Organisation for Economic Co-operation and Development

DAF/COMP/GF(2022)6

Unclassified **English - Or. English**

9 November 2022

DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE

Global Forum on Competition

SUBSIDIES, COMPETITION AND TRADE – Background Note

- By the Secretariat -

1 December 2022

This document was prepared by the OECD Secretariat to serve as a background note for Session II at the 21st Global Forum on Competition to be held on 1-2 December 2022.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

More documentation related to this discussion can be found at: oe.cd/sctr.

Please contact Mr Wouter Meester [Wouter.Meester@oecd.org] or Ms Lynn Robertson [Lynn.Robertson@oecd.org] if you have questions about this document.

JT03507086

Subsidies, Competition and Trade*

The use of subsidies has been rapidly increasing in recent years. This may be a result of several factors, including recent developments that have required, and will continue to require, government intervention, such as the COVID-19 recovery, climate change, fragile and disrupted global value chains and the digital transformation. Many subsidies influence competition and trade by distorting the level playing field and changing market signals, resulting in inefficiencies, prices distortions and altered incentives.

One could therefore expect subsidies to be subject to the intense scrutiny of governments worldwide. This is however not the case and subsidies are, with a few exceptions, mostly assessed or controlled using multilateral rules and free trade agreements.

This background note discusses the extent to which, and how, government subsidies could be part of the competition analysis by competition authorities. For this, it identifies the potential competition concerns of subsidies – predominantly "deep pockets" and potential subsequent predation – and describes their modest role in competition case law to date. Finally, the note suggests that new proposed tools may increase the relevance of competition concerns by increasing the knowledge and transparency about subsidisation, potentially leading to an increased number of enforcement cases, and discusses some challenges for competition authorities when including subsidies in their analysis.

* This note was written by Wouter Meester, with comments from Ori Schwartz, Antonio Capobianco and Ruben Maximiano, all of the OECD Competition Division. It benefitted from inputs from OECD colleagues in the Trade and Agriculture Directorate and the Directorate for Science, Technology and Innovation.

Table of contents

FIGURES

BOXES

1. Introduction

1. The number and size of subsidy measures implemented worldwide has in recent years been steadily increasing. This may be a result of several factors, including recent developments that have required, and will continue to require, government intervention, such as the COVID-19 recovery, climate change, fragile and disrupted global value chains and the digital transformation.

2. It is well documented that many subsidies influence competition and trade. Firstly, they frequently distort the level playing field by changing market signals, resulting in inefficiencies, price distortions and altered incentives. Secondly, as subsidy practices often lack transparency, disagreements over subsidies are a major source of tension in trade relationships, especially when they are perceived as implicit or explicit industrial policy. Such disagreements may continue to lead to growing risks of economic nationalism, government intervention and/or protectionism.

3. Given their importance and potentially distortive nature, one would expect subsidies to be subject to the intense scrutiny of governments worldwide. This is however not the case, with a few notable exceptions such as the state aid regime in the European Union. Subsidies are mostly reviewed using multilateral rules, even though multilateral subsidy disciplines have been criticised for their ineffectiveness for quite some time.

4. While the role of subsidies in distorting trade and in un-levelling the playing field has been well analysed over the years, less attention has been given to the role that subsidies (may) have in antitrust analysis. In particular, less debate has been had on how competition authorities integrate (or not) in their analysis the fact that a market player involved in a competition investigation may benefit from domestic or foreign subsidies, potentially granting it a competitive advantage over its competitors. While this question seems to be less relevant in cartel enforcement, recent policy discussion has especially focussed on the role of subsidies in the assessment of merger control.

5. This background paper starts with a succinct overview of the concept of subsidies, including the rationale behind them, their (potentially) distortive nature, their increasing use in recent times and tools to control and assess them (section 2.). Section 3 explores the theories of harm that apply to subsidies, including the economic basis for these theories. It also takes stock of the extent to which, and how, subsidies have been part of competition analysis of competition authorities. Then, the paper discusses some challenges that are faced by competition authorities when undertaking a competition enforcement case that includes subsidies in the competitive analysis. The final section, section4. , concludes.

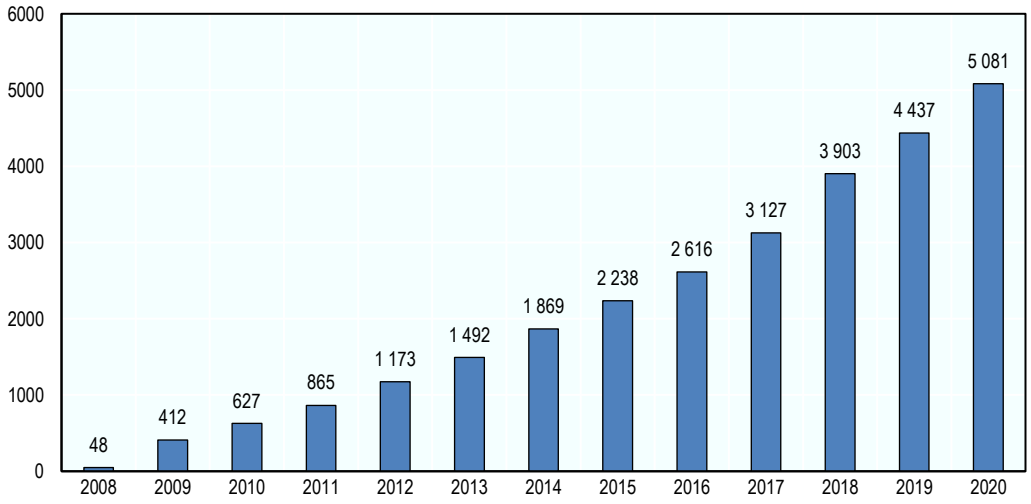
2. Subsidies: the current situation

2.1. Increasing use of subsidies

6. Subsidies[1] take many forms, including direct government expenditures, tax incentives, equity infusions, soft loans, government provision of goods and services and procurement on favourable terms, and price supports (IMF et al., 2022[1]). Although subsidies are a well-known historical phenomenon, we have witnessed a growing use of subsidies in recent years. While subsidies were the most frequent form of intervention after the financial crisis of 2008 (IMF et al., 2022, p. 11[1]), the use of subsidies has only continued to increase ever since (see Figure 1).

Figure 1. Number of subsidies in force by year, globally

Number of subsidy measures in force has been increasing rapidly since 2008



Note: GTA provides information on unilateral state interventions taken since November 2008 that may affect foreign commerce. The foreign commercial interests considered by the GTA are trade in goods and services, investment as well as labour force migration. For the classification of the measures analysed, GTA uses the taxonomy established by the UNCTAD Multi-Agency Support Team (MAST). This classification provides a clear and concise definition of non-tariff measures (NTMs) and is the standard classification for NTMs in goods. For this paper, the chapter of interest is MAST Chapter L - Subsidies group (excluding export subsidies). See for more detail (Evenett and Fritz, 2020[2]).
It is to be noted that the recorded data refers to a simple count of measures, not to the value of production or trade affected. Numerical counts can be misleading, as one country may report many small subsidy measures, while others report only one (very large) aggregate program.
Source: Calculation from the Global Trade Alert (https://www.globaltradealert.org/)

7. While it is clear that the use of subsidies has been increasing, our exact understanding of their size and role remains uneven and incomplete because of the lack of transparency by governments about their support to companies. Several datasets exist, but many have important gaps and shortcomings. Nonetheless, insights into the magnitude of subsidies can be obtained through specific studies by the OECD (see Box 1).

Box 1. Quantification of market and sector specific distortions through subsidisation

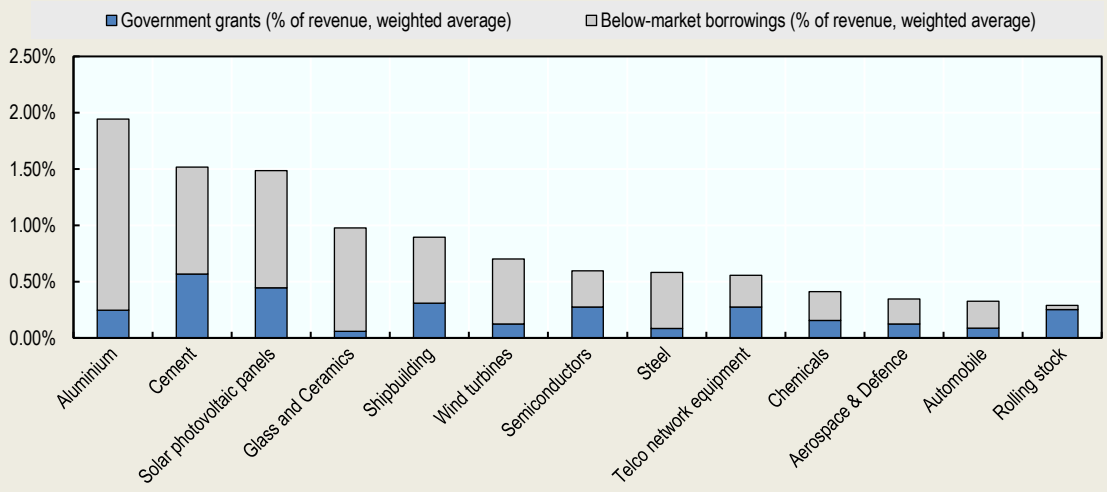
The OECD has longstanding work identifying and quantifying government support in a number of sectors that include agriculture, fisheries and fossil fuels. It has also looked more recently into the support that individual firms obtain in aluminium, semiconductors and steel, and studied more holistically the provision of below-market finance across 13 key industrial sectors.

In 2019, the OECD conducted a study to measure distortions in the international **aluminium** value chain (OECD, 2019[3]). With a sample of 17 firms that represented more than 80% of the total revenue of the global industry, it found that budgetary support from governments totalled more than USD 12.7 billion over the period 2013-17 and was highly concentrated, with the top five recipients accounting for more than 80% of all the support. As for financial subsidies in the aluminium industry, the OECD study found that they ranged between USD 7.5 billion and USD 55.5 billion over the period 2013-17 (OECD, 2019[3]).

Similarly, the OECD reported in the same year that the total government support in the **semiconductor** value chain exceeded USD 50 billion over the period 2014-18 (OECD, 2019[4]). The calculations were made based on a sample of 21 firms which accounted for two-thirds of global industry revenue.

Finally, in 2021, the OECD analysed below-market borrowings and equity support in a sample of 306 large manufacturing firms in 13 industrial sectors over the period 2005-19 (OECD, 2021[5]). In most sectors, the sample accounted for more than two-thirds of global sales or capacity. The report concluded that between 2014-18, government support provided through borrowing amounted to between USD 21 billion and USD 66 billion and that support through below-market equity returns ranged from USD 94 billion to USD 258 billion. Furthermore, it found that, at the sector-level, the cement industry is on average the largest recipient of grants as a share of annual firm revenue, while the largest recipient of below-market borrowing is the aluminium industry (see Figure 2 below). (OECD, 2021, p. 37[5]).

Figure 2. Two of the largest types of subsidies expressed as a share of firm revenue by manufacturing sector (averaged for the whole period 2005-19)



Note: See also Government Support and Subsidies Portal - OECD for more available data.
Source: (OECD, 2021[5])

8. It is likely that subsidies will remain high on the agenda of policy makers in the foreseeable future, not in the least because their use is not expected to decrease in the coming years. Several global challenges will compel economies to (continue to) support consumers, companies and industries, directly or indirectly, using all sorts of measures including subsidies. Such developments include[2]:

1. **Government responses to COVID-19.** Governments have provided unprecedented support to companies and entire sectors as a response to the pandemic, especially through subsidies (Evenett and Fritz, 2021, p. 17[6]). In many economies, such support packages have yet to be relaxed and ultimately brought to an end, and the different approaches towards phasing out subsidies (speed, extent, etc.) could create significant competition and trade tensions.
2. **Greening of economies.** To face climate change and decarbonise economies, large investments are needed to bring about a clean energy transition. While subsidies may at times be necessary to spur the necessary changes in production and consumption choices, their design will be of crucial importance to mitigate possible impacts on competition and trade.
3. **Industrial policy and different economic models.** Subsidies play different roles in different economic paradigms or political economic models. Such differences, and the way in which they are used to support economic or industrial policy can create significant trade tensions.
4. **Resilient global value chains.** The COVID-19 crisis has redrawn attention to the international fragmentation of production, especially for the supply of essential goods but also to wider issues of concentration in supply chains. Governments are increasingly active in seeking, and in some cases subsidising, alternative sources of supply and production for key inputs (IMF et al., 2022, p. 10[1]).
5. **Recent energy crisis as a result of the large-scale aggression in Ukraine.** Given the weight of Russia in the global, and especially European, energy landscape, the Russia/Ukraine conflict has had significant implications for energy prices. As a result, many governments, especially in Europe, have committed significant funding to mitigate the increasing prices (OECD, 2022[7]).
6. **Increasing digitalisation.** The digital economy has brought substantial subsidies for digital innovation. However, subsidies for digital innovation tend to generate large domestic or foreign cross-sectoral spillovers, while targeting R&D subsidies to specific market failures can be especially challenging in fast-paced technology markets with high private returns to R&D. Perceived links to national security raise issues of strategic competition or support for national supply (IMF et al., 2022, p. 10[1]).

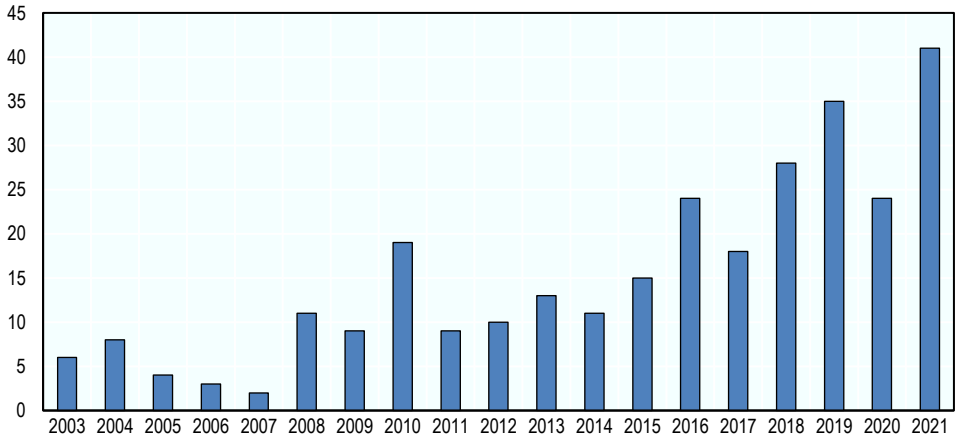
2.2. Subsidies as an increasing source for trade tensions

9. The increase in subsidies has a clear and significant impact on global trade and can create serious trade tensions. Such trade tensions are a result of many factors, including their sheer size, their (perceived) unfairness and their potentially large-scale negative cross-border spillovers. Moreover, they are often extremely difficult to measure and prove (for instance when government support is hidden).

10. An illustration of the increasing trade tensions is the number of countervailing measures implemented over the past two decades (see Figure 3).

Figure 3. Countervailing measures 2003-21

Number of countervailing measures has been increasing rapidly in the past two decades



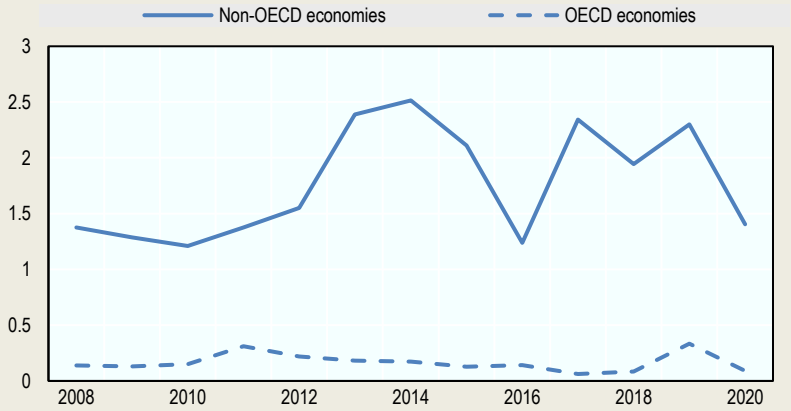
Note: Countervailing measures reported by WTO Members. Countervailing measures are duties that can be imposed by a national investigating authority on specific imported goods if, following an investigation, it finds that the imported goods are benefiting from subsidies, and that they result in a material injury to the domestic industry of the importing country (Art. 15 of the Agreement on Subsidies and Countervailing Measures).
Source: WTO (WTO | Subsidies and Countervailing Measures)

11. As an illustration, one sector in which trade tensions as a result of subsidies have been particularly relevant is the steel sector (see Box 2).

Box 2. Subsidisation and trade tensions in the steel sector

The OECD Steel Committee gathers and analyses data on subsidies and other government support measures provided to the steel sector, to facilitate discussions about subsidies and their interplay with market-based conditions. One of its findings indicates that the level of subsidisation is 10.7 times higher in non-OECD economies than in OECD economies for instruments of comparable transparency such as cash grants, cash awards and cost refunds (per unit of analysis, i.e. unit of tonne of crude steel production capacity) (Figure 4).

Figure 4. Cash grants, awards and cost refunds subsidy intensity over capacity (in USD per metric tons of crude steel production capacity)



Source: (OECD, 2022[8])

National context surrounding the provision of subsidies has a significant impact on both a jurisdiction's propensity to subsidise its steel industry, and the transparency surrounding such subsidisation. For instance, some jurisdictions have supported the competitiveness of their domestic steel industry by setting hard targets for crude steel production and exports, sometimes irrespective of global market conditions. Other jurisdictions have assisted their domestic steel industries in order to achieve other societal objectives – e.g. greening and decarbonising their respective steel industries in the context of international climate commitments, as well as improving labour conditions.

Although important tools for policymakers to achieve national objectives, subsidies can cause market distortions, harm competition, and exacerbate trade tensions. Such issues are particularly present across heavy industrial sectors including the steel industry, whereby the creation of excess production capacity through subsidisation is of particular concern. For instance, the gap between global steelmaking capacity and demand has grown steadily since circa 2010 reaching 538 million tonnes (mt) in 2020, of which non-OECD economies account for 59% and OECD economies 41%.

Excess steelmaking capacity creates a plethora of difficulties for producers in advanced and emerging economies. It depresses prices, undermines profitability, creates trade distortions, undermines the fight against environmental challenges and destabilises world-trading relations. One of the main concerns regarding excess capacity in the global steel market is how it affects international trade dynamics. For example, subsidies may incentivise steel producers to produce, even when market conditions are weak, and discourage the exit of inefficient firms. Moreover, excess production capacity is likely to result in surging exports of steel products at a lower price. The resulting trade distortions can create an unlevel playing field, both domestically and globally, resulting in aggravating trade tensions and giving rise to protectionist measures (recent OECD work highlighted that more than 18% of the antidumping investigations and about 28% of all countervailing duties investigations reported to the WTO from 2013 to 2018 have addressed imports of steel products (OECD, 2022[9])).

2.3. Effects of subsidies on competition and trade

12. In practice, subsidies are granted for a multiplicity of reasons. There are "good" subsidies, or "bad" ones, or some combination of both, depending on their policy objective(s), design, and impact. (IMF et al., 2022, p. 5[1]) However, the difficulty is how to determine which ones are good, and which ones are bad, as this mostly requires an answer to the question "good or bad for whom?". While in a trade context, this is often jurisdiction-specific or sector-specific, from a competition perspective, the focus is mainly on economic efficiency. In other words, good subsidies, for a competition authority official, are those which address market failures and increase economic efficiency, while bad ones are market distorting subsidies and subsidies which decrease economic efficiency. Most competition authorities in this regard focus on consumer welfare, which may imply that it may look favourably to a subsidy that lowers the price for consumers, even though this goes at the expense of producer surplus.

13. There exist legitimate reasons for governments to provide subsidies to companies in specific circumstances. The most frequent justification of subsidies is that they allow governments to correct market failures of various kinds (OECD, 2010[10]). Subsidies can be utilised to address market failures by mitigating negative externalities (e.g. between jurisdictions, environmental), produce positive externalities (e.g. investment in research and development), or achieve certain policy objectives.

14. Common justifications for the use of subsidies include[3]:

- income (re)distribution – subsidies can be a means to redistribute income, for instance by supporting members of certain professions. Agricultural subsidies are a prime example.

- underinvestment in research and development – firms tend to underinvest in research and development (R&D) when the private rate of return to R&D is less than the social return. Subsidies can account for such knowledge spill overs and incentivise investment in R&D.
- employment policies – subsidies may be aimed at protecting employment in specific circumstances, for instance by preventing a company from going bankrupt or being acquired by a foreign company.
- environmental subsidies – subsidies can be required to develop renewable energy initiatives to curb carbon dioxide emissions. This is, similar to the aforementioned situation with R&D, a result of the fact that environmentally friendly goods and services have social welfare benefits beyond their private benefits.
- mitigation of credit and financial market imperfections – where capital markets are not fully efficient, productive activities may be prevented from materialising because of insufficient access to credit. Directly or indirectly subsidised credit can be a means to overcome this.
- agglomeration externalities – governments may provide subsidies to create economic clusters by establishing a concentration of firms active in the same sector, in a given region, which is often considered to generate local positive externalities.
- exploitation of economies of scale – subsidies can help companies to achieve a certain size to benefit from economies of scale, bringing down unit costs.

15. Regardless of their rationale and the various ways in which governments may provide them to firms, subsidies are prone to distorting trade and competition in the markets where their recipients operate. This distortion can be either the primary intent of a given policy or the collateral or unintended effect of the pursuit of other goals.

16. The main source of inefficiency caused by subsidies, besides their possible wasteful nature (inefficiencies resulting from the opportunity cost of public funds), is that they distort market signals. As a result, they are welfare diminishing and interfere with the "Darwinian" mechanism by which capital is allocated to the most efficient firm(s). For instance, an input subsidy for a specific sector, in the absence of market failures or externalities, creates a discrepancy between the production costs and the price of a given product or service, leading to allocative and productive inefficiencies.[4] It can drive overproduction in subsidised sectors and underproduction in others. Similarly, the provision of subsidies to specific firms may also lead to capital misallocation. Subsidies granted to inefficient firms shift production towards less efficient units, thereby increasing total production costs and/or lowering the quantity of output produced. Furthermore, firms benefitting from subsidies can credibly threaten to take actions which would be damaging for other firms, such as engaging in predatory pricing.[5] Finally, subsidies, or "soft budget constraint", may distort firms' incentives to innovate, raise quality, and reduce costs.

17. While some distortions caused by subsidies can pertain to an individual jurisdiction, many (if not most) subsidies have a cross-border effect. Although the exact welfare effect of such subsidies depends on several factors, including the type of subsidy and the situation in a country (e.g. whether a country is a net importer or exporter and whether the subsidies can affect the world price), many disrupt other economies by distorting international competition and trade. This can lead to trade tensions and/or subsidy races.[6]

18. More recently, concerns expressed over foreign subsidies have often not focused on net welfare effects but on (i) the possible disruption to domestic production and job dislocations, and (ii) the possible loss of "strategic" industries (IMF et al., 2022[1]). Such effects are often the result of a government's industrial policy, for instance to encourage and promote a specific industry or sector. Such industrial policy in one jurisdiction may, deliberately or not, have negative economic consequences in other jurisdictions. Although some regard them to be a result of unfair policies or unfair competition[7], such trade distortions are not necessarily within the mandate of a competition authority to address (see Box 3).[8] The next section discusses different instruments that exist to control subsidies.

Box 3. Industrial policy and competition

OECD economies increasingly use industrial policy to intervene in markets.[1] Subsidies are often a key instrument to implement industrial policy, but not the only one. Governments can also achieve industrial policy objectives using tariffs, local-content requirements, government procurements, exemptions from antitrust laws, regulatory barriers to competition, arranged mergers and acquisitions, control of acquisitions of national companies by foreign investors, easy access to credit and resources (OECD, 2009, p. 11[11]). Subsidies grew considerably in recent years (see section 2.1), and this may partly be due to the more prevalent use of industrial policy.

Industrial policy can have a range of objectives including innovation, productivity and growth, competitiveness, inclusiveness, environmental, sustainable development goals, resilience, strategic autonomy (Criscuolo et al., 2022[12]). However, governments may also use industrial policy in ways that can reduce consumer welfare and efficiency, such as to foster new domestic markets, protect domestic jobs, or pick national champions (OECD, 2009[11]).

As such, industrial policy can distort and prevent competition. This is particularly an issue if subsidies favour incumbents, pick winners, or prop-up weak or zombie firms. There are several potential downsides to consider. For example, the cost of supporting specific industries can be significant, subsidies and protection of domestic firms may result in retaliation from other jurisdictions, a reduction of foreign competition can reduce the productivity and competitiveness of the domestic economy, and the protection of incumbents is likely to reduce economic growth (OECD, 2009, p. 14[11]).

However, if well-designed, industrial policy and subsidies can improve, or at least be neutral to, competition. If so, they can also result in productivity growth, economic growth and more innovation. Empirical evidence suggests that industrial policy can increase productivity growth when allocated to competitive sectors or foster competition in a given sector (Aghion et al., 2015[13]). There is also causal evidence using data from Korea that after subsidies ended subsidised firms grew faster than firms that were never subsidised, (Choi and Levchenko, 2022[14]). The OECD found that recent literature suggested that well-designed subsidies stimulate R&D and innovation (Criscuolo et al., 2022, p. 3[12]).

The impact of industrial policy on competition depends largely on the type and its design, just as is the case of subsidies. For instance, (Aghion et al., 2015[13]) has argued that productivity growth can be fostered by targeting more competitive sectors and especially when it is not concentrated on one or a small number of firms within that sector.

Note: [1] Definitions of industrial policy differ. In the broadest sense, industrial policy includes all types of instruments that intend to structurally improve the performance of the domestic business sector (Criscuolo et al., 2022, p. 14[15]). However, in other contexts, often including debates on competition law and policy, it refers to more "nationalist" policies such as domestic content requirements for public procurement, the direct or indirect subsidisation of specific companies, or directive policies such as the creation of national champions and their protection from competitors and foreign acquirers (OECD, 2009[11]).
Source: (OECD, 2009[11]), (Criscuolo et al., 2022[12]), (Aghion et al., 2015[13]) and (Choi and Levchenko, 2022[14]).

2.4. Trade and competition instruments to control subsidies

19. Considering their potentially distortive character, both for competition and trade, this section will briefly set out some of the main current regimes to control subsidies and initiatives that have been recently introduced or proposed.

2.4.1. Trade instruments

20. There are several instruments applicable to subsidies that affect trade.

Multilateral rules

21. A range of WTO rules aim at curbing distorting forms of government support (IMF et al., 2022, pp. 17-23[1]). The rules for trade in goods are set out mainly in the WTO Agreement on Subsidies and Countervailing Measures (ASCM)[9] and the WTO Agreement on Agriculture (AoA). Subsidies affecting trade in services are subject to the WTO Agreement on Trade in Services (GATS), where disciplines are less well developed. These multilateral rules, however, are subject to continuous discussions and negotiations to increase their effectiveness. Notably, the ASCM has been criticised as being inadequate and ineffective.[10]

22. Furthermore, there is the OECD Export Credit Arrangement for disciplines on the provision of export credits.

23. While governments should co-operate to discourage subsidies and subsidy designs that significantly distort trade or investment, they seek to maintain enough flexibility to address market failures and legitimate public policy objectives. Existing multilateral subsidy rules are structured in part with this in mind (IMF et al., 2022, p. 7[1]).

Free trade agreements (FTAs) and trade blocs

24. An increasing number of Free Trade Agreements (FTAs) include provisions that address competition and/or subsidies. The Regional Trade Agreements Information System (RTA-IS) by the WTO indicates that 244 out of 355 regional trade agreements currently in force (69%) include competition as main topic, while 59 out of those 355 (17%) include provisions on countervailing measures or subsidies.[11] Increasingly, such free trade agreements aim to address potential issues between the economies to the agreement as a result of subsidies. For instance, the EU-China Comprehensive Agreement on Investment (CAI), although an agreement in principle as it is not yet signed nor ratified, includes an article (article 8 in section III) on subsidies, which prescribes transparency around subsidies in predefined service sectors, and proposes a process to solve perceived negative impacts from subsidies.

25. Some trade agreements go beyond the WTO rules by including provisions disciplining state-owned enterprises (SOEs) and subsidies to insolvent firms or extending the subsidy-related rules to services as well and apply to investment as well as trade. For instance, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) requires that SOEs act in accordance with commercial considerations and that governments refrain from providing non-commercial assistance to them, such as debt forgiveness or loan guarantees. Similarly, the Agreement between the United States, Mexico, and Canada (USMCA) adopts SOE-subsidy disciplines that go significantly beyond the SCM Agreement, prohibiting financing to insolvent or uncreditworthy SOEs. Many of those preferential trade agreements also contain additional transparency requirements with respect to SOEs and monopolies (IMF et al., 2022[1]).

2.4.2. Competitive neutrality and subsidies

26. Another tool that has been developed to address government support to companies is competitive neutrality. Competitive neutrality is defined as a 'principle according to which all [e]nterprises are provided a level playing field with respect to a state's (including central, regional, federal, provincial, county, or municipal levels of the state) ownership, regulation or activity in the market' (OECD, 2021[16]). State actions that benefit some enterprises over others may distort competition and undermine fair and open markets.

27. On 31 May 2021, the OECD Recommendation on Competitive Neutrality[12] was adopted, establishing a set of principles that promote a level-playing field among competitors and prevent situations where the state grants advantages to certain entities selectively, distorting competition within a market.

28. In practice, competition authorities may have different tools at their disposal to combat competitive neutrality violations, depending on the applicable legal framework and powers of the authority. Three main tools can be identified (OECD, 2021[16])[13]:

1. **Actions to stop anti-competitive legislative and administrative acts.** This involves actions by competition authorities as direct and indirect enforcers. Direct enforcement requires the power by a competition authority to sanction public bodies that adopt anti-competitive acts or conduct and even to remove such acts. When such powers do not exist, competition authorities may challenge specific acts before a court so as for the latter to annul it.
2. **Support in the design of regulation and reform.** Competition authorities may either be given a formal role in reviewing legislation or, when this is not the case, they can use their advocacy powers to provide advice to government on potential competition implications of legislation and reform initiatives, including subsidies.[14]
3. **Control of public support measures.** This may include the enforcement by a competition authority of a state aid regime (see Box 4), a competition authority assuming responsibilities with regards to the regulation of public service obligations (either directly as formal regulator, for instance in network sectors, or more informally by monitoring and advising on public service compensation) or a competition authority advocating for pro-competitive support measures.

29. As this paper will show, given the increasing use of subsidies, competition authorities may also have to take into account in their competition enforcement activities, subsidies, when they facilitate mergers or enable anti-competitive conduct.

Box 4. State Aid control by competition authorities

The EU state aid regime involves both an ex-ante screening procedure and an ex-post assessment mechanism and targets subsidies that distort the internal market. Article 107 of the Treaty on the Functioning of the European Union (TFEU) prohibits any aid provided by a Member State which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods, in so far as it affects trade between Member States.[1] Any state aid should be proportionate and appropriate and the European Commission (EC) undertakes a 'balancing test' (see (OECD, 2021[16]), Box 3.6). The regime is implemented by the EC and the EFTA Surveillance Authority.

Few jurisdictions outside the EU have subsidy control regimes. Exceptions are the UK, following Brexit[2], some candidate and neighbouring countries of the EU[3] and regional trade blocs such as the WAEMU (see (OECD, 2021[16]), Box 3.7), but the EU regime remains the most extensive.

Notes:
[1] Moreover, article 106 TFEU prohibits Member States from adopting, with regard to public undertakings and undertakings which have been given exclusive or special rights, any measure which would lead to infringement of one of the provisions of the Treaties, in particular articles 101-109.
[2] EU State Aid law rules largely ceased to apply within the UK after the Brexit implementation period. In June 2021, the UK adopted its Subsidy Control Act 2022, which proposes that the Competition and Market Authority (CMA) have subsidy control functions and provides for the establishment of a subsidy advice unit within the CMA.
[3] Countries wishing to join the EU are required to set up State aid control mechanisms in order to comply with EU rules before accession (e.g. The Republic of Serbia). State aid regimes have also been implemented in EU neighbouring countries thanks to commercial and regional integration agreements (e.g. Ukraine). (see (OECD, 2021, pp. 49-50[16]).

Source: (OECD, 2021[16])

2.4.3. Recent initiatives to level the global playing field

30. The increasing use and importance of subsidies and the shortcomings of some of the existing tools to control subsidies have increased the debate on whether new tools are needed. This has led, for example, to the increased introduction and use of foreign investment screening mechanisms, including national security reviews (Svetlicinii, 2018, p. 118[17]).

31. In Europe, for instance, the prohibition of a planned merger between Siemens and Alstom in 2019 – aimed at creating a European champion in the rail industry – has led to a debate on the relation between industrial policy and competition policy (see Box 5). The debate raised several issues, but the core of the discussion has been whether EU merger control should take into account the increased globalisation of the economy and/or whether it constitutes an obstacle for ensuring the competitiveness of European companies – in particular through the emergence of European (industrial) champions.

Box 5. The aftermath of Alstom/Siemens

In Europe the blocked merger between Siemens and Alstom[1] in 2019 reignited a debate about the need for improved or increased European industrial policy.[2] The decision resulted in several position papers, initiatives and calls for reform of EU merger control. (Carpi, 2020, pp. 7-11[18]) groups the main ideas and proposals in five broad categories:

1. Proposals that directly affect the substance and procedural elements of EU merger control.[3] On substance, some propose to expand the substantive assessment of mergers beyond the pure competition considerations to explicitly include other public interests, notably the pursuit of explicit industrial policy goals.[4]
2. Proposals to level the global playing field by addressing more directly, in the EU merger review, the potential distortive effects of third country subsidies and support.
3. Proposals to better take into account the increased globalisation of some economic sectors. More specifically, some argue for changes in (i) the definition geographic of the relevant markets, which is argued to often be too narrow[5]; (ii) the conditions (which are believed to be too strict) for potential competition from suppliers established outside the EEA as a countervailing element in the merger assessment; and (iii) the timeframe for the assessment of the potential effects of the merger, which is deemed as too short and therefore does not capture accurately (potential) market developments in a more distant future.
4. Proposals to change current policies regarding merger efficiencies and remedies to offset or remove potential anti-competitive effects identified in a merger assessment. Efficiencies should be attributed a larger role, and behavioural remedies should be used more often at the expense of structural remedies.
5. Proposals for institutional and procedural changes within the existing legal framework, such as strengthening the role of Member States' authorities in the EU merger review, extending the expertise of DG COMP and better associate other Directorates General to the merger investigation and decision-making.[5]

Notes:
[1] Case No COMP/M.8677 – Siemens/Alstom, decision of 6 February 2019.
[2] Reignited, because such debate has not been new. Despite the clear political intention at the EU level to avoid introducing industrial policy considerations in merger control, neither merging parties nor national governments have stopped raising similar claims to obtain or support the clearance of specific transactions aimed at building European champions, though to the detriment of domestic competition. Examples are debates following the prohibition cases of *Aerospatiale-Alenia/de Havilland* (Case No. IV/M053) in 1991, *Volvo/Scania* (Case COMP/M.1672) in 2000 and *Schneider/Legrand* (Case COMP/M.2283) in 2002. (Capobianco and Lapenta, 2022, p. 340[19]).
[3] On procedure, the most far-reaching proposal is to consider whether a right of appeal of the Council which could override European Commission decisions could be appropriate in well-defined cases, subject to strict conditions. This is similar to the mechanisms existing in some Member States, like the *Ministererlaubnis* in Germany or the *droit d'évocation* in France, which could translate in granting a veto power to the Council of Ministers.
[4] In one paper, which came to be known as the "Franco-German Manifesto", the German and French economic affairs ministers set out demands for a relaxation of European merger control and state aid rules in order to allow the creation of European champions. ("A Franco-German Manifesto for a European industrial policy fit for the 21st Century", 19 February 2019).
[5] The European Commission has recently ruled out the need to change the geographic market definition. In its recent evaluation of the "Notice on the definition of relevant market", it has argued that its approach with regards to the definition of the geographic market "*adequately describes the assessment of geographic markets in the context of globalisation*". See (European Commission, 2021[20]).
Source: (Carpi, 2020[18])

32. There are a number of recent national, regional, and plurilateral initiatives that may address some of the aforementioned concerns and may change the way and extent to which subsidies will be scrutinised. This section will discuss such initiatives.

EU proposed legislation on foreign subsidies

33. The EU is close to adopting the new "Foreign Subsidies Regulation".[15] On 30 June 2022, the European Parliament and European agreed on the final text of the regulation. The regulation still requires formal approval, and will likely enter into force in late 2022 or early 2023, and thus apply from mid-2023.[16]

34. Although not a pure competition instrument[17], the new regulation gives the European Commission (EC) the powers to investigate and remedy potential distortive effects from foreign subsidies. These new powers aim to ensure a level playing field in the EU, given the absence, as discussed in section 2.4.2, of State aid policy in most non-EU countries, allowing companies in such countries to benefit from subsidies that may potentially distort competition in the EU internal market. Furthermore, EU antitrust laws and merger control do not explicitly consider foreign subsidies, and the EC is unable to intervene predominantly based on evidence of foreign subsidies distorting competition in the EU internal market (European Commission, 2020[21]).

35. The Foreign Subsidies Regulation[18] has three key elements to scrutinise foreign subsidies (two prior notification systems and an ex-officio control mechanism) (Camesasca, 2021[22]):

1. Prior notification of a certain size merger transaction with significant foreign subsidies.[19] The EC will assess whether there is "a distortion on the internal market", an assessment which will be "limited to the context of the concentration at stake".[20] However, this does not seem to require the EC to establish a direct causal link between the transaction and any market distortion (Batchelor et al., 2021[23]). A distortion of the internal market would arise where a foreign subsidy is liable to improve the competitive position of the business in the internal market and where, in doing so, it actually or potentially negatively affects competition on the internal market.[21]
2. In the context of public procurement, notify the contracting authority of any foreign subsidies received in the preceding three years, if it is an EU public tender with a value exceeding EUR 250 million (European Parlement, 2022, pp. 47-48[24]).
3. Ex-officio investigations based on the EC's own initiative to consider information from any source related to potentially distortive foreign subsidies, as well as reviews into awarded EU public procurement contracts (European Parlement, 2022, p. 27[24])

US Merger Filing Fee Modernization Act of 2022

36. On 29 September 2022, the US House of Representatives passed the Merger Filing Fee Modernization Act of 2022 ("The Act").[22] This package also includes the Foreign Merger Subsidy Disclosure Act[23], requiring merging companies operating in the United States to disclose information about any financial support or subsidies provided by a foreign government to U.S. antitrust regulators, the Federal Trade Commission (FTC), and the Department of Justice (DOJ) Antitrust Division.

37. Title II of the Act describes how "*[f]oreign subsidies […] can distort the competitive process by enabling the subsidized firm to submit a bid higher than other firms in the market, or otherwise change the incentives of the firm in ways that undermine competition following an acquisition*." It refers in particular to the Chinese intend in its strategic national plan "Made in China 2025" to support enterprises to carry out mergers and acquisitions (M&A), equity investment, and venture capital overseas.

38. Risks of Chinese government subsidies were identified and discussed in the 2020 report[24] to Congress from the bipartisan U.S.-China Economic and Security Review Commission and discussed in a hearing of that same Committee on 14 April 2022.[25]

EU, Japan, US trilateral agreement on industrial subsidies

39. In January 2020, the EU, Japan and US issued, in the context of their trilateral discussions, a joint statement, aiming to strengthen existing rules on industrial subsidies. The declared objective was to counter distortions linked to subsidies, SOEs and forced technology transfers, which create overcapacity and unfair competition, hinder the development of innovative technologies and destabilise the functioning of international trade. The joint statement of the three countries includes the following ways to strengthen existing WTO rules on industrial subsidies[26]:

1. Expand the list of subsidies that are prohibited by the WTO by revising Article 3.1 of the ASCM to include new types of subsidies.
2. Reverse the burden of proof for certain particularly harmful types of subsidies, requiring governments to demonstrate that such subsidies do not distort trade or create overcapacity.
3. Add a new strong incentive to Article 25 ASCM to notify subsidies properly, considering the poor compliance with subsidy notification (see endnote 10). Any non-notified subsidies that were counter-notified by another Member will be prohibited, unless the subsidizing Member provides the required information in writing within set timeframes. This requires the respective government to provide sufficient information to demonstrate that the subsidy is authorised and ensures full transparency.
4. An amendment of the ASCM to describe the circumstances in which domestic prices can be rejected and how a proper benchmark can be established, including the use of prices outside the market of the subsidising Member. This allows the ASCM to be more prescriptive of when subsidies are assumed to be distortive.
5. Ensure that, since many subsidies are granted through State Enterprises, these entities are captured by the term “public body”, which is a constitutive element of the subsidy definition under the ASCM.[27]

3. The role of subsidies in competition enforcement

40. As discussed in the previous section, different reasons exist for providing subsidies to companies. Although many subsidies distort competition, most competition law regimes around the world do not include provisions to address public support measures. As such, the enforcement powers of competition authorities are typically limited to cases where the *conduct* of enterprises (can) infringe competition law. Consequently, competition enforcement is often not the appropriate tool to address competitive distortions resulting from government support that might favour (or constrain) certain companies, affecting trade, in which case other instruments, such as multilateral trade rules, state aid or trade remedy rules take precedence.[28]

41. This chapter will discuss the ways in which competition authorities may consider subsidies when enforcing competition law and policy outside of state aid control. We will discuss the theories of harm of subsidies and the role of financial strength in competition enforcement cases (3.1), what lessons can be learned from the existing cases that have included subsidies in their analysis (3.2) and challenges that exist with such cases (3.3).

3.1. Competition concerns from government subsidies

42. Subsidies can affect a firm's cost and revenue structure, its strategic decisions (regarding input and output, entry, exit, or expansion), as well as those of its competitors or potential competitors. In turn, this may affect market structure, functioning and outcomes within and across borders. Non-subsidised competitors, for example, could decide not to enter the market, or they could lose market share or even be forced to exit the market, despite potentially being more efficient or innovative.

43. A subsidised firm can also enjoy economies of scale that a non-subsidised firm might not have access to, even if the latter had more efficient technologies and processes. Size can then lead to an improvement in the cost structure – if not overall efficiency – which may constitute a barrier to entry or expansion by others. Moreover, where certain firms enjoy direct or indirect state support, they may be able to expand into foreign or international markets – not because they are more efficient and/or innovative, but because they may be entering markets where competing firms have not received any, or a similar level of, support.

44. Competition authorities have looked at subsidies in the context of a merger involving a subsidised firm or when subsidies could lead to, or facilitate, unilateral anti-competitive conduct. Subsidies are not relevant in cartel cases, because whether companies receive government support is irrelevant for the assessment whether such agreement is anti-competitive.

45. The concerns with government subsidies are based on an increased level of financial strength, or financial power, that may result from the direct or indirect financial benefit that is received from the government. Such "deep pockets" may translate into a competitive advantage for the recipient, potentially altering its behaviour in the market vis-à-vis competitors. For competition enforcement, a crucial role in the assessment, both for a merger case and an abuse of dominance case, is played by the extent to which increased financial power (or "deep pockets") can create or strengthen a dominant position.[29]

46. There are two ways in which financial strength – as a result of subsidies – can potentially be an issue, namely (i) by potentially creating or enhancing a dominant position (in the case of a merger), or (ii) by facilitating harmful conduct, most notably through predatory pricing.

3.1.1. Financial strength may create, maintain, or enhance dominance

47. Subsidies can add substantially to the available financial resources of a company. Such increased financial strength vis-à-vis competitors may have a significant impact on the business decisions of a company or of its competitors and may enable it to increase its position in the market. Indeed, (Fresnard, 2010[25]) shows that larger relative-to-rivals cash reserves lead to systematic future market share gains at the expense of industry rivals. Moreover, this competitive effect of cash is magnified when rivals face tighter financing constraints. This suggests that financial resources could indeed enable a company to strengthen its market position.

48. Moreover, financial strength may erect a barrier to entry, for instance by acting as a deterrent to potential entrants. Such barrier to entry is particularly relevant in a capital-intensive industry, or an industry that can be characterised by high sunk costs and large economies of scale. That financial resources, or deep pockets, can be an entry barrier is also empirically confirmed in (Boutin et al., 2012[26]). Firstly, they provide evidence that access to business group deep pockets by incumbent and entrant firms affects the level of entry: entry *decreases* when the incumbent-affiliated groups have hoarded large amounts of cash, while access to cash for entrant groups *increases* entry. Secondly, they find that the impact on entry of group deep pockets is more important in markets where access to external funding is likely to be more difficult. Finally, there data demonstrates that the "entry deterring effect" of group deep pockets is more pronounced when groups have more active internal capital markets. All this suggests that internal capital markets affect the product market behaviour of affiliated firms, potentially with an anti-competitive effect.

3.1.2. Financial strength may facilitate harmful conduct

49. Financial strength is also frequently assessed for its potential to incentivise and enable competitively harmful conduct as subsidies may not only contribute to the creation, maintaining or strengthening of dominance, it may also allow it to abuse that dominant position. The most common theory of harm, both in merger cases as well as in abuse of dominance cases, is that the additional financial resources may allow the receiving company to behave in an anti-competitive fashion, including by pricing below its costs for a certain period, compensating such loss-making strategy by charging higher prices elsewhere (a different market) or at a later date (a recoupment period).[30] Such predatory pricing, which has a long tradition in antitrust (see Box 6), may be enabled by government subsidies that increase the financial resources of a company, providing it with a "deep pocket" or "long purse".

Box 6. Predatory pricing and capital market imperfections

An important requirement for predatory pricing to be credible is financial markets being imperfect. Although many consider that financial markets are generally considered relatively efficient ((Motta, 2004, p. 292[27]), this may be less the case for developing countries, increasing the likelihood of predatory pricing being a rational and profitable strategy.

The ”deep pocket argument” was introduced by (McGee, 1958[28]) and later studied by (Telser, 1966[29]) and (Benoit, 1984[30]). The early theory behind “deep pockets” predation was based on a situation where a dominant firm has superior access to capital compared to its competitor. By pricing below the competitor’s average variable costs, the dominant firm could exhaust the financial resources of its competitor, thereby driving it out of the market. If the losses from pricing below average costs can be recovered by (monopoly) profits afterwards, the “deep pocket” predation is both feasible and rational. However, this early model failed to explain why the prey would not be able to borrow funds even though this mere possibility would deter the predator from ever attempting to predate. To account for this issue, more recent economic theory includes capital markets imperfections as a result of principal-agent problems. For instance, if lenders have incomplete information about the companies that wish to obtain funding (including for instance the level of risk or management competence at the borrowing company), such companies may not receive funding, or against less favourable conditions. Consequently, in the situation of imperfect capital markets, the ability to obtain funding is solely determined by a company’s assets. Through predatory pricing, a predator aims to reduce the prey’s assets, reducing its ability to raise capital, ultimately forcing it to exit the market.

According to these theories, the predator simply needs to be financially stronger than its competitors, and there is no requirement for the predator to be the incumbent. Moreover, the exit of competitors is not a requirement, i.e., the predator may simply try to prevent smaller firms from adopting innovations or growing, without forcing them out of the market.

Sources: (Motta, 2004[27]), (Sire, 2022[31]).

50. Because low prices and vigorous competition are generally beneficial for consumers, it is important to distinguish predatory conduct from legitimate and vigorous competition. Erroneous assessment can lead to either over-enforcement (false positives) or under-enforcement (false negatives). Over-enforcement results from the many pro-competitive reasons to price below costs. For instance, entry into a market with high barriers to entry may require a new entrant to incur initial losses, for instance to establish a reputation and convince the customer.[31] Such (potential) over-enforcement is harmful as it may lower the incentive to compete. Under-enforcement, resulting from difficulties establishing whether prices were in fact below costs or disregarding predatory behaviour with prices above costs[32], may allow a dominant firm to maintain or increase its market position.

51. Predatory pricing cases have been brought only rarely by competition authorities.[33] Part of the scepticism[34] around predatory pricing cases is a result of the idea that pricing below cost in order to drive competitors out of the market is argued to be irrational, and for two reasons: (1) there are more profitable ways (e.g., acquisitions) to eliminate competitors, and (2) future price increases will result in new entry (Gomez, Goeree and Holt, 2008[32]). However, as will be discussed later, in the case of government subsidies, there may be other factors at play that make the second reason for making predatory pricing irrational (i.e. future price increases), less relevant. Certain subsidised companies, including SOEs, may be responsible for explicit or implicit governmental industrial policy, instead of seeking to maximise profit. Companies that are not seeking to maximise their long-term profits may engage in predation without recoupment (Capobianco and Christiansen, 2011[33]). This means that the recipient of such subsidies may not (need to and/or want to) increase prices after the predatory period, but this may nonetheless lead to allocative and dynamic inefficiencies.

3.2. Case law that includes subsidies in the analysis

52. The amount of case law that explicitly includes subsidies in its analysis – to analyse dominance – is fairly scarce. Nevertheless, the existing case law allows us to draw a number of lessons that could be relevant for potential future cases.

3.2.1. Subsidies have played a modest role in merger control to date

53. Subsidies have played a role in past merger control cases in two different ways, namely by way of a subsidy offense or a subsidy defense (Sire, 2022[31]). The subsidy *offense* refers to a case where (one of) the merging parties have received a subsidy, potentially providing them with an advantage vis-à-vis their competitors. The subsidy *defense*, however, refers to the case where a subsidy, provided to a competitor of the merging parties, is used as a mitigating circumstance to alleviate anti-competitive concerns.

54. The number of merger cases, however, that have included subsidies (or state aid) in its assessment are relatively limited.[35] Moreover, in none of the existing cases, it was concluded that subsidies were of such proportion that they would lead to competition problems. In most cases, subsidies were too small to cause competition issues. In some cases, the merged entity was considered to be financially strong as a result of the subsidy, but not particularly stronger than its competitors, especially when combined with the market positions of the merging parties. As such, subsidies have not played a decisive role so far.

55. That not including subsidies in the analysis can be problematic, can be illustrated by the acquisition of Pirelli by Chinese State-owned CNRC (see Box 7).[36] This acquisition was cleared unconditionally, with no mention of (foreign) subsidies. Three years later, however, the EC was required to intervene through the imposition of countervailing duties. In the decision of its anti-subsidy investigation, the EC concluded that CNRC had benefited from several interventions by the Chinese State as the company did not have sufficient own funds to finance the acquisition.

Box 7. CNRC/Pirelli

In 2015, China National Chemical Corporation (ChemChina) acquired Pirelli, via its subsidiary – the China National Tyre and Rubber Company (CNRC). This acquisition was unconditionally cleared by the EC (Case No. COMP/M.7643 CNRC/Pirelli)[1].

In October 2017, the European Commission launched an anti-subsidy investigation following a complaint against unfair tyres imports into the EU. In its final decision, the EC stated that CNRC had benefited from several interventions by the Chinese State as the company did not have sufficient own funds to finance the acquisition. The most relevant support measures to CNRC were:

- a grant of RMB 500m (around EUR 66m) from the Central SASAC (State-owned Assets Supervision and Administration Commission of the State Council) to promote global production capacity co-operation under the Belt and Road Initiative (BRI).
- a preferential loan (EUR 800m) from a bank consortium, including China Development Bank (state-owned), EXIM Bank (subordinated to the State Council) and China Construction Bank (state-owned). The loan agreement mentions as purpose of the loan the acquisition of Pirelli.
- a RMB 17m (approx. EUR 2.13m) refund of the interest paid on the loan mentioned above. This refund was granted by the Ministry of Finance for the acquisition of Pirelli's stock rights, as part of the key projects of 2015 special funds for the development of foreign trade.
- an equity participation by the Chinese government worth EUR 533m via Silk Road Fund (SRF), a government investment fund that is part of the Belt and Road Initiative. The investment of SRF corresponded exactly to the amount that was needed by CNRC to gain an absolute majority ownership in the Pirelli Group (65% versus 48.75% without SRF).

Notes:
[1] Case No. COMP/M.7643 CNRC/Pirelli
[2] European Commission Implementing Regulation 2018/1690
Sources: Case No. COMP/M.7643 CNRC/Pirelli, decision of 1 July 2015, European Commission Implementing Regulation 2018/1690, (European Commission, 2021[34]).

The potential problem of subsidised acquisitions can also be deduced from the EC's State aid practice. In State aid cases, the EC frequently uses as a condition to allow the aid, that the recipient cannot engage in mergers or acquisitions for a certain period, precisely to avoid acquisitions subsidised by the government.[37] Such conditions were common, for instance, during the financial crisis in 2008.[38]

3.2.2. Subsidies may be considered in merger control by analysing the ability and incentive to engage in predatory pricing

56. For the substantive assessment of the transaction, subsidies have played a role in assessing the ability and incentive of the merger entity to engage in predatory pricing post-merger.[39] An example is a recent decision by the German Federal Cartel Office, discussing at length the potential impact of Chinese subsidies as part of the assessment of a notified merger (see Box 8).[40]

The ability of the merged entity to engage in predatory pricing

57. The first step in the substantive assessment of many cases is whether subsidies could increase the merging entities' financial and commercial strength to such an extent and in such a way that it could increase the ability of the acquirer to prevent the expansion of competitors or to eliminate (potential) competitors on the relevant market by systematically undercutting competitors' prices.[41] This could be the case if the subsidisation of a company, in light of its existing market position and seen in relation to the financial and competitive position of other market players, would threaten to significantly impede effective competition on the relevant markets.[42]

58. A number of factors have appeared relevant when assessing the impact of subsidies on the financial and commercial strength of the merging parties.

- Financial indicators of the merging entities (most notably the acquirer). Financial strength can be, and has been, assessed by comparing several financial indicators for the acquirer and its competitors, including for instance total sales, EBT, EBT margin, EBIT and EBITDA.[43] A significant financially advantageous position increases the ability to engage in future predation as competitors are less able to react to potential predatory conduct.
- The size and frequency of the subsidy, especially in relation to the financial strength of the merging entity and its competitors.[44] The larger the subsidy, the larger the ability to engage in predatory behaviour. Moreover, a frequent or recurring subsidy, for instance in the form of continuous preferential access to finance (or below-market finance, see Box 8), increases the ability to predate.
- The cost structure of the merging entities[45] – the ability to predate increases when subsidies directly and consistently reduce the variable costs of the recipients vis-à-vis its competitors.

The incentive of the merged entity to engage in predatory pricing

59. However, in principle, the prediction of future behaviour of the merged entity must be based on presumed compliance with competition law. It cannot be presumed that a company will engage in anti-competitive conduct, just because it has the (increased) possibility to do so.[46] There are several factors that may increase the incentive, and therefore likelihood, of a company to engage in predatory conduct.[47]

- A history of violations of the law, such as abusive behaviour in competition law, whereby the merger may facilitate the potential abusive behaviour.
- Ownership structure of the acquiring company. The focus on profit maximisation does not always apply to the conduct of SOEs, especially in non-market, or centrally controlled, economies. SOEs often rather pursue other goals (see also section 2.3), including the achievement of a national (industrial policy) plan. Such objectives may alter the incentive to engage in anti-competitive conduct, including predatory pricing, in the future.[48]
- Ability to recoup losses during a predatory pricing period. In some jurisdictions, the ability to recoup the losses during the predatory period (the period during which the price was below costs) has been regarded as a precondition for predatory pricing to be credible. Section 3.3 elaborates on this requirement of recoupment in some jurisdictions.

Box 8. CRRC/Vossloh

This case pertained to the acquisition of Vossloh Locomotives GmbH ("Vossloh") by Chinese State-owned company CRRC Zhuzhou Locomotives Co., Ltd. ("CRRC Zhuzhou Locomotives"). Vossloh is a leading rail technology company focussed on rail infrastructure, while CRRC Zhuzhou Locomotives is a subsidiary of CRRC Corporation (CRRC). CRRC is listed and is 51% owned by the Chinese State. CRRC is the world's largest manufacturer of rolling stock.

In its merger assessment, the BKa thoroughly examined the particularities associated with the acquisition of the European market leader by a resource-rich SOE from a centrally controlled national economy. It considered the impact of possible state subsidies, the availability of technical and financial means and strategic advantages from other shareholdings (CRRC, through several other subsidiaries, plays an important role in China's industry strategies) in the competitive assessment of the merger.

This included an analysis of the threat of low-price and dumping strategies and the cost advantages resulting from CRRC's state-subsidised activities in many other markets – including its vertical integration, financial resources resulting from *de facto* or *de jure* monopoly on its home market(s), explicit government promotion and favourable input prices. It was argued by the BKa that, while low pricing strategies in the short run are 'inherently competitive' and benefit consumers, such low pricing strategies would need to be grounded on comparative cost advantages of the company concerned vis-à-vis its competitors. If, however, the low pricing strategies are a result of systematic subsidisation, they can distort competition and lead to serious market distortions in the long run.

Ultimately, the existing concerns – the considerable financial resources of the acquirer and the resulting potential for anti-competitive conduct in the future – did not justify a prohibition, as Vossloh's competitiveness had considerably deteriorated over the last few years and CRRC had only been a small player on the European market until then.

This case shows that while SOEs may enter markets with substantial economic power, this does not necessarily pose a threat to effective competition. It also shows, however, that financial strength can be a factor of importance for the assessment of a merger, even if it may not the determining factor (see below under lesson nr. 3).

Source: Bundeskartellambt B4-115-19 CRRC/Vossloh and Bundeskartellamt, press release, 27 April 2020; Chinese company CRRC can acquire Vossloh's shunter division.

3.2.3. Financial strength has been a contributing, rather than a decisive, factor to potential dominance in merger cases

60. Given the limited number of cases in which government subsidies were included in the competition analysis, it may be insightful to look at merger cases in which financial strength – even if not resulting from a government subsidy – has been part of the competitive analysis. Financial strength of the merging entity has indeed played a role in the assessment of several cases in the past. Cases typically related to large (often conglomerate) companies that had superior financial resources, when compared to its competitors. However, while financial strength has been considered an important criterion for the assessment of dominance, it has been considered insufficient to lead to the creation or strengthening of a dominant position in itself.[49] In other words, financial strength can be a contributing, or determining, factor (only) when additional factors are present, rather than a decisive (or sole) factor (Bright and Schmidt, 2005, pp. 304-305[35]).[50]

61. Merger guidelines also provide an indication of the ambiguity around the importance of financial strength and the risk of such financial strength to lead to competition issues. For instance, financial resources are mentioned as a relevant factor in the assessment of market power in the German merger guidelines, but it is said to only play a minor role in practice. Moreover, it is stated that *"Such an exclusionary or deterrent effect is not present every time a company has significant financial resources at its disposal. However, financial resources do improve the ability of a company and its incentives to carry out corresponding strategies, e.g. predatory pricing."*[51] Finally, although financial strength has been part of the substantive assessment in merger cases in the past in certain jurisdictions (e.g. US and the UK), they no longer explicitly include financial strength as a relevant factor for the assessment in their merger guidelines.[52]

62. Earlier, we have seen that several factors provide an indication of the extent to which financial strength may provide the merging entities with the ability to engage in predatory behaviour in the future. However, because financial strength in itself, as argued above, seems insufficient to lead to the creation or strengthening of a dominant position, the analysis of the ability to predate by the merging parties needs to be combined with the (traditional) competitive assessment of the merger (not taking into account the subsidies). This includes the traditional factors of analysis in a merger control assessment, such as relevant market characteristics:

- Market characteristics and mitigating factors – some factors may affect the likelihood of success of predatory pricing. Predatory pricing is more likely to be successful in industries where access to finance constitutes a significant barrier to entry and expansion or in markets with homogeneous products, low switching costs and no other significant barrier to expansion (Sire, 2022, p. 9[31]).
- The forecast period – Another relevant factor for the analysis is the relevant forecast period for the analysis, for instance to assess timeliness of entry. Under paragraph 74 of the EU Horizontal Merger Guidelines[53], the EC examines whether entry would be sufficiently swift and sustained to deter or defeat the exercise of market power. It argues that the appropriate time period depends on the characteristics and dynamics of the market, as well as on the specific capabilities of potential entrants. However, entry is normally only considered timely if it occurs within two years. However, both in Siemens/Alstom[54] as well as in CRRC/Vossloh[55], the appropriate time period was established at five to ten years as a result of the infrequent nature of tenders.

3.2.4. Abuse of dominance cases in which subsidies have played a material role hardly exist

63. As discussed earlier, predatory pricing cases are relatively scarce. Furthermore, such predatory pricing cases as a result of government subsidisation are even scarcer. The cases that come closest relate to predatory pricing using government financing for a public service obligation (PSO), often to (previously) SOEs. When such PSOs are overcompensated by the government, this becomes a *de facto* subsidy that can be used to cross-subsidise activities of the same company in markets where it operates in competition with others with the objective to exclude rivals.

64. Cross-subsidisation results from the execution by one company of economic activities both on (i) a (quasi-)monopoly or legally reserved market and (ii) one or more competitive markets. This set-up may allow the company to price below costs on the competitive market, for instance by shifting costs away from the competitive activities and charging them to the legally reserved activities. This predatory pricing can deter market entry on the competitive market, reduce rivals' share of the market or even force them to leave the market.[56]

65. Strictly speaking, for the subject of subsidisation, the element of overcompensation of the PSO is crucial, since otherwise the potential predatory pricing is not a result of subsidisation but rather other factors (such as the size of the company). Nonetheless, such cases in which companies potentially cross-subsidise between a (quasi-)monopoly and competitive markets may provide some insights with regards to how subsidies could be analysed in the case of predatory pricing.

66. In this regard, a sector that has seen a disproportionate number of cases that are related to abuse of dominance (although not always related to predatory pricing) is the postal sector (see also Box 9). An important and much-cited case, as it was the first time that the EC applied a predatory pricing test in a traditional public service sector, is the case of Deutsche Post from 2001, which led to an infringement decision.[57] This case involved the alleged cross-subsidisation by Deutsche Post, using the revenues from its profitable letter-mail monopoly to finance below-cost pricing in business parcel services, where it faced competition. The EC concluded that Deutsche Post's prices for its mail-order parcel services were indeed below costs, and that the earnings from the reserved letter-post area, since it consistently exceeded the stand-alone costs of the reserved services, was a likely source of cross-subsidisation. Such (loss-making) pricing strategy for mail-order parcel services in the period 1990-1995 was considered not in the entity's own economic interest[58], restricted the sales of competitors and was expected to lead ultimately to higher prices for consumers.

Box 9. Cross-subsidisation in the postal sector

At the end of the 1990s and beginning of 2000, many countries witnessed a large liberalisation and privatisation wave in the postal sector. Consequently, this sector is one in which SOEs are in constant competition with private companies, or private companies are operating on both reserved markets (monopoly) and markets open to competition. Concerns often arise surrounding the potential anti-competitive behaviour in the competitive segments of the postal sector by incumbent postal operators which benefit from exclusive privileges. These concerns particularly relate to anti-competitive cross-subsidisation or predatory pricing. On one hand, relatively limited barriers to entry in the postal sector may limit the likelihood of predatory pricing by profit-maximising firms. On the other hand, limited or restricted incentives for profit-maximisation by regulated or SOEs may increase the incentive for the incumbent to cross-subsidise.

Many countries have established independent regulatory authorities for the postal sector. For instance, EU member states were required under Article 22 of the EU Postal Services Directive to "designate one or more national regulatory authorities for the postal sector that are legally separate from and operationally independent of the postal operators".[1] Some have integrated such regulator in the competition authority (e.g. Australia, Netherlands and Spain). These regulatory authorities are also members of the European Regulators Group for Postal Services (ERGP), an advisory group to the EC that facilitates consultation and co-operation and ensures the consistent application of the postal and parcel legislation. This ERGP acknowledges the risks of cross-subsidisation in its report from 2019.[2]

Notes:
[1] Directive 2008/6/EC of the European Parliament and the Council of 20 February 2008 amending Directive 97/67/EC with regard to the full accomplishment of the internal market of Community postal services, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008L0006.
[2] "ERGP Report on the cross-subsidisation", European Regulators Group for Postal Services, 4 October 2019.
Sources: (Cohen, 2004[36]); (Geddes, 2008[37]); (OECD, 1999[38]); OJ C 39, 6.2.1998, Notice from the Commission on the application of the competition rules to the postal sector and on the assessment of certain State measures relating to postal services.

3.3. Challenges with integrating subsidies in antitrust analysis

67. Subsidies seem to have played a relatively modest role in competition enforcement to date. However, this might change in the near future considering the developments described in section 2. The following challenges may exist for competition authorities when subsidies facilitate mergers or potential anti-competitive conduct.

3.3.1. Establishing the existence of subsidies is not straightforward

68. In a first step, the competition authority needs to establish the existence of subsidies. Substantiating the existence of government subsidies can be rather difficult given the data issues with regards to subsidies. As discussed in section 2.1, public information on subsidies is scarce for a number of reasons. One of main ones is that subsidies are often not explicit, either because they are purposely hidden or because they are a result of institutional choices, including vertical integration by SOEs. Consequently, identifying whether individual companies have benefitted from government subsidies is often challenging.

69. In a jurisdiction with a State aid regime, the establishment of government subsidies will often be more straightforward, as government subsidies of a certain nature and size will need prior approval.[59] In absence of a State aid regime, the most plausible or effective way (aside from information from the notifying parties) to demonstrate the existence of subsidies (even though indirect) is the reference to general patterns or practices from government studies, WTO disputes (past or ongoing) or trade investigations.[60] Internal documents, or the absence thereof, indicating the impact of subsidies, may also be taken into account.[61]

70. The establishment of subsidies can be further complicated by the standard of proof that is in place.[62] A complainant may not be well placed to provide proof for such subsidies, especially when it comes to demonstrating that certain practices were not in line with market conditions.[63]

71. The new tools proposed in the US and the EU mentioned in section 2.4.3 (the US Merger Filing Fee Modernization Act of 2022 and the EU proposed legislation on foreign subsidies) are meant to partly address this challenge.

3.3.2. Acquisitions by subsidised SOEs can create specific issues with regards to merger control

72. The acquisition of a company by a SOE can create specific issues with regards to merger control (see also (OECD, 2018, pp. 17-19[39])). Related to subsidies, a main issue is the lack of transparency around government subsidies to SOEs, as many explicit government subsidies are not disclosed. Moreover, even if not explicitly subsidised by the government, SOEs often benefit from implicit government support, much of which could be classified as subsidies. In certain jurisdictions, for instance, SOEs are shielded from competition in their home markets. Furthermore, implicit subsidies, direct or indirect, can come from other SOEs, affecting the financial strength of the SOE under review, as well as its conduct in the market. For the assessment of a transaction involving an SOE, it is therefore important to take into account the ownership structure of the SOE, and the impact of State control over SOEs. More specifically, it is important to determine the relevant "group" of companies, or the "single economic unit", that is involved in the transaction (Svetlicinii, 2018, p. 102[17]), (Riley, 2016[40]). Not taking into account other SOEs that are within the same State's control may lead to the exclusion from the analysis of the potential provision of financial or other resources below market conditions. Such subsidisation may significantly alter the financial strength of the SOE under review in the merger case. In practice, however, competition agencies do not always seem to analyse in detail this aspect.[64]

73. The lack of transparency around subsidies makes it often challenging to carry out an in-depth assessment, including determining the actual financial advantages, possible or actual co-ordination among SOEs and the likelihood of various foreclosure scenarios.

3.3.3. Subsidies complicate the determination of the relevant costs to establish predatory pricing

74. In a predatory pricing case, a competition authority needs to establish that a dominant player has in fact abused that position by pricing below cost in an effort to maintain or increase its position. The crux in such abuse of dominance cases is often what measure to use for establishing the relevant costs and sales prices to determine whether a predator's prices have been below (its own) costs.[65] Cost measures differ across jurisdictions, and across cases, but the most common include marginal cost (MC), average variable cost (AVC), average avoidable cost (AAC), long run incremental cost (LRAIC) and average total cost (ATC) (ICN, 2008, pp. 9-11[41]). One of the main reasons why cost measures may differ in such analyses, is the extent to which fixed costs should be included, which heavily depends on the relevant product and market.

75. Using the relevant price/cost measure, and applying the relevant legal test in place[66], the competition authority may attempt to establish the existence of predatory pricing. For this, measuring the price/cost relationship to establishing predatory pricing is already complex as it is.[67] As discussed in 3.1.2, a price below cost may simply reflect the sacrifice necessary to establish a presence in a competitive market. Moreover, measuring costs is often challenging as the relevant cost base is dependent on the sector and the circumstances.[68] It involves a case-by-case analysis to account for the specificities of the relevant products and markets and requires corrections for costs that are not reflective of true productive efficiency.[69]

76. Government subsidies make this calculation of the difference between price and costs even more complex. For the substantive analysis in a competition enforcement case, the relevant difference between the price and costs in the event of government subsidies is the difference between the price and the costs that the company would have incurred *but for* the subsidy – i.e. the "true" costs. However, as discussed earlier, government subsidies can take many forms and can be explicit or implicit, direct or indirect, one-time or recurring and can affect the variable costs or fixed costs of the recipient company.

77. Finally, it may also be challenging to establish causation between the subsidy and the potential anti-competitive conduct, even if data about the subsidy is available.

3.3.4. In jurisdictions where recoupment is a precondition for predation, attention should be given to the fact that such recoupment is not always relevant for subsidised SOEs that do not have a profit maximising objective

78. As discussed in section 3.1.2, recoupment is considered a necessary condition in some jurisdictions for predatory pricing to be credible. It is argued that for predation to work, a company should have sufficient market power in order to be able to recoup the monetary losses from the predatory period. However, this is not the case in all jurisdictions. Some consider recoupment a requirement for finding a liability, for others it is not a requirement but a relevant factor, while for some recoupment is not even a relevant factor (ICN, 2008, pp. 16-21[41]). For instance, in the aforementioned 2001 Deutsche Post decision[70], the EC did not explicitly consider whether Deutsche Post was likely to be able to recoup the losses that it identified.

79. For those jurisdictions in which recoupment is a precondition for predation, such argument may be challenging in the case of a SOE. A SOE (potentially) engaging in predatory pricing as a result of a subsidy (either for a merger or predatory pricing case) may not do so for reasons of profit maximisation, but for other reasons such as executing a government industrial policy agenda. In such cases, the typical considerations for recoupment – namely as a predictor for the likelihood of a predatory pricing strategy by a predating company – may not apply and may lead to the wrong conclusion.

80. Finally, (Leslie, 2013[42]) argues that there are many ways in which a company can recoup its below-cost pricing. Consequently, where required, this requires a fine-tuned analysis to ensure that sufficient consideration is given to the different ways that recoupment can be materialised.

4. Conclusions

81. While subsidies can have legitimate objectives, they may distort competition and trade. Several instruments exist to address these distortions and assess, control or counter subsidies. However, many are not competition specific (or have nothing to do with competition) and are instead part of a trade 'toolkit' to address possible trade distortions. From a competition perspective, subsidies should follow competitive neutrality principles. One of the competition policy instruments for subsidies is to consider them in competition enforcement cases.

82. Potential competition concerns from subsidies arise from "deep pockets" and potential subsequent predation. More specifically, increased financial strength as a result of the government subsidies may contribute to the creation or strengthening of a dominant position in a merger case or may facilitate anti-competitive conduct by the recipient of a subsidy in the near future.

83. This paper has shown that subsidies have only played a modest role in competition enforcement cases to date. However, given the increasing use and relevance of subsidies in recent years, some jurisdictions have adopted new legal tools to tackle the issue of subsidies in competitive markets. The most notable tools in this regard are the US Merger Filing Fee Modernization Act of 2022 and the EC proposed legislation on foreign subsidies. It is hard to predict how such new tools will be used and what the new tools will achieve, but they may possibly lead to: (i) increased knowledge and transparency about subsidisation by certain countries, (ii) an increased number of enforcement cases that include subsidies in its substantive analysis.

84. Such developments may increase the relevance of financial strength as a theory of harm in a competition case in the coming years. When considering subsidies in a competition enforcement case, competition authorities face a number of challenges. Such challenges include the often complex identification of subsidies, their implicit nature when it comes to SOEs, the added difficulty to an already challenging task of selecting the relevant cost measure for establishing predatory pricing and the ambiguous role of recoupment.

85. Where appropriate, authorities may want to be more vigilant with regards to merger cases that involve subsidised SOEs. In such cases, recoupment may not be as relevant as in more traditional predatory pricing cases, and a closer look at the broader activities of a State behind the entity involved in a merger may be warranted. Such broader activities or financial government support may increasingly form a part of the overall assessment of a company's financial strength and market position.

Endnotes

[1] Different definitions of subsidies exist. These may range from a narrow consideration of certain budgetary outlays by a government only to broad definitions that may include all sorts of government policies that influence market conditions. In this paper, we refer to a subsidy as a financial, "unrequited" (i.e., without an equivalent contribution in return) contribution using public resources, directly or indirectly, which confers a benefit on the recipient over its competitors (see for instance (IMF et al., 2022, p. 6[1])).

[2] See for instance (Evenett and Fritz, 2021, p. 15[6]) and (IMF et al., 2022, p. 10[1]).

[3] See also for more detail (IMF et al., 2022[1]) and (OECD, 2010[44]).

[4] *Allocative inefficiencies* arise when the relative quantities produced and consumed of various goods are not optimal. Productive inefficiencies arise when a firm does not produce at its minimal costs.

[5] Predatory pricing is the anti-competitive strategy of pricing below cost to injure rival firms and thus induce their exit, pre-empt a new entrant from entering, or prevent smaller firms to innovate or grow is called predatory pricing (Cabral, 2000, p. 269[30][43])). While predatory pricing may be used to hurt competitors, it may also raise barriers to entry. Once a certain firm is able to signal to its rivals that it would respond aggressively to new entry, potential new entrants may not risk joining the market. In such a context, subsidies help make such threats of predatory pricing more credible or, in an industry with network effects, enable companies to gain long-term market power (OECD, 2004[54]).

[6] Subsidy races come from the existence of negative externalities between jurisdictions: the granting of an aid may be a sound policy from the narrow viewpoint of a local or national authority, but when such aid merely shifts economic activity from a region to another, it is globally wasteful (OECD, 2010[44]).

[7] Claims that subsidies are unfair are difficult to resolve. A generally agreed definition of fairness does not exist, and there is a clear difference between the traditions of fairness based on deservedness and on sameness. See also (Forsyth and Guiomard, 2019, p. 49[46])

[8] For instance, the expansion of industrial capacity based on heavy subsidisation in one country may exert downward pressure on global output prices and profits. Unable to compete with subsidised prices, producers that do not benefit from government support may exit the industry, while the financed producers pre-empt their shares of the demand (OECD, 2021[5]). Although this access capacity distorts trade and jeopardizes the international level playing field, such issues cannot be resolved through competition enforcement.

[9] The ASCM, in force since 1995, provides a platform to discipline domestic policies that could distort international markets including the possibility for dispute settlement. The rules of the ASCM apply to all WTO members, with some special provisions for developing and, in particular, least-developed members.

With its notification requirements, it has taken important steps towards more transparency about such policies.

[10] Firstly, because member countries, contrary to what they are supposed to do, do not report on and notify subsidies. The number of WTO members that have failed to make a notification has risen sharply. Less than half of the WTO Members complied with the notification obligation in 2019. Moreover, the information included in the notifications is not uniform across WTO members, and WTO members do not appear to declare in their notifications all the subsidies they grant. (European Commission, 2021, pp. 27-28[34]) Secondly, the WTO regime is limited in scope as it only covers subsidies affecting exports in goods markets. Thirdly, the ASCM Agreement may fail to capture certain forms of government support (OECD, 2021[5]). Fourthly, the refusal of the US to appoint new judges to the Appellate Body has blocked the WTO dispute settlement mechanism, increasing fears of increased disengagement from a multilateral framework.

[11] The database (https://rtais.wto.org) contains information on only those agreements that either have been notified, or for which an early announcement has been made, to the WTO. (last accessed on 21 October 2022)

[12] See OECD, Recommendation of the Council on Competitive Neutrality [OECD/LEGAL/2021].

[13] For more details, see Chapter 3 of the mentioned paper (OECD, 2021[16]).

[14] The OECD defines 'Competition assessment' as 'a review of the competitive effects of public policies including consideration of alternative and less anti-competitive policies' See (OECD, 2021[16]), Box 3.3.

[15] In 2020, the European Parliament and European Council determined that existing measures to address subsidies from outside the EU were unsatisfactory and asked the EC to propose an instrument to address this perceived "regulatory gap". Consequently, on 5 May 2021, the EC proposed the "Foreign Subsidies Regulation" (Alexis, 2021, p. 211[48]). One year later, on 4 May 2022, the European Parliament made some amendments to the proposed regulation (Camesasca, Maczkovics and Bertin, 2022, p. 1[47]).

[16] Foreign Subsidies (europa.eu).

[17] The legal basis for the new regulation is Article 114 (approximation of laws) and Article 207 (trade policy) of the Treaty on the Functioning of the European Union (TFEU). Hence, even though the substantive and procedural rules of the Foreign Subsidies Regulation draw on existing rules for concentrations, antitrust and State aid policy, it is not actually a "competition instrument" (Alexis, 2021, p. 211[48]).

[18] https://competition-policy.ec.europa.eu/international/foreign-subsidies_en

[19] If one of the undertakings is an EU company with aggregate annual turnover of at least EUR 500 million in the EU and the concentration received more than EUR 50 million in subsidies from third countries within the three years prior to the transaction (European Parlement, 2022, p. 37[24])

[20] (European Commission, 2021, p. 19 [para 32][51]).

[21] (European Commission, 2021[51]), art. 3.

[22] H.R. 3843 – Merger Filing Fee Modernization Act of 2022.

[23] This Foreign Merger Subsidy Disclosure Act was previously covered by two separate bills: H.R.5639 – Foreign Merger Subsidy Disclosure Act of 2021) and S.4322 – Foreign Merger Subsidy Disclosure Act.

[24] See https://www.uscc.gov/sites/default/files/2020-12/2020_Annual_Report_to_Congress.pdf.

[25] Hearing on "Challenging China's Trade Practices: Promoting Interests of U.S. Workers, Farmers, Producers, and Innovators".

[26] See "Joint Statement of the Trilateral Meeting of the Trade Ministers of Japan, the United States and the European Union", 14 January 2020 (https://trade.ec.europa.eu/doclib/docs/2020/january/tradoc_158567.pdf).

[27] In *US-Anti-dumping and Countervailing Duties (China)*, the Appellate Body held that a 'public body' is "an entity that possesses, exercises or is vested with governmental authority." Contrary to the previous reports of the WTO adjudicatory body, the Appellate Body held that majority state-ownership is insufficient to demonstrate that the entity is a 'public body' under Article 1.1(a)(1) of the SCM Agreement. The interpretation of the Appellate Body has remained controversial. Previous OECD work, notably an OECD report identifying government support provided through the financial system (OECD, 2021[5]) suggested that the Appellate Body's construction under Article 1.1(a)(1) of the ASCM may not enable certain forms of government support, such as below-market finance bestowed by state financial entities, to be captured. (Appellate Body Report, *US-Anti-Dumping and Countervailing Duties (China)*, WT/DS379/AB/R, adopted 25 March 2011).

[28] For example, the frequently criticized lack of reciprocity (the mutual granting of similar or equivalent rights by trading partners) is not an aspect that can be addressed through competition law. Problems resulting from imbalances in trade relations can only be solved by competition analysis to the extent that it corresponds to the actual competitive conditions. See Bundeskartellamt, case B4-115-19, CRRC/Vossloh, pt. 358.

[29] See also (Bright and Schmidt, 2005[35]).

[30] The anti-competitive strategy of pricing below cost to injure rival firms and thus induce their exit, pre-empt a new entrant from entering, or prevent smaller firms to innovate or grow is called predatory pricing (Cabral, 2000, p. 269[30][43]).

[31] See for instance Bundeskartellambt B4-115-19 CRRC/Vossloh, para. 563.

[32] Above-cost pricing can be predatory as it may deter (i) more efficient entrants, who have not yet reach sufficient scale or (ii) less efficient rivals, which partly exercise a competitive constraint on the predating firm (de la Mano and Durand, 2010, p. 1[49]).

[33] The relatively rare nature of predatory pricing cases can be illustrated by the opening paragraph on predatory pricing on the website of the Federal Trade Commission[33] states that *"[i]nstances of a large firm using low prices to drive smaller competitors out of the market in hopes of raising prices after they leave are rare"* and indicates that *"Although the FTC examines claims of predatory pricing carefully, courts, including the Supreme Court, have been sceptical of such claims."* Moreover, an ICN report in 2008 had identified 24 cases in the preceding ten years by 35 jurisdictions (ICN, 2008, p. 3[41]).

[34] See also for instance (Henderson, 2017[50]).

[35] The identified cases in which subsidies or State aid played a role in the assessment are: **European Commission:** Case No COMP/M.2621 SEB / MOULINEX; decision of 8 January 2002; Case No COMP/M.4841 - ENEL / EMS, decision of 20 December 2007; Case COMP/M.4956 STX/Aker Yards, decision of 5 May 2008; Case COMP/M.5943 Abu Dhabi Mar/ThyssenKrupp Marine Systems, decision of 31 August 2010; Case COMP/M.7333 Alitalia/Etihad, decision of 14 November 2014; Case COMP/M.5153 Arsenal/DSP, decision of 9 January 2009; Case M.9820 Danfoss/Eaton Hydraulics, decision of 18 March 2021; Case M.10078 – Cargotec / Konecranes, decision of 24 February 2022. See also (Stratakis and

Crocco, 2010[45]) and (Sire, 2022[31]). **UK Competition and Markets Authority:** Anticipated merger between Cargotec Corporation and Konecranes Plc, Final report, 31 March 2022 (this case was assessed by the European Commission and the CMA.). **German Bundeskartellambt:** B4-115-19 CRRC/Vossloh, decision of 27 April 2020.

[36] Case No. COMP/M.7643 CNRC/Pirelli, decision of 1 July 2015.

[37] For instance, on 19 March 2020, the EC adopted a State aid Temporary Framework to enable Member States to use the full flexibility foreseen under State aid rules to support the economy in the context of the coronavirus outbreak. In its second amendment, it specified a prohibition of cross-subsidisation and an acquisition ban (European Commission, 2020[52]). *"In order to prevent undue distortions of competition beneficiaries must not engage in aggressive commercial expansion financed by State aid or beneficiaries taking excessive risks. […] As long as at least 75% of the COVID-19 recapitalisation measures have not been redeemed, beneficiaries other than SMEs shall be prevented from acquiring a more than 10% stake in competitors or other operators in the same line of business, including upstream and downstream operations."*

[38] During the financial crisis in 2008, acquisition bans were to ensure that aid could not be used to finance activities such as acquisitions which are not linked to the restructuring process. (see also "Communication for the Commission on the return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules", 2009/C 195/04, 19 August 2009, para 23).

See for instance EC Decision 2011/823/EU of 5 April 2011 on the measures C 11/09 (ex NN 53b/08, NN 2/10 and N 19/10) implemented by the Dutch State for ABN Amro Group NV (created following the merger between Fortis Bank Nederland and ABN Amro N). An acquisition ban is deemed necessary to keep the aid limited to the minimum necessary. This ban is confirmed in a judgment on 8 April 2014 of the General Court in case T-319/11 ABN AMRO Group v Commission.

[39] The EU Horizontal Merger Guidelines are quite explicit about the potential predatory behaviour that could result from subsidies: *"Some proposed mergers would, if allowed to proceed, significantly impede effective competition by leaving the merged firm in a position where it would have the* ***ability and incentive*** *to make the expansion of smaller firms and potential competitors more difficult or otherwise restrict the ability of rival firms to compete. […] In making this assessment the Commission may take into account, inter alia, the* ***financial strength of the merged entity*** *relative to its rivals. (emphasis added)* (see also (Sire, 2022[31]))

[40] Bundeskartellambt B4-115-19 CRRC/Vossloh, decision of 27 April 2020.

[41] See for instance case COMP/M.2908 Deutsche Post/DHL (II), para 34 and case COMP/M.3971 Deutsche Post/Exel, point 79.

[42] Case COMP/M.4517 Iberdrola/Scottish Power, point 44.

[43] Other indicators that were used are overall group turnover, equity, equity ratio, sales, gross profit, EBITD, EBITD Margin, EBIT Margin, EBITDA margin, net profit, liquidity ratio, book value of equity, total assets, working capital, cash and equivalents and interest-bearing long-term debt.

[44] See for instance case COMP/M.5765 Foxconn/Dell (Products) Poland, para 61 and case COMP/M.5870 Foxconn/Sony LCD TV Manufacturing Company in Slovakia, para 49 arguing the subsidies are small compared to the financial size. In Bundeskartellambt B4-115-19 CRRC/Vossloh, para para 416, the State resources are argued to far exceed the possibilities of private competitors.

[45] Case COMP/M.4956 STX/Aker Yards and Case COMP/M.5153 Arsenal/DSP.

[46] See also Bundeskartellambt B4-115-19 CRRC/Vossloh, para 396.

[47] See also (Sire, 2022, p. 8[31]).

[48] See also Bundeskartellambt B4-115-19 CRRC/Vossloh, para 675.

[49] "[…] [W]hilst economic and financial power are important criteria for the appraisal of whether a concentration is compatible with the common market, in the absence of other indicators, financial strength as such will not be sufficient to lead to a situation where effective competition will be significantly impeded." See for instance case COMP/M.2908 Deutsche Post/DHL (II), para 32 and case COMP/M.3971 Deutsche Post/Exel, para 77.

[50] In fact, the limited role of financial strength in the EC's case practice led the authors to propose that financial strength should no longer be considered in the assessment of a merger.

[51] Guidance on Substantive Merger Control, Bundeskartellamt, 29 March 2012.

[52] See also (Bright and Schmidt, 2005, pp. 294-297[35]).

[53] "Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings", 2004/C 31/03, 5 February 2004.

[54] Case No COMP/M.8677 – Siemens/Alstom, para 490.

[55] In Bundeskartellambt B4-115-19 CRRC/Vossloh, para para 620.

[56] In addition, if cross-subsidisation allows the company to set prices below cost in the competitive market, its output in this market may increase. In this case, the company will experience economies of scale that its rivals, not receiving the subsidy, cannot achieve. The increase in output will result in lower unit cost of operation, leading to a further shift in sales from the competitors' product to the cross-subsidising company's product. (OECD, 2018, p. 13[39])

[57] Case COMP/35.141 — Deutsche Post AG, decision of 20 March 2001. Although it was decided that Deutsche Post had infringed Art. 102 TFEU, no fine was imposed. This, due to the fact that the relevant measure of costs used to identify predation, which in this case the SOE should have taken into account when calculating the pricing floor for the purpose of predatory pricing, was not yet sufficiently developed and had not been previously clarified by the Commission. (OECD, 2018[39]).

[58] This did not imply that Deutsche Post should have been seeking to earn a commercial margin, but simply that, like any other business, setting loss-making prices was irrational unless the loss was expected to be compensated through higher prices elsewhere or at a later date.

[59] Indeed, for most of the cases decided by the European Commission (which are the far majority of the discovered merger cases that include an assessment of subsidies), State aid had been already assessed (and approved) under a State aid procedure. In a few cases, however, the existence of State aid was not entirely clear. The existence of State aid was either contested or a State aid procedure was still ongoing. In these cases, however, a substantive analysis of the potential State aid was included for reasons of completeness.

[60] See for instance Bundeskartellamt, case B4-115-19, para 387 and 408. The Bundeskartellamt referred to a report on China by the EC ("Commission Staff Working Document: On Significant Distortions in the

Economy of the People's Republic of China for the Purposes of Trade Defense Investigations" 20 December, 2017) and the "Made in China 2025" industrial strategy.

[61] Case M.9820 Danfoss/Eaton Hydraulics.

[62] The EC has set a high standard of proof for establishing the existence of subsidies given that the *RJB Mining* judgement provides no obligation to carry out an independent analysis to establish the existence of foreign subsidies (see for instance Case COMP/M.4956 STX/Aker Yards, para 85.).

[63] According to the EC, the complainant bears the burden of proof to demonstrate that certain practices are not in line with market conditions. Similarly, while past subsidies may point to the likelihood of future subsidies, the complainant will need to prove that such subsidies in the past have been used in an anti-competitive fashion (Case COMP/M.7333 Alitalia/Etihad). Finally, the subsidies need to be specific to the products at hand in the merger case (Case M.9820 Danfoss/Eaton Hydraulics).

[64] (Svetlicinii, 2018, pp. 112-117[17]) provides a review of the decisions published by the national competition authorities of the EU Member States, focusing on Chinese SOEs, and concludes that State ownership of Chinese SOEs is often not considered.

[65] Or in Europe, below the costs of that of an equally efficient competitor. The use in the analysis of a hypothetical “equally efficient competitor” in Europe implies that an effective competitive process should be protected (instead of simply protecting competitors); i.e. not excluding competitors by other means than competing on the merits of their products or services. (Commission guidance on its enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, OJ C 45, 24.2.2009, para 6).

[66] Different legal tests exist to establish predatory pricing, including the Areeda-Turner rule in US antitrust jurisprudence and the AKZO approach in the EU. Proof of predatory pricing under the Areeda-Turner test requires two things: (i) the predatory pricing strategy is expected to be profitable (i.e. recoupment is likely) and (ii) predatory prices over a significant number of sales are below a relevant measure of cost, presumptively average variable cost (AVC) or, in some cases, marginal costs over a relatively short run. See for instance (Hovenkamp, 2015[53]). In Europe, the AKZO judgment in 1986 (AKZO Chemie v Commission, C-62/86, Saml. 1999-I, 3359) by the European Court of Justice set a legal test for predatory pricing based on a price-cost comparison, the purpose of which was to define the costs that change in relation to the quantity produced. According to this judgment, prices set by a dominant firm below its average variable costs are presumed abusive, while prices above average variable costs but below average total costs are abusive only if they are intended to eliminate a competitor.

[67] See also (Hovenkamp, 2015, p. 2[53]), which mentions the decision in the 1989 US case A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396 (7th Cir. 1989), in which Judge Easterbrook's elaborates on the difficulties inherent in measuring price/cost relationship.

[68] For instance, in the 2001 Deutsche Post decision (Case COMP/35.141 — Deutsche Post AG), the EC found that a test based on the average variable and total costs used in the AKZO judgment is not the most appropriate one to identify the level of predatory pricing for a postal company that performs a PSO, while also offering services in competitive markets. In contrast to the AKZO judgment, the DPAG decision is based on an "incremental costs" cost test, i.e. a test based on AIC, which denotes the average product-specific (incremental) costs per unit.

[69] Examples of costs that need to be corrected for are the relevant cost of capital (which can be lower for a SOE as a result of its government implicit or explicit support) or economies of scale or scope.

[70] Case COMP/35.141 — Deutsche Post AG.

References

Aghion, P. et al. (2015), "Industrial Policy and Competition", *American Economic Journal: Macroeconomics*, Vol. 7/4, pp. 1-32. [13]

Alexis, A. (2021), "Foreign subsidy controls: The new European Commission proposal", *Concurrences*. [48]

Batchelor, B. et al. (2021), "The EU Commission proposes a new merger and public procurement control legislation to combat foreign subsidies", *Concurrences Antitrust Case Laws e-Bulletin*. [23]

Benoit, J. (1984), "Constrained entry in a game with incomplete information", *The RAND Journal of Economics*, Vol. 15, pp. 490–499. [30]

Boutin, X. et al. (2012), "The Deep-Pocket Effect of Internal Capital Markets", *ECGI Working Paper Series in Finance*, Vol. Finance Working Paper N° 258/2009. [26]

Bright, C. and J. Schmidt (2005), "Financial strength as a Relevant Criterion in EC Merger Analysis: A Search for Meaning", *European Competition Journal*, Vol. 1/2, pp. 293-314, https://doi.org/10:5235/ecj.v1n2.293. [35]

Cabral, L. (ed.) (2000), *Introduction to Industrial Organization*, MIT Press. [43]

Camesasca, P. (2021), "The EU Commission proposes a regulation that introduces more scrutiny for companies receiving foreign subsidies", *Concurrences*. [22]

Camesasca, P., M. Maczkovics and S. Bertin (2022), "The EU Parliament signs the Commission's proposal which would allow the Commission to examine whether foreign subsidies have a potential negative impact on the internal market", *Concurrences*. [47]

Capobianco, A. and H. Christiansen (2011), *Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options*. [33]

Carpi, J. (2020), "EU Merger Control in a globalised economy", *Competition Law & Policy Debate*, Vol. Volume 6/Issue 1, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3797497. [18]

Choi, J. and A. Levchenko (2022), "The long-term effects of industrial policy", *NBER working paper*, https://www.nber.org/system/files/working_papers/w29263/w29263.pdf. [14]

Cohen, R. (2004), *Trade and Competition Issues Raised by the Liberalization of State-Owned Monopolies: the Example of Deutsche Post's Cross-Subsidizing of Its Express Delivery Operations*. [36]

Criscuolo, C. et al. (2022), "An industrial policy framework for OECD countries: Old debates, new perspectives", *OECD Science, Technology and Industry Policy Papers*, No. 127, OECD Publishing, Paris, https://doi.org/10.1787/0002217c-en. [15]

Criscuolo, C. et al. (2022), "Are industrial policy instruments effective?: A review of the evidence in OECD countries", *OECD Science, Technology and Industry Policy Papers*, No. 128, OECD Publishing, Paris, https://doi.org/10.1787/57b3dae2-en. [12]

de la Mano, M. and B. Durand (2010), *A Three-Step Structured Rule of Reason to Assess Predation under Article 102, Discussion Paper, version dated 2 February 2010*. [49]

European Commission (2021), *Commission Staff Working Document; Impact Assessment Accompanying the Proposal for a Regulation of the European Parliament and of the Council on foreign subsidies distorting the internal market*. [34]

European Commission (2021), *Proposal for a regulation of the european parliament and of the council on foreign subsidies distorting the internal market*. [51]

European Commission (2021), *Staff Working Document; Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997*. [20]

European Commission (2020), *Amendment to the Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak*. [52]

European Commission (2020), "White Paper on levelling the playing field as regards foreign subsidies". [21]

European Parlement (2022), "Proposal for a regulation of the European Parliament and of the Council on foreign subsidies distorting the internal market (COM(2021)0223 – C9-0167/2021 – 2021/0114(COD))". [24]

Evenett, S. and J. Fritz (2021), *Subsidies and Market Access: Towards an Inventory of Corporate Subsidies by China, the European Union and the United States*. [6]

Evenett, S. and J. Fritz (2020), *The Global Trade Alert database handbook. Manuscript, 14 July 2020.*. [2]

Forsyth, P. and C. Guiomard (2019), "The economic approach to subsidies for foreign airlines", *Journal of Air Transport Management*, Vol. 74, pp. 47-53. [46]

Fresnard, L. (2010), "Financial strength and Product Market Behavior", *The Journal of Finance*, Vol. LXV/3, pp. 1097-1122. [25]

Geddes, R. (2008), "Pricing by State-Owned Enterprises: The Case of Postal Services", *Managerial and Decision Economics*, Vol. 29/7, pp. 575-591, https://www.jstor.org/stable/pdf/25151631.pdf. [37]

Gomez, R., J. Goeree and C. Holt (2008), "Predatory Pricing Rare Like A Unicorn", *Handbook of Experimental Economics Results*, Vol. Volume 1, pp. 178-184, https://doi.org/DOI: 10.1016/S1574-0722(07)00022-4. [32]

Henderson, D. (2017), *Why Predatory Pricing Is Highly Unlikely*. [50]

Hovenkamp, H. (2015), "Predatory Pricing under the Areeda-Turner Test", *Faculty Scholarship at Penn Law. 1825*. [53]

ICN (2008), *Report on Predatory Pricing*. [41]

IMF et al. (2022), *Subsidies, Trade, and International Cooperation*, OECD Publishing, Paris, https://doi.org/10.1787/a4f01ddb-en. [1]

Kokkoris, I. and C. Lemus (eds.) (2022), *The boundaries of public interest in merger control: taking into account non-competition issues including industrial policy and environmental protection*, Edward Elgar Publishing, https://doi.org/10.4337/9781789903799. [19]

Leslie, C. (2013), "Predatory Pricing and Recoupment", *Columbia Law Review*, Vol. 113/7, pp. 1695-1771. [42]

Lianos, I. and I. Kokkoris (eds.) (2010), *State Aid Law Claims in Merger Control*, Kluwer Law International. [45]

McGee, J. (1958), "Predatory price cutting: The Standard Oil (N.J.) case", *The Journal of Law and Economics*, Vol. 1, pp. 137–169. [28]

Motta, M. (2004), *Competition Policy, Theory and Practice*, Cambridge University Press. [27]

OECD (2022), *Assessing trade measure circumvention behaviours in global steel trade*, https://one.oecd.org/document/DSTI/SC(2022)15/en/pdf. [9]

OECD (2022), *Subsidies to the steel industry: insights from the OECD data collection*, https://one.oecd.org/document/DSTI/SC(2022)21/en/pdf. [8]

OECD (2022), "Why governments should target support amidst high energy prices", *OECD Policy Responses on the Impacts of the War in Ukraine*. [7]

OECD (2021), "Measuring distortions in international markets: Below-market finance". [5]

OECD (2021), "The promotion of competitive neutrality by competition authorities, OECD Global Forum on Competition Discussion Paper", https://www.oecd.org/competition/globalforum/the-promotion-of-competitive-neutrality-by-competition-authorities.htm. [16]

OECD (2019), *Measuring distortions in international markets: the aluminium value chain*. [3]

OECD (2019), *Measuring distortions in international markets: The semiconductor value chain*. [4]

OECD (2018), *Competition Law and State Owned Enterprises*, https://one.oecd.org/document/DAF/COMP/GF(2018)10/en/pdf. [39]

OECD (2010), *Competition, State Aids and Subsidies*. [10]

OECD (2010), *Competition, State Aids and Subsidies - Background Note*, https://www.oecd.org/daf/competition/sectors/48070736.pdf. [44]

OECD (2009), *Competition Policy, Industrial Policy and National Champions*. [11]

OECD (2004), "Competition Policy in Subsidies and State Aid". [54]

OECD (1999), *Promoting Competition in Postal Services*. [38]

Riley, A. (2016), “Nuking Misconceptions: Hinkley Point, Chinese SOEs and EU Merger Law”, *European Competition Law Review*, http://dx.doi.org/10.2139/ssrn.2778229. [40]

Sire, T. (2022), “The uneven playing field: How to deal with foreign subsidies when assessing mergers?”, *Concurrences N° 1-2022*, Vol. February 2022, Art. N° 105183, pp. pp. 54-62. [31]

Svetlicinii, A. (2018), “The Acquisitions of the Chinese State-Owned Enterprises under the National Merger Control Regimes of the EU Member States: Searching for a Coherent Approach”, *Market and Competition Law Review*, Vol. II/No. 1, pp. 99-120. [17]

Telser, T. (1966), “Cutthroat competition and the long purse”, *The Journal of Law and Economics*, Vol. 9, pp. 259–277. [29]