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ECONOMIC ANALYSIS AND EVIDENCE IN ABUSE CASES – Background note

by Simon Roberts -

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This document was prepared by Simon Roberts (Professor, Centre for Competition, Regulation and Economic Development, University of Johannesburg) to serve as the background note for Session II of the 20th OECD Global Forum on Competition to be held on 6-8 December 2021.

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Economic Analysis and Evidence in Abuse Cases - Background Note[1]

This background paper considers the role of economics in abuse of dominance cases. Economic analysis and evidence has become increasingly important in the context of effects-based approaches to assessing possible abuse of a dominant position. The paper sets out the core economic framework for assessment of abuse of dominance including the balancing of over- and under- enforcement and the relevance of the characteristics of the markets and economies in question. It comments, in particular, on the challenges faced by authorities in developing and middle-income countries given the rapid expansion of competition law in these jurisdictions. The economic tests in different types of exclusionary and exploitative abuses of dominance are considered along with the practical challenges in the gathering of evidence and undertaking appropriate assessments. The role of economists in cases, including as experts providing testimony on the part of private parties, is examined.

[1] This paper was prepared by Simon Roberts, Professor, Centre for Competition, Regulation and Economic Development, University of Johannesburg

Table of contents

Economic Analysis and Evidence in Abuse Cases - Background Note 2

1. Introduction 5

1.1. Context: concentration, dominance and possible abuse 5
1.1.1. Context 5
1.1.2. Main areas of focus of this paper 6
1.2. Considering type I and type II errors 6
1.2.1. Comment on the challenges in middle-income and developing countries 7
1.3. The role of economics 8
1.3.1. Central concern with substantial market power and its exercise 8
1.3.2. Ways in which abusive conduct harms competition and consumers 9

2. Economic Framework 10

2.1. Defining dominance 10
2.2. Factors contributing to the risk of abusive conduct 11
2.3. Exclusionary abuse 12
2.3.1. Theories of harm: ability, incentive and effects 12
2.3.2. Exclusionary abuse by vertically integrated firms 14
2.3.3. Exclusion by a non-integrated dominant firm 14
2.3.4. Evaluation – economic analysis 16
2.4. Exploitative abuse: excessive pricing 17
2.4.1. Covid-19 price gouging as excessive pricing in exceptional circumstances 19

3. Economic Analysis and Evidence: Practical Challenges in Exclusionary Abuse of Dominance Assessment 20

3.1. Reasoning and methodology 20
3.2. Evidence 21
3.2.1. Quantitative evidence 22
3.2.2. Qualitative evidence 35
3.2.3. Triangulation and robustness 36

4. Role of economists 41

4.1. Integrating economic analysis in case teams 41
4.2. Incentives and economic experts 42
4.2.1. Should different approaches to economic assessment be adopted in different regimes? 42
4.2.2. Are expert economists independent? 43
4.3. Evaluating economic assessments and their role in decisions 44

5. Conclusions 45

References 48

Figures

Figure 2.1. Exclusion with and without vertical integration 13

Boxes

Box 3.1. Exclusive dealing in ticketing in Singapore 24
Box 3.2. Loyalty rebates in the skies: South African Airways I and II 27
Box 3.3. The as-efficient competitor test and appropriate cost benchmarks 28
Box 3.4. Predation through the launch of a "fighting brand" in the UK Cardiff Bus Case 30
Box 3.5. Margin squeeze in mobile money through USSD pricing in Kenya 34
Box 3.6. Exclusivity conditions and loyalty rebates for consumer goods in Latin America 38
Box 3.7. Singapore's draught exclusivity in beer case 40
Box 3.8. Exclusivity agreements in the Philippines Urban Deca Homes case 40
Box 3.9. Tying claims in the India Ajay Devgn Films case 41

1. Introduction

1.1. Context: concentration, dominance and possible abuse

1.1.1. Context

1. Abuse of dominance refers to where companies are in a position to engage in unilateral conduct utilising substantial market power to exclude rivals and/or exploit customers to earn returns that would not normally be earned under conditions of effective competition. It is the area of competition law where there has been the greatest differences in approach between market economies, as well as over time. A special onus is placed on dominant firms not to abuse this position in most countries around the world. Over time this has evolved from a more form-based to a more economic effects-based assessment. Operationalising an effects-based regime to assess abuse cases is one of the major challenges facing competition authorities today given concerns about concentration and market power.

2. A growing body of work has identified increasing market power, within and across countries (see, for instance, Bajgar et al (2019[1]) and OECD (2018[2])). This has raised questions about whether the appropriate balance has been struck in abuse of dominance enforcement and, by implication, in how economics has been translated into tests and standards for adjudication. While some have argued that growing market power reflects the rise of ‘superstar firms’ (including digital platforms), with high mark-ups simply being the reward for innovation, there is evidence that market power is much more widespread than in dynamic economic sectors and that high profits may also be from hindering rather than advancing innovation. The expanding literature has identified increased concentration in many countries, high levels of profitability and links with rising inequality, with recommendations for tougher competition enforcement.[1]

3. Concentration can be due to features intrinsic to industries, such as, economies of scale and scope, network effects, transactions costs, and the size of expenditure necessary for research and development. Large firms are essential for realising the gains from these features (Roberts, 2020[3]). The issue is what amounts to an abuse of a position through the exercise of market power, not the size and concentration, as such.

4. Competition should also be understood in dynamic terms as a process of rivalry which rewards effort, investment and creativity. In these terms we can consider who are the participants and how they are able to bring their products and services to market. Amartya Sen argued that the competitive market mechanism should be evaluated in terms of its accomplishments in promoting individual freedoms (to produce, develop productive capabilities, and make autonomous choices), as opposed to the conventional welfare framework (Sen, 1993[4]). The development of productive capabilities may also be a collective rather than individualist activity. Sen distinguished the ‘opportunity aspect’ relating to the range of choice, and the ‘process aspect’ which includes decisional autonomy not restricted by interference from others (Sen, 1993[4]).

5. This is particularly important for tackling abuse of dominance. The harm to competition from certain conduct may well be in terms of blocking potentially efficient rivals with different and innovative business models. In work on digital platforms there have been important insights into how dominant firm conduct can shape markets in ways which may undermine potential competitors (see, for example, OECD (2020[5]) and OECD (2018[6])). As with taking into account the impacts of mergers on rivals in adjacent markets who may be important sources of potential competition, so in abuse it is also important to understand the implications of arrangements on how market rivalry may, or may not, evolve.

6. Incumbents with substantial market power may also engage in multiple and evolving commercial strategies to protect their position and the returns being earned from it. Indeed, it would be very surprising if they were not constantly re-evaluating their strategies. It is therefore a mistake for abuse of dominance enforcement to require an assessment of discrete and separate conduct and its effects without considering the overall impact of such strategies. We need to consider market power as multi-dimensional, including the power to govern value chains, set standards, act as a gatekeeper and allocate rents (see Dallas et al (2019[7]), Mondliwa (2021[8]), and Roberts (2020[3])).

7. Economic analysis is central to understand how markets work in practice, including considering whether competition is 'effective' in ensuring rewards for investment, innovation and new product development.

1.1.2. Main areas of focus of this paper

8. Economics has become important to the assessment of possible abuse of dominance in most jurisdictions as it is accepted that the effects of arrangements depend on an assessment of market power and whether it is being exerted in ways which improperly distort markets, undermine competition and exploit positions of incumbent firms. This has been driven by responses to the Chicago School critique of form-based approaches. As a result, economists have had a growing influence in cases.

9. It is important to note, however, that economic assessment can support presumptions relating to the form of arrangements where other conditions are also present. Indeed, the challenge of John Vickers is as pertinent as ever: it is not a case of economics versus legal standards but of 'how well the rules are grounded in economics' (Vickers, 2005[9]).[2]

10. This paper sets out the core economic framework for assessment of abuse of dominance including the balancing of over- and under- enforcement and the relevance of the characteristics of the markets and economies in question. It comments, in particular, on the challenges faced by authorities in developing countries given the rapid expansion of competition law in these jurisdictions. The paper does not seek to summarise the excellent textbooks covering the economics of abuse of dominance and is rather focused on putting the economics into practice.[3] The reader is also pointed to the extensive materials produced by the ICN and the OECD. Section 2 considers the economic tests in different types of exclusionary and exploitative abuses of dominance. Section 3 considers practical challenges in the gathering of evidence and undertaking appropriate assessments. Section 4 addresses the role of economists in cases. Section 5 concludes.

1.2. Considering type I and type II errors

11. The appropriate thresholds for weighing-up the factors in an assessment of possible abuse of dominance depend on the balance between the dangers of over-enforcement (or the probability and costs of Type I errors, where anti-competitive conduct is identified where it is not the case) against under-enforcement (the probability and costs of Type II errors, that is, false negatives - where actual abuses are not identified). Under-enforcement means dominant firms are able to maintain their position over actual and potentially-efficient rivals and entrants. The significance of under-enforcement depends on the extent to which the dynamism and increased economic participation that comes from smaller rivals has been stifled. The costs of over-enforcement depend on the extent of the chilling effect that this has on large incumbent firms and their investment.

12. The balancing of the likelihood and harm from under- versus over- enforcement is based on economic assessment. The results of such an assessment vary by jurisdiction and thus different jurisdictions may not necessarily, as a matter of economics, adopt the same rules (Evans, 2009[10]; Christiansen and Kerber, 2006[11]). Where there is a greater likelihood of abuse of dominance and where the duration and amount of harm will be more substantial, this paper argues that simple rules which enable easier prosecution of such conduct are justified *on economic grounds*. This is the case in many developing countries (Cheng, 2020[12]). Indeed, the growing body of research raises questions about the balance in advanced economies also ((Eeckhout, 2021[13]; Wu, 2018[14]; Philippon, 2019[15]; Baker, 2019[16]).

1.2.1. Comment on the challenges in middle-income and developing countries

13. There are a number of reasons why developing and middle-income countries are objectively likely to have greater abuse of dominance concerns than high-income countries (Roberts, 2012[17]; Brusick and Evenett, 2008[18]; Evans, 2009[10]; Hur, 2004[19]). While these countries are very diverse, some key features which go to the application of competition tests in practice and the likelihood and costs of under and over-enforcement are simply highlighted here to emphasise the ways in which they differ substantially from jurisdictions such as the EU and the US.

14. Many (although obviously not all) developing countries have relatively small markets and higher levels of concentration, given scale economies. In very large economies such as the US and EU (which are effectively outliers) it is much less likely that there will be dominant firms in mature industries as, given scale economies, there is likely to be at least a few rivals. In smaller jurisdictions there is a greater likelihood of a single dominant firm in industries such as basic chemicals or some food processing (e.g. wheat and sugar milling) where large capital investments are required and minimum efficient industry scales are close to total national demand (Tapia and Roberts, 2015[20]). Due to poor transport infrastructure, there are also likely to be localised markets even within many of the larger developing economies (Evenett, 2015[21]).

15. State support and access to government in the past has commonly enabled many dominant companies to entrench their position through favourable treatment including licences, regulations, and privileged energy and transport infrastructure provision. These companies may often now be in the hands of multinationals (Brusick and Evenett, 2008[18]). The effects of prior lobbying and patronage, often linking local elites and multinationals, are quite different from the operation of a coherent industrial policy. The latter looks to provide temporary support to build capabilities and is consistent with rivalry. In the examples of China and South Korea rivalrous contests have been central to the allocation of industrial policy support, as well as maintaining rivalry between large businesses to promote competitive discipline (Aghion et al., 2015[22]).

16. In large markets with well-functioning institutions and logistics, dominance is thus more likely to be due to innovation than other factors (in comparison with smaller developing economies) and it is unsurprising that many abuse of dominance issues in the past decade or so in advanced economies have been regarding digital platforms, as well as in sectors such as pharmaceuticals. With regard to digital platforms, the first-mover advantages have been reinforced by network effects and hundreds of acquisitions by the main global businesses (OECD, 2020[5]). However, abuse concerns are much more widespread in other jurisdictions and extend far beyond innovative industries. The issues being raised by digital platforms of entrenched dominance and market power apply much more widely across the economies of many middle-income and developing countries.

17. In many middle-income and developing economies, market failures in financial markets, higher transport costs, and tariff and non-tariff barriers further mean markets are less contestable. Large incumbents can be less easily challenged and the rents they can earn from incumbency are higher. There may well also be less transparency in regulatory decision-making which can be exploited by large and politically connected corporations (Vilakazi and Roberts, 2019[23]).

18. In other words, competition law and policies are likely to matter *more* in these countries, where competition authorities are younger and less well-resourced. However, there are substantial challenges in bringing cases and in most countries very few cases have been taken by authorities. Abuse of dominance cases are typically highly litigious, time consuming and expensive, with final decisions often a decade after the conduct at issue. It is against this backdrop that we must consider the important debates about the role of economic analysis in abuse of dominance cases (see also Gerber (2015[24]), on developing country challenges).

1.3. The role of economics

1.3.1. Central concern with substantial market power and its exercise

19. Market power is pervasive in market transactions because of intrinsic characteristics including information imperfections and economies of scale, scope and network effects. Sellers can exploit some consumers' higher willingness to pay and reluctance to switch to alternatives in many different ways. Generally, this results in small mark-ups which are not necessarily sustained.

20. We are therefore concerned with the exercise of *substantial* market power and how competitive rivalry does or does not keep this in check. This is essentially about economic reasoning and the field of industrial organization, in particular.[4] The specificities of industries and markets matter, which has led economists to advocate for case-by-case analysis in competition enforcement and avoiding assessments simply based on market shares and the form of the conduct.

21. While economics is therefore at the heart of abuse of dominance enforcement it is a mistake to conclude that complex economic assessment with analysis of large data sets is required to make a decision on each case of potential abuse of dominance. Requiring such complex and data-intensive assessments, however, may result in a system that is not administrable. Less well-resourced public institutions in middle-income and developing countries are at a substantial disadvantage. Indeed, it is the economic assessment of the harm caused by abuse of dominance which motivates instead for practical tests to assess if returns are solely due to innovation, risk-taking in investments, creativity and effort, or instead result from conduct that leverages entrenched incumbency to harm competition and consumers. The adoption of presumptions and the shifting of the onus depending on circumstances is informed by sensible economics. It is not sensible to stipulate tests which regulators are unlikely to be able to carry out.

22. Competition economics has developed into an analytical 'toolbox' which can be used to understand market outcomes and firm conduct. This toolbox provides for menus of possible theories of harm to competition which can be tested against the available evidence including importantly evidence obtained from the firms in question and their internal documents. Economics is the framework for organising and assessing this evidence.

23. In practice it involves a problem-solving iterative approach, where information on the market suggests plausible theories that, in turn, can motivate for information gathering to test whether the possible explanations – of efficiency rationales and of anti-competitive abuse - are supported by the facts. Economics is a lens to examine these problems (Tirole, 2017[25]). Such an eclectic approach is a more honest description of much of the work of economists and in the messy world of real markets and firms whose strategies are continuously evolving, even more so.

24. Central to understanding these markets are the presence of market imperfections such as information asymmetries and economies of scale and scope, and network effects (as explained in the textbooks referenced above). The strategic behaviour of firms is analysed through the lens of game theory. And, properly grounding the appropriate competition rules in economics, including the balancing of the important factors, implies being cognisant of the characteristics of the economy in question.

1.3.2. Ways in which abusive conduct harms competition and consumers

25. Harm to consumers is most evident in straightforward exploitation of market power through excessive pricing. Where this is by a firm in a super-dominant or quasi-monopoly position which is unlikely to be challenged in the short to medium term, then the competition authority is effectively acting as an economic regulator of last resort and the techniques applied are akin to those of economic regulation – assessing the size of the mark-ups and returns being earned and possible justifications for them.

26. In this paper we are more concerned with exclusionary abuse of dominance, that is, conduct which harms consumers by distorting the competition process. Of course, this provides the basis for supra-competitive returns to be earned by the dominant firm. However, rather than giving up on the possibility of effective competitive rivalry and directly regulating prices (and quality), the competition authority is responsible for enforcing rules for workable competition in the presence of firms with substantial market power.

27. The market game is much more complex than sports and so the rules can only be given in very high-level terms, meaning that the rule-interpretation involved in competition enforcement may amount to rule-making for the markets in question, given the specificities of those markets and the conduct uncovered. The harm to consumers is the ultimate rationale for protecting the competitive process but how the dynamic process of rivalry plays out is inherently difficult, if not impossible, to predict. It is therefore important to protect competition rather than setting a standard which requires anticipating consumer benefits in any more than broad terms.

28. The competitive process stimulates new ideas, innovations and business models as rivals challenge each other. While difficult to assess, there is a growing consensus about the positive relationship between effective competition and innovation, which is a whole field in itself (Aghion, 2021[26]).[5] This has become acute in the concerns about possible abuse of dominance by digital platforms and has led to revisions of laws and regulations including to designate platforms as having ‘strategic market status’ (proposed in the UK and yet to be enacted), or ‘a paramount significance across markets’ (in Germany).

29. In addition, supra-competitive profits being earned from the exertion of substantial market power provide incentives for dominant firms to protect their positions and the rents being earned through exerting influence in other ways such as through lobbying and funding political organisations to skew the democratic process. Conversely ensuring open and competitive markets are part of more inclusive economies (North, Wallis and Weingast, 2009[27]; Acemoglu and Robinson, 2012[28]). Developing countries are in many cases engaged in building public institutions from a situation where wealth is concentrated

in the hands of small elites in partnerships with concentrated transnational business interests. Their challenge is to generate competition by reducing barriers to entry (Budzinski and Beigi, 2015[29]; Vilakazi, Goga and Roberts, 2021[30]). Abuse of dominance is just one part of the picture.

2. Economic Framework

2.1. Defining dominance

30. Dominance is typically defined as the ability to act to a substantial degree independently of competitors, customers and suppliers. This is not an economic definition, as market power means exploiting the dependent relationship of customers, having regard to customers' alternatives. It is the substantial nature of such market power, given the poor alternatives, that is central to the evaluation of dominance. This can be expressed in being able to earn high profits from charging prices on a sustained basis which are significantly above costs including a reasonable return on capital. When assessing dominance, authorities' economic analysis can focus on two key contributors: limitations to substitutability and entry barriers that insulate the firm in question for competitive pressures (OECD, 2020[5]).

31. In practice, market definition and the position of the firm in this market, is material to the assessment (see, for instance, OECD (2012[31])). Market definition can be understood as an exercise in mapping the dimensions of competition and alternatives in product and geographic space. As such, it is a framework for organising market information. If properly defined, a sustained very high market share in the relevant market is a strong indicator of substantial market power, especially if associated with supra-competitive profits. Care must be taken in the market definition to avoid the 'cellophane fallacy' where prevailing prices already at monopoly levels are used as the basis for the SSNIP test.[6] There is also a potential circularity in assessing dominance in exclusionary abuse cases in that, if the conduct has the effect of substantially lessening of competition, then there must be a market over which the firm has substantial market power in order to have achieved this effect.

32. Some countries have set the dominance market share threshold at around 35% to 50% in their laws while others indicate this in guidance (for example as an indicator which can nonetheless be further assessed on a case-by-case basis). This appears low for unilateral dominance as it implies that there could easily be at least one or two other substantial rivals with substantial market shares and we should instead be more concerned with coordinated conduct if anti-competitive market outcomes are suspected. First, it is important to reiterate that dominance is not an issue in itself, it is simply a threshold for considering the conduct of the firm and its possible anti-competitive effects against claimed justifications. Second, as a matter of economics, it is quite possible that firms have unilateral market power in tight oligopolies where there are tacit understandings and/or product differentiation which means that they are not effectively rivalrous. Two or three firms may independently each be involved in conduct to exclude smaller rivals and entrants as well as to exploit their market power from the tacit understanding. A lower threshold means authorities can at least examine such conduct. Shares below the thresholds are effectively a safe harbour.[7] Some jurisdictions also consider firms to be jointly dominant if there is evidence of co-ordination in their behaviour.

33. Under normal circumstances a dominant position should only lead to scrutiny if it is durable, otherwise high profits will soon be undermined by smaller rivals and entrants. Barriers to entry are important, including because of arrangements put in place by the dominant firm to protect its position or build the 'moat' around it even wider (in the terms of Warren Buffett, as referred to in Eeckhout (2021[13])). These can include regulatory restrictions on entry, limitations to consumer switching, and network effects, among others (see OECD (2020[5]) and OECD (2005[32]) for a more detailed discussion).

34. The Covid-19 pandemic saw a number of countries including the UK and South Africa tackle price gouging as an abuse of dominance even while the conduct was for a short-term and firms did not necessarily have high market shares (OECD, 2020[33]). Again, this was grounded in economics rather than a form-based approach (see section 2.4 below).

2.2. Factors contributing to the risk of abusive conduct

35. The more economic approach has been characterised as an emerging 'post-Chicago' consensus. This is based on economic models demonstrating that with imperfect information and/or scale economies dominant firms can have both the incentive and ability to exclude actual or potentially as-efficient competitors. It is evident that smaller jurisdictions than those of the EU and USA, and those with more entrenched dominant firms due to their economic history, have a greater likelihood of anti-competitive abuse and greater harm from it (Fox, 2003[34]; Gal, 2009[35]; Fingleton and Nikpay, 2009[36]; Evans, 2009[10]).

36. On top of more entrenched quasi-monopolies in many small, middle-income and developing countries, there are generally higher barriers to entry. These include weaker and shallower financial systems and other obstacles to new entrants like the difficulties in establishing distribution networks and ensuring supply of inputs, as well as factors already identified such as the relationship of scale economies to market size, and less developed transport infrastructure. When one considers under what conditions a venture capitalist would finance an entrant, then real world entry barriers are likely to be greater than at first sight (Stelzer, 2008[37]). These factors imply that dominance is more widespread, more persistent and less contestable in many middle-income and developing countries. It thus follows that the risk of abuse of dominance is higher in these situations.

37. It may be thought that by charging a supra-competitive price the dominant firm is more likely to attract entry. But, an entrant is not considering the current price, but the price post-entry and the obstacles it will face to establish production, build a customer base and attain scale and productive efficiency (Ezrachi and Gilo, 2009[38]). The entrant likely has imperfect information as to the costs and efficiency of the incumbent, with the incumbent having an incentive to signal it is efficient and low cost. Moreover, the state may have paid for the incumbent's sunk costs under state-ownership and/or provided state support through privileged access to transport infrastructure, energy supply and investment incentives, while the entrant may be uncertain as to how long and costly it will be to set-up.

38. Alongside the factors affecting the likelihood of abuse, and its costs, the institutional capacity and skills in the country should be taken into account. But, this does not imply a minimalist approach to enforcement. Rather, it implies a careful country-by-country evaluation against what is required for clear and administrable standards. Using the same analytical framework may mean a different weighing-up of considerations forming the appropriate tests because of the different conditions, as well as different levels of investment in detection and punishment.

2.3. Exclusionary abuse

2.3.1. Theories of harm: ability, incentive and effects

39. There are many different ways in which a dominant firm can seek to undermine actual and potential rivals through anticompetitive conduct. For example, it could seek to block rivals' routes to customers through agreeing exclusivity terms or it could tie-up key inputs by vertically integrating into the sources of supply. There are different mechanisms by which this can be achieved depending on the nature of the good or service. For example, in beverages commonly consumed cold, exclusivity over coolers might have an exclusionary effect, or a similar result could be achieved with loyalty rebates offered to the outlets.

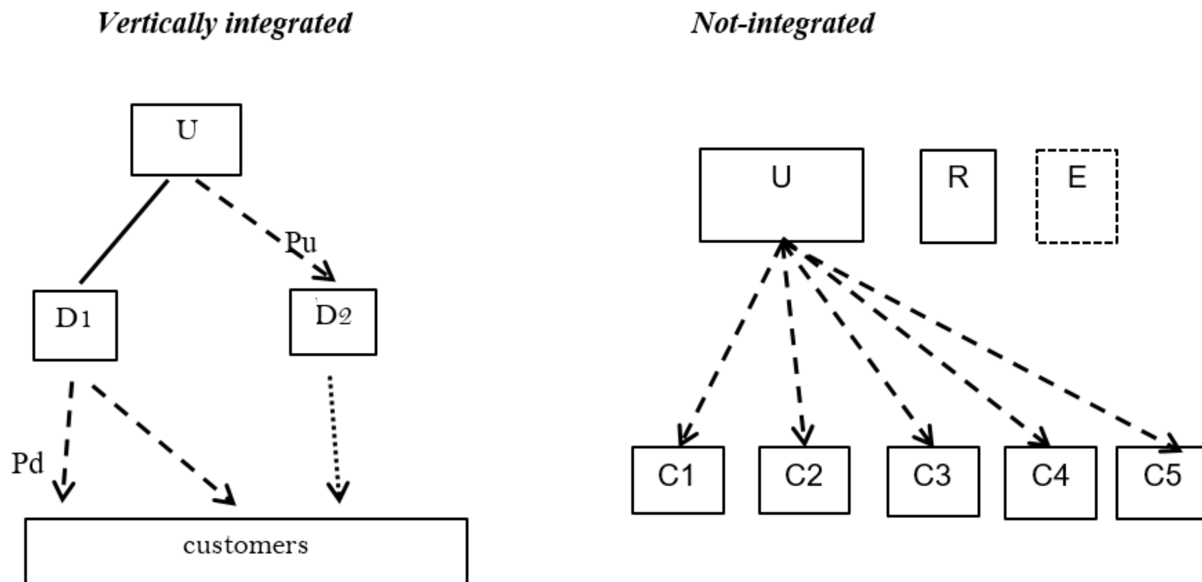
40. Economic analysis is crucial for the assessment of whether the dominant firm has the *ability* to undermine rivals through anticompetitive conduct, the *incentive* to do so, and whether there is a substantial anti-competitive *effect*.

41. An arrangement which may appear to be nakedly exclusionary such as refusing to supply an input, only represents a firm's *ability* to exclude if there are not good alternatives. Buyers can threaten to by-pass the firms by turning to an alternative such as an imported product. But, if this alternative is inferior or much more expensive for the buyers (because of transport costs and other related disadvantages) then the firm knows the buyers are making an empty threat and can stick to its refusal (or strategy to raise rivals' costs).

42. We also need to ask why the firm may be refusing to supply the input when this reduces its sales, that is, what is the anti-competitive *incentive* to do so compared to other justifications. And, is there a substantial likely *effect* on competition?

43. We can distinguish the types of arrangements depending on whether the dominant firm is vertically integrated or not. If the dominant firm is not vertically integrated it can seek to block rivals from customers or suppliers. If it is vertically integrated then the dominant firm is both a supplier and a vertically integrated competitor to rivals. These are described in the simplified form of two levels of markets in Figure 1. However, in value chains there are naturally many levels with varying extents of integration and degrees of market power. Where a dominant firm is not vertically integrated and may be seeking to exclude rivals to it (that is, actual or potential competitors in a horizontal relationship) it may be doing so through vertical arrangements such as exclusive dealing with customers (or suppliers) through which it induces customers to agree to the deals.

Figure 2.1. Exclusion with and without vertical integration



44. When a firm owns both the indispensable upstream input (U) and a seller downstream (D_1), it can engage in a number of strategies to undermine non-integrated rivals. It could refuse to sell to D_2 (or in constrained quantities, undermining scale of D_2), charge a high price Pu that means D_2 is not profitable given downstream price Pd (a 'margin squeeze'), or supply on worse/degraded terms and quality (OECD, 2013[39]).

45. Note that analogous situations exist in digital platforms where entrants and smaller rivals compete with a platform's offering in one layer (such as providing an online comparative shopping tool) while being dependent on the platform itself, such as for the search to direct potential customers to the online offering (OECD, 2020[5]; Furman et al., 2019[40]; Scott Morton et al., 2019[41]; Cremer, de Montjoye and Schweitzer, 2019[42]) (Furman et al., 2019[40]).

46. Models of exclusion typically depend on economies of scale or imperfect information. Clearly both are often present. If information is imperfect, then the incumbent has an incentive to create a reputation by its conduct and/or may seek to signal by its conduct that it is lower cost and more efficient than it is. Scale economies mean an entrant has to be able to build a sufficient customer base to be competitive, and incumbent firms may have the ability and incentive to exclude smaller rivals before they can become a threat (Fumagalli, Motta and Calcagno, 2018[43]). Where there is imperfect information, and where branding and reputation are important, customers may not readily switch, and there are likely to be challenges for smaller rivals in raising the necessary finance. Ultimately, the relevance of different analytical frameworks depends on the characteristics of a specific market.

47. When the dominant firm is not integrated, it can use various means to block its rivals and entrants (R, E) from accessing customers (C1…C5) and undermine the rival's ability to reach the scale necessary to be cost competitive. A number of strategies can be adopted by U to induce or restrict customers from dealing with its competitors. This

includes inducing customers to sign exclusive dealing arrangements or achieving a similar outcome through loyalty rebates.

48. Exclusionary strategies targeted at entrants and rivals may involve some costs (or sacrifice of profits foregone) on the part of the incumbent. This is most obvious in predatory pricing where, in the simple textbook case, prices are reduced today in order to be able to recoup tomorrow. We can ask whether the conduct makes 'no economic sense' absent an anti-competitive rationale.

2.3.2. Exclusionary abuse by vertically integrated firms

49. Vertical integration of upstream (U) and downstream (D_1) businesses typically enables efficiencies from integration through the coordination of operations, transaction cost savings and the alignment of incentives.[8] A degree of vertical integration supports investment and the competitiveness of the chain as a whole. At the same time, this means that the integrated firm has power over non-integrated rivals in circumstances where there are no other good alternative sources of the input (which itself must be necessary or indispensable). In other words, a dominant upstream firm may be excluding rivals to its downstream subsidiary in the market where it may not be dominant. The rationale for doing so is nevertheless likely to be to protect or extend market power upstream. Economic analysis of the markets upstream and downstream is essential for understanding where this situation arises, including depending on the alternatives and concentration at the upstream level.

50. The treatment of the range of potentially exclusionary arrangements has evolved both within and across countries as developments in economics have been applied in cases. A presumption of efficiency for arrangements by dominant firms in some jurisdictions such as the USA was based on recognising transactions costs and the benefits from aligning incentives, however, it failed to take proper account of the incentives to reinforce barriers to entry as well as the extent of the harm to competition which might arise. It was based on assumptions about markets being contestable which disregarded information imperfections and their implications for financial markets and consumer behaviour.

51. Similarly, the argument that the firm could make the 'one monopoly profit' from its upstream position without needing to undermine competition downstream applies in only specific situations. For instance, it assumes away bargaining in the context of imperfect information. The upstream monopolist can face commitment problems in sticking to the monopoly price when buyers know that the firm has an incentive to discount additional sales, while buyers can threaten to turn to imperfect alternatives. Exclusionary conduct, such as exclusive dealing or inducement arrangements, can strengthen the monopolist's commitment and weaken buyers' ability to turn to alternatives. In addition, under certain conditions a firm may not be able to make the 'one monopoly profit' with linear pricing at the upstream level if there is imperfect competition downstream (Motta, 2004[44]). Under these circumstances not all rents can be extracted without exerting market power downstream.

52. Developments in competition policy from the mid-2000s (see Fumagalli (2018[43])) recognise that in the real world there is significant scope for strategic behaviour through exclusionary conduct.[9] Given the existence of economies of scale and scope, imperfect information and network effects, a burgeoning set of microeconomic models has identified situations where dominant firms can have both the incentive and ability to exclude actual or potentially efficient competitors (see Fumagalli (2018[43]) and Rey (2007[45])).

2.3.3. Exclusion by a non-integrated dominant firm

53. A dominant firm which is not vertically integrated can have an exclusionary effect on rivals if it can secure a substantial enough portion of the downstream market, where

there are many uncoordinated buyers, and where fixed costs are significant, to prevent rivals being cost-competitive.

54. There are different ways to tie-up customers and block them from being accessed by rivals. Overt **exclusivity agreements** could be reached with buyers, or a similar outcome could be attained with rebate arrangements which means that customers are effectively locked into the dominant upstream supplier. Note, that these need not lead to complete exclusion from the whole market to raise rivals' costs and harm competition. Harm can result from agreements that do not secure outright exclusivity over the whole market but could include exclusive conditions placed on display space or equipment (such as coolers) or some outlets,[10] and differential pricing linked to purchases from the dominant firm relative to rivals.[11]

55. A dominant firm can also attempt to set high-powered incentives for customers to purchase and promote its brands and exclude rivals, such as through **loyalty rebates**. The effects of such a strategy are impacted by a number of factors, importantly including whether the incumbent has 'must stock' brands whether there is a non-contestable base of sales, and how big this base is (O'Donoghue and Padilla, 2020[46]; Federico, 2013[47]). This means that the seller can discriminate 'infra-customer', that is, between different units bought by the same customer. Other factors include whether the regimes are individualised, retrospective and the duration of arrangements.

56. **Tying** or **bundling** the sale of products together means that a rival may not be able to compete by offering to supply only one of the products. The incumbent may be able to leverage its position in the non-contestable product to the contestable, benefitting from its assured sales in the non-contestable product or market segment to raise obstacles to the rival where it is otherwise able to contest effectively. Tying refers to a practice whereby the seller of product A (the "tying" product) requires some or all purchasers of A also to purchase a separate product B (the "tied" product). Product B may be offered by the seller separately and is contested by (actual or potential) rivals. In 'pure bundling', the products are only offered by the incumbent together and neither is supplied on a stand-alone basis, even while rivals may offer to supply one of the products. In mixed bundling, the products are offered both bundled together and separately, however the price (or other terms) is considerably more favourable if purchased in a bundle.

57. Of course, the most obvious way to tie-up customers is through offering extremely attractive prices which cannot be matched by rivals. This can obviously benefit of customers; however, if rivals are driven out and the incumbent can raise prices to monopoly levels after their exit without being disciplined by new entrants, then the short-term low prices could be a **predatory pricing** strategy. As well as the dangers of a competition authority penalising low pricing, predatory pricing cases are also unusual because normally there are much more attractive exclusionary strategies available to a dominant firm, that is, strategies which do not involve such a large short-term profit sacrifice.

58. Typically, entrants and smaller rivals can compete more effectively for a segment of demand, while a base of customers are much less likely to switch, at least until the rival is more established. The entrant will then be better able to migrate to supplying the wider, or related, markets. It makes much more sense for the dominant firm to target the contestable portion of demand. It also makes sense for the firm to employ a number of mutually reinforcing strategies. In addition, large incumbents will likely have already shaped the market(s) in various ways to make it more difficult for smaller rivals such as by advertising and configuring distribution (Church and Ware, 2000[48]).

59. If entry is easier in one customer and/or product segment then the conduct can be **targeted** – whether it is by employing a lower priced 'fighting brand', bundling the product

for this segment, or inducing the customers in this segment not to deal with competitors through loyalty rebate schemes. While these may involve a cost (in the form of a short-term profit sacrifice) on the part of the dominant firm, it is much lower by being targeted, and the recoupment is on-going in terms of the protection of profits in the main market. This underpins the theories of harm in the *Microsoft* cases relating to web browsers and servers, as well as in *Intel* and *Cardiff Buses* (see Box 3.4, below).[12] In each of these cases an entrant able to develop a customer base will be able to challenge the incumbent over a wider area, whether in the computer operating system, more bus routes, or by achieving scale to compete across chip customers.

2.3.4. Evaluation – economic analysis

60. There is a wide range of varied conducts, depending on market and industry conditions, which can have the same objective. Exclusionary abuse can also involve multiple arrangements some of which are interchangeable, and some which are complementary and mutually reinforcing. Sophisticated large corporates naturally evolve their conduct and strategies across multiple markets, differentiated products and customer segments.

Interchangeability

61. As a matter of economics, conduct which may appear different at first sight may be interchangeable and firms can obscure what they are actually engaged in without a careful examination of the mechanisms at work being undertaken. Focusing on ‘plain vanilla’ textbook-type conduct will likely only pick-up conduct engaged in by naïve firms who could have framed the arrangements in other, less straightforward, terms. Indeed, under the assumption that conduct really aiming to exclude is engaged in by firms which will want to hide their intent, it might be the case that the focus should not be on the overt practices but on arrangements designed to achieve the exclusionary outcomes.[13] Two examples illustrate this.

62. First, an outright refusal to supply may raise red flags where a firm is the quasi-monopoly supplier of an indispensable input. However, the same substantive conduct can be the setting of prices or other terms which ensure that any potential buyer is effectively unviable (a ‘margin squeeze’ – see OECD (2009[49])), in effect, a constructive refusal. Competition authorities need to be able to quickly sort these situations out.

63. Second, outright exclusivity requirements on the part of a dominant firm might raise immediate questions and call for justification. The structuring of rebates into contracts which are paid retrospectively on reaching thresholds set for individual customers such that they must, as a matter of fact, purchase almost all their requirements from the supplier to reach the target, can have the same effect as exclusivity. Moreover, authorities’ attention to such types of ‘loyalty rebates’ has seen firms describe them in different ways such as ‘growth rewards’ which make them appear to be incentivising effort while in fact they could be exactly the same in terms of the de facto exclusivity which is induced.

Complementary and mutually reinforcing

64. The effects of conduct depend on the market conditions, which have themselves been shaped by the dominant firm. For example, consumer preferences and the investments in advertising required to establish brand recognition result from the advertising and marketing strategies of the leading brands. Similarly, distribution and packaging models are set by the main incumbent(s), often across related products for multi-product firms. An entrant or smaller rival can, of course, seek to disrupt the established models; however, if wholesalers and retailers are operating in one way and consumers are conditioned to them then it will be an uphill battle to break-in, especially if only entering into one product line

or market segment. Arrangements which raise barriers to the entry and expansion of challengers may not appear to be exclusionary on the face of it, however, they may be an investment which pays dividends to the incumbent if they widen the moat.

65. Vertical integration may realise efficiencies, while at the same time, when involving a firm with substantial market power at one or more market levels, increasing the levers which can be used to undermine rivals. One of the lessons of the economic assessment of mergers is the value of acquiring potential competitors who may come from upstream, downstream or horizontally adjacent markets. It can also assist in shaping markets at multiple levels and increase the risks for an entrant (and their financial backers).

66. For an entrenched dominant firm, it makes sense to be making an ongoing assessment of the potential competitive threats, market segments where entry costs will be lowest and the range of mechanisms which might deter or raise the costs of such entry. A portfolio of conducts may well be more effective and lower cost than a single category. For example, some limited exclusivity may be most effective for one retail or distribution channel, while rebates can be targeted at important large customers where establishing a foothold would be important for the reputation of an entrant (see **Error! Reference source not found.** for an example of combined arrangements on the part of Unilever in Chile regarding soap powder where there had been exclusivity conditions, rebates, paying for shelf space, advertising expenses and brand proliferation). Other important customers could be offered attractive terms for bundles of products where the rival is only contesting in one. These types of conduct may well ensure that an entrant requires a much longer time to achieve minimum efficient scale and therefore has higher average costs. Influence over the pricing of key inputs can add to the variable costs from the supply side.

67. At the same time, the incumbent naturally aims to become lower cost and more efficient and conduct which is exclusionary may also have an apparent efficiency rationale. This is not the same as the conduct being required to achieve the efficiency – there may well be less restrictive arrangement which could achieve this efficiency. Without effective rivalry there will likely be harm to consumers including not being responsive to consumers' needs, however. The economics toolbox is critical to sorting these different aspects out.

68. Ultimately, the relevance of different analytical frameworks depends on the facts of specific markets and careful assessment of the firm conduct. Incumbents can stifle competitive rivalry and protect profits in the longer term through different exclusionary strategies, which may be to an extent substitutable or mutually reinforcing.

69. The combined effects of arrangements including the historical shaping of markets by incumbents is one of the reasons why market inquiries or investigations have become recognised as an important area for competition authorities. Through inquiries a more holistic evaluation can be undertaken and remedies recommended[14] (and implemented, depending on the powers in the jurisdiction in question – see OECD (2006[50]) for a discussion of remedies in abuse cases).

2.4. Exploitative abuse: excessive pricing

70. Competition authorities have been cautious about excessive pricing cases as it effectively means that they take on the role of a 'regulator of last resort' to directly curb the exploitation of market power in the absence of effective rivalry rather than to protect competition (see, for instance, OECD (2011[51])). However, since the financial crisis there has been greater scepticism about markets self-correcting (Davis and Mani, 2018[52]). There have been notable cases in Europe regarding pharmaceuticals pricing. In the context of the Covid-19 pandemic a number of competition authorities tackled price gouging as an exploitative abuse of dominance, meaning that excessive pricing has taken a more central

position in recent years. In some developing countries, notably South Africa, there have been a number of major excessive pricing cases as well as price gouging cases during Covid-19. We provide a concise review here.[15]

71. Much of the literature and case law on excessive pricing starts from the United Brands case in which the European Court of Justice sets out a two-limbed test to evaluate whether a 'dominant undertaking has made use of the opportunities arising out of its dominant position in such a way as to reap trading benefits which it would not have reaped if there had been normal and sufficiently effective competition'.[16] The ECJ noted that economists may well propose other tests for unfairly high pricing (see also Jenny, (2018[53])). The two limbs are:

1. Is the difference between the price actually charged and the cost actually incurred excessive? If yes:
2. Has a price been imposed which is: i. unfair in itself? Or, ii. unfair when compared to competing products.

72. Excessiveness involves assessing what would be expected under conditions of effective competition and thus of considering appropriate counterfactuals. This 'as if' test assists with considering the difference between the mark-up over cost. It is also at the heart of the actions taken regarding short-term exploitative pricing during Covid-19. It implies an economic evaluation of the market(s) in question. A reward for the capital invested is normally included in the cost assessment, however, what reward over and above this is considered excessive? This involves a value judgement for which the economic analysis is an input.

73. Comparators can play an important role in considering appropriate counterfactuals. However, it assumes that there are appropriate comparators available, where costs are similar and the markets can be adjudged to be effectively competitive. Comparators can include (see (Motta and de Streel, 2006[54])):

- Prices of the same firm for substantially the same product in different markets (after correcting for transport and related costs in the case of different geographic markets), at different times, and/or to different customers in the same market. This includes prices of product sold into export markets.
- Prices of the same/similar products in competitive markets, sold by different firms, such as international comparators.

74. In the pharmaceutical cases, there are typically barriers to entry and margins are high. Pharmaceutical products result from investments in research and development where the returns are highly uncertain and it is not possible to allocate investments to specific products. The challenges are exemplified in the CMA's *Phenytoin* case brought against Pfizer and Flynn Pharmaceuticals. The CMA tackled what appeared to be nakedly exploitative price increases of a drug which was out of patent and was, through being classified as a generic when supplied by Pfizer for exclusive distribution in the UK by Flynn, no longer subject to price regulation. The price was increased in 2012 from £2.83 to £67.50, falling back to £54.00 in 2014. Clinical guidance was that patients with epilepsy who were on this product should not be switched. The CMA relied mainly on the cost-plus assessment with a percentage profit margin. The case is ongoing, and the CAT has remitted the case back to the CMA for an evaluation of the wider market context, comparators and economic value (see Davis and Mani, 2018). Given the nature of the industry, the regulatory gaps which had allowed the conduct, it has been questioned by some as to whether a market investigation would not have been more appropriate (Davies and Padilla, 2018). The CMA is, however, taking on further cases in the area. Further details on

excessive pricing cases in pharmaceutical markets, and their challenges, can be found in OECD (2018[55]).

75. In South Africa, where there have been a number of excessive pricing cases, these have involved mature industries where scale economies, barriers to entry, and transport costs meant a single firm is overwhelmingly dominant. Prior state ownership and support rather than innovation and risk-taking had bequeathed the position being exploited. Extensive economic and financial evidence was led in the *Mittal* and *SCI* cases about the correct counterfactuals to be considered, the comparators and the cost assessments (Mncube and Ngobese, 2019[56]; Mondliwa and Roberts, 2019[57]).

2.4.1. Covid-19 price gouging as excessive pricing in exceptional circumstances

76. There were sudden surges in demand for essential goods at the start of the pandemic in countries around the world in early 2020 and prices shot up.

77. The pandemic and related government social distancing guidance meant that consumer behaviour changed as people shopped closer to home, travelled less on public transport (impacting those without cars), and visited fewer outlets as social distancing rules required retailers to limit customer access and created long queues outside retail outlets. Uncertainties created by real or perceived scarcity of essential goods could inflate consumers' willingness to pay and led to those with higher disposable income to buy beyond their regular needs with stockpiling behaviour exacerbating scarcity.

78. The changes meant that competitive rivalry at the local retail level was reduced, and some retailers could have substantial market power, even though transient. If high prices incentivise suppliers to expand quickly, there is probably little cause for concern as market corrections mean that the consumer harm is short-lived. Intervening to curb price increases can discourage the supply response. However, the harm caused by price gouging, in potentially denying vulnerable consumers access to essential products, can be very material even if high prices were sustained just for a few weeks (Jenny, 2020[58]).

79. Competition authorities intervened in some countries including Kenya, South Africa and the UK, and not in others. In South Africa and the UK investigations were opened under abuse of dominance provisions while in Kenya consumer protection law was used. This was criticised as dampening the supply response and misunderstanding the role of market signals. South Africa prosecuted a large number of cases while in the UK the CMA monitored market developments and closed the investigations following appropriate downward adjustments.

80. In each country, the cases were mainly to do with pricing at the retail level which greatly exceed wholesale cost increases (see Fung (2021[59]), for the UK and Boshoff (2021[60])for South Africa). While there were supply chain issues and scarcity, the price increases being tackled were in excess of the higher input costs and reflected local retailer exploitation. Intervention against excessive retail mark-ups, and not against price increases that reflect higher production or import costs, is unlikely to undermine producers' incentives to expand. In addition, the supplier response is not based on short-term local price hikes but on what suppliers expect prices to be at the wholesale level when they can bring more produce to market. In economic terms, the costs (actual wholesale costs), benchmarks (other local markets with more competition) and impacts on supply were all addressed.

3. Economic Analysis and Evidence: Practical Challenges in Exclusionary Abuse of Dominance Assessment

81. Each abuse of dominance case is different and case-by-case analysis is essential. What types of quantitative and qualitative analysis will be relevant for a particular case will depend on the market characteristics and the types of conduct being assessed. It will also depend on what data is available, including what data has been obtained by firms. Economists are central to framing the assessments and in motivating for the necessary data to be required. This part of the background paper focuses on the practical challenges for exclusionary abuse as central to competition authorities' mandate (and given that excessive pricing represents a quasi-regulatory role and does not apply in all jurisdictions).

3.1. Reasoning and methodology

82. The core question is to distinguish conduct which is competition on the merits from that which is an anti-competitive abuse of dominance (normally defined as conduct which potentially harms competition). And, if it is shown that there is potential harm competition, are there efficiency rationales for it which might justify the conduct, where the efficiencies could not be realised in a less anti-competitive manner. We are assuming that the firm has been found to be dominant, noting the element of circularity here – that if the firm is capable of having a substantial anti-competitive effect through unilateral conduct then it must have the market power to do so. Conversely, if the potential harm to competition is not substantial it may be because in fact the firm does not have the substantial market power which it appeared to from the initial evaluation.

83. By its nature, an investigation of alleged abuse of dominance normally starts with a complaint which sets out how the complainant believes they have been harmed and by whom. This may well not set out a clear theory of harm in competition economics terms and, in any event, presents the outcomes simply as perceived by the complainant. The complainant typically does not know how the firm is treating other parties and hence the extent to which there is harm to competition, as opposed to harm to an individual competitor. More fundamentally, the complaint may be misdirected. The arrangement could work through favouring some downstream firms over others (such as the complainant), but the core anti-competitive rationale is in fact to undermine horizontal rivalry upstream in the market where the supplying firm has the majority share. The complaint relating to differential treatment may incorrectly frame the nature of the harm to competition if it views the collateral impact downstream as the central harm (which is, in fact, upstream).

84. A complainant may also make a charge of unilateral abuse of dominance (for example, for a margin squeeze) when in fact the harm to competition arises from collusion. The reason that only one supplier may be willing to provide a quote (for example, for a given grade or to a given geographic region) may be because a market division cartel is in operation. Questions may be raised about unilateral dominance when the markets are being evaluated but it does not mean that exclusionary conduct is absent.

85. Authorities may wish to initiate abuse investigations even if they have not received a complaint. For example, firms that are dependent on a dominant firm for essential inputs may be deterred from filing a complaint out of fear of reprisals from the dominant firm. The risk of such reprisals may be particularly pronounced if the harmed firms have contact with the dominant firm in multiple markets.

86. It is therefore important to step back and assess the facts relating to the markets and ask at what levels and in which markets is the market power located (and would be protected). This is critical for considering how to frame the initial selection of the theories of harm and for drawing-up the economic analysis plan including information gathering. As further data is gathered, the market workings will be understood in much greater depth along with the ways in which the dominant firm sells the relevant products across different customer segments. This could mean supplementing the theories of harm, and further refining the scope of the investigation. Only by assuming away the complexity and messiness of real-world markets and the incentives for firms to engage in multiple and evolving forms of conduct could a linear approach be rigidly adopted.

87. The assessment of the ability to exclude, the modelling of incentives, and analysis of effects is therefore in a dynamic, strategic environment drawing on game theory to collate and test evidence.

3.2. Evidence

88. Vigorous competition can clearly undermine competitors – better products at cheaper prices mean consumers switch. Conduct is only anti-competitive if it impairs the abilities of actual or potential rivals to compete in ways which differ from normal competition ‘on the merits’. In other words, the conduct is economically rational only because it tends to lessen, prevent or distort competition (the ‘no economic sense’ test) rather than simply providing better goods and services to customers.

89. An anti-competitive effect can be inferred if the conduct has the capability to exclude. It may be that the influence has been such that rivals have been deterred and their exclusion is not directly observable. The extent of the market which is practically foreclosed to rivals due to the conduct is an important test here, especially when the requirements to be competitive are taken into account.

90. The tests and the necessary evidence depend on the nature of the unilateral conduct. It may also be the case that the same conduct may have both positive and negative effects and these have to be sorted out and weighed-up. We set out tests for the main types of conduct, noting that typically evidence should be considered in the round, with quantitative evidence alongside qualitative evidence, such as from internal documents.

91. Quantitative evidence includes descriptive evidence on firms and markets along with quantitative techniques including econometric analysis. For an evaluation of possible abuse, it is very important to collect and analyse evidence on firms and markets including on prices, costs, market shares, consumer behaviour, the duration and coverage of arrangements, and economies of scale and network effects. This is not the same as employing quantitative techniques such as econometrics. Indeed, as illustrated in the boxes below (and see also Davis (2010[61])), abuse of dominance cases have rarely turned on analysis employing advanced quantitative techniques. While there have been major advances in employing quantitative techniques in horizontal merger evaluation, it is much more difficult to do so in abuse of dominance cases. This is for a number of reasons. Exclusionary abuse of dominance requires analysing markets upstream and downstream and the interaction between them. There is also a suite of different models which need to be considered relating to whether strategic behaviour is consistent with harm to competition. The assumptions required for quantitative techniques to be applied generally mean that one cannot consider aspects rooted in game theory which are germane to the assessment of possible abuse. This does not mean that analysis is purely based on qualitative evidence.[17]

3.2.1. Quantitative evidence

92. Data is clearly a constraint for the quantitative analysis that can be done, however, that does not mean one should simply analyse the available data without critically considering its dispositive value (in case it is like looking for one's keys under the lamp post). This data may well be provided by the party being investigated (possibly along with economic analysis they have commissioned). It is very important to understand what the data is and not to jump to rapid conclusions. The starting point ought to be the core question to be addressed. For example, data provided by parties initially may well be of average list prices and, rather than drawing inferences from this, it will likely be important to get disaggregated data by key customer segments and geographic areas, net of rebates and discounts.[18] A completely different picture may well emerge from this if rebates and discounts to some customer segments and/or offered by some suppliers are very significant. Cost data from the dominant firm is clearly important for price-cost benchmarks and as-efficient competitor tests.

93. Obtaining granular data may well be resisted by parties as onerous. First, it is important to be assertive about the relevance of data for an effective assessment. Second, the data likely to be required, such as on pricing and on costs, is probably tracked closely by the firms itself if it is important for its decision-making. Requiring internal documents that are routinely prepared by the company, such as internal marketing reports and dashboards of divisional performance, will quickly indicate data which the company places weight on and which it can readily provide. These should be obtained early in an investigation.

Exclusive dealing and loyalty rebates

94. In evaluating exclusive dealing arrangements, it is helpful to first consider the proportion of the market to which they apply and their duration, and second, additional evidence of anti-competitive effects. Information from the parties, customers and competitors can be used to establish the nature and reach of the arrangements. This enables an assessment of the extent of the market which is foreclosed to rivals. A substantial proportion of the relevant market must normally be foreclosed for there to be an exclusionary abuse of dominance.

95. The larger the proportion covered the more likely will anti-competitive effects result, given scale economies and incumbency advantages which may be taken into account (see Box 3.1). Exclusive dealing arrangements may be applied to distribution channels or sources of supply that are particularly important for potential entry by new competitors or expansion by existing competitors. Agreements of longer duration are more likely to be exclusionary. If the buyers are uncoordinated and dispersed, and contracts are staggered, it will also be more difficult for an entrant to bid for them. Each individual buyer is unlikely to switch to the entrant given the lack of a track record and existing customer base.

96. In these circumstances, there may be little or no profit sacrifice required by the incumbent to induce buyers to agree to the exclusive contracts, especially if the incumbent has a first-mover advantage. This may be reinforced if other inducements included (such as branding and marketing). If there are key buyers who could sponsor entry then these buyers would have to be rewarded with more favourable terms and a profit sacrifice would be implied to induce the buyers to sign-up to exclusivity agreements.

97. Likely effects can be inferred from the coverage of the exclusivity along with market features such as economies of scale. Where the introduction of agreements can be identified, then the effects on the ability of rivals to attract customers and effectively compete can be assessed. This involves considering the growth of the rivals against a counterfactual, to consider if the growth has been stalled or even reversed relative to what would have been the case.

98. A quantitative assessment of market characteristics is necessary along with analysis of qualitative evidence. The assessment of the extent and durability of dominance and market power, barriers to entry, scale economies and the contestable share of the market are all important for assessing the extent of foreclosure and likely harm to competition. The evidence must be consistent with a theory of harm as set out in a well-grounded economic model of exclusion. The importance of considering the quantitative evidence along with qualitative evidence, 'in the round', is well illustrated in the cases involving consumer goods such as beverages and ice cream (see Box 3.6 below).

99. Efficiency rationales need to be motivated by the incumbent where a likely anti-competitive effect has been found. The rationales include explaining relationship-specific investments which require exclusivity. Where efficiencies do exist then balancing can be challenging and needs to consider whether the extent and duration of the exclusivity is required for the efficiencies (as discussed below).

Box 3.1. Exclusive dealing in ticketing in Singapore

In June 2010 the Competition Commission of Singapore (CCS) found that ticketing company SISTIC.com had abused its dominant position by requiring venue operators and event promoters to use its services exclusively. In addition to removing the exclusive dealing requirement a penalty was imposed. The decision was upheld by Singapore's Competition Appeal Board in May 2012 after hearing economic experts for CCS and SISTIC.com.

The CCS investigation found that SISTIC was the dominant ticketing service provider in Singapore and had maintained a market share of 85-95%. The exclusive agreements with venues, including the major sporting and entertainment events venues, had excluded rivals and maintained its dominance and that this had enabled increases in the booking fees for ticket buyers.

In the CCS analysis and the appeal there was consideration of quantitative evidence on market power reflected in pricing and market shares, as well as barriers to entry, network effects and countervailing power. In terms of whether there was competition for the market or in the market, the CCS considered the negotiations on exclusivity and concluded, with comparisons to ticketing in other countries, that SISTIC.com required exclusivity and dictated terms which were negotiated individually with events providers and not based on transparent and standard criteria. Aside from two main venues (one of which was part owned by SISTIC) there was buyer fragmentation.

The economic experts, with reference to the approach in the UK and EU, differed on whether effects-based tests required demonstrating likely harm to the competitive process or if the harm to economic welfare must be demonstrated in terms of price and output relative to the appropriate counterfactual. The Competition Appeal Board agreed with the CCS that demonstrating likely adverse effect on competition was the appropriate test. Evidence on the nature of the contracts, extent of foreclosure and the duration of the contracts supported the finding that the exclusive contracts made no economic sense absent an exclusionary objective and constituted an abuse of dominance.

The CCS decisions are taken by Commission Members, who are largely senior government officials and professors of law or economics. Appeals of the CCS decisions are then heard by a specialist Competition Appeal Board which is composed of those with expertise in law, economics, finance and business meaning that it is well positioned to consider economic evidence. Note that there have also been cases of exclusive dealing in outsourced ticketing in a number of other countries including Ireland and South Africa.

Sources:
Abuse of a Dominant Position by SISTIC.com. Decision CCS/600/008/07 of the Competition Commission of Singapore, 4 June 2010.
In the matter of: Notice of the infringement Decision Issued by Competition Commission of Singapore, Abuse of a Dominant Position by SISTIC.com Appeal No.1 of 2010, Decision of Competition Appeal Board of Singapore, 28 May 2012, https://www.cccs.gov.sg/media-and-consultation/newsroom/media-releases/ccs-fines-sisticcompte-ltd-for-abusing-its-dominant-position

100. ***Rebates*** are less overtly exclusionary than exclusive dealing and require more information to evaluate. If they are individualised and retrospective/retroactive (or 'roll-back') they can be loyalty inducing in giving rise to strong incentives for buyers to purchase from a dominant seller. They may work in various ways including through targets being set in terms of a level, growth or share of purchases. If this has the effect of inducing purchases close to the total projected requirements of each customer then they can be equivalent to an exclusive dealing arrangement. Critical to their likely effect is that they can be targeted at the portion of demand which is contestable while applying to all sales including a substantial proportion of demand is effectively non-contestable by the rival(s). In effect, the dominant seller is offering a lower price for the monopolised sales conditional on the customer also buying sales being competed for.

101. If there is a substantial non-contestable share the rebate can be structured so that the effective price that a competitor has to offer to attract customers in the contestable portion is very low and maybe below costs (or even negative). This is because the competitor has effectively to compensate the customer for their loss of the rebate on the non-contestable portion which the customer will continue to purchase from the dominant firm. The appropriate economic test for whether a rebate is exclusionary involves assessing the form of the rebate scheme and the economic evidence as to whether as-efficient rivals to the dominant firm can match the rebated effective price. This involves a price – cost test. While it is important to determine the relevant cost benchmark, normally average avoidable cost or the long-run average incremental cost (see Box 3.3),[19] the effective price is very sensitive to the contestable share of the market which requires an economic analysis of the market ideally including evidence of rivals which have attempted to compete through offering discounts and other terms (see Box 3.2). The sensitivity of the result to different estimates of the contestable share can be calculated.

102. The evidence to determine the contestable and non-contestable shares will depend on the nature of the product or service. Evidence from customers is important here to establish the nature of demand and end consumer preferences, as well as how the customers have responded, in practice, to the rebates. For example, it may be an iconic brand with a substantial loyal consumer base which is a 'must-stock' item for retailers. There may be considerations relating to quality or reliability which are not immediately evident to many end consumers and they are reluctant to switch, impacting on the intermediate buyers (such as with computer microprocessors). As in Box 3.2, there may be a large proportion of consumers who stick with what they know because of convenience and their company rather than themselves may be paying for the service. The time horizon for this analysis will depend on the market's features, with a longer horizon likely meaning a larger contestable share. Marketing data over time, changes in product offerings and pricing and any natural experiments which have occurred will all be useful. Evidence can be obtained from key customers, including through interviews and document requests. Consumer surveys could be undertaken for the investigation, however, it is likely that firms in the market will have undertaken their own market research which will be helpful. While a quantitative measure needs to be derived of the contestable share of the market in order to compute the effective price, qualitative information will also assist such as from industry bodies and internal documents.

103. A coherent theory of how the exclusion results in likely consumer harm needs to be articulated and tested against the characteristics of the market. For example, if the theory involves a form of de facto exclusive dealing, it will be necessary to understand the nature of sustained dominance, a high market share and the lack of buyer coordination or large customers for which rivals could compete (see OECD (2016[62]) for further discussion). Alternatively, it is possible that loyalty rebates could be viewed as a form of dynamic

predation with higher prices following exclusion and deterrence of competitors (see Federico (2011[63])).

104. The long-running *Intel* case brought by the European Commission has seen decisions from the Commission, the General Court in 2014, the Court of Justice of the European Union (CJEU) in 2017, as well as an opinion from Advocate General Wahl, and re-hearing by the General Court in 2020 (decision still to be handed down), which have interrogated how rebates should be assessed. The Commission's case included conduct in the form of conditional rebates to the four major original equipment manufacturers (OEMs), of personal computers and 'naked restrictions' in the form of Intel paying OEMs in return for not using the products of the rival (AMD). The Commission calculated the contestable share, being the proportion of the OEMs' requirements which could be switched, using the relevant time horizon of one year at most. The effective price from this was compared to the Average Avoidable Costs of Intel as part of an as-efficient competitor test which was found to demonstrate an exclusionary abuse of dominance. A counterfactual was set out in terms of the effect which the conduct likely had in terms of the market share of AMD, and hence indirectly on consumers.

105. The General Court's decision supported the Commission while determining that the as-efficient competitor test and the related economic analysis was not required for conduct of the form of 'exclusivity rebates' in that they are conditional on the customer buying all or most of their requirements from the dominant firm.[20] The CJEU, following an opinion from Advocate General Wahl found that an economic effects analysis was required and remitted the matter back for a re-hearing by the General Court.[21] The CJEU determined that the General Court had not considered all of Intel's arguments as to the economic effects and needed to do so in order to make a decision. This included the challenges to the AEC test conducted by the Commission, the extent of dominance of Intel, the share of the market covered by the practice, the nature of the arrangements in terms of conditions and duration, and whether the observed market outcomes were the result of competition on the merits, as Intel had argued. The characterisation of loyalty inducing rebates could lead to a presumption of illegality but the analysis and evidence put up by the respondent to rebut this had to be considered.

Box 3.2. Loyalty rebates in the skies: South African Airways I and II

South African Airways (SAA) which had between 65-70% of the domestic airline market introduced a set of incentive and commissions for travel agents around 1999 which were applied retroactively when an individualised target was met. In addition, through the 'Explorer Scheme' individual employees of travel agents were incentivised. Around 85% of SAA tickets at the time were sold through travel agents (there were direct sales by the airlines but no online sales at the time). A complaint was referred in 2001 and the Tribunal made a finding against SAA in 2005 (SAA I), highlighting the roll-back or 'back to Rand 1' nature of the scheme such that if the target was met the rebate was provided back for all sales made. SAA ended the Explorer Scheme however retained similar incentive schemes for all major travel agents including so-called 'TRUST' agreements consisting of lump-sum payments to travel agents conditional on reaching certain sales or market share targets. The Tribunal made a second finding covering 2001 to 2005 in 2010 (SAA II).

In the interim there had been entry and growth of a low-cost airline and the growth if internet sales. Substantial economic evidence was led on the market segmentation including between internet and travel agent sales and time-sensitive and non-time sensitive travellers, the workings of the rebates, the effects on rivals, on travel agents and inferences on consumer harm. Travel agents testified that achieving the rebates on an annual basis was essential for their margins, that they could and did influence customers choice and that SAA as a full-service airline flying with the widest coverage and most flights had an incontestable share of the market (its share of travel agent sales domestic air travel was 74-79%). The Tribunal also examined the growth of rivals being stifled in practice despite lower fares offered and inferred consumer harm.

The Tribunal set out the requirements for evaluating whether an exclusionary act had an anti-competitive effect (as is required in South African law). In this case, which it reinforced in subsequent decisions, the Tribunal held that an effect is established if there is '(i) evidence of actual harm to consumer welfare or (ii) if the exclusionary act is substantial or significant in terms of its effect in foreclosing the market to rivals.' While allowing for reasonable inferences to be drawn from proven facts, the Tribunal nonetheless indicated that the tests of effects would provide evidence of a quantitative nature which can be weighed against alleged efficiency or pro-competitive gains of the conduct. The Tribunal found prices would have been lower if the rivals had not been undermined.

Source: Federico 2013; Fumagalli et al (2018:231-235).

106. The exclusion of a less-efficient competitor may in some circumstances have an anti-competitive effect if the rival is potentially efficient but is unable to achieve the scale economies or realise network effects because of the dominant firm's conduct (OECD, 2018[6]). This conduct may include that which is additional to the rebates and which undermines the rival's ability to reach a wider customer base.

107. Qualitative evidence including on how and why the rebates were set on an individualised and retroactive basis is also likely to be important. Further details on loyalty rebates and their assessment can be found in OECD (2016[62]).

Box 3.3. The as-efficient competitor test and appropriate cost benchmarks

The as-efficient competitor (AEC) test assesses whether the conduct is capable of restricting competition or likely to restrict competition in terms of its effects on a competitor which is as-efficient as the dominant firm (that is, considering the dominant firm's costs). Whether an AEC test is required depends on the jurisprudence in the jurisdiction in question. An AEC test can be an important part of the economic analysis of price-based exclusionary conduct. And, where the dominant firm has put up evidence that the conduct reflects vigorous competition on the merits which would not exclude an efficient competitor, then this will need to be engaged with.

The main components of the AEC test are the effective price that a rival has to charge to compete with the dominant firm and the relevant cost benchmarks. An effective price below the cost benchmark means that an AEC would be excluded. The effective price results from the analysis of the nature of the pricing conduct, such as rebates and the contestable market share, or alleged predatory pricing including in the form of fighting brands.

The cost benchmarks are normally taken to be the average avoidable cost (AAC) or long-run average incremental cost (LRAIC). These are the costs which would be saved if the additional output associated with the alleged exclusion would not be supplied by the dominant firm, expressed on an average basis per unit of output. It means that an equally efficient competitor cannot contest to supply the targeted customers without making a loss. The AAC and LRAIC may differ as the LRAIC includes product-specific fixed costs which may have been incurred by the dominant firm to expand output before the conduct in question. Average total costs (ATC) may also be relevant where additional qualitative evidence, such as intent – evidence spelling-out an exclusionary strategy on the part of the dominant firm – is uncovered. For a single product firm, LRAIC and ATC may be practically the same.

In margin squeeze cases, where the dominant firm is vertically integrated and supplies a product or service to its own subsidiary which is an indispensable input to actual or potential competitors, the price set on this input may be found to be capable of excluding efficient competitors if the margin that can be made does not cover costs. The cost benchmark here is normally the LRAIC of the dominant firm's subsidiary. In other words, the price for the input charged to third parties is applied to the subsidiary and if it does not cover the relevant costs of the subsidiary for the appropriate increment of output then it would not be commercially viable on a standalone basis.

Calculation of the relevant cost benchmark requires getting detailed cost data from the dominant firm and possibly from other sources such as industry experts and other companies. Cost data are included in financial accounts, however, this may not be in the form required for the economic analysis and more detailed cost data at the level of the product line may need to be estimated. Common costs will need to be separated out, ensuring not to remove costs which would be avoided if the incremental output was not produced (in which case an apportionment of common costs is necessary to identify the costs that are truly common). This will likely involve judgements to be made and means that the economic analysis will not necessarily yield a definitive answer. Instead, the assessment of price cost tests is an important part of the assessment of the likely anti-competitive effect.

Predatory pricing

108. A great deal of attention has been paid to the appropriate cost tests for 'plain vanilla' predation being below-cost pricing of a single product firm, but this is a very unlikely strategy to actually be followed by an incumbent. Such straightforward predation is a curiosity because in most cases a much more attractive exclusionary strategy could be adopted. The mechanism to induce customers not to deal with the rivals or entrants could be targeted at the market segment or product specifications where the entrants are best able to persuade customers to switch. Further, the conduct can be combined with other arrangements which leverage off the incumbent's position with its large market share and possibly its well-established brands, where these are consumer goods.

109. Predation cases can also be in the form of a 'fighting brand' (as in the Cardiff Bus case, Box 3.4) where the incumbent can target below-cost pricing just at where the rivals are most likely to be able to contest. The economic rationale for predation is that through one or a combination of reputation effects, signalling, exploiting financial market imperfections where the rival does not have 'deep pockets', and scale economies and learning effects, the incumbent can sacrifice short-term profits for a longer-term bolstering of its position and the returns to be earned from it.

110. The core test for whether the pricing is simply meeting competition or has an exclusionary rationale is to assess whether the price charged is below the relevant cost benchmark. The benchmark depends on the nature of the market and qualitative information such as on the strategy and intent of the incumbent. It could be that below a measure of average total cost is anti-competitive if this is part of a spelt-out intent which may include other strategies to reinforce the impact of the targeted below cost pricing. However, normally the price-cost tests are of pricing below the average costs which would be avoided if the additional chunk of sales would not have been made. This would include the fixed costs to target the market or customer segment such as advertising to this group, or additional distribution costs.

Box 3.4. Predation through the launch of a "fighting brand" in the UK Cardiff Bus Case

In 2008, the UK Office of Fair Trading ("OFT") issued a decision that Cardiff City Transport Services ("Cardiff Bus") had abused its dominant position in the market for urban bus services in Cardiff. In particular, the OFT determined that Cardiff Bus's reaction to the entry of a "no-frills" (i.e. basic service level) competitor, 2 Travel Group ("2 Travel"), was predatory. Cardiff Bus launched its own no-frills service on the same day 2 Travel started operating. Cardiff Bus's no-frills service had the same schedules and routes as 2 Travel, and this service was discontinued after 2 Travel Group exited the markets in question.

The OFT analysed a range of factors in determining that Cardiff Bus held a dominant position both on an individual route level and an overall network level. It found that Cardiff Bus faced limited actual competition from a few small competitors, and that there were numerous limitations to entry into the relevant markets (for example, given limited bus depot capacity).

The OFT's analysis sought to determine whether Cardiff Bus's launching of a rival service constituted a predatory strategy, or whether it reflected normal commercial behaviour. Cardiff Bus indicated to the OFT that its no-frills service was launched on a trial basis to test the market, and that the service was withdrawn after it provided to be unsuccessful. The OFT's analysis included:

- Qualitative analysis: Reviewing internal documents to identify the business strategy in question, and to test Cardiff Bus's assertions made to the OFT during the investigation. This review found little contemporaneous evidence supporting Cardiff Bus's explanation of its launch strategy, but did find proof that the service was launched specifically to deny scale to 2 Travel. Further, evidence indicated Cardiff Bus's no-frills service performance was measured relative to its impact on 2 Travel, and that the withdrawal of those services was due to the departure of 2 Travel from the market.
- Pricing analysis: Comparing the prices charged by Cardiff Bus's no-frill service and 2 Travel – Cardiff Bus's prices were lower on three out of four zones compared. Further, Cardiff Bus's no-frill service prices were significantly lower than its regular services.
- Price-cost analysis: Evaluating the performance of Cardiff Bus's no-frills service. This analysis found that the revenues of Cardiff Bus's no-frills service were insufficient to cover the costs of the service. The OFT used average avoidable costs as a benchmark, given that these incorporate investments such as capacity increases for predatory purposes. It noted that pricing below average avoidable costs in the medium term is not an economically justifiable strategy, since stopping operations would save more costs than the revenue lost. Pricing below cost may be justified as it could reflect a service that is still maturing and building a customer base, or simply an unsuccessful business strategy. However, the OFT found no business planning or contemporaneous documents indicating Cardiff Bus sought to earn a profit from its no-frill service at any point (for example an attempt to ensure prices would cover costs at any estimated level of ridership).

Considering this analysis together, the OFT found that Cardiff Bus's no-frill service was launched as an exclusionary strategy. Further, the OFT found no indications that there was ever a business plan or pricing strategy aimed rendering the no-frill service profitable on its own merits (rather than as a strategy for eliminating the threat of 2 Travel).

Source: Office of Fair Trading (2008), Abuse of a dominance position by Cardiff Bus, Decision No. CA98/01/2008, 18 November 2008 (Case CE/5281/04), https://assets.publishing.service.gov.uk/media/555de4cbed915d7ae5000178/cardiffbus.pdf.

Tying and bundling

111. Whether tying or bundling forecloses rivals is a factual question which requires understanding the alternatives available to rivals, the pro-competitive and anti-competitive incentives for selling products together, and the effects this has on rivals. When tying particular products together has a legitimate rationale, it is likely to be practiced by other significant, but not necessarily large, competitors and there may be competition among "systems" of closely related products, with each competitor offering customers a system consisting of several separate products used together (see, for example, Bourreau (2020[64])).

112. It is important to consider whether there is substantial independent demand from customers who would likely purchase the tied product from a supplier other than the dominant firm, were they given a choice of doing so. The demand needs to be large enough to make the stand-alone supply of the tied product a viable business. When products are consumed in fixed proportions then there is less likely to be independent demand and there may also be efficiencies from supplying them together.

113. The economic analysis depends on the theory of harm being tested. As we can see from the two Microsoft cases below, there is an important distinction between protection of the dominant firm's position in the main market from potential threats arising from a rival building a strong position in an adjacent market and reasons for tying and bundling based on the incentives to extend market power into the adjacent market due to characteristics of that market.

114. The incentives and effects depend on why the incumbent would want to leverage its power into the related market (tied market) when it can make the monopoly profits in the non-contested market (the tying market) in any case. There may be features of the tied market which means it can extract additional profits, however, it is also important to remember that its position in the tying market may be threatened over time by rivals who evolve from growing their position first in the contestable market which can be blocked.

115. A careful examination of the market conditions in both markets is essential. The likely effects depend on the proportion of the tied market which is foreclosed and scale economies in this market, which means (potentially) as-efficient competitors' ability to compete can be undermined. If there are initial sunk investments required, then tying by the dominant firm can increase the financial risks associated with entry into the tied or tying markets. A tie can act as a barrier to entry if the tie makes successful entry in the tied market dependent upon simultaneous entry in both markets. In evolving markets characterized by network effects, a dominant firm in one market may have the incentive and ability to extend its market power into an emerging market through tying. Where the tied market may develop new business models threatening the incumbent's position in the tying market, then there are added incentives to ensure potential rivals are blocked at the outset (see Carlton and Waldman, (2002[65])).

116. The cases in the USA and EU regarding tying by Microsoft of Internet Explorer and Windows Media Player involved detailed consideration of the relevant economic models and assessment in such matters.[22] The Internet Explorer case illustrate the theory of harm where tying is not to leverage into the adjacent market (in internet browsers) but rather to guard against the potential for the rival browser Netscape to threaten the position of Windows as an operating system due to Netscape role in promoting the adoption of the Java language. Microsoft argued that supplying Windows with Internet Explorer as a bundle generated cost savings in distribution and transactions, and a better user experience. In contrast, the EU's Windows Media Player case was not about protecting Microsoft's market power in operating systems but about bundling the dominant operating system to shape future competition in adjacent markets by tipping the media player market in its favour. While Microsoft argued that the media layer was an integral part of the operating system the Commission found that there was demand for standalone media players distinct from the operating system.

117. Anti-competitive effects must be set against efficiencies arising from the tying (see below for a discussion of these efficiencies).

Refusals to supply and margin squeeze by vertically integrated firms

118. The economic analysis of vertical exclusionary abuse through outright refusal to supply or a margin squeeze is similar to tying and bundling products in adjacent markets. A firm supplying an indispensable input may be able to leverage its position into the downstream, potentially competitive market yet it is unclear what is its incentive to do so. Why refuse to supply profitable customers to earn the monopoly profit upstream while having vigorous competition downstream which will increase demand for the monopoly product?

119. There are a number of reasons why the profit may not be earned upstream without a measure of foreclosure, and furthermore why there may be incentives to foreclose downstream rivals in order to protect market power upstream. First, there may be constraints on the exertion of market power upstream whether due to a) regulation upstream; b) imperfect competition upstream; or c) commitment problems on the part of the monopolist as customers are aware that the monopolist has an incentive to sell additional volumes at below the monopoly price. Vertical foreclosure may assist the exertion of substantial market power to earn the supra-competitive profits from the upstream position, including through coordination upstream when there is imperfect competition. The likelihood of such circumstances requires economic analysis of the markets in practice (as described in OECD (2019[66])).

120. Second, there is also a dynamic foreclosure concern, where entry upstream to challenge the dominant firm will be more likely if there are independent downstream firms. These downstream rivals may themselves vertically integrate into the upstream market or may sponsor an entrant. In any event, an entrant upstream is more likely if there is a customer base which it can serve. Foreclosure downstream may therefore be to protect a quasi-monopoly upstream (Fumagalli and Motta, 2020[67]). It implies that entry will be necessary simultaneously at both levels.

121. The costs of foreclosure depend on the 'vertical arithmetic' by which foregone returns (taking costs into account) can be assessed from loss of sales upstream and the likely substitution by customers downstream from the independent firms to the subsidiary of the dominant firm. The calculation also needs to take account of whether the dominant firm's downstream subsidiary has similar costs to the independent firms.

122. As with the tying and bundling, evaluating outright refusal to supply requires assessing the feasibility of supply independent volumes and the extent of harm to competition. The onus on a dominant firm not to lessen prevent or distort competition means that where it supplies an indispensable input there is a 'duty to deal', if feasible (that is, in the absence of an objective justification). The evidence could include whether there has been supply to independent customers in the past, in the industry in other countries, and whether there are additional costs to supply (which would not justify an outright refusal, in any case).

123. A constructive refusal to supply can be ensured by a margin squeeze through the pricing and other supply terms. The as-efficient competitor test is applied to make a quantitative assessment as to whether the independent downstream business is viable at the prices charged upstream and downstream by the dominant firm's businesses when taking into account the appropriate cost benchmark (see Box 3.3). The cost data are normally that of the dominant firm, such that rivals are as-efficient as it is.

124. There have been many margin-squeeze cases in network industries around the world, reflecting the legacy of state-owned fixed-line operators and the rapid growth of markets for services which use the network. In particular, there have been many cases relating to fixed-line telecommunications in Europe as markets were liberalised (Fumagalli, Motta and Calcagno, 2018, pp. 577-80, 589-96[43]; Baker and Salop, 2015[68]; Evenett, 2015[69]). There has been an interesting case in Kenya relating to mobile money services where the dominant mobile network operator sets the price for the means by which account holders can send instructions to their bank to use the payments system as an alternative to mobile money transfer (Box 3.5).

Box 3.5. Margin squeeze in mobile money through USSD pricing in Kenya

Mobile money refers to the transfer and use of financial services via a mobile phone. A registered mobile money user can deposit cash with an agent in exchange for e-money which can then be transferred to another user, used to make bill and merchant payments or access savings, credit and insurance services using a mobile phone. Users do not have to hold an account at a financial institution but only need to register for the service with their mobile network provider using a form of identification. The proliferation of cheap mobile phones across sub-Saharan Africa and the coverage of mobile telecommunications networks, has enabled rapid growth of mobile money and has led to dramatic improvements in financial inclusion. Kenya is one of the leading countries worldwide with practically the whole adult population being mobile money subscribers.

There are strong first-mover advantages and network effects associated with the multi-sided platform nature of mobile money provision, bringing together subscribers, agents and merchants. In Kenya, the market leader Safaricom with its M-Pesa mobile money services, has maintained a dominant position in terms of active subscribers and usage (with a share maintained above 70% for around a decade).

As coverage extended from the unbanked to be ubiquitous across the population, mobile money services have faced rivalry from commercial banks who have been extending branchless banking services to their account holders. People can use their mobile phone as a device to send instructions to their bank such as to make a transfer, as an alternative to using mobile money. To do this on the feature phones (not smart phones with internet banking) people use the USSD functionality. Unstructured Supplementary Service Data (USSD) is a protocol used by GSM cell phones to communicate with their service provider's computers via text messages. The mobile telecommunications companies determine the terms and charge for USSD sessions.

In Kenya Safaricom had been found to be charging up to KSh10 (around US$0.11) per session of up to 180 seconds in August 2014, along with substantial set-up and monthly fixed charges. A market inquiry conducted by the Competition Authority of Kenya (CAK) in 2016 found Safaricom charging up to KSh5 per session. The inquiry assessment considered market shares, dominance and market power. It then assessed various measures of costs of Safaricom and found that third-party providers of transfer services (such as banks through the payments system accessed via USSD) faced a margin squeeze, particularly in lower value transactions. That is, if Safaricom’s own mobile money operations had born the prices that it charged to third parties then the margins on money transfers would not have been commercially viable. In March 2017, the CAK reached an agreement with Safaricom in which the price of USSD would drop to just KSh1 (about US$ 0.01), which was similar to the levels in a number of other countries. The costs of USSD provision were also found likely be much less than KSh1 per session.

Note that previously Safaricom had also imposed agent exclusivity which had been removed under a settlement with the CAK in 2014, after weighing-up anti-competitive effects and the possible efficiency justifications.

Source: Paelo and Roberts (2022[70]); Roberts (2019[71]); Mazer and Rowan (2016[72]); Competition Authority of Kenya (2016[73]).

Evaluating efficiency rationales

125. Where a dominant firm is found to have engaged in exclusionary conduct the firm may claim that the conduct is necessary to realise efficiencies and that these efficiencies outweigh the anti-competitive effects. This implies a quantitative assessment of efficiencies in order to balance against the anti-competitive effects. It is important to note that: the conduct must be necessary for the efficiencies to be realised; that the efficiencies could not be realised through less exclusionary arrangements; and, that the onus is on the firm to provide all the evidence to evaluate the claimed efficiencies.

126. The nature of the economic efficiencies depends on market characteristics. For example, exclusive dealing arrangements may be justified to protect relationship-specific investments against opportunistic behaviour, hold-up problems and free-riding. A manufacturer may want to invest in a retailer's ability to promote its products through training of sales staff and improved display and advertising, however, other manufacturers brands which are carried by the retail outlet could 'free ride' on this investment. Alternatively, investments may be made by a components manufacturer for a particular product. If the assembler knows the components manufacturer has already made the sunk investment it can opportunistically offer a lower price for the component knowing the manufacturer will still be willing to supply it. These effects mean firms may under-invest. Exclusive dealing arrangements can address these market failures. However, if enforceable contracts can be drafted in each case, then exclusivity would not be required.

127. When we consider refusal to supply, margin squeeze and tying and bundling, efficiencies may result from integrating the production and supply of complementary goods and services. An obligation to supply separately may impose costs and/or reduce the returns to linked innovations across the complementary goods and services.

128. Such efficiency grounds must be balanced against the importance of effective competitive rivalry in driving economic efficiencies, including dynamic efficiencies from product development, new and improved business models and other innovations. This implies that it is very important whether the conduct which restricts competition is taking place where it maintains or strengthens a position of super-dominance which could endure and cause long-term harm to welfare.[23]

129. It is hard, if not impossible, to quantify the effects to be balanced. The role of economic analysis is to ensure a coherent framework for the weighing-up of the likely orders of magnitude, to ensure that any efficiencies claimed are substantiated, and that appropriate weight is given the competition concerns. In addition, alternative means to achieve the efficiencies without having the restrictions on competition must be taken into account.

3.2.2. Qualitative evidence

130. Qualitative evidence has a very important role to play in providing insights into production conditions, market workings, consumer behaviour, demand segmentation and the ways in which products are marketed. As with quantitative evidence, the relevant evidence is guided by the framing of the theories of harm being assessed. This evidence can be obtained from industry experts as well as from market participants. Large businesses need to have systems for strategy, marketing and decision-making on the whole range of competitive variables. A rich picture can be built-up from the internal documents that result from these assessments and deliberations. These will be commercially sensitive and confidential to the business and hence will need to be requested under the powers utilised in an investigation, which are justified given their typically very relevant nature.

131. Evidence on firms' strategy and how it has shaped markets from marketing and strategy documents can include documents which relate to the intent of a specific arrangement. Intent may be a plus factor, as per the test for predation established in the European Commission's *AKZO* case, where pricing below average total cost may be found to be exclusionary if accompanied by evidence of intent. However, especially where a firm has carefully considered possible antitrust complaints, internal documents may well be sanitised for just such an eventuality. And, it should always be born in mind that vigorous competition involves intent to undermine competitors by attracting customers with better terms.

132. Rather than looking for a 'smoking gun' in terms of intent in the documents, the strategy and marketing documents are likely to be a useful part of economic evidence where they set out key features of an exclusionary strategy which can be assessed against the observed conduct and market outcomes. Marketing documents can also include information on key features of the markets and can be triangulated with the quantitative data. For example, the documents will likely set out market segments, demand characteristics, routes to market and customer preferences, key customers, the returns to advertising and branding and the importance of product differentiation. These are key features which are necessary to interpret market trends.

133. Communications in the form of emails and other electronic means are also very helpful in assessing strategies of the firm, including with regard to responses to market developments. The large amount of information which can be provided in response to such information requests will require resources to assess.

134. The growth in electronic communication and digitalisation of production and market information means that there is a wealth of recorded information in firms' hands. The costs of providing data are also much lower than before when hard copies needed to be made. However, the flip side is being overwhelmed with the information provided such that it is impossible to process it. Tools for searching digital information bases such as emails, and skills to do so, are essential. This is a critical area in which competition authorities need to invest as part of wider data gathering, processing and analysis capabilities.

135. The nature of arrangements and how they have actually conditioned customers' behaviour should also be assessed from customers themselves. This information can point to factors which may mitigate or compound the effects, as well as the outside options (alternatives) which customers have actually deemed worthy of consideration. The market features and responses of the firms are also directly relevant to the theories of harm to be tested and can lead to amending the investigation plan including further categories of data which need to be obtained.

3.2.3. Triangulation and robustness

136. As with economic analysis in merger investigations (OECD, 2020[74]), it is very important to consider how all the evidence comes together, with economics as an organising framework. Triangulation refers to using multiple sources of data and different types of information which bears on the core questions being answered. It is not about more information being better than less, however. Unreliable and irrelevant data are unhelpful and may be positively misleading (as with confusing average list prices with effective transaction prices). It is especially important not to place weight on sophisticated econometric analyses when the underlying data are questionable. It is far better to combine reliable quantitative and qualitative data which directly bear on the issues. The information must credible and relevant. Differences and inconsistencies between information from different sources which appear reliable does not mean the information should be disregarded but instead can point to important issues for further assessment.

137. The drawing together of different sources of qualitative evidence, together with limited quantitative evidence on the extent of dominance and the scope and duration of conduct, is evident in a range of cases in Latin America and Asian countries relating to exclusivity in different forms (Box 3.6 through Box 3.9). In some cases, the conduct also included a combination of agreements, discounts and rebates, as well as payments for display space which appeared to have a combined effect. A combination of quantitative and qualitative evidence pointed to the lack of an anti-competitive effect (in Box 3.9).

Box 3.6. Exclusivity conditions and loyalty rebates for consumer goods in Latin America

Several Latin American competition authorities have considered practices relating to the exclusive distribution or display of consumer goods. While some cases have involved simple exclusivity clauses (i.e. conditioning the supply of a dominant firm's product on exclusivity), many others involved more nuanced risks of competition harm. For example, several authorities have examined conditions associated with the use of refrigerator and freezer space for food and beverages, including equipment provided by brands to retailers. The assessment in these cases generally considered both the justifications for these conditions (for example in terms of protecting the incentive to invest in providing freezers) and potential foreclosure impacts (which may be aggravated in situations such as limited space for multiple brands' freezers). A selection of these cases is summarised below.

Brazil's Unilever case

The Brazil Administrative Council for Economic Defence (CADE) issued a decision and fine in 2018 regarding conditions imposed by Unilever on retailers. The conditions involved exclusive sales, preferential display, and exclusive freezer access for the Kibon brand of ice cream.

CADE found specifically that loyalty discounts in this case were significant enough to result in foreclosure and the creation of entry barriers for new ice cream producers. However, the Council did not find that exclusive freezer access conditions raised competition concerns, as the freezers were provided and maintained by Unilever, making exclusivity a mechanism for protecting investment incentives. Further, the Council indicated these conditions would not prevent the entry of competitors.

Source: CADE (2018), Administrative Process No. 08012.007423/2006-27, 16 October 2018, https://www.gov.br/cade/pt-br/assuntos/noticias/unilever-e-condenada-por-criar-barreiras-a-concorrentes-no-mercado-de-sorvetes

Chile's Unilever case

In 2013, Chile's Fiscalía Nacional Económica determined that Unilever had abused its dominant position through a system of loyalty discounts and retroactive rebates granted to retailers for laundry detergents.

Fiscalía found that Unilever possessed a dominant position for laundry detergents in Chile given the range of brands under its control. In particular, it observed both the high (over 70%) market share of Unilever as well as significant entry barriers (most prominently the exclusivity conditions, as well as others such as advertising expenses and brand proliferation).

In its analysis of the competitive effects of the conduct in question, Fiscalía observed the high proportion of Unilever sales covered by exclusivity agreements in both traditional retail and supermarket segments, as well as the high proportion of retailers covered. It also noted the impact of sales targets covering a large portion of retailer sales on the ability of Unilever's rivals to compete.

Unilever settled the case with Fiscalía by agreeing to abolish exclusivity agreements, refraining from offering exclusivity discounts or sales targets, and not paying supermarkets for shelf space for three to five years.

Source: Fiscalía Nacional Económica (2013), Decision re: Unilever, 3 April 2013, https://www.fne.gob.cl/wp-content/uploads/2013/04/requ_xx_2013.pdf; Chile's Submission to the Latin American Competition Forum Roundtable on Competition Issues in the Groceries Sector (2015), https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/LACF(2015)18&docLanguage=En.

Mexico's Cervecería Cuauhtémoc Moctezuma and Grupo Modelo case

The Mexico Federal Competition Commission initiated an investigation in 2010 with respect to the practices by Cervecería Cuauhtémoc Moctezuma and Grupo Modelo, which together accounted for approximately 95 percent of the beer market in Mexico. The investigation centred around allegations by a rival beer producer regarding cash and non-cash loyalty incentives granted to retailers, bars, taverns and restaurants by these firms. This case is somewhat unique given it focused on two competing firms, rather than a single dominant firm.

While the Commission recognised some exclusivity agreements can be justified, for example when suppliers finance improvements or expansions in retail stores, they may also harm competition when they are imposed by firms with market power, and unduly impede competitors' market access.

The case was closed after the targets of the investigation agreed to a range of commitments, including granting craft beers open and unrestricted access to markets, limiting the share of customers subject to exclusivity deals, and ensuring all exclusivity contracts are written, transparent and time-limited.

Source: Mexico's Submission to the OECD Competition Committee Roundtable on Commitment Decisions in Antitrust Cases (2016), https://www.cofece.mx/wp-content/uploads/2017/11/2016_compromisos-en-casos-antimonopolio.pdf; Competition Policy International (2013), "Mexico: CFC cracks open beer market for craft brewers, limits exclusivity agreements", 11 July 2013, https://www.competitionpolicyinternational.com/mexico-cfc-cracks-open-beer-market-for-craft-brewers-limits-exclusivity-agreements/.

Uruguay's Fábricas Nacionales de Cerveza case

In 2013, the Uruguay Commission on the Promotion and Defence of Competition issued a decision regarding several conditions imposed by Fábricas Nacionales de Cerveza on beer retailers. Fábricas produced nearly all domestic beer in Uruguay. Among others, these conditions included limiting display space available to Fábricas' rivals in supermarkets, excluding rival products from refrigerated spaces, and offering retailers discounts for limiting the sale of competitors' products.

The Commission analysed the business arrangements in question, and found that there was no harm to competition associated with the allocation of promotional display or refrigerator space. In particular, the Commission determined that these spaces are not essential for the sale of beer (since, in contrast to ice cream, other unrefrigerated spaces were available for rival products), and were accorded in a market for which payment was provided in exchange for spaces.

On the other hand, the Commission found that discounts specifically aimed at limiting the sale of rival products would harm competition by limiting market access, and were not justified by any efficiency reasons.

Source: Commission on the Promotion and Defence of Competition (2013), Decision No. 51/103, 10 April 2013, https://www.gub.uy/ministerio-economia-finanzas/sites/ministerio-economia-finanzas/files/2020-10/20130411_resolucion_013_51_osanil_fnc.pdf?_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=en-US&_x_tr_pto=nui.

Box 3.7. Singapore's draught exclusivity in beer case

Asia Pacific Breweries (Singapore) Pte. Ltd ended their draught beer exclusivity agreements with on-premise outlets in 2015 following an investigation by the Competition Commission of Singapore. The investigation indicated that the outlet exclusivity on draught beers had restricted the choices available to retailers and consumers particularly with regard to micro-breweries and craft breweries. The CCS considered information from various market participants and commissioned a market study on market practices, collecting quantitative and qualitative information.

Source: *Competition Commission Singapore (2015).* https://www.cccs.gov.sg/media-and-consultation/newsroom/media-releases/asia-pacific-breweries-singapore-ends-exclusive-business-practices-following-ccs-investigation

Box 3.8. Exclusivity agreements in the Philippines Urban Deca Homes case

The Philippine Competition Commission issued a fine and order to remove exclusivity arrangements in a 2019 case involving a real estate developer and its property management arm. Urban Deca Homes Manila Condominium Corporation, the manager of a condominium tower, had formed an exclusive partnership with an internet service provider to provide internet connections to residents of the tower.

As a result of the agreement, rival internet service providers were prevented by property managers from accessing the tower, installing internet units or marketing their services to residents. Thus, residents who were not party to the agreement were given only a single option for their internet service provider. The Commission noted that this had the effect of inflating prices for internet services; for example a 5 Mbps monthly plan cost PHP 2,599 in the tower compared to P1,299 available from other networks.

The Commission found that Urban Deca abused its dominant position in the provision of property management services by preventing other internet service providers from serving residents in the Tower. Urban Deca proposed a settlement, removing the exclusivity arrangements from the tower in question as well as eight others.

Source: *Philippine Competition Commission, "Press Release: PCC investigation: Condo developer charged for abuse of dominance over exclusive internet setup", 6 April 2019; Philippine Competition Commission, Decision No. 01-E-001/2019, Competition Enforcement Office of the Philippine Competition Commission vs. Urban Deca Homes Manila Condominium Corporation and 8990 Holdings Inc., 30 September 2019.*

Box 3.9. Tying claims in the India Ajay Devgn Films case

In 2012, the Competition Commission of India issued an order in response to a complaint made by Ajay Devgn Films, a Bollywood film production company, against a film production and distribution company Yash Raj Films. Ajay's complaint related to Yash Raj's distribution of films for the Diwali season. Yash Raj required single screen theatres wishing to show one of its major blockbuster films to also agree to show another of its films – effectively tying the purchase of the blockbuster by theatres to the purchase of the other film.

The Commission rejected the complaint and determined that no abuse of dominance had occurred. In particular, it found no evidence that Yash Raj was a dominant film producer and distributor. For instance, it noted that Yash Raj produced only 2-4 films per year compared to a total of over 95-107 in Bollywood in the relevant period. The Commission also questioned whether Indian films constituted a separate market (while refraining from making a specific determination on this issue).

In addition to the lack of evidence of dominance, the Commission also identified several indicators that the conduct would result in appreciable harm to competition: it was applied only to single-screen theatres (and not multi-screen theatres which represented approximately two-thirds of theatre revenues); it was not accepted by all single-screen theatres, indicating that the blockbuster film was not a "must-have"; and it applied for only a limited time period.

Source: *Competition Commission of India (2012), Order in Ajay Devgn Films vs. Yash Raj Films Private Limited & others, Case No. 66/2012, 5 November 2012,* https://www.cci.gov.in/sites/default/files/CaseNo16of2010MainOrder_0.pdf

4. Role of economists

4.1. Integrating economic analysis in case teams

138. Almost all competition authorities have chief economist's groups, economics research bureaus or research departments. There are two main models for how the economists from these groups engage with cases. In the first model, the economists can form a pool of expertise in the organisation and be allocated to teams on the complex cases requiring analysis of effects on competition, including abuse of dominance cases. The economic analysis is integral to the case investigation and not a separate piece of work. In the second model, the chief economist's team plays a separate review role, providing an opinion on case investigations and advising at a decision-making level. In both situations economists are also typically employed within the main divisions dealing with mergers and anti-competitive conduct.

139. Economics thinking will be more integrated in the first model while the second provides for a check and balance to the case investigation teams. The first may also be better for building competition economics expertise across the organisation. The second model may be favoured if there is a wish for economists to be viewed as a distinct expert profession within the authority. This may have advantages in attracting and retaining economists, however, if economic analysis is viewed as part of the problem-solving process of case investigation (as I have argued), then greater integration would be preferred. There are also pitfalls in the second approach as the nature of cases typically means there are a

multitude of avenues that can be followed-up and setting-up a process to highlight all the possible areas rather than maximising the resources which are being devoted to the most important avenues may not be optimal when there are scarce skills and resources. Of course, appropriate checks are required but it is not necessarily the case that a separate economics team is required as one of these checks. As described above, the iterative process of using the economic theory tool-box to understand the market outcomes and arrangements observed implies economists are best deployed as central members in case teams. For further discussion on these and other institutional design considerations for competition authorities, see OECD (2015[75]), as well as OECD (2020[76]) on the use of economic analysis for merger investigations.

4.2. Incentives and economic experts

140. The expansion of effects-based assessment in competition regimes, along with the global expansion of competition law, has seen an incredible growth in competition economics consultancies around the world. This has been accompanied by a proliferation of conferences, blogs and events dedicated to the appropriate economic assessment for competition cases. There is obviously a self-serving incentive for economists to emphasise the importance of the economic analysis and complex techniques. However, the employment of overly complex techniques should be resisted while not rejecting the importance of core economic concepts and assessment.

141. It is now not uncommon to have international economic experts from consulting firms working for private parties in middle-income and developing countries, where these experts have substantially more training and resources at their disposal than the authority economists. The consultants naturally wish to skew the tests to the more advanced, in terms of both theory and statistical analysis, and to undermine the value of sound economic assessment by authorities based on reliable information on market characteristics, combining quantitative and qualitative evidence. In addition, the consultants are likely to make approaches to hire the most accomplished economists from the authorities, reinforcing the disparity. The difference in capacity between consultants working for parties and the economists in the authority is thus a reality for many countries, aside from those in high-income countries with well-established regimes. Two questions flow from this state of affairs.

4.2.1. Should different approaches to economic assessment be adopted in different regimes?

142. Workable regimes need to be able to detect and sanction abuses of dominance. This is especially important in middle-income and developing countries where the characteristics of the economies mean such abuses are more likely than in high income economies. At the same time, it is no exaggeration that the team for a single case in an authority such as the UK may well be larger than the entire enforcement divisions of many developing country authorities. The authorities may well be investigating the same multinational company for the same conduct, but with the barriers to entry and levels of concentration likely to be higher in the developing country.

143. This implies that, either we recognise that competition authorities will struggle to discipline abuses of dominance in developing countries and there may be a clamour for alternative measures to be used, or a 'horses for courses' approach is adopted. What would the latter involve in a way which would nevertheless ensure sound economic analysis lies at the heart of the assessment? Fortunately, the challenges posed by digital platforms to long-established competition regimes point to a menu of options that can be applied in

middle income and developing countries for the abuse of dominance matters which are likely to be at the top of their priorities (OECD, 2020[5]). First, the onus could be shifted onto entrenched dominant firms to justify conduct that prima facie undermines rivalry. Indeed, this may already be the case in some jurisdictions.[24] Second, the reach of dominant firms across related markets and along value chains could be recognised, as per the 'gatekeeper' definition being proposed by the EC or the 'paramount significance for competition across markets' in the German competition amendment. The levels of concentration within and along value chains and the likely higher barriers to entry in middle income and developing countries, as discussed above, suggest that these framings have wider applicability in such countries when considering the extent and durability of the positions of dominant firms. It is important to reiterate that these provisions only apply to dominant firms, and likely those in an entrenched and super-dominant position, and that it ensures an effects-based assessment can be made. In other words, it is in circumstances where there are good reasons to believe the balance likely lies towards type II errors that the powers of authorities in middle-income and developing countries need to be bolstered.

144. The developments in digital platforms highlight the multi-dimensional nature of market power. Several of the case examples also illustrate, with regard to relatively more mature markets, that exclusionary effects can result from a combination of conducts. This implies that it is important to be able to assess the causes of market outcomes more broadly than a discrete conduct being identified and that competition authorities need to be empowered to do so especially where, as in many middle-income and developing countries, they are the back foot to start off with in terms of information and resources. Market inquiries (or market studies) are an important alternative means to evaluate market outcomes with the important proviso that the inquiries must have powers to compel the production of relevant information and that there must be the power to make and enforce remedies. There needs to be substantial penalties for failing to comply fully with information requests.

4.2.2. Are expert economists independent?

145. Expert economists are not independent in the same sense as experts in fields such as medicine or engineering who might testify in legal disputes. This is not to cast aspersions on the character of the economists but is due to the nature of the discipline. Economics is a social rather than a natural science and that means it is possible to select from different reasonable assumptions and arrive at quite different explanations for observed market outcomes.[25]

146. It is impossible to control for all the different variables at work and assumptions about consumer and firm behaviour have to be made in all models. It means that arguments can reasonably be made for opposing positions in most complex matters. In a sense, economists can play the role of expert advocates for contesting interpretations. This can assist in focusing the inquiry of the decision-making panel on the key factual and conceptual disputes (see OECD (2008[77]) for a discussion on presenting complex economic theories to judges). Too often, however, it can lead to extensive highly complex analysis which confounds rather than clarifies. It may therefore be important to shift the onus onto the dominant firm, where appropriate given the essential characteristics of the market and descriptive analysis of the market outcomes.

4.3. Evaluating economic assessments and their role in decisions

147. A number of jurisdictions have issued best practices for expert economic opinions (for a review see Christiansen and Ewald, (2014[78])). The two key principles are relevance (which is self-evident) and reliability/robustness. The analysis must be robust in that it is not highly sensitive to small changes in the data, or included variables nor to small changes in underlying assumptions. The assessment must also be replicable, with all the steps spelled out, and it should be explained such that it is comprehensible to non-experts.

148. How expert economic evidence feeds into adjudication depends on the regime. In many authorities, the evaluations made by experts for merging parties can be submitted to the authority and the competition authorities' economists can engage with it as part of the assessment which may lead to a provisional finding. A similar approach can be taken to abuse of dominance cases if and when the authority sets out the theories of harm being considered at an early stage. However, in mergers the parties prepare in advance of the merger being filed while in abuse cases they are responding to the analysis of the authority and will naturally also want to consider the provisional findings before responding. Typically boards of commissioners, panels or tribunals take decisions based on the authority's analysis including the evaluation of the evidence presented by parties. This decision can then be appealed to courts. Expert reports will also likely be filed at this stage.

149. However, there is a wide variation in the extent to which economic evidence is presented in hearings and is subject to scrutiny. In a minority of countries, expert economists' evidence may be led and cross-examined in formal hearings before the decision-making body (a specialist Tribunal in countries such as Chile and South Africa). The South African experience is at one extreme, with very extensive hearings with senior counsel leading evidence and cross-examining economists as expert witnesses. This has led to voluminous expert reports, often running into thousands of pages in total, and evidence and cross examination extending over several days (sometimes scheduled over periods of a year or more). This involves very substantial resources and prolonged procedures and decision-making in what are adversarial processes (although it is meant to be inquisitorial) which have not necessarily generated greater clarity as opposed to a proliferation of reports (Roberts, 2019[71]). While in mergers the parties have an incentive to expedite the hearing process, in abuse of dominance cases the opposite is the case, which meant that it is important for the decision-making panel to make decisions on the key issues on which they believe the case will turn.[26] Processes which incorporate examination of expert evidence as part of the authority's investigation is likely more practical for authorities with limited resources.

5. Conclusions

150. Economic evidence is central to the assessment of conduct under competition law. This is especially the case for abuse of dominance cases. However, the record of competition enforcement of abuse of dominance has rightly come under scrutiny given the concerns about the implications of growing market power. The rise of digital platforms has raised particular challenges for competition authorities (described in detail in OECD (2020[5])), however, the challenge of effective rules and their application to unilateral conduct by firms with substantial market power applies much more generally.

151. Middle-income and developing countries, most of which have adopted competition laws and built institutions over recent decades, are under particular pressure to ensure effective and administrable abuse of dominance regimes which reflect a balancing of type I and type II errors. This balance depends on the characteristics of the respective economies, while the appropriate regime depends on a realistic assessment of the institutional capacity. This paper sets out the importance of the core economic frameworks for assessing possible abuses of dominance and the importance of economic evidence. However, it also points to the pitfalls of excessive complexity and sophistication along with the need to recognise the reasons why economists can reasonably disagree (and will likely do so, given the incentives at play). Having seen a move to more effects-based tests in many regimes, the challenges with economic analysis should not lead to a return back to form over effects, as that would imply sidestepping the economic analysis which is the central part of interrogating the conduct. A potential way forward is identified which draws from the developments regarding digital platforms, that is, to place a greater onus on entrenched (super)dominant firms to justify their conduct while empowering the authorities to effectively gather and assess the necessary information to make decisions based on sound economics, and set remedies where required.

Endnotes

[1] See: Akcigit et al (2021[86]); Eeckhout (2021[13]); De Loecker & Eeckhout (2020[89]); Ennis, Gonzaga & Pike (2019[87]); Philippon (2019[15]); Syverson (2019[80]); Bajgar et al (2019[1]); Wu (2018[14]); Baker and Salop (2015[68]); Lamoreaux (2019[82]).

[2] 'To say that the law on abuse of dominance should develop a stronger economic foundation is not to say that rules of law should be replaced by discretionary decision making based on whatever is thought to be desirable in economic terms case by case. There must be rules of law in this area of competition policy, not least for reasons of predictability and accountability. So the issue is not rules versus discretion, but how well the rules are grounded in economics.' (Vickers, 2005[9])

[3] These include Fumagalli, Motta and Calcagno (2018[43]), Viscusi, Harrington and Sappington (2018[92]), O'Donoghue and Padilla (2020[46]), Niels, G., H. Jenkins, J. Kavanagh (2016[91]), Bishop and Walker (2010[88]), Whinston (2006[79]), Motta (2004[44]). I also draw on my own experience as an economist working for competition authorities in South Africa and the UK, as well as advising on cases and conducting courses for those in competition authorities in many other countries, especially in Africa.

[4] See Tirole's Nobel Prize lecture (2014[85]) for a short overview; Tirole (2017[25]) for longer exposition.

[5] Earlier work by Aghion and collaborators found an inverted U relationship between concentration and innovation.

[6] Small but significant and non-transitory increase in price.

[7] This is the case even while the laws may allow for abuse cases to be brought at levels below these thresholds (as in South Africa) as, in practice, the obstacles are huge.

[8] We consider here where the firm is dominant upstream; the discussion equally applies where the firm is dominant downstream and can exert market power over independent suppliers upstream,

[9] See also the EC's Guidance paper on Article 102 (EC, 2009).

[10] See *Van Den Bergh Foods*, and *Coca-Cola* (O'Donoghue and Padilla (2020[46]), Chapter 7, footnote 89).

[11] As in *Hoffman – La Roche* where the European Court of Justice found that 'the special price offered by Roche is the consideration for the abandonment by its purchasers of their opportunities to obtain substantial proportions of their requirements from competitors.' (as cited in O'Donoghue and Padilla, Chapter 7)

[12] Case COMP/C-3/37.990—Intel, Commission Decision of 13 May 2009; Cardiff Buses, decision of the Office of Fair Trading No. CA98/01/2008 of 18 November 2008.

[13] The margin squeezes and exclusivity/rebates are evident in long-running and successive South African cases involving the fixed line telecommunications company and the national airline (Competition Tribunal of South Africa, 2021[84]).

[14] See Motta, Peitz, and Schweitzer eds (2022 (forthcoming)[90]).

[15] See Jenny (2018[53])

[16] United Brands Company and United Brands Continental B.V. v. Commission of the European Communities, Nos 27/76, [1978], http://eur-lex.europa.eu/legal-content/EN/SUM/?%20uri¼CELEX:61976CJ0027

[17] Davis and Garces (Davis and Garces, 2010, p. 502[61]) suggest that 'vertical restraints are often tackled using qualitative arguments about the likelihood of foreclosure and consumer harm rather than detailed quantitative analysis', however, they go on to consider 'informal and semiformal' assessment and so-called 'vertical arithmetic' calculations which involves collating and assessing quantitative information.

[18] See Scheffman and Coleman (2003[83]), figure 4, for example of where list and actual prices vary substantially in the context of identifying conduct – in this case coordination - and Davis and Garces (2010) for discussion, including of this citation.

[19] The EC Guidance Paper indicates that if the comparison should be of whether the effective price on the contestable share is below or above Average Avoidable Cost (AAC) or Long-Run Average Incremental Cost (LRAIC) (see paras 43–44).

[20] *Intel Corporation Inc v European Commission* ("General Court Judgment"), Case T-286/09 EU:T:2014:547.

[21] *Intel Corporation Inc v European Commission* ("CJEU Judgment"), Case C-413/14 P EU:C:2017:632. Opinion of Advocate General Wahl in Intel Corporation Inc v European Commission ("AG Wahl Opinion"), Case C-413/14 P, para. 169.

[22] See Fumagalli et al (2018[43]) for a brief summary.

[23] Hence the EC Guidance Paper on Article 102 indicates that if the exclusionary conduct maintains, creates or strengthens a market position approaching a monopoly then the conduct cannot normally be justified on efficiency grounds.

[24] For example, see recent amendments to the South African competition act.

[25] Louis Phlips (1996[81]) helpfully sets out a guide – the ten commandments - for economists working for parties defending their position against collusion and predation charges. As he observes with reference to collusion 'If those working for the defense, the so-called expert witnesses, obey the ten commandments, they will make the detection of collusion even more difficult than it is today. Yet, if the antitrust authorities know the ten rules of the game the defense is playing, they will react better than they currently do and increase their chances of detecting collusion. .. since we, the economic experts, are more often than not paid to testify for the defense, I shall pay special attention to the arguments they need to make their case.'

The ten commandments for defence economists are:

1. *Thou shalt have no other gods before competition*

2. Thou shalt exaggerate the level of demand

3. Thou shalt exaggerate demand shocks

4. Thou shalt exaggerate the inelasticity of demand

5. Thou shalt exaggerate the level of costs

6. Thou shalt under-report cost shocks

7. Thou shalt exaggerate asymmetries between firms

8. Thou shalt exaggerate asymmetries between markets

9. Thou shalt exaggerate costs of transportation

10. *Thou shalt otherwise tell the truth.*

[26] Chile's Tribunal has adopted this approach (see Tapia and Roberts (2015[20])).

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