess a potential abuse of dominance by Public Power Corporation in the wholesale electricity sector in Greece. The company is the biggest supplier of retail and wholesale electricity in Greece. The Commission expressed concerns that the company might have distorted competition by adopting predatory bidding strategies to prevent rivals from competing in the wholesale market and reduce investments into the generation of clean energy.⁵⁸

Commentators argue that pricing analyses may even be adapted to take into account that the market price is not the true price, thus making it possible to consider the environmental externalities (on the firm and on society) in the assessment of loyalty rebates, predatory pricing or margin squeeze. Competition authorities could assess whether, for instance, it is the recourse to polluting materials or GHG emitting technologies that gives the dominant firm a competitive edge and enables it to undercut its rivals (Dolmans and Mostyn, 2021^[57]).

Other abuses may include, for instance, the conduct of a dominant firm disposing chemical products into rivers, thereby gaining a competitive advantage over rivals that incur higher costs by disposing of waste in compliance with the law (Dolmans and Mostyn, 2021^[57]).

To the extent that the anticompetitive conduct corresponds also to an infringement of environmental regulations, the debate on environmental concerns and competition touches on similar issues as the

debate on privacy in digital markets. Regulatory standards could be used, in some circumstances, as elements of the competition analysis (e.g. essential facilities when there is a regulatory duty to deal), and it may even be appropriate to use them as proxies on occasion (Dunne, 2020^[58]; OECD, 2021^[59]). Ongoing cases, such as the *Facebook* case in Germany and the referral for preliminary ruling pending before the Court of Justice of the European Union, may provide guidance on this matter as regards privacy regulation in a way that may be applicable, *mutatis mutandis*, to cases involving environmental regulation.

4.2. Conflict between competition and environmental protection

4.2.1. Potential abuses of dominance associated with environmental benefits

One can think of a number of cases where a company with a dominant position may engage in conduct that might be considered abusive, but that may bring environmental benefits that may provide a pro-competitive or objective justification.

Examples may include cases where a dominant company:⁵⁹

- refuses to deal with trading partners (even potential) who do not meet environmental criteria above the regulatory standards;
- enters into long-term exclusive arrangements in order to recover substantial environmental investments;
- engages in tying and bundling, conditioning the sale of its usual product on the purchase of an additional green product;
- operates an e-commerce platform and prioritises its own green products whilst demoting rivals' more polluting products (Dolmans and Mostyn, 2021^[57]).

4.2.2. Green pro-competitive justifications

In these instances, one may also consider whether the otherwise abusive conduct may be objectively justified, if it yields environmental benefits.⁶⁰ In cases where a pro-competitive justification is alleged, competition authorities might have to weigh the potential restriction of competition against the overall environmental benefits for consumers and society.

Pro-competitive or objective justification claims may be difficult to substantiate, typically requiring the dominant firm to demonstrate that:

- The efficiencies are a result of the conduct;
- The competition restriction is necessary and proportionate to realise the efficiencies;
- The efficiencies outweigh any negative effects on competition and consumer welfare;
- The conduct does not eliminate effective competition.⁶¹

In the Swedish Patent and Market Court's *FTI*,⁶² Förpacknings- och Tidningsinsamlingen AB (FTI) terminated a competitor's access to its recycling system but claimed that this was objectively justified to ensure compliance with higher environmental and recycling standards than those provided by the law. The Patent and Market Court rejected this efficiency claim on grounds that FTI had not shown that there were no less restrictive measures (e.g., renegotiation of the contract) that would have achieved the same goals and also given that it was not FTI's task to determine which standards should apply concerning recycling targets.

In *Sydhavnens Sten & Grus*,⁶³ the CJEU carried out a proportionality test weighing competition restrictions against environmental goals. The Municipality of Copenhagen had concluded contracts to process environmentally non-hazardous building waste with three companies. Sydhavnens was precluded from

processing that waste within the boundaries of Copenhagen, even though it was qualified to do so. It alleged that the contracting companies might have abused their dominant position arising from the exclusive rights granted by the municipality. Due to the fact that the Municipality of Copenhagen at the time was mostly burying building waste rather than recycling, the restriction was considered necessary to guarantee a significant flow of waste to the three contracting firms, in order to ensure their profitability and build capacity. In its assessment, the CJEU found that the restriction of competition was necessary for the management of building waste and that a measure having a less restrictive effect on competition, such as the imposition of recycling obligation on companies, would not have been effective.⁶⁴

5. Environmental Considerations in Merger Control

As investors pile into funds that are strong on ESG criteria, one can expect more and more investment strategies and business models taking into account environmental considerations. This will likely lead to an increasing number of mergers driven by an environmental rationale and impact.⁶⁵

One such example would be the acquisition of a green target company motivated by the acquirer's investment strategy to reduce carbon emissions beyond the levels required by environmental legislation. This was the rationale of the *Repsol/Viesgo* merger assessed by the Spanish competition authority (CNMC).⁶⁶ This allowed Repsol, by acquiring the low-emission business of Viesgo, to enter the market for green electricity generation and implement its environmental transition towards cleaner electricity markets.

Merger control aims to ensure structural changes to the marketplace do not lead to anti-competitive outcomes, typically by reference to the consumer welfare standard. In recent years, this has been interpreted to coincide with short-term price effects, with less emphasis being given to longer-term effects on prices, quality or innovation. However, given the technological breakthroughs required for the green transition, which often have long lead times, this paradigm may have to shift. Similarly to killer acquisitions, this may require existing decision-making frameworks to be adapted.⁶⁷

5.1. Market definition

In the definition of the relevant market, through the application of the hypothetical monopolist test, competition authorities consider consumer preferences, including those relating to the environment.

In the *DEMB/Mondelez/Charger OPCO* (2015),⁶⁸ the European Commission assessed whether normal coffee could be distinguished from non-conventional coffee, such as organic or fair trade coffee. Although it did not define them as separate markets for reasons of supply-side substitutability, it found that some consumers perceive the latter as fulfilling different needs, such as making a contribution to environmental sustainability. Similarly, in *Chiquita Brands International/Fyffes*,⁶⁹ the European Commission defined different market segments between conventional bananas and organic or FairTrade bananas, depending on consumer preferences.

In the US ready-to-eat cereals market, the Federal Trade Commission (FTC), relying on retailers and end-consumers data, considered that natural/organic cereals are not substitutes for conventional ones.⁷⁰ An analogous finding has been made recently by the French Competition Authority with the definition of a bio food market, based on a consumer survey.⁷¹

Environmental aspects in the context of market definition have also been taken into account in the Swedish Competition Authority's decision concerning Gasum's acquisition of Lidingö Clean Gas and Natuitcor, where the authority found separate markets for LNG and other fossil fuels, since natural gas is subject to stricter environmental regulations and the market is growing rapidly thanks to investments and due to consumers' perception.⁷²

5.2. Compatibility between competition and environmental protection

5.2.1. Mergers associated with environmental damage

Not every merger that has an impact on the environment poses a challenge. A merger that restricts competition while also damaging the environment may be prohibited or cleared subject to conditions. Environmental considerations can enter (and have entered in the past) the competition assessment through different doors, as environmental aspects can be relevant in defining the theory of harm.

A first example of a theory of harm that may be found in mergers with environmental damage is a **horizontal theory of harm involving unilateral effects in differentiated products**. The increasing market power resulting from the merger may lead to higher prices for green products, lower green quality and less green innovation. Further, with customers' demand (firms or individual consumers) for more sustainable products increasing and green premia decreasing, product differentiation based on environmental parameters will likely increase in importance.

One of the main factors in a unilateral effects theory is the elimination of the constraints exercised by close competitors. When analysing closeness of competition, competition authorities take into account consumer preferences.

In *Schwarz Group/Suez Waste Management*, the European Commission analysed the closeness of competition between companies in the recycling of lightweight packaging market. One of the factors considered for this analysis was that most customers had a preference for lower environmental impact, including in terms of CO₂ emissions from transport to the recycling plants.⁷³

A question relating to closeness to competition is whether competition authorities should take into account only revealed preferences by consumers or whether consumer surveys and customer questionnaires should try also to address preferences considering consumer biases (OECD, 2021^[40]).

A second **horizontal theory of harm relates to a merger leading to increased buyer power**. This was applied by the European Commission in *Aurubis/Metallo*,⁷⁴ where preserving competition on prices was a direct way to address also environmental concerns. The European Commission assessed whether the transaction would have granted the merged entity increased buyer power to enable it to lower the price at which it purchased copper scrap. One of the concerns was that lower prices could lead to lower incentives for copper scrap collectors and pre-processors to collect and invest in copper scrap recycling due to the expected decrease in their revenues. This was considered important since, “A well-functioning, competitive copper recycling industry is key to meet the future needs of European industry and to limit the impact on the environment”.⁷⁵ Following an in-depth investigation, the merger was cleared, as the European Commission found the price effect not significant and, in any event, unlikely to materialise.

Box 6. European Commission – Aurubis/Metallo

In May 2020 the Commission approved the acquisition by Aurubis, the largest European copper producer and the world's largest copper recycling firm, of the metal recycling company Metallo Group, after an in-depth Phase II investigation. According to Executive Vice-President Vestager,

“Copper is an important input needed for electric mobility and digitisation. A well-functioning circular economy in copper is important to ensure a sustainable usage of resources in the context of the European Green Deal. This is why we carried out an in-depth investigation of the merger between Aurubis and Metallo”.

The Commission focused its investigation on the effects on competition in the market for copper scrap for smelting and refining. The merging firms are competitors and key trading partners for suppliers of

copper scrap. The Commission was concerned that the buyer power of the combined purchaser post-merger would allow it to extract lower prices from the industrial suppliers that sell copper scrap as a by-product of their manufacturing processes. Such lower copper scrap prices would be equivalent to higher costs, which could then be passed onto end-consumers in the form of higher final prices, providing less incentives for the use of the recyclable scrap to primary copper, yielding a negative “circular economy effect”.

The Commission cleared the merger, finding that industrial suppliers could still sell their copper scrap to a range of alternative purchasers, including outside of the European Economic Area. As a result, the merger would not have significant impact on prices (cost of copper scrap) and such impact would be, in any case, unlikely to take place.

The Commission also looked into green innovation efficiencies, based on the parties’ argument that the acquisition could have positive environmental benefits through technology transfers within the merged entity. Metallo Group has specific expertise in the use of innovative and more sustainable metal recovery technologies. Enhanced metal extraction from scrap, for example, would have reduced the need for primary production, including decreasing the need for mining extraction.

The Commission concluded that, while it was possible that improved metal extraction could materialise and be at least partly passed on to suppliers, innovation efficiencies could not be considered transaction-specific, timely and verifiable.

Source: European Commission, Press Release, IP/20/801, “Mergers: Commission clears Aurubis’ acquisition of Metallo”, https://ec.europa.eu/commission/presscorner/detail/en/IP_20_801; European Commission (2020), M.9409 - Aurubis/Metallo Group Holding Case, Decision of 1 July 2020, C(2020) 2752 final

Further, environmental considerations could be given relevance as non-price dimension of competition, such as a parameter of product quality or innovation. Similarly to the reduction in quality of privacy or data protection, competition authorities may consider transactions as detrimental for competition, if they reduce the environmental quality of the products or degrade innovation for green products (Volpin, 2020^[22]).

A third **theory of harm**, therefore, **relates to unilateral effects on the pace and amount of innovation**. Whilst, in unilateral price effects analyses, the focus lies on the impact on firms’ pricing decisions post-merger, a unilateral innovation effects theory focuses on firms’ decisions and incentives to discontinue, delay or re-orient existing green research projects. Like in price effects, a horizontal unilateral innovation theory of harm would require looking at the “business stealing” effect of the transaction (Federico, Scott Morton and Shapiro, 2019^[60]). In such a scenario, the loss in green innovation in the short term may also result in a loss in green competition in the future, due to path dependency.

An understanding of the role of path dependency for innovation will be important for agencies in their assessment of impacts of mergers on green innovation. There is significant evidence that the more a firm has innovated in polluting technologies such as combustion engines, the more likely it will continue down that path and not go down the less polluting path (Aghion, Antonin and Bunel, 2021^[23]). This may suggest that competition authorities would need to analyse carefully the innovation implications of a transaction by i) understanding its rationale; and ii) understanding its impact on the incentives to innovate in green technologies.

In *Dow/DuPont* (see Box 7), for example, the European Commission analysed the incentive effects of developing new and better environmentally friendly products in the agro-business. It referred to the importance of innovation in crop protection products for environmental safety and human health and assessed the impact of the merger on innovation in the direction of public policy goals such as environmental safety, human health, and effectiveness in securing crop yields in light of the biological challenges faced by the industry.⁷⁶ The Commission found that the merger would have had a significant

negative impact on innovation competition, because it would have incentivised the parties to discontinue some of their innovation efforts, as they were two close competitors for R&D in a number of important pesticide innovation areas.

Further, the Commission also looked at a second type of innovation theory of harm related to broader “innovation spaces” or the overall level of innovation in an industry. It found that the merger would have led to lower incentives and ability to innovate, due to the fact that it was a concentrated industry with very high barriers to entry.

This latter type of innovation theory of harm relating to broader “innovation spaces” or the overall level of innovation in an industry can be of particular relevance as regards helping to protect green innovation. Indeed, “*this framework is very much suited to address competition concerns that may result in innovation efforts related to environmental technologies*” (Badea et al., 2021^[11]) such as, for instance, for the development of technologies with long innovation cycles. In particular, this may be used to safeguard innovation when there is a risk of discontinuing overlapping pipelines or research, or reducing the incentives or the ability to achieve the same level or type of innovation (Badea et al., 2021^[11]).

Box 7. European Commission – Dow/Dupont

In 2017 the European Commission decision in Dow/DuPont focused part of its analysis on the degree of innovation rivalry. Concerns were identified with respect to the elimination of overlapping research efforts, and a reduction in innovation competition in an already concentrated industry, as the merger would bring together two close competitors in R&D.

The first theory of harm related to innovation competition in overlapping lines of research, due to the structural reduction of incentives and ability to compete on innovation, by suppressing R&D assets and reducing investment in R&D.

The second theory of harm related to elimination of close competition in “innovation spaces” that were described as referring to the broad direction and targeting of the R&D efforts, through the discovery, development and then specific R&D activities. The theory of harm was the likely discontinuation, delay or redirection of the overlapping lines of research and pipeline products. For each “innovation space”, it measured concentration by analysing the share of patents held by each firm, weighted according to citations as a measure of patent quality (based on data from the merging parties on their patents and their competitive intelligence on competitors’ patents, as well as third-party data on patent citations). On this basis together with scale, global presence at discovery and development level, the Commission considered that there were only five global R&D players.

The Commission concluded that the merger would result in the likely discontinuation of overlapping innovation efforts. The parties would have reduced incentives to innovate and likely reduced total innovation capacity to reduce costs. It found that it was unlikely that rivals would counteract such effects. The clearance decision was therefore conditional on R&D asset divestiture remedies.

Source: European Commission, M.7932 – Dow/DuPont, Decision of 27 March 2017, https://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf.

Also in the context of the *Aurubis/Metallo* merger (see Box 6), one potential concern early in the process was that, since Metallo was a particularly innovative player for recycling technologies, the merger might have reduced incentives to invest and innovate in the treatment and recovery of copper scrap.⁷⁷

The impact on innovation of a merger can take time to materialise and is therefore subject to a greater degree of uncertainty than price competition (see further below on the timeframe for the assessment). One

way to assess potential competition on green innovation that may be lost from a merger is to examine the green innovation programmes of the firms. This allows agencies the option of basing their findings on the effects of the incentives of the parties to reduce their R&D efforts following the merger, instead of on the final impact on consumers via price, quality and choice that would occur if or when the innovation leads to fruition.

A **fourth theory of harm related to innovation concerns “green killer acquisitions”**, which are acquisitions of more sustainable competitors aimed at alleviating competitive pressure to produce greener or less polluting products. An example may be one of a non-renewable generation company that may decide to acquire a target start-up dedicated to the manufacture of batteries with the aim of stopping such production and avoiding that a solution to the problem of intermittency of renewable energies is brought to the market (CNMC, 2020, p. 20^[37]). Similarly, the buyer might have new clean (though more costly) promising technologies in the pipeline and, as a result of the loss of competitive pressure to innovate on environmental aspects, it may decide to stop such R&D projects and continue to use the more polluting and cheaper technology (along the lines of reverse killer acquisition in digital markets). The damage may be compounded by the existence of “kill zones”, whereby start-ups and investors might not even invest in innovative green competitors given the presence of strong incumbents (OECD, 2020^[61]).

This may even be more of an issue should green innovation be carried out by smaller players, where merger thresholds such as turnover might mean that such mergers may not be notifiable, in many jurisdictions, to competition authorities.

5.3. Conflict between competition and environmental protection

5.3.1. Potentially anticompetitive mergers associated with environmental benefits

As noted above in relation to agreements and abuses of dominance, some cases might be less clear-cut and analytical challenges may arise where a merger may harm competition but have a positive impact on the environment. One may think of a merger where the buyer acquires a relatively close competitor for one of the products in the market, which leads to price increases, but where both parties have also know-how and technologies that may be considered complementary and that could lead to significant green innovation in the longer run.

In such cases, the assessment may have to take into account efficiencies to understand whether there are beneficial effects that may counteract the potential harm from the merger.

5.3.2. Green Efficiencies

Although in practice difficult to substantiate, like other types of efficiencies, there is no economic rationale against considering green efficiencies. The merging parties can submit that their transaction brings efficiencies, for instance, in the form of more environmentally friendly products and that the benefits for sustainability outweigh the negative effects of the merger on competition (Rosenboom, 2021^[62]).

The consideration of environmental sustainability as a potential efficiency is explicitly recognised by the CMA’s updated merger assessment guidelines:

What constitutes higher quality, greater choice or greater innovation will depend on the facts of individual cases. It might be, for example, that benefits in the form of environmental sustainability and supporting the transition to a low carbon economy are relevant customer benefits in some circumstances. A merger may lead to lower energy costs and some benefits that customers may value (such as a lower carbon footprint of the firm’s products).⁷⁸

In many jurisdictions, in order to be accepted, efficiencies must benefit consumers, be transaction-specific and be verifiable. The challenges discussed above in Section 2. may arise in relation to the boundaries of the assessment of efficiencies, such as, for instance, whether out-of-market efficiencies are relevant to offset in-market detrimental effects on competition.

Merger-specificity would require merging parties to demonstrate that the pursued environmental objectives can only be achieved by means of the merger. This means that positive effects resulting from environmental legislation (e.g. from an emission trading scheme) could not be accepted as an efficiency. Also, efficiencies would not be acceptable, should they be achievable via less anticompetitive means, such as a non-structural co-operation agreement or joint venture.

As regards verifiability, efficiencies must be supported in evidence to demonstrate to what extent consumers will benefit.

Even though efficiencies may be difficult to bring, it has been noted that

The recent interest from authorities in reflecting on the role of competition policy in helping to solve the climate challenge makes it likely that the next attempt at a green efficiency defence will be treated seriously, and have the opportunity to shape competition case law (Rosenboom, 2021^[62]).

5.4. Timeframe for the assessment

In both green innovation and green killer acquisition theories of harm, the timeframe for the assessment is crucial. Many of the effects from such mergers will become clear further into the future than what most competition agencies consider as foreseeable effects. Often authorities consider a timeframe of around two to three years for the assessment of the effects of a merger, even if they leave scope for extending that timeframe where there are factors (e.g. contractual or financial) that give certainty about the future unfolding of the market (OECD, 2021^[49]).

Adopting a longer timeframe would allow to capture potential harms and efficiencies that take longer to be realised. How much longer the timeframe considered should be will depend on the industry, since lead times differ significantly. A rule of thumb is to use the current 2-3 year timeframe only after the potential constraint is expected to have materialised and reached maturity. This would have the advantage that if the innovation would come on stream in, for instance, 5 years, then the competitive constraints would begin to be assessed only at that time and from then onwards (OECD, 2021^[49]).

It is suggested that this approach could be taken as a default whenever there is green innovation at stake. Given the importance of technological innovation and breakthroughs in the green space, this may need to be further discussed and developed.

5.5. Evidence

As mentioned above, competition authorities can give relevance to environmental considerations when assessing the impact that the transaction may have on innovation and innovation incentives. The analysis of effects on quality, choice and innovation may be challenging from an evidentiary standpoint. Existing market shares, for instance, may be less informative for a dynamic analysis, as they may be an inadequate proxy for market power for the future. For instance, in *Dow/Dupont* (see Box 7), the European Commission took into account the merging parties' and their competitors' innovation capabilities, such as the parties' specialisation and assets, R&D efforts and headcount, track record and their patent portfolios.

The long term implications of innovation path dependency, for instance, might be revealed by strong internal evidence and, contrariwise, it would require such evidence to show that the firm will not discontinue green investments by an acquiring more pollutant firm.

When looking at dynamic effects, internal documents can therefore play an important role (Kar, Cochrane and Spring, 2021^[63]), as they can contain information and evidence of the competitive dynamics, the parties' activities and future plans, all of which can help construct the counterfactual. Internal documents will also be key when competition authorities scrutinise the parties' plans in relation to green efficiencies.

The sort of internal documents that will be important to look at for both efficiencies and harm may include:

- sustainability reports, with higher probative value being accorded to independent reports on due diligence sustainability impacts and R&D efforts relevant to the parties internal decision-making process;
- documents submitted to the board of directors on R&D plans and goals;
- internal communications between senior executives, including Chief Sustainability Officers, R&D Chiefs and HR Managers (these latter, for instance, on recruitment of key engineers and research staff);
- consumer surveys, in particular when taking into account consumer behavioural biases.

Other documents may be industry-specific and dependent on the theory of harm. Also documents that detail the analysis of the valuation of the purchase price might be important when faced with green innovation to fully understand the rationale of the deal.⁷⁹

Importantly, the progressive move towards increased ESG reporting (OECD, 2011^[64]; OECD, 2018^[65]) will mean that competition authorities may have access not only to official reporting but also to a wealth of preparatory working documents, which will assist them with understanding the companies' positions as regards environment and the quantification of the expected environmental harms and benefits of the transactions.

Internal documents are important to obtain not only from the merging parties but also from their competitors, knowing that the usual caveats apply to such documents, since they be prone to bias, upward or downward, depending on whether the focus was on attracting investors or on avoiding regulatory concerns.

In assessing environmental dynamic effects, similarly to digital markets, competition authorities will need to continue to refine not only best practices of internal document collection (with advanced and often comprehensive requests) but also IT tools and search capabilities of internal documents. To extract the full evidentiary value of the collected documents, competition authorities may need to build expertise in-house or via co-operation with other competition authorities, environmental agencies or environmental economics experts.

In relation to quantification, even if tools to quantify innovation effects may be currently less developed than the ones applied for the quantification of price effects, it is important that this practical obstacle does not derail the analysis. In other words, innovation effects should not have less weight in the assessment simply because they are harder to measure. As noted by Federico, Scott Morton and Shapiro (2019^[60]):

In practice, one rarely has real-world evidence on how two products that are not yet launched will compete against each other or what their respective sales will be. At best, one has projections, and even those are rarely available until product launch is imminent, in part because each firm typically has limited insight into the status of development efforts at other firms, making it difficult for the firms to study and predict how their products will compete. For all of these reasons, the more difficult it is to discern the specifics of future competition, the wiser it may be to rely on the general economic principles [...] Requiring the government [or competition authority] to offer precise quantitative evidence of future competition to meet its burden of proof regarding unilateral innovation effects would be tantamount to giving up on merger enforcement relating to the development of future products that are early in the development stage or not yet discovered.

As noted in Section 3.4, this consideration may affect the evidentiary standard test applied by competition authorities. In relation to evidence of harm, many competition authorities (outside the scope of hard-core

cartels or criminal infringements) have traditionally applied a ‘balance of probabilities’ test to determine whether a conduct is anticompetitive. Like in digital markets, the shift from a ‘balance of probabilities’ test to a ‘balance of harms approach’⁸⁰ could be applied to mergers that consider environmental dynamic effects, especially when loss of green innovation may be at stake. A ‘balance of harms’ test looks not only at the likelihood of the materialisation of the harm, but calibrates it also to the likely magnitude of the anticompetitive effects if harm were to take place. Such an approach would allow competition authorities to intervene where the likelihood is lower but the magnitude of the innovation effects is higher. See further on this approach in (OECD, 2020^[61]).

5.6. Remedies

When anticompetitive effects are identified by the competition authority, remedies may be offered by the merging parties in order to address and solve the competition concerns in order to obtain a clearance decision. Therefore, remedies addressing environmental concerns could be conceivable when environmental competition harm has been identified. Many jurisdictions consider that structural remedies are preferable to behavioural remedies for horizontal mergers, as they are likely to be more effective, solve the competitive harm more directly and lower monitoring costs for competition authorities.

Remedies to solve competition problems may also have a positive impact on the environment. For instance, in the *Novelis/Aleris* merger of two suppliers of aluminium automotive body sheets, the parties submitted commitments to divest Aleris’ aluminium automotive body sheets business, including intellectual property and licences, permits and authorisations. Aluminium is a light material that allows car manufacturers to produce more fuel-efficient vehicles and therefore reduce CO₂ emissions. This divestiture addressed the concerns of reduced choice and higher prices for aluminium automotive body sheets, which are necessary to develop lighter cars.⁸¹

In the *Dow/DuPont* innovation theory of harm (Box 7), the Commission cleared the merger with the condition that the merging entity would divest the relevant DuPont pesticide businesses together with the divestment of almost the entirety of DuPont’s global R&D organisation.⁸²

One question is whether behavioural remedies might become more relevant as competition authorities consider environmental competition harm. For example, a competition authority may consider that, as a result of a merger, some customers involved in developing environmentally friendly products will have to bear higher costs to obtain the necessary inputs. In such a case, it may be envisaged that access to green technologies might be granted, such as access to research facilities, intellectual property or data (Kar, Cochrane and Spring, 2021^[63]).

6. **Alternative approaches to environmental considerations**

In addition to taking into account environmental considerations within the competitive assessment under the economic efficiency test, competition authorities may have a number of other options depending on the specific characteristics of each regime, as well as the type of case examined. The main approaches are described below.

6.1. State action defence-type of cases

In some jurisdictions, the State action defence or equivalent doctrines can be invoked where an anticompetitive conduct oriented at achieving a public benefit is mandated or authorised by the Government or by regulation.

According to commentators (Hovenkamp, 2019^[66]; Petrosyan, 2019^[67]), the State doctrine might have applied, for example, in the case of the recent investigation opened by the US DoJ against a consortium of four vehicle producers to determine whether their voluntary framework agreement with the State of California was infringing competition law (see Box 4). The California Air Resource Board framework agreement imposed a target for the reduction of emissions that was more ambitious than the one provided by the law. The DoJ expressed concerns in relation to the possibility that the agreement might have a negative effect on competition and reduce the incentives for companies to compete.⁸³

Another interesting example was assessed by the German Bundeskartellamt in the *DSD* case. In this case, in order to set up the efficient collection of business packaging waste in Germany, required by the Packaging Ordinance, businesses were allowed to adhere to a collection and disposal scheme. To the extent that co-operation between competitors was required, the Bundeskartellamt allowed the cooperation for a limited time, monitoring it to ensure that it would not lead to unnecessary restrictions of competition.⁸⁴

6.2. Public interest considerations by a different governmental body

Some regimes provide that an external governmental body be in charge of determining whether a decision by the competition agency may be superseded for public interest reasons (e.g. Germany, France, the United Kingdom and the United States). By reason of the technical nature of the decision and to preserve independence, the analysis of public interest objectives going beyond economic efficiency is entrusted to a governmental body other than the agency, usually at ministerial level, and allows them to override the competition decision (OECD, 2016^[68]).

Box 8. Public interest considerations in merger control

Several jurisdictions allow taking into account public interests in merger reviews. For instance, the Spanish Competition Act allows the Council of Ministers to clear a merger that would otherwise be prohibited on grounds “of general interest [such as] environmental protection.”

The German law provides room for considering public interest grounds via ministerial authorisation proceedings. This enables the Federal Minister of Economic Affairs to override the Bundeskartellamt’s merger control decisions and clear an otherwise prohibited merger.

In January 2019, for instance, the Bundeskartellamt prohibited the Miba/Zollern merger after finding that the concentration was likely to significantly impede effective competition in the supply of bearings for large-bore engines. The parties argued that public interest concerns justified overriding the prohibition on grounds, amongst others, of an interest in developing innovation potential for key technologies that could be used in the future for wind energy generation. In light of the positive effects of the transaction on energy transition and the environment, the Minister overrode the decision and cleared the merger.

Source: OECD (2016), Public Interest Considerations in Merger Control, <https://www.oecd.org/competition/public-interest-considerations-in-merger-control.htm>; OECD (2020), Sustainability and Competition – Note by Germany, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)63/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)63/en/pdf).

6.3. Public benefit test by the competition authority

Other regimes allow the competition authority itself to perform the assessment and balance the public benefit or the public interest against the anticompetitive harm. Such regimes include, for instance, Australia and New Zealand, where the agencies can green light restrictive agreements and mergers potentially reducing competition if a net public benefit exists. This means that “*the likely public benefit resulting from the conduct outweighs the likely public detriment*” and is interpreted as including “*anything of value to the community generally*”.⁸⁵

These regimes offer, therefore, a specific mechanism to take into account environmental considerations, even when they do not affect economic efficiency. The Commerce Commission of New Zealand (NZCC), for example, granted authorization to an agreement whereby refrigerant wholesalers could supply the product only to licensed or certified customers, on grounds that it would contribute, first, to increased compliance and, second, to reduced release of hazardous substances in the atmosphere.⁸⁶

Similarly, the Australian Competition and Consumer Commission (ACCC) authorised tyre and batteries stewardship recycling schemes for public benefit reasons.⁸⁷ Under such schemes, companies are able to enhance the circularity of their industries and coordinate the disposal of the products across the supply chain (see, for a description of the Battery Stewardship Council, Box 9).

Box 9. ACCC – Battery Stewardship

In March 2020, the Battery Stewardship Council (BSC) asked the Australian Competition & Consumer Commission (ACCC) to authorise its voluntary Battery Stewardship Scheme, aimed at facilitating the collection, sorting and end-of-life recycling of expired batteries, for a duration of five years. The members of the BSC are businesses along the battery supply chain.

The scheme levies an extra charge of AUD 0.04 per 24 grams (the weight of a standard AA battery) on the price of imported batteries, but provides for a rebate for recyclers funded through the levies and membership fees. The membership is voluntary, but the members of the project commit to only deal with one another along the supply chain.

The ACCC conducted a public benefit analysis, considering that environmental benefits, as well as increased public awareness about battery disposal, and increased innovation would come from the scheme. The ACCC also weighed the public detriment brought about by the agreement, including the obligation to trade only between members within the scheme, any possible battery price increases, as well as safety issues and compliance burdens.

In September 2020, the ACCC granted conditional authorisation of the scheme for five years, considering that the public benefit outweighed the detriment. To counter the safety risk, the ACCC required the BSC to develop a battery safety strategy within a year with the input of multiple stakeholder groups.

Source: Australian Competition & Consumer Commission, 'Determination Application for authorisation AA1000476', 4 September 2020. Battery Stewardship Council; Lapenta G. and Giangaspero M. (2021), Greening Antitrust: Lessons from the ACCC's Authorisation of a Recycling Co-Operation Agreement, *Journal of European Competition Law & Practice*, <https://doi.org/10.1093/jeclap/lpab072>.

6.4. Prioritisation and agency discretion

Another main way in which competition authorities may support environmental goals and take into account environmental considerations is prioritisation. In antitrust cases (anticompetitive agreements and abuse of dominance investigations), competition authorities typically exercise some degree of discretion in deciding which cases to pursue with priority.

This has emerged clearly, for instance, during the early stages of the Covid-19 crisis, where many governments and competition authorities provided guidance or allowed some forms of co-operation between competitors to maintain or revive the functioning of supply and distribution chains in the short-run (OECD, 2020^[46]). The Hellenic Competition Commission Staff Discussion paper noted, also against the backdrop of the current Covid-19 pandemic, how sustainability can be considered an element contributing to systemic resilience and, in that context, how it should inform the assessment of competition enforcement priorities.⁸⁸

The German Bundeskartellamt made use of its discretionary powers, for instance, when it decided not to commence investigation against possible anti-competitive agreements for fair-trade labelling initiatives. The FairTrade label system prohibited companies from paying less than the minimum price set by FairTrade for some products and allowed producers to set together a premium for their products, which might have constituted a restriction by object. The Bundeskartellamt gave importance, in the exercise of its discretion, to the social objective of the agreement.⁸⁹

The Draft Guidelines on Sustainability Agreements published by the Dutch competition authority (ACM) may also be seen as a prioritisation tool.⁹⁰ The Guidelines aim at informing businesses on which

sustainability agreements are unlikely to raise concerns and on “*what opportunities exist for making sustainability agreements within the boundaries of competition law*”.⁹¹ In a similar vein, the United Kingdom Competition and Markets Authority published earlier this year guidance for businesses on its approach to sustainability agreements.⁹²

Prioritisation may, of course, also work in the opposite direction, by allowing a competition authority to consider anticompetitive conduct that is also harmful for the environment as a focus area where enforcement resources should be invested. This option has been highlighted by the French Competition Authority, which set sustainable development as a priority area, including by targeting competition law infringements that also have a negative impact on environmental protection.⁹³

6.5. Competition advocacy efforts

Another important way in which competition authorities can enable progress towards environmental objectives is via targeted advocacy efforts. Particularly against the backdrop of the current Covid-19 pandemic, which provides an extraordinary opportunity to “build back better”, competition authorities can find fertile ground with governments and policymakers to push for pro-competitive and pro-environmental reforms and policies.

For example, in the past months many competition authorities had an opportunity to interact with policymakers to highlight the importance of well-functioning markets to support a swift and sustainable economic recovery. In this context, competition principles should inform reforms and policies.

Advocacy efforts may be focused, for instance, on key sectors that enable the green transition, address coordination problems or stimulate green innovation and technological advancement (OECD, 2020^[47]; CNMC, 2020^[37]). Fundamental may also be infrastructure markets, such as energy and transportation, which in addition to having economy-wide knock-on effects, play a fundamental role in the decarbonisation process. For example, in the last few years, a progressive reduction in the costs of wind and solar investments have made these types of energy competitive with conventional sources. It is estimated that “*the costs of generating power in a 90% carbon-free market will be 10% lower than in a 55% carbon-free market*” (Goldman School of Public Policy, 2020^[69]; Fabra, 2021^[70]).

An example of how competition authorities can use their advocacy powers to shape markets and set the direction for a sustainable recovery is provided by COFECE. In order to create a competitive market for energy generation in Mexico, COFECE promoted the introduction of Clean Energy Certificates in the Electric Industry to encourage the generation of more energy from clean sources. COFECE also recently filed a complaint against a reform that could undermine competition in the generation and commercialisation of electricity, by reducing investments in clean generation capacity and strengthening the market power of the incumbent national power supplier.⁹⁴

Advocacy efforts can also be invested to reduce the risks that new or existing regulation does not stifle investments in green innovation. One example could be building code requirements for structural concrete that ensure compliance with public safety rules. Should such requirements define in great detail the performance of the material or even its chemical composition, they may inadvertently hinder investments in new types of ‘greener’ concrete (Gates, 2021^[2]). A competition assessment of such rules may recommend a flexible formulation of the provisions, allowing to maintain the highest safety standards without undermining investments in green innovation.

6.5.1. Market Studies

Market studies are a non-case specific instrument which offers the flexibility of analysing an entire market and, in some jurisdictions, make recommendations to government or even impose remedies. This tool may

be particularly effective when applied to new or developing industries or technologies that can have an impact on environmental sustainability and on economic welfare.⁹⁵

An example is the CMA's market study in the electric vehicle charging sector. The CMA considered that transport is the largest source of emissions in the UK and that a well-functioning market was fundamental to achieve the UK's Net-Zero commitment. In particular, the CMA recommended to government to ensure the continued electric vehicles charging roll-out (including involving local authorities) and to simplify charging for customers. Considering its findings, the CMA also took enforcement action by initiating an investigation into the long-term exclusivity arrangements for charging along motorways to analyse whether they may have anticompetitive effects.⁹⁶

6.5.2. Public Procurement

The adoption of competitive, open tenders in green public procurement will also play an important role. Competition authorities can recommend, where appropriate, that tender criteria are solution-oriented and allow the adoption of equivalent technologies, so as to foster technological neutrality and more innovation for the achievement of carbon-neutrality (see, on the choice between a technology-neutral and technology-specific approach (Fabra, 2021^[70])). The adoption of harmonised green public procurement criteria, however beneficial, should not result in competition distortions.

7. Conclusions

This paper analysed the different approaches that competition authorities can adopt when integrating environmental considerations in their competition enforcement and merger control. While the role of the state as regulator cannot be overestimated, the investment power, knowledge and know-how that business possess will be fundamental to achieve the breakthrough technological innovation that is required to fight the climate change emergency.

The paper finds that competition policy can significantly support environmental goals, particularly when consumers' demand for green products exists. Competition enforcement and merger control, within the traditional framework of analysis, have an important role to play in preventing anticompetitive conduct and transactions that are also harmful to environmental objectives. Cases may arise, in particular, where the detrimental impact of the conduct or transaction is also affecting non-price dimensions of competition, such as environmental quality, choice and innovation.

In their assessment of conduct and transactions with an impact on environmental protection, competition authorities will have to consider carefully the companies economic incentives, as well as supply-side and demand-side markets failures, such as coordination problems, first-mover disadvantage or consumer behavioural biases, which, if ignored, may lead to non-optimal outcomes for achieving well-functioning markets.

When looking at markets where these factors play a significant role, competition authorities will always need to be wary of anticompetitive risks and of potential spill overs leading to infringements of competition rules. Competition authorities, however, may also need to eliminate obstacles to genuinely beneficial and pro-competitive green co-operation initiatives. This may be done in various ways, including by providing clear general and individual guidance to businesses on which co-operation agreements may be allowed thanks to their beneficial effects, such as green quality improvements, or more sustainable and clean process and product innovation.

As more and more investment strategies and business models integrate sustainability considerations, driven by regulations, investors, shareholders and consumers, authorities will also increasingly have to deal with mergers driven by a sustainability rationale. Given the importance of green technology and innovation, agencies will need to gain a clear understanding of economic incentives and collect relevant evidence for that rationale, including by resorting to internal documents.

While the analyses of environmental considerations are complex, it seems possible to conclude that the legal and economic frameworks are apt to accommodate them within the boundaries of the traditional interpretation of consumer welfare standard and the traditional assessment of harm and efficiencies. The tools for this analysis and the design of competition investigations may require further development and adjustments.

Advocacy efforts, including prioritisation decisions and the use of market studies, may also give a fundamental contribution to these objectives.

Across the world, competition authorities have only just started to engage on and discuss these multifaceted issues. For competition policies to remain relevant in achieving carbon-neutrality goals, alongside regulation, competition authorities will need to provide clear guidance to businesses and ensure that capital is allocated as efficiently as possible to allow moving fast towards sustainable industries and firms. Strong international co-operation between competition authorities will be needed to determine how best to face the challenges that integrating environmental considerations into the assessment presents.

Endnotes

¹ UN Sustainable Development Goals (2015), <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

² Pew Research Center (2021), “In Response to Climate Change, Citizens in Advanced Economies Are Willing To Alter How They Live and Work”, <https://www.pewresearch.org/global/2021/09/14/in-response-to-climate-change-citizens-in-advanced-economies-are-willing-to-alter-how-they-live-and-work/>.

³ Autoriteit Consument & Markt (ACM) (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-opportunities-within-competition-law.pdf>.

⁴ Hellenic Competition Commission (HCC) (2020), Staff Discussion Paper, *Competition Law & Sustainability*, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html>.

⁵ Bundeskartellamt (2020), *Offene Märkte und nachhaltiges Wirtschaften - Gemeinwohlziele als Herausforderung für die Kartellrechtspraxis*, https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Diskussions_Hintergrundpapier/AK_Kartell_recht_2020_Hintergrundpapier.pdf?__blob=publicationFile&v=2.

⁶ UK Competition & Markets Authority (CMA) (2021), “Environmental Sustainability Agreements and Competition Law”, <https://www.gov.uk/government/publications/environmental-sustainability-agreements-and-competition-law/sustainability-agreements-and-competition-law>; CMA (2021), Environmental Sustainability and the Competition and Consumer Law Regimes - Advice to the Secretary of State for Business, Energy and Industrial Strategy - Call for inputs, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021364/CFI_-_sustainability_advice_.pdf.

⁷ Kartellgesetz 2005 [Cartel Law] § 2 Abs. 1(b) (Austria).

⁸ The results of the European Commission’s call for contributions are available at this link: https://ec.europa.eu/competition-policy/green-gazette/conference-2021_en.

⁹ Hungarian Competition Authority, Sustainable Development and Competition Law – Survey Report (Special Project for the 2021 ICN Annual Conference), 30 September 2021, <https://www.gvh.hu/en/gvh/Conference/icn-2021-annual-conference/special-project-for-the-2021-icn-annual-conference-sustainable-development-and-competition-law>. The results of the survey have been presented in the plenary session of the ICN Annual Conference in Budapest on 13 October 2021.

¹⁰ See also, for a very short analysis, case COMP/M.4271 – *Daikin/Oyl*, para. 27, where the European Commission noted that the risk of a race to the bottom in terms of environmental friendliness of the relevant product was very limited or non-existent, because the standards are set out in EU legislation.

¹¹ Throughout the paper, the expressions ‘environmentally-friendly’ or ‘sustainable’ or ‘green’ products are meant to encompass eco-friendly, biodegradable, recyclable, fair-trade sourced and/or products with lower environmental impact.

¹² See, for a more complete reviews of the literature, Schinkel, M. and L. Treuren (2021), “Green Antitrust: Friendly Fire in the Fight against Climate Change”, <http://dx.doi.org/10.2139/SSRN.3749147>.

¹³ See above endnotes 3 to 8.

¹⁴ Public benefit test and public interest considerations are discussed separately in Section 6. .

¹⁵ This expression is also used by Nowag, J. (2016), *Environmental Integration in Competition and Free-Movement Laws*, Oxford University Press, p. 44.

¹⁶ The neo-brandeisian approach emerged in the United States as an academic and political movement criticising the laxity of competition enforcement and promoting a stronger antitrust enforcement aimed at counteracting concentration of market power in the hands of few market players, including by promoting antitrust intervention in the market to address social issues, such as income inequality, protection of consumers' and workers' rights or unemployment.

¹⁷ Hellenic Competition Commission (HCC) and Netherlands Authority for Consumers and Markets (ACM) (2021), *Technical Report on Sustainability and Competition*, <https://www.epant.gr/en/enimerosi/publications/sustainability/item/1284-technical-report-on-sustainability-and-competition.html>.

¹⁸ European Commission, Case M.7217, *Facebook/WhatsApp*, 3 October 2014, paras. 87 and 102 and footnote 79.

¹⁹ European Commission, Case M.8124, *Microsoft/LinkedIn*, 6 December 2016, http://ec.europa.eu/competition/mergers/cases/decisions/m8124_1349_5.pdf, para. 350.

²⁰ European Commission, Decision of 21 December 1994, *Philips/Osram*, case IV/34.252, OJ L378, <https://eur-lex.europa.eu/eli/dec/1994/986/oj>, paras. 25-27.

²¹ European Commission, Decision of 24 January 1999, *CECED*, case IV.F.1/36.718, OJ L187, <http://data.europa.eu/eli/dec/2000/475/oj>, para. 56.

²² ACM (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-oppurtunities-within-competition-law.pdf>, paras. 40-41.

²³ Ibid.

²⁴ OECD (2020), *Sustainability and Competition - Note by Australia and New Zealand*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)62/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)62/en/pdf).

²⁵ *Ohio v. American Express Co.*, 585 U.S. Supreme Court 16-1454 (2018).

²⁶ *United States v. Topco Associates, Inc.*, 405 U. S. 596, 611 (1972).

²⁷ Case T-86/95, *Compagnie générale maritime v. Commission*, 28 February 2002, EU:T:2002:50, para. 343; European Commission, Case COMP/AT.39595, *Continental/United/Lufthansa/Air Canada*, 23 May 2013, C(2013) 2836 final, https://ec.europa.eu/competition/antitrust/cases/dec_docs/39595/39595_3012_4.pdf, paras. 57-59.

²⁸ European Commission, *Guidelines on the application of Article 81(3) of the Treaty*, OJ C 101, 27 April 2004, p. 97–118 para. 43 and *Horizontal Merger Guidelines*, para. 79.

²⁹ T-111/08, *MasterCard*, 24 May 2012, EU:T:2012:260, para. 225 confirmed by the Court of Justice C-382/12 P, *MasterCard*, 11 September 2014, EU:C:2014:2201.

³⁰ It is expected, however, that the European Commission will provide further guidance on this issue in its updated guidelines on horizontal cooperation and vertical agreements.

³¹ Hellenic Competition Commission (HCC) (2020), Staff Discussion Paper, Competition Law & Sustainability, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html>, p. 28.

³² Environmental-damage agreements are defined as those that help, in an efficient manner, to comply with an international or national standard, or helps realize a concrete policy goal to prevent environmental damage. See ACM (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-oppurtunities-within-competition-law.pdf>, paras. 45 ss.

³³ Federal Law amending the Cartel Act 2005 and the Competition Act, BGBl. I No. 176/2021.

³⁴ See also M.P. Schinkel in 'Summary of the OECD Third Competition Open Day' (24 February 2021), *Concurrences*, No. 2-2021, <https://www.concurrences.com/en/review/issues/no-2-2021/conferences/ruben-maximiano>.

³⁵ See, for the work of the OECD on international co-operation, <https://www.oecd.org/competition/internationalco-operationandcompetition.htm>.

³⁶ OECD (2013), The Role and Measurement of Quality in Competition Analysis, Note by the European Commission, <https://www.oecd.org/daf/competition/Quality-in-competition-analysis-2013.pdf>, 6.

³⁷ See, for instance, Hellenic Competition Commission (HCC) and Netherlands Authority for Consumers and Markets (ACM) (2021), *Technical Report on Sustainability and Competition*, <https://www.epant.gr/en/enimerosi/publications/sustainability/item/1284-technical-report-on-sustainability-and-competition.html>.

³⁸ ACM (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-oppurtunities-within-competition-law.pdf>, paras. 53-56.

³⁹ These examples are all provided by ACM (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-oppurtunities-within-competition-law.pdf>. See also, among others, Unilever (2020), Sustainability cooperations between competitors & Art. 101 TFEU - Submission to DG COMP, https://www.unilever.com/Images/unilever_submission_sustainability_competition_law_tcm244-551751_en.pdf; Dirk Middelschulte, Article 101 TFEU in the Decisive Decade, *Concurrences* No. 4/2020; Simon Holmes (2020), "Climate change, sustainability, and competition law", *Journal of Antitrust Enforcement*, Vol. 8/2, pp. 354-405, <http://dx.doi.org/10.1093/JAENFO/JNAA006>.

⁴⁰ This and other sections in the paper largely draw and reflect the insights and examples contained in Cristina Volpin (2021), "Competition and Sustainability: The Odd Couple", in *Frontiers of Competition Law*, Edward Elgar, forthcoming.

⁴¹ For an example in merger control, see *Aurubis/Metallo Group Holding*, Case M.9409, Commission Decision C(2020) 2752 final [2019], https://ec.europa.eu/competition/mergers/cases/decisions/m9409_3908_3.pdf and Box 6.

⁴² See European Commission, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, OJ C 11, 14 January 2011, paras. 24–25.

⁴³ French Competition Authority, Decision 17-D-20 of 18 October 2017, <https://www.autoritedelaconurrence.fr/fr/decision/relative-des-pratiques-mises-en-oeuvre-dans-le-secteur-des-revetements-de-sols-resilients> and Press Release, <https://www.autoritedelaconurrence.fr/en/communiqués-de-presse/19-october-2017-cartel-floor-coverings-sector>.

⁴⁴ European Commission, Decision of 21 December 1994, *Philips/Osram*, case IV/34.252, OJ L378, <https://eur-lex.europa.eu/eli/dec/1994/986/oj>, paras. 25-27.

⁴⁵ Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, para. 329.

⁴⁶ ACM (2014), Analysis of the sustainability arrangements concerning the ‘Chicken of Tomorrow’, https://www.acm.nl/sites/default/files/old_publication/publicaties/13789_analysis-chicken-of-tomorrow-acm-2015-01-26.pdf.pdf.

⁴⁷ Davenport, C. (2020), “Justice Department Drops Antitrust Probe against Automakers that Sided with California on Emissions”, *The New York Times*, <https://www.nytimes.com/2020/02/07/climate/trump-california-automakers-antitrust.html> (accessed on 30 April 2021).

⁴⁸ See M.P. Schinkel in ‘Summary of the OECD Third Competition Open Day’ (24 February 2021), *Concurrences*, No. 2-2021, <https://www.concurrences.com/en/review/issues/no-2-2021/conferences/ruben-maximiano>.

⁴⁹ See also Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, para. 329.

⁵⁰ European Commission, Decision of January 24, 1999, *CECED*, IV.F.1/36.718, OJ L187, <http://data.europa.eu/eli/dec/2000/475/oj>, para. 56.

⁵¹ See, also, European Commission, Guidelines on the applicability of Article 81 of the EC Treaty to horizontal cooperation agreements (2001) OJ C 3 01/2, para. 191.

⁵² European Commission (2020), Staff Working Document, Evaluation of the Vertical Block Exemption Regulation, SWD/2020/0172 final.

⁵³ CMA (2021), The Retained Vertical Agreements Block Exemption Regulation – Consultation document, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/99455/2/VBER_recommendation_2021_consultation_with_annexes_170621_FINAL.pdf, p. 54.

⁵⁴ The OECD, for instance, provided guidelines on how to conduct cost benefit analysis for environmental initiatives, while the Technical Report jointly published by the Dutch and the Greek competition authorities provide parties with possible metrics adjusted for the competitive assessment.

⁵⁵ Hellenic Competition Commission (HCC) (2020), Staff Discussion Paper, *Competition Law & Sustainability*, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html>.

⁵⁶ The element of the assessment, such as market definition, that are in common with merger control are discussed in Section 5. , but analogous observations are applicable, where relevant, to anticompetitive conduct.

⁵⁷ Hellenic Competition Commission (HCC) (2020), Staff Discussion Paper, *Competition Law & Sustainability*, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html>.

⁵⁸ European Commission, Press Release of 16 March 2021, Antitrust: Commission opens investigation into PPC's behaviour in the Greek wholesale electricity market, https://ec.europa.eu/commission/presscorner/detail/en/IP_21_1205.

⁵⁹ CMA (2021), Environmental Sustainability and the Competition and Consumer Law Regimes - Advice to the Secretary of State for Business, Energy and Industrial Strategy - Call for inputs, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021364/CFI_-_sustainability_advice_.pdf.

⁶⁰ Ibid.

⁶¹ European Commission's *Guidance on Article 102 Enforcement priorities*, para. 30.

⁶² PMÅ 2741-18, 21 January 2019, pp. 39. The judgment of the Patent and Market Court was reversed by the Patent and Market Court of Appeal (PMCA) which did not consider the recycling system to be an essential facility and so did not review the objective justification claim (PMÖÅ 1519-19, 28 February 2020). This example is taken from the contribution by the Swedish Competition Authority to the Commission's call for contributions on *Competition policy contributing to the European Green Deal*, p. 12.

⁶³ C-209/98, *Sydhavnens Sten & Grus*, Judgment of the Court of 23 May 2000, EU:C:2000:279.

⁶⁴ Ibid, paras. 72-81.

⁶⁵ According to Larry Fink's 2021 Letter to CEOs, <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>: "From January through November 2020, investors in mutual funds and ETFs invested \$288 billion globally in sustainable assets, a 96% increase over the whole of 2019 [...] the creation of sustainable index investments has enabled a massive acceleration of capital towards companies better prepared to address climate risk [...]".

⁶⁶ Case C/0975/18 *Repsol/Viesgo Generación*.

⁶⁷ See for instance, Section 4 of OECD (2021), Concept of potential competition, <http://oe.cd/tcpc> and Section 5 of OECD (2020), Start-ups, Killer Acquisitions and Merger Control, www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf.

⁶⁸ Case M.7292, *DEMB/Mondelez/Charger OPCO*, recital 57.

⁶⁹ Case M.7220, *Chiquita Brands International/Fyffes*, recital 73.

⁷⁰ <https://www.ftc.gov/system/files/documents/cases/d09388posttreehousecomplaint.pdf>

⁷¹ French Competition Authority, Decision 21-DCC-161 of 10 September 2021 relating to the acquisition of exclusive control of certain activities of the Bio C'Bon group by Carrefour France, https://www.autoritedelaconcurrence.fr/sites/default/files/integral_texts/2021-10/20-188_publicue_decision_21dcc161_0.pdf, para. 24.

⁷² Swedish Competition Authority, Case Dnr 7/2020, <https://www.konkurrensverket.se/globalassets/dokument/konkurrens/beslut/avskrivningsbeslut/20-0007.pdf>, paras. 13 and 43.

⁷³ Case M.10047, *Schwarz Group/Suez Waste Management*, decision of 14 April 2021, https://ec.europa.eu/competition/mergers/cases1/202128/m10047_688_3.pdf, paras. 56 and 118.

⁷⁴ Case M.9409, *Aurubis/Metallo Group Holding*, decision of 1 July 2020, https://ec.europa.eu/competition/mergers/cases/decisions/m9409_3908_3.pdf.

⁷⁵ European Commission, IP/19/6305, *Mergers: Commission opens in-depth investigation into proposed acquisition of Metallo by Aurubis*, press release of 19 November 2019, https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6305.

⁷⁶ European Commission, M.7932, *Dow/DuPont*, decision of 27 March 2017, https://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf, paras. 1977 and 1979-1980.

⁷⁷ European Commission, IP/19/6305, *Mergers: Commission opens in-depth investigation into proposed acquisition of Metallo by Aurubis*, press release of 19 November 2019, https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6305.

⁷⁸ CMA's Merger Assessment Guidelines (CMA129) - 2021 Revised Guidance, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1011836/MAGs_for_publication_2021_-.pdf, para. 8.21.

⁷⁹ See, for instance, a comprehensive valuation analysis when assessing potential competition concerns by the CMA in *PayPal/iZettle*, Final report, 12 June 2019, <https://www.gov.uk/cma-cases/paypal-holdings-inc-izettle-ab-merger-inquiry>.

⁸⁰ See Report of the Digital Competition Expert Panel (2019), *Unlocking digital competition*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf and, for an analysis, RBB Economics (2019), *A question of balance: Comments on a proposed new test for UK merger control*, https://www.rbbecon.com/downloads/2019/05/RBB_B59_Brief1.pdf.

⁸¹ European Commission, M. 9706, *Novelis/Aleris*, decision of 1 October 2019, https://ec.europa.eu/competition/mergers/cases1/20215/m9076_5518_3.pdf.

⁸² European Commission, M.7932, *Dow/DuPont*, decision of 27 March 2017, https://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf.

⁸³ MLex (2019), *Probe of automakers' California emissions deal took uncommon route through DOJ*, <https://mlexmarketinsight.com/news-hub/editors-picks/area-of-expertise/antitrust/probe-of-automakers-california-emissions-deal-took-uncommon-route-through-doj>.

⁸⁴ OECD (2020), *Sustainability and Competition - Note by Germany*, https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2020/OECD_2020_Sustainability_and_Competition.pdf?__blob=publicationFile&v=2, p. 21.

⁸⁵ OECD (2020), *Sustainability and Competition - Note by Australia and New Zealand*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)62/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)62/en/pdf).

⁸⁶ Commerce Commission New Zealand, *Refrigerant License Trust Board*, Decision 735, 25 November 2011, https://comcom.govt.nz/_data/assets/pdf_file/0020/67007/PUBLIC-Decision-735-Refrigerant-License-Trust-Board-Final-Determination.pdf, paras. 73-77.

⁸⁷ OECD (2020), *Sustainability and Competition - Note by Australia and New Zealand*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)62/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)62/en/pdf).

⁸⁸ Hellenic Competition Commission (HCC) (2020), Staff Discussion Paper, *Competition Law & Sustainability*, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html>, p. 16.

⁸⁹ OECD (2020), *Sustainability and Competition - Note by Germany*, https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2020/OECD_2020_Sustainability_and_Competition.pdf?__blob=publicationFile&v=2, p. 22-24.

⁹⁰ In a recent event on this topic, Siún O’Keeffe (Acting Team Manager Legal Affairs Department, Netherlands Authority for Consumers and Markets) explained that the guidelines can be seen as a prioritisation tool: <https://www.concurrences.com/en/conferences/9th-global-antitrust-hot-topics-eu-us-global-perspectives-2-competitor>.

⁹¹ ACM (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-opportunities-within-competition-law.pdf>.

⁹² UK Competition & Markets Authority (CMA) (2021), “Environmental Sustainability Agreements and Competition Law”, <https://www.gov.uk/government/publications/environmental-sustainability-agreements-and-competition-law/sustainability-agreements-and-competition-law>.

⁹³ Autorité de la concurrence, AMF, Arcep, ART, CNIL, CRE, CSA, HADOPI (2020), Accord de Paris et urgence climatique : Enjeux de régulation, https://www.autoritedelaconcurrence.fr/sites/default/files/2020-05/publication_aai-api_accord_de_paris_052020_2.pdf. See also <https://www.autoritedelaconcurrence.fr/en/press-release/after-very-active-2020-autorite-de-la-concurrence-announces-its-priorities-2021-which>.

⁹⁴ Comisión Federal de Competencia Económica (COFECE) (2021), ‘COFECE makes available to the public the preliminary version of the document about the market for Clean Energy Certificates to receive comments’, https://www.cofece.mx/wp-content/uploads/2021/02/COFECE-003-2021_ENG.pdf; International Renewable Energy Agency (2015), ‘Renewable Energy Prospects: Mexico’, Remap 2030 A Renewable Energy Roadmap, https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/IRENA_REmap_Mexico_report_2015.pdf, p. 33; International Trade Administration (2021). ‘Energy Resources Guide – Mexico – Renewable Energy’, <https://www.trade.gov/energy-resource-guide-mexico-renewable-energy>; COFECE (2021), COFECE recommends to the Congress of the Union not to approve the Initiative to reform the Electric Industry Law, https://www.cofece.mx/wp-content/uploads/2021/02/COFECE-006-2021_ENG.pdf; COFECE files a constitutional controversy against the Decree that reforms several provisions of the Electric Industry Law, https://www.cofece.mx/wp-content/uploads/2021/04/COFECE-012-2021_ENG.pdf.

⁹⁵ CMA (2021), Environmental Sustainability and the Competition and Consumer Law Regimes - Advice to the Secretary of State for Business, Energy and Industrial Strategy - Call for inputs, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021364/CFI_-_sustainability_advice_.pdf, p. 23.

⁹⁶ Ibid.

References

- Aghion, P., C. Antonin and S. Bunel (2021), *The Power of Creative Destruction: Economic Upheaval and the Wealth of Nations*, Harvard University Press. [23]
- Aghion, P. et al. (2020), “Environmental Preferences and Technological Choices: Is Market Competition Clean or Dirty?”, No. 26921, National Bureau of Economic Research, <http://dx.doi.org/10.3386/w26921>. [19]
- Autoriteit Consument & Markt (ACM) (2021), *Guidelines on Sustainability Agreements - Opportunities within Competition Law (second draft)*, <https://www.acm.nl/sites/default/files/documents/second-draft-version-guidelines-on-sustainability-agreements-oppurtunities-within-competition-law.pdf> (accessed on 25 March 2021). [98]
- Badea, A. et al. (2021), “Competition Policy in Support of Europe’s Green Ambition”, *European Commission Competition Policy Brief*, <https://op.europa.eu/en/publication-detail/-/publication/63c4944f-1698-11ec-b4fe-01aa75ed71a1/language-en/format-PDF> (accessed on 5 October 2021). [11]
- Banerjee, A. and E. Duflo (2019), *Good Economics for Hard Times*, Public Affairs , New York. [30]
- Bundeskartellamt (2020), *Open markets and sustainable economic activity - public interest objectives as a challenge for competition law practice*. [79]
- CMA (2021), *Environmental Sustainability and the Competition and Consumer Law Regimes - Advice to the Secretary of State for Business, Energy and Industrial Strategy - Call for inputs*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021364/CFI - sustainability advice .pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021364/CFI_-_sustainability_advice_.pdf) (accessed on 22 October 2021). [97]
- CNMC (2020), *Sustainability and Competition - Submission to DG COMP’s call for contributions “Competition Policy Supporting the Green Deal”*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)93/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)93/en/pdf) (accessed on 26 October 2021). [37]
- Competition & Markets Authority (2021), *Annual Plan 2021 to 2022*, <https://www.gov.uk/government/publications/competition-and-markets-authority-annual-plan-2021-to-2022/annual-plan-2021-to-2022#our-main-themes-for-202122> (accessed on 24 March 2021). [96]
- Competition & Markets Authority (2021), *Environmental Sustainability Agreements and Competition Law*, <https://www.gov.uk/government/publications/environmental-sustainability-agreements-and-competition-law/sustainability-agreements-and-competition-law> (accessed on 24 March 2021). [83]
- Ding, W. et al. (2020), “Competition Laws, Norms and Corporate Social Responsibility”, *National Bureau of Economic Research*, <http://dx.doi.org/10.3386/w27493>. [20]
- Dolmans, M. (2021), “Sustainable Competition Policy and the “Polluter Pays” Principle”, in Holmes, S., D. Middelschulte and M. Snoep (eds.), *Competition Law, Climate Change &* [38]

- Environmental Sustainability*, Concurrences, Paris, <https://www.concurrences.com/en/livre/competition-law-climate-change-environmental-sustainability-646#id=66925> (accessed on 28 March 2021).
- Dolmans, M. (2020), *Sustainable Competition Law - Note to the OECD Hearing on Sustainability and Competition*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)69/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)69/en/pdf) (accessed on 24 October 2021). [16]
- Dolmans, M. (2020), “Sustainable Competition Policy”, *Competition Law & Policy Debate*, Vol. 5-6/4-1, pp. 4-23. [10]
- Dolmans, M. and H. Mostyn (2021), “Editors’ Preface”, *Dominance and Monopolies Review*. [57]
- Dunne, N. (2020), “Dispensing with Indispensability”, *Journal of Competition Law & Economics*, Vol. 16/1, pp. 74-115, <http://dx.doi.org/10.1093/JOCLEC/NHAA004>. [58]
- European Commission (2020), *Press Release: Antitrust: Commission opens investigation into Apple practices regarding Apple Pay*, https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1075. [72]
- European Commission (2013), *Press Release: Antitrust: Commission closes investigation of EPC but continues monitoring online payments market*, https://ec.europa.eu/commission/presscorner/detail/en/MEMO_13_553. [74]
- European Commission (2011), *Press Release: Antitrust: Commission opens investigation in e-payment market*, https://ec.europa.eu/commission/presscorner/detail/en/IP_11_1076. [73]
- Fabra, N. (2021), “The Energy Transition: An Industrial Economics Perspective”, *International Journal of Industrial Organization*, <https://doi.org/10.1016/j.ijindorg.2021.102734> (accessed on 2 November 2021). [70]
- Fair Trade Advocacy Office (2019), *EU Competition Law and Sustainability in Food Systems - Addressing the Broken Links*. [80]
- Federico, G., F. Scott Morton and C. Shapiro (2019), “Antitrust and Innovation: Welcoming and Protecting Disruption”, <https://doi.org/10.1086/705642>, Vol. 20/1, pp. 125-190, <http://dx.doi.org/10.1086/705642>. [60]
- Gates, B. (2021), *How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need*, Penguin Random House. [2]
- Gerbrandy, A. (2020), “The Difficulty of Conversations About Sustainability and European Competition Law”, *Competition Policy International*, <https://www.competitionpolicyinternational.com/the-difficulty-of-conversations-about-sustainability-and-european-competition-law/> (accessed on 26 October 2021). [95]
- Gilbert, R. (2020), *Innovation Matters - Competition Policy for the High-Technology Economy*, The MIT Press, <http://dx.doi.org/10.7551/MITPRESS/12686.001.0001>. [56]
- Goldman School of Public Policy (2020), *2035 Report: Plummeting Solar, Wind and Battery Costs Can Accelerate Our Clean Electricity Future*, <https://www.2035report.com/wp-content/uploads/2020/06/2035-Report.pdf> (accessed on 2 November 2021). [69]
- Haller, K., J. Lee and J. Cheung (2020), *Meet the 2020 Consumers Driving Change*, [13]

- <https://www.ibm.com/downloads/cas/EXK4XKX8> (accessed on 1 May 2021).
- Harvey, F. (2021), “Global Green Recovery Plans Fail to Match 2008 Stimulus, Report Shows”, *The Guardian*, <https://www.theguardian.com/environment/2021/feb/12/global-green-recovery-plans-fail-to-match-2008-stimulus-report-shows> (accessed on 31 March 2021). [8]
- Helbling, T. (2020), “Externalities: Prices Do Not Capture All Costs - Back to Basics: Finance & Development”, *IMF Finance and Development*, <https://www.imf.org/external/pubs/ft/fandd/basics/external.htm> (accessed on 24 October 2021). [28]
- Hellenic Competition Commission (2020), *Competition Law & Sustainability*, <https://www.epant.gr/en/enimerosi/competition-law-sustainability.html> (accessed on 17 March 2021). [94]
- Hellenic Competition Commission (2020), *Sustainability and Competition - Note by Greece for the 134th OECD Competition Committee*. [78]
- Hepburn, C. et al. (2020), “Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?”, *Oxford Review of Economic Policy*, Vol. 36/S1, <https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf> (accessed on 18 October 2021). [93]
- Holmes, S. (2020), *Climate Change and Competition Law - Note to the OECD Hearing on Sustainability and Competition*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)94/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)94/en/pdf) (accessed on 31 March 2021). [15]
- Holmes, S. (2020), “Climate change, sustainability, and competition law”, *Journal of Antitrust Enforcement*, Vol. 8/2, pp. 354-405, <http://dx.doi.org/10.1093/JAENFO/JNAA006>. [4]
- Hovenkamp, H. (2019), “Are Regulatory Agreements to Address Climate Change Anticompetitive? | The Regulatory Review”, *The Regulatory Review*, <https://www.theregreview.org/2019/09/11/hovenkamp-are-regulatory-agreements-to-address-climate-change-anticompetitive/> (accessed on 19 October 2021). [66]
- Iacovides, M. and C. Vrettos (2021), “Falling through the cracks no more? Article 102 TFEU and sustainability: the relation between dominance, environmental degradation, and social injustice”, *Journal of Antitrust Enforcement*, pp. 1-29, <http://dx.doi.org/10.1093/jaenfo/jnab010>. [77]
- ICC (2020), *Competition Policy and Environmental Sustainability*, <https://www.oecd.org/daf/competition/ICC-competition-and-environmental-sustainability.pdf> (accessed on 22 October 2021). [3]
- IMF (2019), *Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature - Working Paper No. 19/185*, <https://www.imf.org/en/Publications/WP/Issues/2019/09/04/Macroeconomic-and-Financial-Policies-for-Climate-Change-Mitigation-A-Review-of-the-Literature-48612> (accessed on 24 October 2021). [92]
- Inderst, R. and S. Thomas (2021), “Prospective Welfare Analysis - Extending Willingness-to-Pay Assessment to Embrace Sustainability”, *Journal of Competition Law & Economics*, <http://dx.doi.org/10.1093/JOCLEC/NHAB021>. [45]
- Inderst, R. and S. Thomas (2021), “Reflective Willingness to Pay - Preferences for Sustainable Consumption in a Consumer Welfare Analysis”, <https://www.wiwi.uni-> [31]

frankfurt.de/fileadmin/user_upload/dateien_abteilungen/abt_fin/Dokumente/PDFs/Allgemeine_Dokumente/Inderst_Downloads/Neuere_Arbeiten_seit2015/Inderst_and_Thomas_Reflective_WT_P_5_July_2021.pdf (accessed on 30 September 2021).

- IPCC (2021), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, <https://www.ipcc.ch/report/ar6/wg1/#FullReport> (accessed on 14 September 2021). [1]
- Kar, N., E. Cochrane and B. Spring (2021), *Environmental Sustainability and EU Merger Control: EU Competition Policy's Dark Horse to Support Green Investment*, Concurrences. [63]
- Monti, G. and J. Mulder (2017), "Escaping the Clutches of EU Competition Law: Pathways to Assess Private Sustainability Initiatives", *European Law Review*, Vol. 42, pp. 635-656. [91]
- Nowag, J. (2016), *Environmental Integration in Competition and Free-Movement Laws*, Oxford University Press. [33]
- OECD (2021), *Competition Enforcement and Regulatory Alternatives*, <https://www.oecd.org/daf/competition/competition-enforcement-and-regulatory-alternatives-2021.pdf> (accessed on 27 October 2021). [59]
- OECD (2021), *Effective Carbon Rates 2021: Pricing Carbon Emissions through Taxes and Emissions Trading*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/0e8e24f5-en>. [9]
- OECD (2021), *Efficiency Analysis in Vertical Restraints*, [https://one.oecd.org/document/DAF/COMP/LACF\(2021\)4/en/pdf](https://one.oecd.org/document/DAF/COMP/LACF(2021)4/en/pdf) (accessed on 28 October 2021). [54]
- OECD (2021), *Environmental Considerations in Competition Enforcement*, *OECD Competition Committee Discussion Paper by Nadine Watson*, OECD, [https://one.oecd.org/document/DAF/COMP\(2021\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2021)14/en/pdf). [40]
- OECD (2021), *Key Issues Paper - Meeting of the OECD Council at Ministerial Level*, [https://www.oecd.org/mcm/MCM_2021_C-MIN\(2021\)1.en.pdf](https://www.oecd.org/mcm/MCM_2021_C-MIN(2021)1.en.pdf) (accessed on 22 October 2021). [7]
- OECD (2021), *The Concept of Potential Competition*, <https://www.oecd.org/daf/competition/the-concept-of-potential-competition-2021.pdf> (accessed on 30 October 2021). [49]
- OECD (2021), *The OECD Green Recovery Database: Examining the environmental implications of COVID-19 recovery policies*, <https://www.oecd.org/coronavirus/policy-responses/the-oecd-green-recovery-database-47ae0f0d/> (accessed on 17 September 2021). [75]
- OECD (2020), *Co-operation between competitors in the time of COVID-19*, <https://www.oecd.org/competition/Co-operation-between-competitors-in-the-time-of-COVID-19.pdf> (accessed on 14 November 2020). [46]
- OECD (2020), *Start-ups, Killer Acquisitions and Merger Control*, <https://www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf> (accessed on 31 October 2021). [61]
- OECD (2020), *Sustainability and Competition - Note by Australia and New Zealand*, [https://one.oecd.org/document/DAF/COMP/WD\(2020\)62/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2020)62/en/pdf) (accessed on 19 October 2021). [90]
- OECD (2020), *Sustainability and Competition - Note by Germany*, [89]

- https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2020/OECD_2020_Sustainability_and_Competition.pdf?__blob=publicationFile&v=2 (accessed on 19 October 2021).]
- OECD (2020), *Sustainability and Competition - OECD Competition Committee Discussion Paper*, [86]
<http://www.oecd.org/daf/competition/sustainability-and-competition-2020.pdf> (accessed on 23 March 2021).
- OECD (2020), *The Role of Competition Policy in Promoting Economic Recovery*, [47]
<https://www.oecd.org/daf/competition/the-role-of-competition-policy-in-promoting-economic-recovery-2020.pdf> (accessed on 14 April 2021).
- OECD (2018), *Cost-Benefit Analysis and the Environment: Further Developments and Policy Use*, [39]
 OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264085169-en>.
- OECD (2018), *Due Diligence Guidance for Responsible Business Conduct*, [65]
<https://www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm> (accessed on 1 November 2021).
- OECD (2018), *Non-price Effects of Mergers - Note by the European Union*, [43]
[https://one.oecd.org/document/DAF/COMP/WD\(2018\)14/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2018)14/en/pdf) (accessed on 30 October 2021).
- OECD (2016), *Public Interest Considerations in Merger Control*, [68]
<https://www.oecd.org/competition/public-interest-considerations-in-merger-control.htm> (accessed on 26 October 2021).
- OECD (2015), *Aligning Policies for a Low-carbon Economy*, OECD Publishing, Paris, [6]
<https://dx.doi.org/10.1787/9789264233294-en>.
- OECD (2015), *Competition Law and Responsible Business Conduct*, [50]
<https://mneguidelines.oecd.org/global-forum/2015GFRBC-Competition-Law-RBC.pdf> (accessed on 31 March 2021).
- OECD (2015), *Executive Summary of the Competition Committee Discussion on Intellectual Property and Standard Settings*, [71]
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M\(2014\)3/ANN3/FINAL&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M(2014)3/ANN3/FINAL&doclanguage=en).
- OECD (2014), *Intellectual Property and Standard Setting*, [51]
<http://www.oecd.org/daf/competition/competition-intellectual-property-standard-setting.htm> (accessed on 28 October 2021).
- OECD (2012), *The Role of Efficiency Claims in Antitrust Proceedings*, [53]
<https://www.oecd.org/competition/EfficiencyClaims2012.pdf> (accessed on 30 October 2021).
- OECD (2011), *Guidelines for Multinational Enterprises*, [64]
<http://mneguidelines.oecd.org/mneguidelines/> (accessed on 1 November 2021).
- OECD (2011), *Sustainable Manufacturing Toolkit*, [14]
<https://www.oecd.org/innovation/green/toolkit/48704993.pdf> (accessed on 2 November 2021).
- OECD (2010), *Horizontal Agreements in the Environmental Context*, [82]
<http://www.oecd.org/competition/cartels/49139867.pdf> (accessed on 17 March 2021).

- OECD (2010), *Horizontal Agreements in the Environmental Context - UK CMA's Contribution*. [48]
- OECD (2010), *Standard Setting*, <https://www.oecd.org/daf/competition/47381304.pdf> (accessed on 28 October 2021). [52]
- OECD (2002), "Glossary of Statistical Terms", <https://stats.oecd.org/glossary/detail.asp?ID=3215> (accessed on 30 September 2021). [85]
- Peeperkorn, L. (2021), "Competition Policy is not a Stopgap!", *Journal of European Competition Law & Practice*, <http://dx.doi.org/10.1093/jeclap/lpab039>. [88]
- Peeperkorn, L. (2021), "European Union", in Holmes, S., D. Middelschulte and M. Snoep (eds.), *Competition Law, Climate Change & Environmental Sustainability*, Concurrences, <https://www.concurrences.com/en/livre/competition-law-climate-change-environmental-sustainability-646#id=66915>. [35]
- Peeperkorn, L. (2020), "Competition and Sustainability: What Can Competition Policy Do?", *Concurrences*, Vol. 4, <https://www.concurrences.com/en/review/issues/no-4-2020/on-topic/sustainability-and-competition-law-97390#nh75>. [41]
- Petrosyan, G. (2019), "DOJ's Probe into Four Automakers: Impartial Investigation or Politicization of Antitrust?", *Competition Policy International*, <https://www.competitionpolicyinternational.com/dojs-probe-into-four-automakers-impartial-investigation-or-politicization-of-antitrust/> (accessed on 19 October 2021). [67]
- Polman, P. and A. Winston (2021), *Net Positive : How Courageous Companies Thrive by Giving More than They Take*, Harvard Business Review Press. [12]
- Porter, M. and M. Kramer (2011), "Creating Shared Value", *Harvard Business Review*, <https://hbr.org/2011/01/the-big-idea-creating-shared-value> (accessed on 19 October 2021). [27]
- Pucker, K. (2021), "Overselling Sustainability Reporting", *Harvard Business Review*, https://hbr.org/2021/05/overselling-sustainability-reporting?utm_medium=email&utm_source=newsletter_monthly&utm_campaign=finance_not_activessubs&deliveryName=DM129742. [29]
- Rosenboom, N. (2021), *The role of sustainability in merger control*, <https://www.oxera.com/insights/agenda/articles/the-role-of-sustainability-in-merger-control/>. [62]
- Schinkel, M. and Y. Spiegel (2017), "Can collusion promote sustainable consumption and production?", *International Journal of Industrial Organization*, Vol. 53, pp. 371-398, <http://dx.doi.org/10.1016/j.ijindorg.2016.04.012>. [18]
- Schinkel, M. and L. Treuren (2021), "Corporate Social Responsibility by Joint Agreement", *Amsterdam Center for Law & Economics Working Paper No. 2021-01*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3878784#. [21]
- Schinkel, M. and L. Treuren (2021), "Green Antitrust: Friendly Fire in the Fight against Climate Change", *SSRN Electronic Journal*, <http://dx.doi.org/10.2139/SSRN.3749147>. [42]
- Schinkel, M. and L. Treuren (2021), "Green Antitrust: Why Would Restricting Competition Induce Sustainability Efforts?", *ProMarket*, <https://promarket.org/2021/03/26/green-antitrust-why-would-restricting-competition-induce-sustainability-efforts/?amp>. [32]

- Simon, D. and J. Prince (2016), “The Effect of Competition on Toxic Pollution Releases”, *Journal of Environmental Economics and Management*, Vol. 79, pp. 40-54, <http://dx.doi.org/10.1016/J.JEEM.2016.03.001>. [87]
- Snoep, M. (2021), *Speech on Sustainability and Cooperation*, GCR Connect, <https://www.acm.nl/en/publications/speech-sustainability-and-cooperation-martijn-snoep-gcr-connect-april-28-2021>. [25]
- Stigler, G. (1974), “Free Riders and Collective Action: An Appendix to Theories of Economic Regulation”, *The Bell Journal of Economics and Management Science*, Vol. 5/2, pp. 359-365, <https://www.jstor.org/stable/pdf/3003114.pdf>. [24]
- Tirole, J. (2017), *Economics for the Common Good*, Princeton University Press. [81]
- UK Competition & Markets Authority (2021), “Environmental Sustainability Agreements and Competition Law”, <https://www.gov.uk/government/publications/environmental-sustainability-agreements-and-competition-law/sustainability-agreements-and-competition-law> (accessed on 30 April 2021). [84]
- UNCTAD (2015), “The role of competition policy in promoting sustainable and inclusive growth”, https://unctad.org/system/files/official-document/trbpbconf8d6_en.pdf. [5]
- Unilever (2020), *Sustainability cooperations between competitors & Art. 101 TFEU - Submission to DG COMP*, https://www.unilever.com/Images/unilever_submission_sustainability_competition_law_tcm244-551751_en.pdf. [17]
- van Dijk, T. (2021), “A New Approach to Assess Certain Sustainability Agreements under Competition Law”, in Holmes, S., D. Middelschulte and M. Snoep (eds.), *Competition Law, Climate Change & Environmental Sustainability*, Concurrences, Paris, <https://www.concurrences.com/en/livre/competition-law-climate-change-environmental-sustainability-646#id=66923>. [26]
- Veljanovski, C. (2021), “Collusion as Environmental Protection - An Economic Assessment”, *Journal of Competition Law & Economics*, <https://doi.org/10.1093/joclec/nhab025>. [44]
- Volpin, C. (2021), “Competition and Sustainability: The Odd Couple”, in *Frontiers of Competition Law*, Edward Elgar, forthcoming. [36]
- Volpin, C. (2020), “Sustainability as a Quality Dimension of Competition: Protecting Our Future (Selves)”, *Competition Policy International*, https://www.competitionpolicyinternational.com/sustainability-as-a-quality-dimension-of-competition-protecting-our-future-selves/#_edn42. [22]
- Wang, S. et al. (2020), “The Implications of Vertical Strategic Interaction on Green Technology Investment in a Supply Chain”, *Sustainability*, Vol. 12/18, p. 7441, <http://dx.doi.org/10.3390/SU12187441>. [55]
- Wei, Y. et al. (2020), “Self-preservation strategy for approaching global warming targets in the post-Paris Agreement era”, *Nature Communications*, Vol. 11/1, pp. 1-13, <http://dx.doi.org/10.1038/s41467-020-15453-z>. [76]
- Whish, R. and D. Bailey (2021), *Competition law*, Oxford University Press. [34]

www.oecd.org/competition

