On the concepts of legal standards and substantive standards (and how the latter influences the choice of the former)

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ABSTRACT

The substantial literature on the optimal choice of legal standards (LSs) in Competition Law enforcement concentrates on the factors that influence this choice *given* the Substantive (or Liability) Standard adopted by courts and competition authorities (CAs). Generally, this literature assumes that the substantive standard (SS) is welfarist. However, in reality, courts and CAs in different countries and over time use different criteria for establishing liability and, very often, these criteria are *not* welfarist. This article's main objective is to clarify the relationship between legal and SSs and show the important influence of the latter on the choice of the former: our analysis shows that while efects-based LSs are compatible with non-welfarist SSs, under the latter courts and CAs will be much more likely to use Per Se LSs. This occurs as under non-welfarist SSs the strength of the presumption of illegality will be higher. This influence may be considered as being mainly responsible for differences in the LSs adopted in European Union and in North America (USA and Canada) or UK, especially in relation to abuse of dominance cases.

KEYWORDS: competition law enforcement, legal standards, substantive standards
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I. INTRODUCTION

The appropriate choice of *legal standards* (LSs) in Competition Law (CL) enforcement, that is, of the *decision rules* that provide the basis for how assessment of potentially anticompetitive conducts must be undertaken, has been hotly debated for many years. This choice determines the extent to which economic analysis and evidence is relied upon by Competition Authorities (henceforth, CAs) and courts, in assessing whether specific conducts violate CL. How widely divergent the opinions have been in this debate and how dominant specific points of view become, in terms of their influence on enforcement practice, has varied over time and across countries and continents. Broadly speaking, the USA (or North America) point of view has tended to give economic analysis and evidence a much more important role to that assigned by the dominant view in Europe.[1] The US enforcement practice is closer to a *rule of reason* than to a Per Se approach, while European Union (EU) enforcement is more *object-based* than *effect-based*.[2] This difference has been particularly pronounced in abuse of dominance cases. As Geradin and Petit noted in 2010, under a presumption of illegality, the assessment of abuse of dominance cases in the EU has relied on 'old, formalistic legal appraisal standards, and (has shown) a reluctance to endorse a modern economic approach'.[3] For another review and appraisal reaching the same conclusions, see Neven and the recent analysis of Colomo.[4] The latter's

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1   Both at the level of the EU Commission and that of Member States. For an excellent overview of the application of economics in a century of antitrust enforcement in the USA, see W Kovacic and C Shapiro, 'Antitrust Policy: A Century of Economic and Legal Thinking' (2000) 14(1) Journal of Economic Perspectives 43. As A Gavil notes in 'Burden of Proof in U.S. Antitrust Law' (2008) 1 in Competition Law and Policy 125, American Bar Association (ABA) Section of Antitrust Law, after the *Sylvania* decision 'the Court systematically went about the task of dismantling many of the per se rules it had created in the prior fifty years, and increasingly turned to modern economic theory to inform its interpretation and application of the Sherman Act'. D Neven, 'Competition Economics and Antitrust in Europe' (2006) 21(48) Economic Policy 741, contains a review of the situation in EU, identifying the low levels of economic analysis, especially in abuse of dominance cases. See also, J Gual and N Mas, 'Industry Characteristics and Anti-Competitive Behavior: Evidence from the EC's Decisions' (2011) 39(3) Review of Industrial Organisation 207, for the use of concepts and tools from modern Industrial Organization theory and FM Fisher, 'Games Economists Play: A Noncooperative View' (1989) 20(1) The Rand Journal of Economics 113, for an early skeptical view. For an exchange that encapsulates well the controversy in Europe, see W Wils, 'The Judgement of the EU General Court in Intel and the So-called More Economic Approach to Abuse of Dominance' (2014) 37 World Competition 405, and P Rey and J Venit, 'An Effects-Based Approach to Art. 102: A Response to Wouter Wills' (2015) 38(1) World Competition, discussing the recent EU *Intel* decision 3–29. Also, L Peepercorn, 'Conditional Pricing: Why the GC Is Wrong in Intel and What the Court of Justice Can Do to Rebalance the Assessment of Rebates' (2015) (1) Art.70835, Concurrences Journal 43–63.

2   The terms are not, strictly speaking, exactly equivalent. See for details Section II below. We also note here that, sometimes, a distinction is drawn by legal scholars between 'rules' (a term that in the context of antitrust, they reserve for Per Se) and 'standards' (like the 'rule of reason')—see for example, RD Blair and DD Sokol, 'The Rule of Reason and the Goals of Antitrust: An Economic Approach' (2012) 78(2) Antitrust Law Journal 451, and A Jones and W Kovacic, 'Identifying Anticompetitive Agreements in the US and the EU: Developing a Coherent Antitrust Analytical Framework' (2017) 62(2) Antitrust Bulletin. As Blair and Sokol, ibid 472, write 'The rule of reason involves more open-ended inquiry than that of a per se analysis, moving antitrust away from rules and toward a standard'. We neglect this terminological distinction in what follows.

3   D Geradin and N Petit, 'Judicial Review in EU Competition Law: A Quantitative and Qualitative Assessment' (2010) TILEC DP No 2011-008.

4   Neven (n 1); I Colomo, 'Beyond the "More Economics-Based" Approach: A Legal Perspective on Art. 102 TFEU Case Law' (2016) 81(5) Common Market Law Review 709–739. See also P Papandropoulos, 'The

careful and extensive review of the *European Courts' choice of LS* in abuse of dominance cases shows that for a large number of practices associated with such cases, the standard is one of *Per Se* Illegality while for the rest the LS is what we will call later the Truncated effect-based (which certainly falls short of Full Effects-Based or rule of reason).

Recent years have also witnessed a significant resurgence in the theoretical and policy debate concerning the optimal *SS* in the enforcement of CL. The notion of 'substantive standard' seems to be sometimes confused with that of 'legal standard'.[5] The two notions, though related, are clearly distinct. The *substantive or liability standard* is the *criterion* used (eg impact on consumer welfare) in order to decide whether or not a conduct violates the law. LSs refer to *how* decisions are reached. *Per Se* rules (or *Per Se* LSs, such as the one always applied in hard-core cartel cases) are perfectly consistent with welfarist SSs (such as consumer surplus or total welfare). And, as we show below, Effects-Based LSs are perfectly consistent with non-welfarist SSs.

What is interesting, though rather surprising, is that no attempt, as far as we know, exists to try to bring together these two strands of the literature and, specifically, to clarify and formalize the relationship between these two concepts. This is important for two main reasons. The first is that, as just mentioned, the two concepts are often confused with each other, even by prominent authors. The second is that we can use the analysis of their relationship to throw light on the differences in the choice of LSs in different jurisdictions. We show that a very important factor behind these differences is the differences in SSs across countries. Indeed, we argue that this is the main factor behind the most significant remaining divergence in antitrust enforcement between EU and North America, which is that the latter continues to use to a greater extent *Per Se* or object-based LSs.

In the academic economic literature, to a large extent, the alternative SSs discussed are *welfarist*—that is, the debate relates to whether a Consumer Surplus or a total welfare SS should be used.[6] However, in practice, a number of *non-welfarist*

Implementation of an Effects-Based Approach under Art. 82: Principles and Application' in I Kokkoris and I Lianos (eds), *The Reform of EC Competition Law – New Challenges* (Kluwer Law International 2010); Peepercorn (n 1); Rey and Venit (n 1); P Marsden, 'Exclusionary Abuses and the Justice of "Competition on the Merits"' in Kokkoris and Lianos (eds) (n 4).

5 Or, the two concepts are not distinguished clearly from each other and their relation is left unclarified. For example, two prominent contributors to the relevant literature write: 'It is important . . . to have a clear statement of the welfare standard to be employed in promoting the goal of antitrust policy under a rule of reason (in the sense of not relying on presumptions to make inferences about liability) analysis. In the absence of clear guidance by the Supreme Court, it is left to the discretion of the lower courts which of two standards to follow – consumer welfare or total welfare' (Blair and Sokol (n 2) 472). Statements like this run the danger of creating confusion about two matters: (i) as shown below, a rule-of-reason does not necessarily imply, nor is it implied by, the adoption of a welfarist substantive standard (SS); and (ii) that the SS need not be (and in practice often is not) welfarist – as we point out in detail below.

6 There has been quite an intense debate on this issue. See the contributions by D Neven and L-H Röller, 'Consumer Surplus versus Welfare Standard in a Political Economy Model of Merger Control' (2005) 23(9–10) International Journal of Industrial Organization 829–848; B Lyons, 'Could Politicians Be More Right Than Economists? A Theory of Merger Standards' (2002) Center for Competition and Regulation, WP 02-1; and, more recently, J Padilla, 'Efficiencies in Horizontal Mergers: Williamson Revisited' in WD Collins (ed), *Issues in Competition Law and Policy* (American Bar Association Press 2005); DW Carlton, 'Does Antitrust Need to Be Modernized?' (2007) Economic Analysis Group, DP 07-03; J Farell and M

standards are also used. In Europe, for example, due to a strong ordo-liberal tradition,[7] the underlying SS is seen as to 'protect the economic freedom of market participants'—which would imply that any conduct that puts one or more competitors at a disadvantage would be considered unlawful, irrespective of whether or not there are strong *a priori* grounds for making a judgment that the ultimate consequences/ effects of this type of conduct on consumer or total welfare is negative. More generally, there has always been and there is still a lively debate revolving about the issue of *public interest objectives* especially—but not exclusively—related to the jurisdictions in Brazil, Russia, India, China, South Africa (BRICS) and other developing countries.[8]

Katz, 'The Economics of Welfare Standards in Antitrust' (2006) Competition Policy Center, Institute of Business and Economic Research, UC Berkeley; K Heyer, 'Welfare Standards and Merger Analysis: Why Not the Best?' (2006) EAG DP 06-08; S-O Fridolfsson, 'A Consumer Surplus Defence of Merger Control' (2007), Research Institute of Industrial Economics, WP 686; R Pittman, 'Consumer Surplus as the Appropriate Standard for Antitrust Enforcement' (2007) 3 CPI 204; SC Salop, 'Question: What Is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard' (2010) 22(3) Loyola Consumer Law Review 336–363; L Kaplow, 'On the Choice of Welfare Standards in Competition Law' (*John Ohlin Centre for Law, Economics and Business*, 2011); J Baker, 'Economics and Politics: Perspectives on the Goals and Future of Antitrust' (2013) 81 Fordham Law Review 2175; H Hovenkamp, 'Implementing Antitrust's Welfare Goals' (2013) 81 Fordham Law Review 2471; RD Blair and DD Sokol, 'Welfare Antitrust in US and EU Antitrust Enforcement' (2013) 81 Fordham Law Review 2497; EM Fox and L Sullivan, 'Antitrust Retrospective and Prospective: Where Are We Coming from? Where Are We Going?' (1987) 62 New York University Law Review 936–988, and other references in J Baker and S Salop, 'Antitrust, Competition Policy and Inequality' (*mimeo*, 2015) George Town University Law Center. The latter propose that the consumer surplus standard 'also helps to address inequality' (12). For a recent contribution also containing an extensive review of the recent debate, see Y Katsoulacos, E Metsiou and D Ulph, 'Optimal Substantive Standards for Competition Authorities' (2016) Journal of Industry, Competition and Trade. Some CAs are already using a total welfare standard (eg in Canada, Australia, and New Zealand). In the USA, since the end of 1970s, the courts have accepted the view that antitrust law is a 'consumer welfare prescription' (Jones and Kovacic (n 3)); also, DA Hyman and W Kovacic, 'Institutional Design, Agency Life Cycle and the Goals of Competition Policy' (2013) 81(5) Fordham Law Review 2163–2174. But it is worth noting that recently there have been quite a few voices that have argued that this should change, and the emphasis should return to the protection of the competitive process: eg GJ Werden and L Froeb, 'Back to School: What the Chicago School and New Brandeis School Get Right' (Symposium on Reassessing the Chicago School of Antitrust Law, 2018); and T Wu, 'After Consumer Welfare: Now What? The "Protection of Competition" Standard in Practice' (*CPI*, April 2018). Indeed, GJ Werden, 'Antitrust's Rule of Reason: Only Competition Matters' (2014) 72 Antitrust Law Journal 713–728, claims that, 'commentators either have merely asserted that a welfare standard must be applied or mistakenly claimed that the Supreme Court has endorsed a welfare standard'. In EU, as stressed below, a weaker standard—that concerning the impact on competitors or to the 'competitive process'—is used.

7 See for details and references Section II below.
8 These objectives may relate to issues of equality, employment, international competitiveness, growth, and protection of Small and Mediun Sized (SMEs). See also Fox and Sullivan (n 6) and Baker and Salop (n 6). Throughout our discussion in this article, we focus on *differences between jurisdictions* (and over time) in (the primary) SS adopted. We recognize but do not examine the implications of an agency or court having at the same time more than one goals—that may include efficiency *and* public interest goals. For a very good discussion of these issues, see also Hyman and Kovacic (n 6). As they mention 'in many countries, non-efficiency objectives remain in the statute because their presence is a precondition for a coalition that will support enactment'. Indeed, there are good reasons to believe that many countries would not establish competition systems 'if economic efficiency were the only reason they were allowed to offer in support of enacting such laws' (2167). For a very good discussion and defense of public interest objectives by developing country jurisdictions, see M Gal and E Fox, 'Drafting Competition Law for Developing Jurisdictions: Learning from Experience' (2014) New York University Law and Economics Working Paper 374.

Our main objective in this article is to formalize the concepts of LSs and SSs and their relationship and investigate the influence of the latter on the choice of the former. We show that this influence is two-fold, specifically we establish two main results:

1. To start with, the SS adopted will have a significant impact on the extent to which economic analysis and evidence are relied upon by courts and CAs in assessing whether there is liability *when the LS adopted is Effects-Based*. While, as we show, *Effects-Based LSs are compatible with non-welfarist SSs*, under a welfarist SS, the adoption of an Effects-Based LS will require the utilization of a significantly greater amount of competition-related economic analysis and evidence than if the SS is not welfarist.[9] This is clearly illustrated by the exchange between Wils[10] and Rey and Venit[11] concerning the LS adopted by the European General Court in, by now, the famous *Intel* decision. The first commends this decision for adopting an Effects-Based standard, while the latter criticizes it for not doing so! The paradox can be resolved by noting that the first uses the term 'Effects-Based' to characterize the LS used in this case, but by 'effects' he refers to the effects of Intel's conduct on its rivals—on 'the preservation of undistorted competition'[12]—rather than to its effects on welfare (presuming that the right SS should be non-welfarist). The latter criticizes it for not using additional economic analysis to demonstrate the effects of the conduct on consumer welfare (associating, mistakenly, an effect-based LS with a welfarist SS).[13] More generally, the positions of Wils and the General Court in the case of *Intel* confirm the weight given by the EU institutions to the need to protect market structure rather than to the need to avoid consumer harm as their liability criterion.[14]

2. Secondly, and more importantly, we show that the adoption of *non-welfarist SSs induces the choice of LSs that are closer to Per Se*. According to our second main result, when under a welfarist SS, a court would adopt an Effects-Based LS, if the SS becomes that of just protecting the competitive process the Court is likely to move to a ('lower') Per Se LS. The principal reason is that 'lowering' the SSs (from that of welfare to that of protecting the

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9   But has a more restricted objective such as 'protecting the economic freedom of market participants' (see also below).
10   Wils (n 1).
11   Rey and J Venit (n 1).
12   The meaning of 'preserving undistorted competition' was actually made clear by the Court which, upholding in its entirety the Commission's Decision, argued that making it more difficult for a rival to compete 'in itself suffices for a finding of infringement'.
13   The decision of the General Court was recently reversed by the European Court of Justice (ECJ) though, reading carefully the decision by the ECJ one sees that the ECJ considers that the (lower) General Court did not satisfactorily examine what was required in order to show that the liability standard that rivals were disadvantaged was satisfied.
14   See also discussion in Section II.

competitive process) increases the strength of the presumption of illegality and this, ceteris paribus, induces the Court to favour Per Se type LSs.[15]

In Section II, we provide informal definitions of and discussion about the concepts and the various types of legal and SSs that have appeared in the relevant literature. In Section III, we formalize and clarify these concepts and draw a number of observations about their relationship. In Section IV, we derive the two results just mentioned concerning the influence of SSs on the choices of LSs, and Section V concludes.

II. TYPES OF LEGAL AND SSs: AN INFORMAL PRELIMINARY DISCUSSION

LSs: informal definitions of the two main categories

We start by providing the following informal definitions of the two broad categories of LSs.[16] These definitions aim to make clear also their relation to the concept of SSs.

Per se LS

With this standard, decisions about whether or not there is liability[17] in the case of a specific conduct undertaken by a firm (or group of firms) are reached on the basis of a *presumption* concerning the effects of a general class (or a subclass) of conducts within which we must establish that the specific conduct falls,[18] and without pursuing any investigation concerning the effects of *the specific conduct* on whatever criterion for liability[19] is adopted by the CA—on which criterion[20] the '*effects*' have to be established. Once it has been shown that the specific conduct falls within the general class of conducts presumed to have a negative effect based on the SS used, there is no need to analyse the effects of the specific conduct itself.

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15 See below for a careful explanation of the terms 'higher' and 'lower' used here.

16 Below we will use the American term *Per Se* and the European term *Effects-Based* to refer to these two broad categories of LSs.

17 We focus, for easiness of exposition, just on conducts that are 'presumptively illegal' (or considered to be, on average, 'harmful'), so the issue is about whether and how liability can be established. For 'presumptively legal' conducts (considered to be, on average, 'benign'), the issue is about whether and how acquittal can be established. A Per Se LS in the former case is termed a Per Se Illegality LS. In the latter case, it is termed a Per Se Legality LS. The analysis of Per Se Legality is directly analogous to that of Per Se Illegality.

18 Thus, under (strict) Per Se, the anticompetitive effects are *inferred* from the conduct itself. See also below for the case we will refer to as Modified Per Se standards. Our definition is close to that of H Hovenkamp, 'The Rule of Reason' (2017) Florida Law Review 2471: 'Correct application of the per se depends critically on a judgement that certain practices are unreasonable as a "class" or family group. As a result, condemnation requires that they be correctly placed within that group' (42).

19 There will of course be an investigation for establishing beyond reasonable doubt the specific characteristics/type of the conduct itself, eg investigation relating to the evidence for establishing that a collusive agreement existed between a group of firms. Over time, there may be changes in the height of proof that plaintiffs must introduce in order to demonstrate that the specific conduct belongs to the set for which a presumption of liability is warranted. See, for example, for the case of the USA, Jones and Kovacic (n 3) 19.

20 That defines the CA's SS.

Effects-Based LS

With this, the decision about whether or not there is liability in the case of a specific conduct undertaken by a firm (or group of firms) is reached after pursuing an *investigation concerning the effects of the specific conduct* on whatever criterion for liability is adopted by the CA—on which criterion the '*effects*' have to be established. Thus, Effects-Based standards are used when we do not consider that valid inferences (satisfying a sufficiently high Standard of Proof) can be made for the effects of the specific conduct, from what we know about the average potential effects of the general class of conducts to which the conduct under investigation belongs.

Obviously, in practice, there are variations in the LSs adopted, and thus it is best to think of LSs as forming a *continuum* at the extremes of which are the (strict) Per Se (or object-based) and the ('full') rule of reason (or Full Effects-Based) standards (these variants are discussed in more detail further). As Jones and Kovacic note, 'the general progression in U.S. doctrine has been toward recognition of an *analytical continuum* whose boundaries are set, respectively, by categorical rules of condemnation (*per se* illegality) or acquittal (*per se* legality) and an elaborate, fact-intensive assessment of reasonableness (Rule of Reason). These poles are connected by a range of intermediate tests that seek to combine some of the clarity and economy of brightline rules with the greater analytical accuracy that a fuller examination of evidence can produce.'[21]

Given these definitions, we can think of the difference between these two broad types of standards as follows. For certain conducts, a sufficiently high *standard of proof* can be reached by applying a Strict Per Se (Illegality) standard, to the widest class of conducts to which the specific conduct belongs if conducts within this class are harmful under a very wide range of market conditions.[22] For many other conducts, however, this will not be the case. For these other conducts, the presumption of illegality, which can be applied to the general class of conducts of this type, is not very strong, so one needs to rely on presumptions that can be applied to subclasses of conducts and market conditions, with a more restricted set of characteristics, to which (chosen subclass) the specific conduct must be shown to belong,[23] in order to reach a sufficiently high standard of proof as needed for the Court or Authority to reach its threshold for discharging its burden of proof and establishing its ultimate

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21 See also Gavil (n 1) 139; A Italianer (Director-General for Competition, European Commission), 'Competition Agreements under EU Competition Law' (40th Annual Conference on International Antitrust Law and Policy, 2013), referring to Justice Stevens who was probably the first to point out that one should think of LSs (for dealing with restraints under US s 1) as forming a *continuum* with Per Se and Rule of Reason being at the opposite ends of this *continuum*. As Italianer notes, the US Supreme Court has explicitly recognized that 'the categories of analysis cannot pigeonholed into terms like "per se" or . . . "rule of reason". No categorical line can be drawn between them. Instead, what is required is a situational analysis moving along what the Court referred to as a *"sliding scale".*' A quite detailed discussion is also contained in Hovenkamp (n 18) 31–41. See also P Papandropoulos (n 4).

22 Such as for explicit horizontal price fixing agreements. The presumption of illegality is extremely strong for this wide class of conducts and so it is enough to know that the conduct belongs to this class to infer that more or less certainly its effects will be detrimental irrespective of the specific market conditions in the case investigated.

23 This implies that the CA will have to undertake additional investigation than when a Strict Per Se rule is used in order to identify the exact subclass of conducts to which the specific conduct belongs.

contention. A Full Effects-Based LS must be applied when, in order for the Court or Authority to reach its threshold for discharging its burden of proof and establishing its ultimate contention, a full investigation of the effects of the *specific* conduct has to be undertaken—ie when no sufficiently strong presumption can be established by just considering the effects of a wider class of conducts similar to the specific one under investigation.[24]

Substantive (or liability) standards

As noted already above, the SS adopted by courts and CAs in practice is often not that of consumer or total welfare. In this section, we clarify further the nature of these other SSs. The main thing to note is that non-welfarist SSs, or non-welfarist liability criteria, can be distinguished from welfarist SSs in two different ways:

A. *A non-welfarist SS can be just one of a continuum of criteria that need to be examined in order to form a judgment about the ultimate criterion of welfare.* Thus, for example, the criterion of extant market power (MP) forms usually part of the process of assessing whether there is 'exclusionary effect'. And, the criterion of the 'preservation of competition' or of whether the type of conduct and market conditions under consideration has 'exclusionary effects' forms *part of the process* of reaching a judgment on the basis of the welfare criterion. But, for the latter, it has to be *additionally* examined whether the conduct could have substantial efficiency effects that, also could, in many cases, outweigh potential exclusionary effects, and thus raise consumer surplus or efficiency. We regard one of the main differences in the liability standards applied in the EU and the USA in recent years to be of this type, specifically, that in the EU, in contrast to the USA, the courts and, subsequently, the authorities,[25] typically use the criterion of 'disadvantaging competitors' as the liability standard in abuse of dominance or vertical restraint investigations.

As Korah[26] mentions, seeking an explanation for this phenomenon, the tradition of the Ordo Liberal School[27] had a deep influence on the Commission and the thinking in many National CAs in the early years of enforcement (1960s), as a result of which more emphasis was placed on any restrictions of

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24 While of course this implies that the extent and sophistication of the economic analysis and evidence utilized under a Full Effects-Based standard are greater than that under object-based rules, the extent to which economic analysis has to be used will depend on the exact variant of Per Se/object-based or Effects-Based rule that is used.

25 Authorities, concerned with their reputation, will always be following what they anticipate that the courts, to which their decisions can be appealed, will do (see, for a formal argument and proof, Y Katsoulacos, 'On the Choice of Legal Standards: A Positive Theory for Comparative Analyisis' (2019) Eur J Law Econ <https://doi.org/10.1007/s10657-019-09616-7> accessed 12 June 2019. Hyman and Kovacic (n 6) make this point very vividly: 'no matter how determined an antitrust agency is to advance a legal argument, when the Supreme Court slaps it down hard [by annulling its decisions], it is sensible for the agency to reexamine its position, and make a different argument the next time round'.

26 The authorities seemed to consider that always several inefficient firms were more competitive than fewer more efficient firms and they were more interested in static than dynamic competition—V Korah, 'The Reform of EC Competition Law: The Challenge of an Optimal Enforcement System' (2010) in Kokkoris and Lianos (eds) (n 4).

27 Ordoliberalism reflects a German idea that the market should have some order.

conduct that disadvantaged rivals, restricted the freedom of the parties, or increased market concentration. More importantly, as also noted recently by Gifford and Kudrle,[28] despite the significant reforms and improvements in the EC in the last 25 years, the ordo-liberal influence remains and CL enforcement in the EU remains non-welfarist relative to other mature jurisdictions.

B. A non-welfarist SS may be one related to the 'public interest concerns', that as we mentioned above, have been popular (perhaps increasingly so) in BRICS and developing countries. For example, the SS may focus on non-welfarist criteria, such as inequality, employment, or international competitiveness. These are not criteria that need to be examined when trying to form a judgment about the traditional welfare criterion, ie they are distinct from the latter. On the other hand, CAs using these non-welfarist liability criteria can adopt Per Se or 'effects'-based LSs in the sense used in this article[29]—in order to reach a decision concerning how the examined conduct and market conditions affect whatever the criterion is.[30]

Below we concentrate on the case where the non-welfarist SSs are of type-A.

Types of LSs referred to in the literature assuming a welfarist SS

In the literature, we often find references to '*modified Per Se*' (or '*modified object-based*'), standards, where the application of the object rules requires application of (contextual) analysis of market and firm characteristics before it can be established that the specific conduct belongs to a subclass of conduct/market characteristics for which there is a strong presumption of illegality. The most widely used Modified Per Se standard is the Per Se standard subject to a significant MP (or, dominance) requirement. For abuse of dominance business practices, a *Truncated Effects-Based* LS can be thought of as a LS in which decisions about whether or not there is liability in the case of a specific conduct are reached on the basis of a presumption concerning the subclass of conduct and market characteristics that distort the competitive process by disadvantaging rivals (ie through exclusionary effects, widely defined), so assessment just requires a showing that in the specific investigation the conduct and

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28 See also discussion in Jones and Kovacic (n 13) 28 and reference there to Peepercorn (n 1). P Marsden (n 1) on the ordo-liberal approach in abuse of dominance cases. Also, Blair and Sokol (n 2), JV Coniglio, 'Rejecting the Ordoliberal Standard of Consumer Choice and Making Consumer Welfare the Hallmark of an Antitrust Atlanticism' (*CPI Antitrust Chronicle*, 2017); DD Sokol, 'Troubled Waters Between US and European Antitrust' Review of Gifford and Kurdle (2017) 115(6) Michigan Law Review, for the multi-objective character of EU CL 115–139.

29 Meaning that with Per Se, we rely on making inferences about the 'effects' of a specific conduct from what we already know about the 'effects' of populations of similar conducts; with Effects-Based, we do not rely on making such inferences and try to identify 'effects' by investigating in detail the specific conduct.

30 When a CA places emphasis on a non-welfarist SS of this type, then, of course, the extent to which it will rely on *competition-related* economic analysis and evidence will be very limited on the role of these public interest objectives; see also Fox and Sullivan (n 6) and Baker and Salop (n 6).

market characteristics belong to this subclass. The literature on LSs has also been referring to the '*structured rule of reason*'[31] where the conduct is assessed through a specific series of screens to distinguish lawful from unlawful cases,[32] in contrast to the (unstructured or) '*full*' or '*open*' *rule of reason* where all potentially anti-competitive and pro-competitive effects of the specific conduct are assessed and compared.[33] In the Appendix, we provide a brief account of the economic analysis required by the different LSs mentioned above under a welfarist SS.

III. FORMALIZING THE CONCEPTS OF SSs AND LSs

From this section onwards, we will focus on monopolization or (using EU terminology) abuse of dominance cases and more specifically exclusionary conduct by firms with monopoly power, which is the most controversial area of CL enforcement, with the biggest divergence in enforcement practices in different countries.

Consider then the assessment of a specific firm's conduct that potentially violates CL under art 102 in EU or Sherman Act Section 2 in the USA. Let us call P^I, the class or population of conducts with similar characteristics to the case to be assessed. Having identified the conduct characteristics the CA will also obtain some preliminary (perhaps limited) information about the firm and its market.

We start by defining the following four alternative SSs that can be potentially used.

Under SS^i, $i =$ I, II, III, IV, we find liability when we can show that the conduct belongs to population $i =$ I, II, III, IV. With P^I defined above, we now define three more, progressively more restricted (less general), populations as follows:

P^{II} ($= P^{MP}$) = population of conducts that belong to P^I *and* for which, according to the assessment that can be made with economic tools and evidence, the firms have (significant) MP.

P^{III} ($= P^{CC}$) = population of conducts that belong to P^I, for which according to the assessment that can be made, the firms have MP *and* for which the conducts disadvantage or exclude a rival/reduce consumer choice (CC).

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31 For example, a 'structured rule of reason' was proposed very recently in the USA (Supreme Court of California for the '*In re Cipro Cases I and II*' No S198616 (Cal 7 May 2015) for 'pay-for-delay' settlements between the patent holder and generic manufacturers. Also a 'structured rule for reason' was proposed by the US Supreme Court for dealing with RPM (in case *Leegin Creative Leather Products Inc v PSKS Inc* (2007)). And, different types of 'structured rules of reason' have been proposed for dealing with predatory practices—see, for example, Miguel de la Mano and B Durand, 'A Three-Step Structured Rule-of-Reason to Assess Predation under Art. 82' (2005) DGCOMP DP <http://lsr.nellco.org/nyu_lewp/374> accessed 19 February 2019.

32 The first screen is usually the demonstration of the existence of significant market power.

33 See F Alese, *Federal Antitrust and EC Competition Law Analysis* (Ashgate Publishing 2008) 129; R O'Donohue and AJ Padilla, *The Law and Economics of Art. 82* (Hart Publishing 2008); K Huschelrath, *Competion Policy Analysis: An Integrated Approach* (Springer 2009) 41 ZEW Economic Studies; Jones and Kovacic (n 3) 22–25. The term '*quick look*' as an alternative *truncated effects LS* falling short of the 'full' rule of reason is also sometimes used—see Italianer (n 21), Gavil (n 1), and Hovenkamp (n 18). Jones and Kovacic (n 3) 23 identify two decisions in the USA, in the 1980s, that 'set the foundation for the modern framework by recognizing intermediate alternatives to summary (Per Se) condemnation and a full blown rule of reason inquiry'. We use the term *Truncated Effects-Based* in our analysis below.

P^{IV} ($=P^W$) = population of conducts that belong to P^I, for which according to the assessment that can be made, the firms have MP, the conducts exclude a rival *and* also the conducts have a welfare (W)-reducing impact.

Of course, allocating a specific conduct to a population P^i, $i =$ II, III, IV will be subject to decision errors of Type I (false convictions) and Type II (false acquitals). The implications of recognizing decision errors and their importance in the choice of LSs are discussed further below (in Section 4).

We will be using the following notational convention:

$$SS^{II} = \text{Market Power SS}, \quad SS^{III} = \text{Consumer Choice SS}, \quad SS^{IV} = \text{welfare SS},$$

and we will say that the SS is 'higher' as we move from a MP SS to a CC SS and to a welfare SS.

Below we will neglect population P^I since in the real world courts and CAs will not usually rely, with the exception of hard core collusive agreements, on this population to make decisions and focus on the other three populations defined above. Populations P^i, $i =$ II, III, IV, constitute the *decision-base* for undertaking the assessment of conducts. Of course, using a different decision-base population P^i, $i =$ II, III, IV, increases the extent of economic analysis as we move from $P^{II} = P^{MP}$, to $P^{III} = P^{CC}$ to $P^{IV} = P^W$: to show welfare harm requires more economic analysis than to show an exclusionary effect and the latter requires more economic analysis than to just demonstrate dominance.

To check whether SS^i is satisfied we either show that the conduct belongs to P^i or, we *infer* (alternatively, we *presume*) that it does, by showing that it belongs to a more general (less restricted) population P^j, $j < i$. Thus, once SS^i is defined, we can also define the LS, that is, *how* the decision will be taken, given the chosen SS.

The following LSs, $LS_{Pj}^{SS^i}$, $j \leq i$, $i =$ II, III, IV; $j =$ II, III, IV, can be defined, where the subscript indicates the population that constitutes the *decision-base* for undertaking the assessment:

   i. LS_{MP}^{MP}: given a MP SS, with this LS, the decision is made by just assessing whether conduct belongs in population P^{MP}.
  ii. LS_{MP}^{CC}: given a CC SS, with this LS, decision is made by assessing whether conduct belongs in population P^{MP} and then inferring from this its effect on CC.
 iii. LS_{CC}^{CC}: given a CC SS, with this LS, decision is made by assessing whether conduct belongs in population P^{MP} and then assessing whether it belongs in population P^{CC}, ie investigating for this specific conduct its effect on CC.
  iv. LS_{MP}^{W}: given a welfare SS, with this LS, decision is made by assessing whether conduct belongs in population P^{MP} and then inferring from this its effect on welfare.
   v. LS_{cc}^{W}: given a welfare SS, with this LS, decision is made by assessing whether conduct belongs in population P^{MP}, then assessing whether it

belongs in population P^{CC}, and then inferring from this its effect on welfare.

vi. LS_W^W: given a welfare SS, with this LS, decision is made by assessing whether conduct belongs in population P^{MP}, then assessing whether it belongs in population P^{CC}, and finally assessing whether it belongs in population P^W, ie through an investigation for this specific conduct of its effect on welfare.

Note that we can define additional LSs (indeed, we have seen above it is best to think of a *continuum*) by thinking, for example, that a series of tests have to be undertaken in order to establish that the conduct has exclusionary effect. For example, assume that two tests are required. Then an additional population, between populations P^{MP} and P^{CC}, can be defined in which firms have MP and only one additional test/analysis is undertaken from which exclusion (reduction in CC) is then inferred. Etc.

Note that in all cases where for a LS, $LS_{P^j}^{SS^i}$, $j < i$, the population P^j is less restricted (or more general) than the population P^i, that is, P^i is a subset of P^j in these cases (cases (ii), (iv) and (v)). We can now provide a more formal definition between Per Se and Effects-Based LSs.

Definitions:

i. Per Se LSs are the $LS_{P^j}^{SS^i}$, *for which* $j < i$.

That is, Per Se are LSs for which the SS^i or criterion i for establishing liability concerns a more restricted (less general) population P^i of conducts/market conditions than the less restricted (more general) population P^j on the basis of which a decision on liability is made—so a *presumption* (or an inference), about whether or not the criterion is satisfied, is made from the more general population. Consider, for example, Resale Price Maintenance (RPM) restraints under a welfarist SS, so the population P^i is that of welfare-reducing RPM restraints. Such restraints were treated under a Modified Per Illegality LS in the USA and this is still the case in EU. This means that the basis for a liability decision has been the (more general) population P^j, consisting of RPM conducts undertaken in market conditions in which just dominance could be established. It was thought that an adverse welfare effect can be inferred or presumed once it is established that the conduct belonged to the more general (decision base) population P^j.

ii. Effects-Based LSs are the $LS_{P^j}^{SS^i}$, *for which* $i = j$.

So the SS^i or the criterion i for establishing liability concerns the same population of conducts/market conditions as that on the basis of which a decision is made. As noted above, following the *Leegin* case in 2007, courts in the USA decided that the LS for RPM should shift from Per Se Illegality to Effects-Based, that is, for RPM, the basis for a liability decision should be the population P^j of welfare-reducing conducts, so it should be shown that in any given case the specific RPM restraint belongs to this population. This implies that $i = j$, or the populations P^i and P^j are the same.

Obervations/Remarks—Discussion

Given the above formalization, a number of observations/remarks are in order. We first note that in theoretical papers like that of Katsoulacos and Ulph, comparison is focused exclusively between LSs LS_{MP}^W and LS_W^W, Katsoulacos and Ulph (2009) ie, a comparison between Per Se (with a decision reached by just assessing whether conduct belongs in population P^{MP}) and Effects-Based under a welfarist SS. Also:

1. The above discussion illustrates that welfarist SSs should not be confused with Effect-Based (rule-of-reason) LSs, as the literature commonly does. We can have Effects-Based LSs without welfarist SSs (such as in cases (i) and (iii)) and we can have Per Se LSs with welfarist SSs (such as in cases (iv) and (v)).

   A characteristic example of the confusion is that of the exchange between Wils and Rey and Venit, that was mentioned already in the Introduction. The former argues in favour of the European Commission and General Court using the LS LS_{CC}^{CC}, which is Effects-Based (as Wils indeed calls it), while the latter condemns the European Commission and Court for not using an Effects-Based LS, associating, mistakenly, an Effects-Based LS just with LS_W^W. It is of course another matter whether the European Commission did use the right LS or it should use LS_W^W rather than LS_{CC}^{CC}— indeed the recent ECJ ruling suggests that the General Court and European Commission used an even lower LS, something in between LS_{MP}^{CC} and LS_{CC}^{CC}. However, for as long as courts adopt a CC SS, there is no higher LS than LS_{CC}^{CC}. We agree with Rey and Venit that the judgment should have relied on a higher LS, but, for this, the European Courts should explicitly switch to a welfarist liability criterion.

2. We say that LSs are 'higher' when, *given the SS*, the population on the basis of which we are making the decision (indicated by the subscript j in LS_j^i)[34] become more restricted. Higher LSs in this sense increase the extent of economic analysis. Thus, comparing LS_{MP}^{CC} to LS_{CC}^{CC}, the LS is 'higher' in the latter case—we can refer to the latter as an (Effects-Based) CC LS and to the former as a (Per Se) MP LS. Similarly, comparing LS_{MP}^W to LS_{CC}^W to LS_W^W, the last one (that can be termed Full Effects-Based) LS is the 'highest', while the second (Per Se) LS is 'higher' than the first (also Per Se) LS.

   Also, an Effects-Based LS is 'higher' than another Effects-Based LS if in the former the population base for making the decision is more restricted. Thus, LS_W^W is higher than LS_{CC}^{CC}, which is higher than LS_{MP}^{MP}.

   On the other hand, moving from a Per Se to an Effects-Based LS does *not* imply that we move to a higher LS *if the Effects-Based LS concerns a lower SS than the Per Se LS*. So, for example, comparing LS_{MP}^{MP} to LS_{MP}^{CC} to LS_{MP}^W, the latter (Per Se) LS is not 'higher' to the two former (respectively, Per Se and Effects-Based[35]) LSs, and, similarly, when comparing LS_{CC}^W to LS_{CC}^{CC}, in the

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34   For simplicity, we will use LS_j^i to indicate $LS_{P_j}^{SS_i}$.

35   LS_{MP}^{MP} is Effects-Based since $i = j$.

sense that in these comparisons the SS is only changing and the decision-base remains the same. Note that in terms of the terminology commonly used (discussed in the previous section), LS_{MP}^{CC} and LS_{MP}^{W} would both be referred as Modified Per Se LSs. According to our formalization, LS_{CC}^{CC} is an Effects-Based LS, while LS_{CC}^{W} is a Per Se LS. In the literature, both of these would be referred to as Truncated Effects-Based LS.

3. The SS adopted by a CA or court will have a significant influence on the extent to which economic analysis and evidence is relied upon in finding liability *when an Effects-Based LS is adopted* given that lowering the SS will necessarily lead to a lowering of the LS adopted. Thus, lowering the SS from a welfare SS to a CC SS will lower the LS to *at most* the (Effects-Based LS) LS_{CC}^{CC}. And, economic analysis in $LS_{W}^{W} >$ economic analysis in $LS_{CC}^{CC} >$ economic analysis in LS_{MP}^{MP}. This increase in economic analysis and evidence occurs as, in these examples, we move to more restricted populations (from P^{MP} to P^{CC} to P^{W}) as the basis for making decisions, when the SS becomes 'higher'.

4. Those arguing that the European Commission's approach puts emphasis on the 'protection of competitors' do not seem to recognize that this can mean either having a CC SS and use the LS_{CC}^{CC} or the LS_{MP}^{CC}, or having CC as the decision-base and use the LS_{CC}^{W}. But these are very different: the former indicates that EU Courts, perhaps under ordo-liberal influence, consider CC rather than welfare the appropriate SS; the latter indicates that when choosing between LSs *under a welfarist SS*, it is best to adopt LS_{CC}^{W} because of decision error, deterrence, and cost (and/or) legal uncertainty considerations.[36]

5. *Benefit of using additional economic analysis:*

   i. Given Point 3 above, we expect that moving from Per Se towards Effects-Based *for any given SS* will tend to *increase the discriminatory power of the LS*, that is, the ability to discriminate correctly between 'benign' and 'harmful' conducts—thus, this will hold when LS moves from LS_{MP}^{CC} to LS_{CC}^{CC} or when LS moves from LS_{MP}^{W} to LS_{CC}^{W} to LS_{W}^{W}. Essentially, keeping SS constant and moving to higher LS by restricting the decision-base will improve discriminatory power.[37]

   ii. But moving from LS_{CC}^{CC} to LS_{CC}^{W} or from LS_{MP}^{CC} to LS_{MP}^{W}, ie *keeping the decision-base the same but increasing the SS, is likely to decrease the discriminatory power of the LS.* To clarify this note that discriminatory power will be higher when the objective is to distinguish correctly between exclusionary and non-exclusionary conducts (using LS_{CC}^{CC}), rather than to distinguish correctly between exclusionary conducts *for which a welfare-reducing inference can be made from those for which it cannot* (using LS_{CC}^{W}). Similarly, discriminatory power will be higher when the objective is to distinguish, from MP,

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36 Y Katsoulacos and D Ulph, 'Legal Uncertainty, Competition Law Enforcement Procedures and Optimal Penalties' (2015) 41(2) European Journal of Law and Economics 255–282. Y Katsoulacos and D Ulph, 'Regulatory Decision Errors, Legal Uncertainty and Welfare: A General Treatment' (2016) International Journal of Industrial Organisation.

37 Note that we cannot say how LS_{CC}^{CC} compares to LS_{W}^{W}. Also, that above does not imply that LS_{W}^{W} is 'superior' to LS_{CC}^{W}. For that, one needs to take into account also increased enforcement costs.

whether conduct has CC-reducing effects, using $\text{LS}_{\text{MP}}^{\text{CC}}$, rather than to distinguish whether conduct has welfare-reducing effects, using $\text{LS}_{\text{MP}}^{\text{W}}$.

IV. HOW SSs INFLUENCE THE CHOICE OF LSs: SOME RESULTS

Katsoulacos and Ulph provide a quite general analysis of the choice of LSs under the assumption that courts and CAs are welfare maximizers and the SS is welfarist (specifically, the SS is that of consumer surplus).[38] They derive a general condition for an Effects-Based LS to be preferable to Per Se in this case. Here, we want to be able to apply this condition also to the case where the SS is not welfarist but it is that of CC. To do that we assume that the courts wish, *ceteris paribus*, to *minimize the probability of decision errors relative to some SS*, rather than to minimize the *welfare cost* of these decision errors.[39] The condition derived by Katsoulacos and Ulph remains essentially the same as shown below.

Consider a specific presumptively illegal conduct undertaken by a firm with monopoly power[40] that is investigated for potential violation of CL. The probability of decision errors when an Effects-Based (or *discriminating*[41]) LS is used is given by:

$$\gamma(1 - p_h) + (1 - \gamma)(1 - p_B) \tag{IV.1}$$

where, assuming a welfarist SS, γ is the probability that conducts of similar type to the one investigated are harmful to welfare, p_h is the probability of correctly identifying harmful conduct when it is harmful, and p_B is the probability of correctly identifying benign conduct when it is benign.

The probability of decision errors when a Per Se LS is used is $(1 - \gamma)$, this been the probability of false convictions and given that under a Per Se LS all conducts of a given type are condemned/disallowed.

Thus, adopting an Effects-Based LS will lower decision errors if the expression in Equation (IV.1) is lower than $(1 - \gamma)$, that is, if:

$$q = \frac{p_b}{1 - p_h} > \frac{\gamma^W}{1 - \gamma^W} = s \tag{IV.2}$$

where q is what Katsoulacos and Ulph term the *discriminatory quality* of the Effects-Based standard and s is what they term the *strength of the presumption of illegality*.[42]

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38 See also Y Katsoulacos and D Ulph, 'Optimal Legal Standards for Competition Policy' (2009) Journal of Industrial Economics. Also, Y Katsoulacos and D Ulph, 'Optimal Enforcement Structures for Competition Policy: Implications for Judicial Review and Internal Error-Correction Mechanisms' (2011) European Competition Journal; Katsoulacos and Ulph (n 36).

39 Of course, if Per Se and Effects-Based LSs generate approximately the same decision errors, the choice will be Per Se since it has lower enforcement costs.

40 The analysis in Katsoulacos and Ulph (n 38) is much more general assuming any conduct that can potentially violate CL but we make the assumption here of a conduct that would come under art 102 in EC or s 2 of the Sherman Act in the USA, in order to relate better to the analysis below. In Katsoulacos and Ulph (n 38), presumptively illegal is termed a conduct type that is on *average* harmful to welfare (consumer surplus).

41 The term often used in the literature to indicate non-Per Se LSs (see Katsoulacos and Ulph (n 38) and the references therein).

42 We remind the reader that we are using superscript 'w' to indicate that we are assuming a welfarist SS.

Given the above general result and the previous discussion we can now establish:

Proposition 1:

> When a court would consider it optimal to use the highest (ie the Effects-Based) LS corresponding to an SS, then moving to a lower SS will necessarily lower the LS too, *even if the latter LS remains Effects-Based.*
>
> This is clear from the preceding discussion. If under a welfarist SS, Equation (IV.2) holds the Court will choose the Effects-Based LS, LS_W^W. Then, given the discussion of the previous section and specifically Remarks 3 and 4, if the SS were the (lower) CC SS, the highest LS that could be used is the lower LS_{CC}^{CC}. The latter would of course require substantially less economic analysis and evidence in conduct assessment (as discussed above—Point 3).

Proposition 2:

> When, under a welfarist SS, a court would adopt an *Effects-Based LS*, if the SS becomes lower, the Court is likely to move to an (even) lower (Per Se) LS, rather than the Effects-Based LS corresponding to the lower SS. The principal reason that this could happen is that lowering the SS increases the strength of the presumption of illegality and this, *ceteris paribus,* induces the Court to favour Per Se type LSs.
>
> To show this assume that the Court has a welfare SS and that its optimal LS is the (Effects-Based) LS, LS_W^W. This means that this LS improves the discriminatory quality of the assessment enough to make it preferable to adopting a (Per Se) MP LS, LS_{MP}^W (after taking into account increased costs of enforcement and, potentially, from legal uncertainty[43]). Thus, the following condition must hold from our discussion above concerning the condition for an Effects-Based LS to be superior to Per Se:

$$q_W^W = \frac{p_{b,W}^W}{1 - p_{h,W}^W} > \frac{\gamma^W}{1 - \gamma^W} = s^W \tag{IV.3}$$

> where γ^W was defined above, s^W is the index of the *strength of the presumption of illegality under the welfare SS*, $p_{b,W}^W$ is the probability of having identifed correctly a benign (in terms of welfare) conduct by a firm with MP, when the conduct is exclusionary and has been shown to belong to population P^W, $p_{h,W}^W$ is the probability of having identifed correctly a harmful (in terms of welfare) conduct by a firm with MP, when the conduct is exclusionary and has been shown to belong to population P^W and, finally, q_W^W is the index of the *discriminatory quality* of the LS adopted, that is, the index that measures how good is the LS_W^W in discriminating between harmful (welfare-reducing) and benign (non-welfare-reducing) conducts that are undertaken by firms with MP, have exclusionary effects and have been shown to belong to population P^W.
>
> Consider now that the Court adopts a CC SS. Then, at most it will adopt LS_{CC}^{CC} (Proposition 1). But now an even lower LS may be adopted, because of the increase in the strength of the presumption of illegality under the

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43 See Katsoulacos and Ulph (n 36). Further, it means that LS_W^W is superior to the intermediate (Per Se) LS LS_{CC}^W.

lower SS.[44] Specifically, with a CC SS, the Court has the option of adopting (the Effects-Based) $\mathrm{LS_{CC}^{CC}}$ or adopting $\mathrm{LS_{MP}^{CC}}$, ie an even lower (Per Se) MP LS. It will have to compare the discriminatory quality of the former (Effects-Based) standard to the (higher) strength of the presumption of illegality under the CC SS. From Equation (IV.2), the condition for the discriminatory quality of the former to exceed the presumption of illegality is:

$$q_{\mathrm{CC}}^{\mathrm{CC}} = \frac{p_{b,\mathrm{CC}}^{\mathrm{CC}}}{1 - p_{h,\mathrm{CC}}^{\mathrm{CC}}} > \frac{\gamma^{\mathrm{CC}}}{1 - \gamma^{\mathrm{CC}}} = s^{\mathrm{CC}} \qquad (\mathrm{IV.4})$$

where γ^{CC} is the probability that conducts of the type considered are CC-reducing when undertaken by firms with MP and s^{CC} is the index of the strength of the presumption of illegality under a CC SS. $p_{b,\mathrm{CC}}^{\mathrm{CC}}$ is the probability of having identifed correctly a benign (in terms of not reducing CC) conduct by a firm with MP, $p_{h,\mathrm{CC}}^{\mathrm{CC}}$ is the probability of having identifed correctly a harmful (in terms of reducing CC) conduct by a firm with MP, and $q_{\mathrm{CC}}^{\mathrm{CC}}$ is the index of the discriminatory quality of the (Effects-Based) LS adopted, $\mathrm{LS_{CC}^{CC}}$.

Though Equation (IV.3) may hold and the Court with a welfare SS may find optimal the Effects-Based $\mathrm{LS_W^W}$, if the SS is not welfarist and is, instead, that of CC the Court may not find optimal to use the Effects-Based $\mathrm{LS_{CC}^{CC}}$—that is, Equation (IV.4) may not hold. There are a number of reasons for this. To start with:

i. Given that, clearly, $\gamma^{\mathrm{CC}} > \gamma^{\mathrm{W}}$, since the probability that a conduct has exclusionary effects is higher than the probability that it has welfare-reducing effects, it follows that $s^{\mathrm{CC}} > s^{\mathrm{W}}$: *the presumption of illegality increases when we switch from a welfare SS to a CC SS.* Thus, the RHS of Equation (IV.4) is certainly higher than the RHS of Equation (IV.3).

ii. Now, we compare $q_{\mathrm{CC}}^{\mathrm{CC}}$ to $q_{\mathrm{W}}^{\mathrm{W}}$ on the LHS of Equations (IV.3) and (IV.4). The former measures the discriminatory quality of the $\mathrm{LS_{CC}^{CC}}$ in terms of discriminating (and hence avoiding decisions errors) between a CC-reducing and a non-CC-reducing conduct by a firm with MP that has been shown to belong to population P^{CC} ,[45] while the latter measures the discriminatory quality of the $\mathrm{LS_W^W}$ in terms of discriminating (and hence avoiding decisions errors) between a welfare-reducing and a non-welfare-reducing conduct by a firm with MP whose conduct is exclusionary and belongs to population P^{W}. In other words, the comparison of $q_{\mathrm{CC}}^{\mathrm{CC}}$ to $q_{\mathrm{W}}^{\mathrm{W}}$ depends on how good our models are in recognizing exclusionary from non-exclusionary conduct undertaken by a firm with MP, that has been shown to belong to

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44 As shown immediately below. That is, the strength of the presumption of illegality varies inversely with the SS (been lowest under a welfarist SS). It should be remembered that the discussion here assumes throughout that the conduct examined is considered to be presumptively illegal in the sense that it is considered to be *on average* harmful. For the directly analogous analysis of presumptively legal conducts, see Katsoulacos and Ulph (n 38).

45 That is, how good is population P^{CC} in discriminating between consumer choice-reducing from non-consumer choice-reducing conduct by firms with MP.

population P^{CC}, relative to how good are our models in recognizing welfare-reducing from non-welfare-reducing exclusionary conduct, that has been shown to belong to population P^W. Clearly, q_W^W may be greater than q_{CC}^{CC} but, even if this is not the case, q_{CC}^{CC} may well not be big enough to satisfy Equation (IV.4) given the increase in s (on the RHS of Equation (IV.4)). Thus, in comparing Equation (IV.3) to Equation (IV.4), the RHS of Equation (IV.4) is unambiguously greater than the RHS of Equation (IV.3), while the LHS of Equation (IV.4) may be smaller than that of Equation (IV.3) and, even if larger, it may well not be sufficiently larger for Equation (IV.4) to hold. All in all, when Equation (IV.3) holds, Equation (IV.4) may well not hold: if Equation (IV.4) does not hold, then the LS that will be adopted with a CC SS will be the (Per Se) MP LS, LS_{MP}^{CC}.

Secondly, even if Equation (IV.4) holds, a (Per Se) MP LS, LS_{MP}^{CC}, will have lower enforcement cost than the (Effects-Based) CC LS_{CC}^{CC}, and this may outweigh any benefits (that, from the discussion above, are likely to be smaller) from reducing errors by moving to a higher LS.

Corollary to Proposition 2:

The proposition that the increase in the presumption of illegality may induce a court using a lower SS to adopt the lower (Per Se) LS (rather than the Effects-Based LS corresponding to that lower SS) holds also when, with a higher SS, the Court's optimal LS is not the Effects-Based LS, but a Per Se LS (corresponding to that higher SS, eg LS_{CC}^W under a welfare SS). However, this is less likely to occur than in the case described in Proposition 2.

To show this assume that the Court has the highest welfare SS, but that its optimal LS is not the Effects-Based LS_W^W but the CC (Per Se) LS, LS_{cc}^W. This means that this LS improves the discriminatory quality of the assessement enough to make it preferable to adopting an even lower (Per Se) MP (after taking into account increased costs of enforcement and, potentially, from legal uncertainty). Further, it means that moving to a still higher LS, the (Effects-Based) welfare LS, LS_W^W, does not improve the discriminatory quality enough relative to the increase in the enforcement cost and, potentially, legal uncertainty. Thus, while Equation (IV.3) may hold for LS_W^W, it holds more strongly for LS_{cc}^W, and further, the latter has the advantage of lower enforcement cost. Thus, the following condition holds:

$$q_{CC}^W = \frac{p_{b,CC}^W}{1 - p_{h,CC}^W} > \frac{\gamma^W}{1 - \gamma^W} = s^W \qquad (IV.5)$$

where γ^W and s^W were defined above, $p_{b,CC}^W$ is the probability of identifying correctly a benign (in terms of welfare) conduct by a firm with MP, when inferring this from population P^{CC}, ie from its exclusionary properties, $p_{h,CC}^W$ is the probability of identifying correctly a harmful (in terms of welfare) conduct by a firm with MP, when inferring this from population P^{CC}, ie from its exclusionary properties, and q_{CC}^W is the index of the *discriminatory quality* of the LS adopted, that is, the index that measures how good is the LS_{CC}^W in

discriminating between harmful (welfare-reducing) and benign (non-welfare-reducing) conducts that are undertaken by firms with MP and have exclusionary effects—ie belong to population P^{CC}.

Assume now that the Court moves to a CC SS. Then, as noted above, it has the option of adopting LS_{CC}^{CC} or adopting LS_{MP}^{CC}, ie an even lower (Per Se) MP LS and it will adopt the former if:

$$q_{CC}^{CC} = \frac{p_{b,CC}^{CC}}{1 - p_{h,CC}^{CC}} > \frac{\gamma^{CC}}{1 - \gamma^{CC}} = s^{CC} \qquad \text{(IV.4, repeated)}$$

Again, we note that $s^{CC} > s^{W}$, that is, the presumption of illegality increases when we switch from a welfare SS to a CC SS. Then, coming to a comparison between q_{CC}^{CC} and q_{CC}^{W}, the former depends on how good are our models in discriminating exclusionary from non-exclusionary conduct by firms with MP, that has been shown to belong to population P^{CC}. q_{CC}^{W} depends on how good are our models in inferring correctly welfare- (from non-welare-) reducing exclusionary conduct by firms with MP, that has been shown to belong to population P^{CC}. Given Remark 5(ii) above q_{CC}^{CC} is likely to be greater than q_{CC}^{W}. Thus, in comparing Equation (IV.3) to Equation (IV.4, repeated), the RHS of Equation (IV.4, repeated) is unambiguously greater than the RHS of Equation (IV.3), but the LHS of Equation (IV.4, repeated) is also larger than the LHS of Equation (IV.3). Even if Equation (IV.4, repeated) holds, however, to repeat what was noted above, a (Per Se) MPLS, LS_{MP}^{CC}, will have lower enforcement cost than an Effects-Based CC LS LS_{CC}^{CC}, and this may outweight any benefits from reducing errors. Thus, we conclude that with the lower SS the Court may choose to adopt the (Per Se) MPLS, LS_{MP}^{CC}. However, this is less likely to occur than in the case described in Proposition 2.

V. CONCLUDING REMARKS

While welfare-related considerations suggest that Effects-Based LSs should be very widely adopted in CL enforcement, we find that for the assessment of many business conducts this is not what we observe in practice, especially in some jurisdictions. Among the more mature jurisdictions, this is particularly pronounced in the EU. In this article, we have emphasized the very significant, but up to now underexplored, role played by the choice of *substantive* standards on whether Per Se or Effects-Based LSs are adopted and, therefore, on the extent of economic analysis utilized. The non-welfarist SS that EU Courts have been applying is, on the basis, of the arguments of this article, likely to be mainly responsible for the wide difference in the LSs adopted (especially in relation to abuse of dominance cases) in the EU relative to North America (USA and Canada).

A corollary of the analysis of this article is that criticizing the European Commission for adopting Per Se type LSs in assessing conduct by dominant firms, as Geradin and Petit[46] do, is misguided. A more satisfactory way to interpret the

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46 Geradin and Petit (n 3).

situation in the EU is to start by noting that it is the European Courts that favour 'low' (Per Se type) LSs, something that, according to the analysis above, is perfectly consistent *with their SS, which is non-welfarist.* The choices of the European Commission to *also* use the same 'low' LSs could then be seen as a rational optimal response to what it anticipates that the courts will choose, given its desire to save costs and not to risk having its decisions reversed.[47]

Appendix

ECONOMIC ANALYSIS REQUIRED UNDER DIFFERENT LSs AND A WELFARIST SS

In order to distinguish between alternative LSs that can be applied *under a welfarist SS*, we can delineate which of the following factors/analyses are taken into account in the assessment for establishing liability (reduction in welfare)[48]:

i. Analysis of the set and nature of conduct characteristics, plus collection of basic information about the firm and market characteristics, and demonstration of whether the conduct belongs to a class to which a presumption of Per Se illegality with respect to the substantive/liability criterion can be applied.

ii. Detailed contextual analysis of market and firm characteristics (the most common approach is to take this analysis into account for establishing significant extant MP[49]).

iii. Analysis of the nature of strategic interaction and the incentive structure of firms, and identification of conditions that are likely to disadvantage rivals by generating exclusionary effects or more generally are likely to have MP enhancing effects. Analysis with objective to show harm to consumer welfare.

iv. Analysis of various efficiency creating effects or counterfactual analysis that may affect the assessment of what are the implications of the *specific* conduct for welfare,[50] eg increases in productive efficiency in the market by excluding or marginalizing less-efficient rivals.

Then we have:

1. *Strict Per Se*: assessment relies on a presumption about the effect on welfare that is based just on (i)—focus is on the most general class of conduct and market characteristics.

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47   See Proposition 2 of Katsoulacos (n 25) showing that under such circumstances, a reputation maximizing authority facing increased costs for adopting higher standards may well choose to adopt even lower LSs than the courts. Also, see n 23 reference to Hyman and Kovacic (n 6). See also Neven (n 1) who points to the almost 100% successful record of the EC in having its decisions upheld by EU Courts in art 102 cases in which decisions have 'remained focused on form'.

48   We remind the reader that, as above, we assume presumptively illegal conduct.

49   A very important ingredient in this enquiry continues to be the definition of the relevant market.

50   It should be recognized here that, as Jones and Kovacic (n 3) 10) mention 'there remains considerable debate over the test to be applied to restraints deemed to be helpful to the realization of efficiencies . . .. Must the defendant show that such restraints are "indispensable" or "necessary" to the attainment of valid ends . . .? Can the plaintiff prevail by demonstrating that the defendant could have availed itself of less restrictive measures to achieve the claimed efficiencies . . .?'.

2. *Modified Per Se*: assessment relies on a presumption about the effect on welfare that is based just on (i) and (ii)—so now focus is on a more restricted class (population) of conduct and market characteristics.

3. *Truncated Effects-Based*: assessment relies on a presumption about the effect on welfare that is based on (i), (ii), and (iii)—so focus is on an even more restricted class of conduct and market characteristics.

4. *Full Effects-Based*: assessment relies on a full investigation that is based on (i), (ii), (iii), *and* (iv). It is worth stressing that the scope of the analysis even under a full Effects-Based depends on whether the (welfarist) SS is that of consumer or total welfare. In the former case, the assessment will focus on whether in the specific case we can expect output reducing or price increasing effects, while in the latter case, the assessment must take into account also whether the effect of efficiencies outweighs a reduction in consumer welfare so total welfare is expected to increase.[51]

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51 Hovenkamp (n 18) 63 argues that 'we can limit arbitrariness' in the application of the rule-of-reason by 'focusing on price and output effects rather than general welfare effects', that is, by applying a consumer surplus rather than a total welfare SS. See Carlton (n 6) for arguments in favour of total welfare SS and Katsoulacos, Metsiou and Ulph (n 6) for a detailed review.