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Toward a Coherent Policy on Cartel Damages

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ABSTRACT

The focus of cartel damages law is on the recovery of the cartel overcharge. Parties other than purchasers are often neglected, not only as a matter of judicial practice, but also due to legal restrictions. We argue that a narrow concept of standing—which excludes parties that supply either the cartel or the firms that purchase from the cartel with complementary product components—falls short of achieving effective antitrust enforcement and corrective justice in the best possible way. We provide a framework with two complementary products and show that under neither competition nor cartelization do the allocation and the distribution of surpluses depend on whether producers of complements purchase from the cartel or supply the cartel or the cartel’s customers. Thus, we argue that prima facie producers of complements should be treated alike, regardless of their position in the supply chain. Moreover, based on various factors that determine the enforcement effect of antitrust damages claims and their role as an instrument to achieve corrective justice, we show that a broad concept of standing is, indeed, the preferable legal solution. While its implementation would require a change in position by the U.S. federal courts, we submit that it would amount to a consistent completion of the legal framework within the E.U.

Keywords: Cartel damages, antitrust standing, pass-on, suppliers, complementary goods

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I. INTRODUCTION

How does a component become part of a manufactured good? One obvious way is for the manufacturer of the good to buy the component from a supplier and build the component into the product. But there are two others. Sometimes the order is reversed and the component maker buys the otherwise complete product from the manufacturer, adds the component, and resells the finished product to consumers. And sometimes the component maker supplies the component directly to the consumer, who buys the otherwise complete product separately and combines it with the component at home.¹ Indeed, erasers make it onto pencils in all three ways. Pencil makers buy erasers and attach them to the pencils they sell, eraser-makers buy pencils and attach the pencils to the erasers they sell, and consumers also sometimes buy eraser-less pencils, and separate eraser-tops, and put the two together at home.

Given that all three approaches – supply, purchase, and separate sale – achieve the same end of providing a complete product to the consumer, one might expect antitrust law, and its counterpart in the European Union, competition law, to treat them similarly. In fact, neither legal regime does so. When undertaken by manufacturers, cartels tend to harm component makers. The potential harm is clear when the component maker pursues a purchase strategy, buying the good from the manufacturer, adding the component, and then reselling the finished good to consumers, because in this case the component maker pays the higher cartel price directly. Antitrust and competition law have both long recognized the right of component makers to sue for compensation in this scenario.

However, enforcers and courts on both sides of the Atlantic have failed to recognize that component makers are equally harmed by manufacturer cartels when component makers act as suppliers or when they sell components separately to consumers. Even though in these cases component makers do not pay the higher prices charged by the cartel, they suffer because those higher prices reduce consumer demand for the combined product and, therefore, the sales of the component. For example, if pencil makers collude to raise pencil prices, consumers will buy fewer pencils. That means that pencil makers will buy fewer erasers for attachment to pencils, and consumers will buy fewer erasers to use alongside their pencils, harming eraser-makers acting as suppliers or as separate sellers. Lost sales means lost profits, and component makers are harmed just as surely as if they had been forced to pay higher prices for the pencils themselves. As a response,

¹ In the following, we will refer to these scenarios as the “purchaser case”, the “supplier case” and the “separate seller case,” respectively.

component makers will find it a profit-maximizing strategy to lower their prices to mitigate the decline in demand. Thus, while in the purchaser case component makers primarily suffer from a cartel-induced overcharge, as suppliers and separate sellers they suffer a loss due to cartel-induced underpayment.

Antitrust law today only permits component makers to sue for damages if they happen to have embraced the purchaser model, buying directly from the manufacturer and, then, adding the component themselves. The culprit is current standing doctrine, which holds that only “direct purchasers” of cartel products, understood to mean those who have actually paid the prices fixed by the cartel, have a right to sue for damages.² While under E.U. competition law, standing rights of suppliers and independent sellers of complements are not firmly excluded, the issue is only cautiously discussed and, thus, it appears highly uncertain whether component makers as suppliers to a cartel or let alone as independent sellers could recover damages for their loss.

This focus on the purchasers’ damage is flawed as a matter of basic economics, as cartelization not only harms component makers regardless of whether they are purchasers, suppliers, or separate sellers, but harms them in precisely the same way, and in the same amount, in all three cases, as our simple economic model reveals. That is, from an economic perspective, the harm inflicted on component makers is exactly the same, regardless of the particular way in which the component finds its way into the final product. When component makers acting as purchasers pay a higher price to the cartel, the component makers partially pass that higher price on to consumers, reducing consumer demand for the finished product by the same amount as demand would be reduced were the cartel to sell directly to consumers at a higher price. Thus, the component maker suffers the same demand-driven loss as a purchaser that the component maker would suffer as a supplier or separate seller.

From an economic perspective, it is, therefore, entirely arbitrary for antitrust to provide compensation for this harm when production is organized through the purchaser method, but not when it is organized through the supplier or separate sale methods. It follows directly from the existence of harm in the supplier and separate seller cases that the current standing rule allows cartels to escape financial responsibility for some of the harm that they cause. And it follows just as directly that as a matter of corrective justice, and

² A notable exception are purchasers injured by “umbrella pricing” for the benefit of whom the appellate courts of at least two circuits have affirmed standing and proximate causation, see *In re Beef Industry Antitrust Litigation*, 600 F.2d 1148, 1166, fn. 24 (5th Cir. 1979); *United States Gypsum Co. v. Indiana Gas Co., Inc.*, 350 F.3d 623, 627 et seq. (7th Cir. 2003). In contrast, a claim for damages due to umbrella pricing was dismissed in *Mid-West Paper Products Co. v. Continental Group*, 596 F.2d 573 (3rd Cir. 1979).

not just good economics, the law should provide all component makers with the same means of redress, because they all suffer exactly the same harm.

A change of the law would not make the calculation of damages any more difficult than it is today. Courts today award direct purchasers “overcharge damages” equal to the increase in price imposed by the cartel, multiplied by the volume of sales. Awarding damages to suppliers and separate sellers would require only that courts or enforcers substitute the decline in price caused by the resulting decrease in component demand for the increase in price currently used in the overcharge measure of damages.

Broadening the concept of antitrust standing would also eliminate the conflict of interest in enforcement that is inherent in the (direct) purchaser rule. On the one hand, because direct purchasers may not be able to obtain the cartel’s products elsewhere, they may have an incentive not to bring suit against the cartel, even if forced to accept higher prices as a result. On the other hand, a cartel may simply bribe its direct purchasers by forwarding a share of the cartel profits. Conferring standing rights to a broader class of aggrieved parties reduces such risks of intimidation or corruption. More in particular, separate component sellers have no such direct business relationships to preserve, and would therefore be more likely to act as private attorneys general, suing to enforce anti-cartel rules, or revealing private information about cartelization to government enforcers.

Giving suppliers and separate sellers standing is consistent with the two main competing views of the goals of antitrust and competition policy. The dominant view, which is arguably the law on both sides of the Atlantic, is that the primary goal is to protect only consumers from harm. Against this “consumer welfare standard,” some argue instead for a “total welfare standard” that would require antitrust to protect both consumers and producers as a group. By making possible damages awards for suppliers and separate sellers, giving these groups standing would obviously protect the interests of producers, in accordance with the total welfare standard. But this approach would also protect consumers. That is because consumers benefit from the lower prices charged by component makers in response to creation of the cartel, offsetting the harm consumers suffer from the higher prices charged by the cartel itself. By compensating component-makers, antitrust would therefore reward pro-consumer behaviour.

Giving suppliers and separate sellers standing would require a fundamental change in the focus of courts and enforcers in both the U.S. and the E.U. In the U.S., it would require overturning of a line of cases affirming the direct purchaser rule. In the E.U., the change would be less difficult to implement, because it is consistent with existing principles of E.U. competition law. The change is, however, worth the trouble, because the importance of component production in the economy is great. Virtually

everything sold in a modern economy, from computers to weapons systems, either incorporates essential components purchased by the manufacturer from independent suppliers or purchased separately by end users.³ Jet manufacturers like Boeing and Airbus source components for their airplanes from thousands of independent suppliers, but airlines buy jet engines for the planes separately, from engine manufacturers like Rolls Royce. Builders buy their elevators from one company, and repair services – another kind of component essential to use of the product – from independent service providers. Even Apple, which is famously possessive of its supply chain, sources iPhone components from thousands of independent suppliers, while users buy apps and their phone cases, which many would consider essential to use of the product, from independent suppliers. Losses to component suppliers are therefore guaranteed in virtually every cartel case.

The remainder of the paper is structured as follows: In Part II we outline the current law of antitrust standing in the U.S. and the E.U., as well as the basic economics of cartel damages and optimal deterrence. We also show how cartel effects on suppliers and separate sellers of complements are considered for the calculation of the (direct) purchaser's cartel overcharge. In Part III, we consider the economic effects of cartelization on the market for complementary products. In particular, we assess the cartel-induced effects on producers of complements against the background of the concept of optimal antitrust damages and analyse the interrelationship between the legal (dis-)regard for these effects and the calculation of the (direct) purchaser's overcharge. In Part IV, we discuss several policy considerations beyond optimal damages award and coherence across market organizations that may support or militate against a broad concept of antitrust standing. In Part V we set out legal implications. Part VI concludes.

II. CURRENT LAW AND POLICY

A. U.S. Antitrust Law

Pursuant to Section 4 of the Clayton Act, “any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor in any district court of the United States [...] and shall recover threefold the damages by him sustained.” Despite its statutory framework, the law of cartel damages actions is largely the creation of federal judges. Thus, in contrast to what the above language might suggest,

³ Production functions exhibiting this property are sometimes called O-ring production functions. See Michael Kremer, *The O-Ring Theory of Economic Development*, 108 *Quarterly Journal of Economics* 553 (1993).

a right to sue for recovery of cartel damages is not granted to any plaintiff who may show injury from an antitrust violation. The doctrine of antitrust standing as established by the case law requires, instead, that a court further determine whether the plaintiff is a proper party to bring suit.⁴

1. The Doctrine of Antitrust Standing

The Supreme Court, in its *Associated General Contractors* decision, shaped the essential elements of the current doctrine of antitrust standing. Two labor unions sued an association of building contractors for damages. They alleged that the defendants had violated the antitrust laws by forcing its members and its outside contractors to engage only non-unionized firms. The Supreme Court identified five factors that must be taken into account in deciding whether a plaintiff should have antitrust standing:⁵ (1) the causal connection between the antitrust violation and the harm to the plaintiff, and whether the harm was intended; (2) the nature of the injury, in particular whether the plaintiff is a consumer or a competitor in the relevant market; (3) the directness of the injury, including whether determining damages would be too speculative; (4) the danger of duplicative recovery and whether it would be too complex to apportion the damages; and (5) the existence of a class of better-situated plaintiffs or more direct victims.⁶ As a result, leaving aside exclusionary effects to the detriment of competitors, under U.S. federal law, antitrust standing in cases of horizontal coordination of prices, quantities, etc. is restricted to direct purchasers with the aforementioned exception of “umbrella plaintiffs”.⁷ In particular, in *Hanover Shoe*, the U.S. Supreme Court ruled against a defensive use of the pass-on argument,⁸ and, subsequently, in *Illinois Brick*, the Court refused to grant standing to indirect purchasers who argued that a cartel overcharge had been passed on to them.⁹

⁴ *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104, 110 n. 5 (1986).

⁵ *Associated General Contractors v. California State Council of Carpenters*, 459 U.S. 519, 540-45 (1983).

⁶ Summary taken from ABA Section of Antitrust Law, *Proving Antitrust Damages: Legal and Economic Issues* (ABA Publishing: Chicago, Ill., 2nd ed. 2010), p. 18.

⁷ See *supra* note 2.

⁸ *Hanover Shoe & Co. v. United Shoe Machinery Corporation*, 392 U.S. 481 (1968).

⁹ *Illinois Brick Co. v. Illinois*, 431 U.S. 720 (1977). Note, however, that about 30 states have enacted so-called *Illinois Brick* repealer legislation, according to which indirect purchasers may sue for cartel damages under the states’ antitrust laws; see ABA Section of Antitrust Law, *Proving Antitrust Damages: Legal and Economic Issues* (ABA Publishing: Chicago, Ill., 2nd ed. 2010), p. 30.

2. Suppliers to the Cartel

With regard to monopsony underpayment—i.e., when suppliers are the target of a cartel of buyers—their standing has been confirmed by the Supreme Court.¹⁰ Thus, in this respect, an upstream injury to suppliers is treated essentially the same as a downstream injury inflicted on consumers. In contrast, standing of suppliers on the grounds of alleged restrictive practices of their customers in the downstream market has been considered and ultimately denied¹¹ by the Court of Appeals of at least four Circuits.¹² Remarkably, however, none of the four cases was initiated by a supplier’s suit grounded in an antitrust injury due to a decline in demand caused by downstream cartelization. *Comet* concerned a supplier that allegedly lost a contract, as he refused to pay a bribe that his general contractor had agreed to with other construction contractors and a Governor in the course of a bid-rigging conspiracy.¹³ In *Exhibitors’ Service*, a supplier’s services became superfluous due to a market share conspiracy unrelated to a cartel-induced output restriction.¹⁴ In *International Raw Material*, the suit was directed against a buyer cartel. The plaintiff invoked the issue of downstream cartelization to undermine the defendants’ immunity from the antitrust laws.¹⁵ In *SAS of Puerto Rico*, the plaintiff was a supplier to a market-dominant firm that was alleged to have foreclosed a downstream market in breach of the essential-facilities doctrine.¹⁶

¹⁰ *Mandeville Island Farms v. American Crystal Sugar Co.*, 334 U.S. 219 (1948); *Beef Industry Antitrust Litigation*, 600 F.2d 1148 (5th Cir. 1979), *cert. denied*, 449 U.S. 905 (1980); *SAS of Puerto Rico, Inc., v. Puerto Rico Telephone Company*, 48 F.3d 39, 44 (1st Cir. 1995).

¹¹ There are, however, occasional earlier judgments by lower courts that have argued for a wider concept of standing; see, e.g., *Wilson v. Ringsby Truck Lines, Inc.*, 320 F. Supp. 699, 701-703 (D. Colo. 1970), in which the District Court granted antitrust standing to truck drivers and warehousemen who brought suit against their employer, claiming to have suffered reductions in wages and other compensation because the defendant discontinued some of its business as a result of a market-sharing agreement with its competitors.

¹² Not included are cases that involve suits that target downstream mergers; see this category of cases where, however, suppliers’ standing is generally denied as well. Phillip E. Areeda, Roger D. Blair, Herbert Hovenkamp and Christine Piette Durrance, *Antitrust Law* (Wolters Kluwer: New York), 4th ed. 2014), Vol. IIA, ¶350c, pp. 269-274.

¹³ *Comet Mechanical Contractors, Inc., v. E.A. Cowen Construction, Inc.*, 609 F.2d 404 (10th Cir. 1980).

¹⁴ *Exhibitors’ Service, Inc. v. American Multi-Cinema, Inc.*, 788 F.2d 574 (9th Cir. 1986).

¹⁵ *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318, 1327-29 (3rd Cir. 1992).

¹⁶ *SAS of Puerto Rico, Inc., v. Puerto Rico Telephone Company*, 48 F.3d 39, 44 (1st Cir. 1995).

The courts based their verdicts solely on considerations regarding an effective private enforcement of the antitrust laws. While the U.S. Supreme Court has repeatedly stated that (treble) damages under Section 4 of the Clayton Act serve both as a means of deterring antitrust violations *and* of compensating victims,¹⁷ this latter objective and the notion of corrective justice, respectively,¹⁸ have not been discussed as considerations that could argue for a broader concept of antitrust standing. Suppliers were not considered “proper” plaintiffs because consumers and competitors in the affected market were available as a class of more suitable plaintiffs.¹⁹ The courts assumed the latter to be in a superior position to notice antitrust violations and to have sufficient self-interest to bring an antitrust suit. Moreover, while it has been argued that, on the one hand, damages claims by suppliers entail risks of duplicative recovery,²⁰ on the other hand, suppliers’ damages and their causal connection with an antitrust infringement have been considered too “speculative.”²¹

3. Suppliers to the Cartel’s Customers

An antitrust suit on the grounds that the customer of the plaintiff suffered from reduced demand due to an upstream cartelization seems not to have been reported so far. Standing has been denied, however, where an exclusionary practice has been directed at the plaintiff’s customers. For instance, a supplier to an airline was not permitted to bring an antitrust suit on the grounds that the airline was driven out of the market as a result of the collusive predatory pricing of competing airlines.²² Such a suit differs significantly from an

¹⁷ See *Illinois Brick Co. v. Illinois*, 431 U.S. 720, 746 (1977) (“But §4 has another purpose in addition to deterring violators and depriving them of ‘the fruits of their illegality,’ *Hanover Shoe*, 392 U.S. at 494; it is also designed to compensate victims of antitrust violations for their injuries.”); *American Soc’y of Mech. Eng’rs v. Hydrolevel*, 456 U.S. 556, 575-76 (1982) (“[T]reble damages serve as a means of deterring antitrust violations and of compensating victims ...”).

¹⁸ See, on the notion of corrective justice as a guiding principle of antitrust damages law, *infra* sub IV.B.

¹⁹ *Exhibitors’ Service, Inc. v. American Multi-Cinema, Inc.*, 788 F.2d 574, 578-79 (9th Cir. 1986); *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318, 1329 (3rd Cir. 1992); *SAS of Puerto Rico, Inc., v. Puerto Rico Telephone Company*, 48 F.3d 39, 44 (1st Cir. 1995).

²⁰ *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318, 1329 (3rd Cir. 1992).

²¹ *SAS of Puerto Rico, Inc., v. Puerto Rico Telephone Company*, 48 F.3d 39, 45 (1st Cir. 1995).

²² *Brian Clewer, Inc. v. Pan Am. World Airways, Inc.*, 674 F. Supp. 782 (C.D. Cal. 1986), *aff’d*, 811 F.2d 1507 (9th Cir.), *cert. denied*, 484 U.S. 925 (1987). In fact, the plaintiff was not a typical supplier but a travel agency that characterized itself as a “marketer of air

alleged restrictive practice, as it does not necessarily involve “a claim that output has been curtailed or prices enhanced throughout an entire competitive market.”²³

Nevertheless, the reasons given by the court are telling because, applying the criteria developed by the Supreme Court in *Associated General Contractors*, it based its verdict, *inter alia*, on the already familiar consideration that the plaintiff “was neither a consumer nor competitor” in the airline market but in the market for the sale of airline tickets.²⁴ Moreover, the court emphasized the existence of classes of potential plaintiffs that were in a better position to assert antitrust claims—namely, the airline that was the target of the alleged predatory pricing and whose suit against the defendant airlines had been settled, as well as the customers of the airline whose class actions were on track to be settled.²⁵ Finally, the court emphasized that the plaintiff “stands in the same position of numerous other prospective plaintiffs whose alleged losses are indirect and derivative,” including “other suppliers of goods and services, food vendors, waste disposal, services and custodians.”²⁶ These reasons given by the court indicate that the court would have equally denied standing if the plaintiff had alleged a restrictive practice to the detriment of its customer. Thus, in light of the established doctrine of antitrust standing and the existing body of case law, there can hardly be any doubt that courts would not confer antitrust standing on firms that separately sell complementary goods to cartels’ purchasers and that claim to have suffered a loss due to reduced demand.²⁷

B. Competition Law in the E.U.

Within the E.U., the law on cartel damages is an area of continuous development. In its seminal judgment in *Courage*, the European Court of Justice (ECJ) stated that the “full effectiveness” of the prohibition of restrictive practices pursuant to Article 101 TFEU “and, in particular, the

transportation and related services” and whose profits depended largely on the commission obtained from the sale of tickets of the airline that had been the alleged victim of predatory practices, *id.*, at 784 and 788.

²³ *Id.*, at 786.

²⁴ *Id.*

²⁵ *Id.*, at 787.

²⁶ *Id.*

²⁷ See, e.g., John E. Lopatka, *Antitrust Injury and Causation*, in ABA Section of Antitrust Law (ed.), *Issues in Competition Law and Policy* (ABA Publishing: Chicago, 2008), Vol. III, 2299, 2312-13; Areeda, Blair, Hovenkamp and Durrance *supra* note 12, at ¶350a, p. 267: “An immediate victim of illegal conduct by the defendant(s) is the plaintiff’s customer, who then buys fewer inputs from the plaintiff. The plaintiff generally lacks standing unless the plaintiff competes with the defendant.”

practical effect laid down in [Article 101 TFEU] would be put at risk if it were not open *to any individual* to claim damages for loss caused to him.”²⁸ Pursuant to the principle of effectiveness embodied in Article 4(3) TEU, which imposes a duty of loyal cooperation between the Member States and the E.U. institutions, the laws of the Member States that provide the legal basis for cartel damages claims and that, in the absence of harmonising E.U. law, lay down the detailed rules governing those legal actions, must not render the right to claim damages “practically impossible or excessively difficult.”²⁹ Accordingly, in *Courage*, the ECJ stated that E.U. law did not preclude national law from preventing an unjust enrichment of claimants of cartel damages or from denying parties standing who bear “significant responsibility” for the infringement of competition law.³⁰ Subsequently, in *Manfredi*, the ECJ added that it was for the Member States’ laws to prescribe “the application of the concept of ‘causal relationship’” between an illegal restrictive practice and the harm suffered.³¹ However, those domestic rules must comply with the principle of effectiveness. On this basis, the ECJ held in *Kone* that domestic law must not exclude compensation of losses resulting from umbrella pricing “categorically and regardless of the particular circumstances of the case”³² and thereby effectively gave umbrella plaintiffs the right to sue. It still remains open, however, whether the principle of effectiveness, as it was invoked and interpreted by the ECJ in *Courage*, entails any requirements, first, for the legal treatment of pass-on effects and the right to sue by indirect purchasers³³ and, second, for antitrust standing by suppliers to the cartel or by separate sellers of complements.

²⁸ Case C-453/99, *Courage v. Crehan*, EU:C:2001:465, para. 26 (emphasis added).

²⁹ *Id.*, at para 29. This principle was codified in Article 4 E.U. Cartel Damages Directive: “In accordance with the principle of effectiveness, Member States shall ensure that all national rules and procedures relating to the exercise of claims for damages are designed and applied in such a way that they do not render practically impossible or excessively difficult the exercise of the Union right to full compensation for harm caused by an infringement of competition law.”

³⁰ Case C-453/99, *Courage v. Crehan*, EU:C:2001:465, paras. 30 et seq.

³¹ Joined Cases C-295/04 to 298/04, *Vincenzo Manfredi v. Lloyd Adriatico Assicurazioni SpA and others*, EU:C:2006:461, para 64.

³² Case C-557/12, *Kone AG and others v. ÖBB-Infrastruktur AG*, EU:C:2014:1317, para 33.

³³ In the literature, this is answered partly in the affirmative; see, e.g., David Ashton and David Henry, *Competition Damages Actions in the EU* (Edward Elgar: Cheltenham and Northampton, MA, 2013, para. 3.030; Döleyman Parlak, *Passing-on Defence and Indirect Purchaser Standing: Should the Passing-on Defence Be Rejected Now the Indirect Purchaser Has Standing after Manfredi and the White Paper of the European Commission?*, 33 *World Competition* 31-32 (2010); Firat Cengiz, *Antitrust Damages Actions: Lessons from American Indirect Purchasers’ Litigation*, 59 *International & Comparative Law Quarterly* 39, 52 (2010).

Similar to the ECJ's statement in *Courage*, the E.U. legislature stipulated in Article 3(1) of the E.U. Directive on Cartel Damages³⁴ that "Member States shall ensure that any [...] person who has suffered harm caused by an infringement of competition law is able to claim and to obtain full compensation of that harm." However, as this statement presupposes a concept of causation—which the Directive does not provide for, and therefore, remains, in principle, a matter of Member States' laws³⁵—it does not exclude *a priori* the possibility that Member States will deny compensation for certain types of harm based on doctrines such as remoteness, proximate causation, or directness of injury.³⁶ Remarkably, and in contrast to the U.S. courts, Article 12(2) of the Directive explicitly grants standing to indirect purchasers.³⁷ Other potential plaintiffs beyond direct purchasers remain unaddressed in the operating part of the Directive. Yet it is pointed out in recital 43 of the Directive that "infringements of competition law [...] may also concern supplies to the infringer (for example in the case of a buyers' cartel)." As the case of a monopsony underpayment due to a cartel by buyers is mentioned only as one conceivable example of possible harm done to suppliers, this wording suggests that the legislature at least had in mind damages done to suppliers due to downstream cartelization by their customers as a possible cause for damages actions. Though recitals contain a statement of reasons given by the legislature, and, thus, the enacting terms of the Directive have to be interpreted in light of the recitals,³⁸ the quoted statement does not give a conclusive argument for deducing standing rights for suppliers from Article 3(1) of the Directive.

³⁴ Directive 2014/104/EU of the European Parliament and of the Council of 26 November 2014 on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union, OJ L 349, 5.12.2014, p. 1 (in the following, referred to as "E.U. Cartel Damages Directive").

³⁵ See recital 11, 2nd sentence E.U. Cartel Damages Directive: "All national rules governing the exercise of the right to compensation for harm resulting from an infringement of Article 101 or 102 TFEU, including those concerning aspects not dealt with in this Directive such as the notion of causal relationship between the infringement and the harm, must observe the principle of effectiveness and equivalence."

³⁶ See recital 11, 5th sentence E.U. Cartel Damages Directive: "Where Member States provide other conditions for compensation under national law, such as imputability, adequacy or culpability, they should be able to maintain such conditions in so far as they comply with the case-law of the Court of Justice, the principles of effectiveness and equivalence, and this Directive."

³⁷ This rule is, of course, interrelated with the decision to grant cartelists a passing-on defense against their purchasers, pursuant to Article 13 of the E.U. Cartel Damages Directive.

³⁸ See, e.g., Joined Cases C-402/07 and C-432/07, *Sturgeon and others*, EU:C:2009:10923, paras. 41-44.

Hence, for the time being, the ball is in the court of the Member States' institutions. The Directive leaves the Member States' legislatures sufficient discretion to adopt a broad concept of antitrust standing as proposed in this article. However, ultimately it will be up to the national courts to clarify, by way of a preliminary reference to the ECJ,³⁹ whether an infringement of Article 101 TFEU must trigger the liability of cartelists towards suppliers and/or separate sellers of complements to satisfy the principle of effectiveness or whether such liability is within the discretion of each Member State. However, we are not aware of any decision of a European court that has even considered the issue.

While economic studies aimed at informing the legal discourse on cartel damages in the E.U. have pointed to (potential) injuries inflicted upon suppliers and upon separate sellers of complementary products,⁴⁰ and while the Commission recognizes that those parties may suffer harm,⁴¹ thus far, these effects have been largely ignored in the legal debate in Europe.⁴² Actions for damages for breaches of E.U. competition law are still at an early stage of development, and it is still quite a challenge even for direct purchasers to get their cartel overcharge compensated by a follow-up action. Thus, the number of final judgments is still low (although numerous cases are still pending or have been settled), and it is understandable that neither the Commission nor academic writers have considered it a pressing issue to discuss rather doubtful categories of (potential) damages. What is more, the hesitancy to address the topic arguably reflects that it is widely regarded as quite delicate. If standing were granted to those classes of plaintiffs, wouldn't this effectively mean opening the "flood gates"—i.e., allowing for socially wasteful litigation and creating a risk of systematic, socially undesirable over-deterrence? Those who feel uneasy about a broad concept of standing will find their skepticism supported by the aforementioned rules of U.S. law, which are typically seen as a functioning model of private enforcement of antitrust rules.

³⁹ See Article 267 TFEU.

⁴⁰ See, e.g., Oxera, *Quantifying antitrust damages, Towards non-binding guidance for courts, Study prepared for the European Commission*, 2009, p. 27; Frank Maier-Rigaud and Ulrich Schwalbe, *Quantification of Antitrust Damages*, in David Ashton and David Henry, *Competition Damages Actions in the EU: Law and Practice* (Edward Elgar: Cheltenham and Northampton, MA, 2013), para. 8.024-8.028 and 8.032.

⁴¹ See European Commission, SWD(2013) 205, *Commission Staff Working Document, Practical Guide, Quantifying harm in actions for damages based on breaches of Article 101 or 102 of the Treaty of the Functioning of the European Union*, C(2013) 3440, p. 12, note 26.

⁴² But see, e.g., Eckart Bueren and Florian Smuda, *A Primer on Damages of Cartel Suppliers – Determinants, Standing US vs. EU and Econometric Estimation*, ZEW Discussion Paper No. 13-063 (2013), who argue for a broad concept of standing that includes cartel suppliers.

C. Rationalizing a Narrow Concept of Antitrust Standing: Interim Findings

Whatever legal doctrine is invoked and whatever rhetoric courts or commentators on both sides of the Atlantic use to justify restrictions on antitrust standing, the widespread skepticism towards cartel damages claims by suppliers and separate sellers of complementary goods rests upon a modest number of recurring policy considerations. Damage caused to parties other than the cartel's purchasers are often characterized as being "tenuous" and "speculative." While it is not denied that these parties may suffer actual harm due to the cartel, it is assumed that to deal with such cases would burden the courts with questions of excessive economic complexity. More generous rules on standing might attract lawsuits without merit and increase the number of false judgments (false negatives and false positives). Thus, the underlying rationale is that the social costs of allowing these claims would outweigh the benefit to society in terms of higher enforcement pressure on cartelists and in terms of gains in corrective justice to the victims of a cartel. This argument is typically presented in relative terms: as direct purchasers can be seen as a category of plaintiffs that are always available and that are in a position to act more efficiently and effectively as vindicators of the public interest, there seems to be no good reason to accept the higher costs that accompany lawsuits by suppliers. In addition, giving different categories of parties affected by a cartel the right to sue is commonly considered the same as hindering effective antitrust enforcement through direct purchaser claims, as it entails the need for a complex "apportionment" of damages. Associated with this is a particularly widespread fear that a broad concept of standing will end up with "duplicative recovery" and, thus, with a socially undesirable degree of deterrence.

In the following, we will consider these arguments and try to demonstrate that a consistent concept of antitrust enforcement via damages claims must not negate the effects on suppliers and separate sellers of complementary goods and should, indeed, grant standing to these categories of cartel-affected firms. Therefore, we first of all need to clarify two aspects: first, the concept of optimal deterrence; and second, how effects on suppliers and separate sellers of complementary goods are currently considered in calculating the cartel overcharge—i.e., the price effect on the cartel's purchasers account.

D. Optimal Deterrence

In both the U.S. and the E.U., deterrence has been identified as one crucial objective of cartel damages actions. Thus, based on this, the question arises: what are the criteria for the kind of damages that should be recoverable? In the following, we do not take a position on the optimal institutional design for antitrust enforcement. Rather, we engage in a partial analysis that takes

certain institutional elements as given—in particular, the level of public enforcement or the (un-)availability of multiple damages. Within this framework, we discuss whether producers of complements should generally have antitrust standing rights.

1. Private Damages Actions as One among Several Enforcement Tools

Antitrust laws employ multiple tools for enforcement. Firms that participate in cartels will be fined and have to pay damages. Notably, in the U.S., cartel activity is considered a serious crime, and, thus, individuals engaging in cartelization may be convicted and imprisoned. When evaluating the deterrent effect of the legal status quo, it is imperative to ascertain the overall deterrence due to the sanctions in place. In an ideal world, the various mechanisms will support each other and, taken together will achieve effective deterrence in the most efficient way.

Nevertheless, when considering the normative expectations that should be attributed to private damages actions as an enforcement mechanism, there are sound reasons to strive for a tool that will work as an effective instrument on its own. That is because private enforcement via damages claims should at any rate function as a “safety net” when public enforcement fails.⁴³ This might be the case for various reasons, in particular due to insufficient resources, as the work of antitrust authorities is (negligently or deliberately) not sufficiently appreciated by political decision makers; or due to misguided—or at least suboptimal—enforcement strategies. There is, for instance, a widespread belief that during recent years, authorities have relied too much on leniency applications and have invested too little in active anti-cartel policy, such as screening industries that proved to be “cartel-prone” or developing alternative instruments such as whistleblower rewards that could incentivize market players to reveal information about cartel infringements. Be that as it may, even if private enforcement is seen merely as a safety net,⁴⁴ that makes it necessary to construe antitrust damages actions in such a way that they can operate as a potent enforcement tool, ranging from effective

⁴³ See John C. Coffee Jr., *Rescuing the Private Attorney General: Why the Model of the Lawyer as Bounty Hunter is Not Working*, 42 Maryland Law Review 215, 227 (1983) (“Equally important, private enforcement also performs an important failsafe function by ensuring that legal norms are not wholly dependent on the current attitudes of public enforcers or the vagaries of the budgetary process and that the legal system emits clear and consistent signals to those who might be tempted to offend. Absent private enforcement, potential defendants would have a considerably stronger incentive to lobby against public enforcement efforts or to seek to curtail funds to public enforcement agencies.”).

⁴⁴ Note that the failsafe function also entails an increased accountability of public enforcers’ decisions not to take action. See Kent Roach and Michael J. Trebilcock, *Private Enforcement of Competition Laws*, 34 Osgoode Hall L.J. 461, 483.

proceedings on the disclosure of evidence to the definition of recoverable damages. It is true that if we had in place a mechanism of antitrust enforcement via damages actions that could guarantee optimal deterrence, adding to this any kind of (imperfect) public enforcement would result in socially wasteful over-deterrence. However, as we are nowhere close to this state, it seems fair to note that any amendment to the current system of damages actions that brings it closer to optimal enforcement will result in an improvement of overall antitrust enforcement.

2. On the Possibility of Over-deterrence

When antitrust law is not accompanied by adequate sanctions, profit-maximizing firms will hazard the consequences of illegal conduct. Thus, they will either be prepared to knowingly break the law or to invest too little in measures that are meant to ensure compliance with the law. These risks of under-deterrence are uncontroversial. Less clear, however, is whether there is a risk of over-deterrence when it comes to cartel enforcement. If one assumes that any cartel infringement is socially undesirable, then the wrongdoer who refrains from deliberately breaking antitrust laws can avoid any sanction, with costs that amount to zero from a social point of view or that are even negative, as may be the case if one bears in mind that the expenses that go along with cartelization are being saved. Thus, if one does not want to leave the door open for an “efficient breach”⁴⁵—a question that hardly seems significant in the context of hardcore cartels—it might appear as if there were actually no risk that socially desirable market activities would cease as a result of sanctions that go beyond (however defined) optimal deterrence.

When looking more closely, it becomes evident, however, that this analysis holds only under certain conditions. Over-deterrence appears to be a real problem because, first, firms cannot always accurately anticipate the dividing line between what is and is not allowed under antitrust laws.⁴⁶ This also holds true with regard to conduct on the fringes of what must be condemned as a per se violation under Section 1 of the Sherman Act or as a restriction of competition by object under Article 101(1) TFEU. Thus, firms may forgo business activities whose legality, from the firm’s point of view,

⁴⁵ See *infra* note 50.

⁴⁶ See, e.g., Areeda, Blair, Hovenkamp and Durrance *supra* note 12, at ¶330b2, pp. 41-42. In legal systems in which liability requires proof of fault, courts may apply this requirement to cushion risks of over-deterrence that are entailed by ambiguous legal standards. However, the fault requirement provides only for an imperfect remedy in this regard; see Jens-Uwe Franck, *Umbrella pricing and cartel damages under EU competition law*, 11 European Competition Law 135, 144-45 (2015).

is unclear, but that are, in fact, perfectly legal and socially desirable.⁴⁷ Second, it is the management that decides about precautionary measures to prevent antitrust violations and that is responsible for the “tone from the top” with regard to abiding with the antitrust laws. However, it may well be that it is, say, the salespeople or employees in lower or middle management positions that arrange cartels on their own. Therefore, an excessive threat of liability may cause management to invest in compliance efforts to a socially undesirable extent.⁴⁸ This may include activities such as risk assessments, antitrust-law training courses for staff members, active searches for cartel infringements, or the introduction of whistleblowing systems. Over and above these measures, it may even induce the management to refrain from investments in sectors that are prone to cartelization. Thus, it is essential to strive for optimal rather than complete deterrence and to have a “yardstick” at its disposal for the evaluation and calibration of the deterrent effect of cartel damages liability.

3. (Non-)Profitability in Expectation: The *Beckerian* Standard Model

A frequently used model of optimal deterrence defines the optimal expected sanction in line with *Gary Becker’s* seminal works on the economic analysis of crime prevention.⁴⁹ Adapting it to the evaluation of cartel damages, the deterrent effect of potential private damages actions depends on the amount of damages a court may order an antitrust infringer to pay and on the likelihood that the sanction will ultimately be imposed. An optimal sanction should force a firm to internalize the social costs of its behavior. Hence, the optimal damages award should equal the external harm done by the cartel—i.e., the net harm to persons other than the cartelists. Therefore, in an ideal world of antitrust enforcement, the recoverable damages should equal the deadweight loss borne by persons other than cartelists, plus the cartel overcharge.⁵⁰ Individual losses that are induced by a cartel and that

⁴⁷ See John M. Connor and Robert H. Lande, *Cartels as Rational Business Strategy: Crime Pays*, 34 *Cardozo Law Review* 427, 431, note 16 (2012).

⁴⁸ See Bruce H. Kobayashi, *Antitrust, Agency, and Amnesty: An Economic Analysis of the Criminal Enforcement of the Antitrust Laws*, 69 *George Washington Law Review* 715, 735-39; Douglas H. Ginsburg and Joshua D. Wright, *Antitrust Sanctions*, *Competition Policy International*, Autumn 2010, at 3, 8; Gregory J. Werden, Scott D. Hammond, and Belinda A. Barnett, *Deterrence and Detecting of Cartels: Using All the Tools and Sanctions*, 56 *The Antitrust Bulletin* 207, 210-11 (2011); Franck *supra* note 46, at 145-46.

⁴⁹ Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 *Journal of Political Economy* 169 (1968).

⁵⁰ See, e.g., Richard A. Posner and Frank H. Easterbrook, *Antitrust* (West: St. Paul, Minn., 2nd ed. 1981), p. 550; William M. Landes, *Optimal Sanctions for Antitrust Violations*,

represent a mere transfer of wealth between parties not responsible for the antitrust infringement should ideally be ignored. This is why in an ideal world of deterrence through damages liability, losses resulting from umbrella pricing should not figure in the damages, even though they are caused by the cartel.⁵¹ In addition, as the likelihood that a cartel will be detected⁵² and that a victim will subsequently (successfully) sue for damages is less than one, the actual damages awarded should be adjusted upward: net harm to others ÷ (Probability of detection × Probability of successful damages action or settlement).

The consequences of these insights are essentially twofold. First, the actual deterrent effect of cartel damages claims depends on a number of legal aspects other than the rules on antitrust injury and standing. A quite important factor is, *inter alia*, the availability of punitive or multiple damages that may offset risks of under-deterrence caused, for example, by restrictions on antitrust standing. Second, if the damage caused by a cartel to a category of market participants represents part of the deadweight loss or part of the rents pocketed by the cartelists, a recovery of this type of damages, as such, may never entail a risk of over-deterrence. In contrast, to refuse standing to those parties may cause a risk of systematic under-deterrence.

Optimal Sanctions for Antitrust Violations, 50 U. Chi. L. Rev. 652, 656 (1983); William Breit and Kenneth G. Elzinga, *Private Antitrust Enforcement: The New Learning*, 28 J. Law & Econ. 405-410-412; William H. Page, *The Scope of Liability for Antitrust Violations*, 37 Stan. L. Rev. 1445, 1455 (1985); Richard A. Posner, *Economic Analysis of Law* (Wolters Kluwer: New York, 9th ed. 2014), §10.14, p. 394; Connor and Lande *supra* note 47, at 431-435, 468. Since it seems to be undisputed that the cartel overcharge has to be part of optimal antitrust damages, the dispute as to whether the overcharge should be considered part of a welfare loss (for this position, see Richard Posner, *Antitrust Law* (University of Chicago Press: Chicago and London, 2nd ed. 2001), p. 13-17) and whether the optimal sanction should be calculated on the basis of the damage caused (harm based) or of the profit made by the cartel (gain based) ultimately concerns only the question of whether efficiency gains that might occur—e.g., due to savings in production costs—should also be disgorged from the cartelists, or whether incentives for an “efficient breach” should be left. For the former position, see, e.g., Wouter P.J. Wils, *Optimal Antitrust Fines: Theory and Practice*, 29 World Competition 183, 191-193 (2006); and for the latter position, William M. Landes, *id.*, 652, and Richard Posner, *Antitrust Law* (The University of Chicago Press: Chicago and London, 2nd ed. 2001), p. 267.

⁵¹ Richard A. Posner, *Economic Analysis of Law* (Wolters Kluwer: New York, 9th ed. 2014), §10.14, p. 395. There may be, however, good reasons to award compensation for damages caused by “umbrella pricing” as a second-best solution; see Franck *supra* note 46, at 140-148.

⁵² According to a survey of studies and opinions, the detection rate of cartels is predominantly estimated to be in the 10% to 25% range. See John M. Connor and Robert H. Lande, *Cartels as Rational Business Strategy: Crime Pays*, 34 Cardozo Law Review 427, 462-465, 486-490, tbl. 3 (2012).

4. Beyond Fines and Damages in Expectation: “The Fear of Being Betrayed”

While the aforementioned literature in line with *Becker* focuses on the overall payment by the cartel that should, in expectation, be just large enough to deter a crime, economists have stressed that an illegal cartel can be sustained only if all cartel members follow the collusive agreement. This means that a cartel can be deterred if potential members know that the cartel would break down shortly after being formed. Thus, a cartel can be deterred by making sure that potential cartelists’ incentive constraint to sustain the cartel outcome is violated and that potential cartelists cannot trust their partners in this illegal activity.⁵³ This is the main motivation behind leniency or whistleblower rewards programs.⁵⁴ Thus, taking into account that a cartel is not a single entity, but contains a group of individual actors, the issue of deterrence is not fully addressed by focusing on the overall level of fines and damages that the cartel pays. Indeed, if firms that are granted leniency have to pay damages in private lawsuits, deterrence might well be more difficult, as a cartel may more easily be sustained when the overall payment is increased. While orthogonal to the main point of our paper, this qualifies our remarks on optimal deterrence.

E. Calculating Cartel Damages

Both suppliers to a cartel and separate sellers of complementary goods may find it a profit-maximizing strategy to reduce their prices in response to a cartel’s output reduction. Thus, the question arises of how such effects of underpayment are considered in calculating the negative price effect on the cartel’s purchasers. Under U.S. antitrust law, the fact that indirect purchasers may not sue for damages is offset by an over-compensation to the benefit of direct purchasers (as the cartelists have no passing-on defense). Therefore, it would seem to be consistent if the refusal of antitrust standing for suppliers and for separate sellers of complementary goods were offset by a normative decision to ignore the aforementioned effects that benefit direct purchasers, who would, in turn, be over-compensated.

⁵³ For a clear exposition of this point, see, e.g., Maria Bigoni, Sven-Olof Fridolfsson, Chloé Le Coq and Giancarlo Spagnolo, *Trust, Leniency, and Deterrence*, 31 *Journal of Law, Economics, and Organization* 663, at 663-666 (2015).

⁵⁴ Leniency programs are nowadays standard investigative tools of antitrust authorities and, thus, have been implemented by both the U.S. Department of Justice Antitrust Division and the E.U. Commission, among others. In contrast, while, at present, whistleblower rewards programs are deployed in such places as the United Kingdom, South Korea, and Hungary, they have been considered but not yet implemented in the U.S. or by the E.U. Commission; see Kevin R. Sullivan, Kate Ball and Sarah Klebolt, *The Potential Impact of Adding a Whistleblower Rewards Provision to ACPERA*, the antitrust source, October 2011, 1-6.

However, until now, the courts have not developed a doctrine to this effect, and, in fact, it appears that they have not even considered the issue. Pursuant to the general rule that governs damages calculation, a party that is entitled to damages can recover a loss measured by the difference between her actual position and the position she would have been in but for the antitrust violation. Thus, based on the premise that the antitrust infringement did not occur, a hypothetical “but-for world” has to be constructed and compared to the position the plaintiff is actually in. Here, in a standard price-fixing case, the measure of damages is “the difference between the price actually paid by the [plaintiff] on the contracts and the price it would have paid absent the conspiracy.”⁵⁵

As a consequence of this approach, inasmuch as a cartel supplier reduces its prices in order to reduce the decline in demand, this reaction must not be negated when the but-for scenario is constructed. It should advance the but-for price, thereby effectively impeding an over-compensation of the cartel’s purchasers. If the but-for price is—as frequently happens—calculated following comparator-based approaches,⁵⁶ this may ensure that the price effect of a cartel on direct purchasers will, indeed, include reactions of the cartel’s suppliers, even though the courts do not explicitly consider the issue.

Effects on separate sellers of complementary goods should get equal consideration when constructing the but-for scenario (and should thereby reduce the damages granted to a direct purchaser). Yet, in contrast to the effects on suppliers, this does not happen “automatically” because the cartel damage calculation is based on the price to be paid by the direct purchasers to the cartel. While there is a doctrine under U.S. antitrust law according to which the benefits a plaintiff derives from an antitrust violation should be included in the damages calculation,⁵⁷ and while Article 3(3) of the E.U. Cartel Damages Directive explicitly states that “[f]ull compensation under this Directive shall not lead to overcompensation[,]” we could find no precedent for an effective implementation of this rule with regard to cartel-induced price reductions on the part of separate sellers of complementary products. It appears that the courts have not, so far, considered this kind of passing-on defense.

⁵⁵ *New York v. Julius Nasso Concrete Corp.*, 202 F.3d 82, 88; see, also, Article 3(2) E.U. Cartel Damages Directive, which stipulates that “[f]ull compensation shall place a person who has suffered harm in the position in which that person would have been had the infringement of competition law not been committed.”

⁵⁶ Here, the calculation is based on cross-sectional comparisons or time-series comparisons. Cross-section and time-series information can be combined to apply difference-in-difference methods.

⁵⁷ *L.A. Mem’l Coliseum Comm’n v. NFL*, 791 F.2d 370, 381-83 (7th Cir. 1986).

III. AN ECONOMIC ANALYSIS OF CARTEL EFFECTS IN MARKETS WITH COMPLEMENTARY PRODUCTS

In our economic analysis, we investigate markets for products or product bundles characterized by perfect complementarity. Here, the postulated one-to-one relationship in the use of the different components provides a clear and relevant case of product market interaction between the components contained in the final good or service. Cartelization in the sales of one component can have strong effects on the performance of firms producing other complementary components. According to U.S. antitrust practice, such firms can bring an action for damages only if they are direct purchasers of the cartelized component; however, as our economic analysis reveals, economic effects are driven by the degree of complementarity and not by the particular market organization.

A. A Framework for Evaluating Cartel Effects

We consider the effects of cartelization on the market of a complementary product. For simplicity, we restrict our attention to the case in which two products, A and B, are perfect complements.⁵⁸ This means that consumers enjoy benefits from the combination of one unit of product A and one unit of product B. Absent cartelization for product A, we postulate that both markets operate perfectly competitively.⁵⁹ In our economic analysis, we postulate that firms are specialized and can produce only one of the two products. The case of integration will serve only as a benchmark below. Depending on the particular case of interest, one of following three organizational structures for the selling of those complements applies:

1. **Purchaser case (PuC).** Firms producing product B buy product A as an input and sell bundles of product A and product B on the market; i.e., cartelization occurs in the upstream market, and firms producing product B are purchasers of the product provided by the cartelized industry.
2. **Separate seller case (SSC).** Both products may be sold directly to consumers, and consumers then combine one unit of each of the two

⁵⁸ The economic insights derived below generalize to any situation of complementarity; the assumption of perfect complementarity allows for simple visualization.

⁵⁹ Under imperfect competition, the analysis would need to be modified, and the behavior of imperfectly competitive firms would need to be specified. Bueren and Smuda, *supra* note 42, consider the purchaser and supplier case and postulate symmetric Cournot competition among producers of product B. Depending on the postulated behavior, the way the selling of complements is organized may affect the market outcome.

products to enjoy consumption benefits. Thus, firms producing product B are separate sellers.

3. **Supplier case (SuC).** Firms producing product A buy product B as an input and sell bundles of product A and product B on the market; i.e., cartelization occurs in the downstream market. Firms producing product B are suppliers to firms producing product A.

These three organizational structures are illustrated in Figure 1.

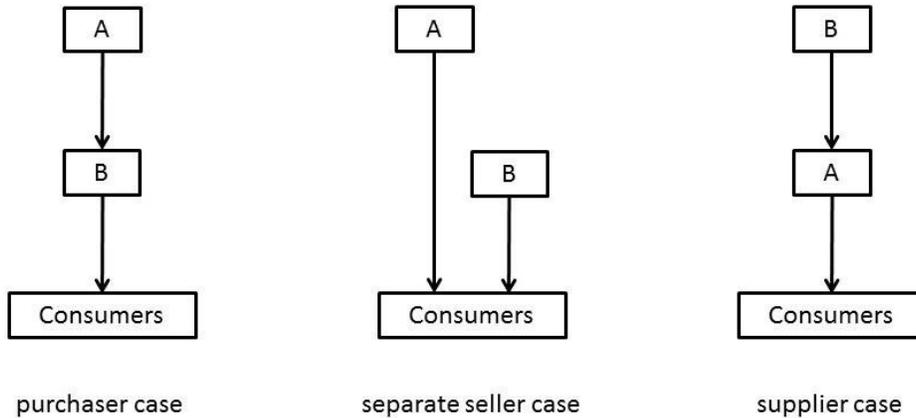


Figure 1: Three alternative market organizations

Using the facts of *International Raw Material*⁶⁰ as an example, we can see how this might look in a real-world business scenario. Assume that a producer of soda ash sells his products overseas via maritime cargo to industrial consumers. This mode of transport necessarily involves the service of a terminal operator at the harbor that specializes in loading vessels with this kind of substance. Starting from this base case, different market organizations are conceivable:

1. **Purchaser Case.** The producer sells soda ash to a dealer that operates a harbor terminal and that resells the soda ash overseas at an agreed port of destination (CIF transaction).
2. **Separate Seller Case.** The producer sells soda ash overseas and commits to placing the goods alongside the buyer's vessel at a specified port of shipment (FAS transaction). The terminal operator loads the soda ash on behalf of the buyer.
3. **Supplier Case.** The producer sells soda ash overseas at an agreed-upon port of destination (CIF transaction). The terminal operator loads the soda ash on behalf of the seller.

⁶⁰ *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318 (3rd Cir. 1992).

Suppose that both components are produced under increasing marginal costs, with industry cost functions $C_A(Q_A)$ for component A and $C_B(Q_B)$ for component B, and consumers have a downward-sloping demand for bundles consisting of one unit of each to the two products. Since marginal costs depend on the number of units produced, we can write $MC_A(Q_A)$ and $MC_B(Q_B)$, respectively, where Q_A is the number of units of product A and Q_B is the number of units of product B. The inverse demand curve that gives the market price as a function of total output is denoted $P(Q)$. Since the products are perfect complements, the market always features $Q = Q_A = Q_B$, as, otherwise, some units would be wasted.

As a benchmark, we consider an environment in which each firm produces A and B.⁶¹ The marginal cost of producing the Q 'th unit is $MC_A(Q) + MC_B(Q)$. Cartelization of A implies cartelization of both components. The cartel's maximal profit is reached under the monopoly outcome with price P^{CI} and quantity Q^{CI} . Absent cartelization, the perfectly competitive outcome would be delivered with price P^X and quantity Q^X . The loss incurred by purchasers due to cartelization consists of the total overcharge, $(P^{CI} - P^X)Q^{CI}$, and the output effect measured by the area below the demand curve and above the perfectly competitive price P^X in the range between the cartel quantity Q^C and the competitive quantity Q^X . This benchmark is well understood in the economics literature. Figure 2 illustrates these effects of cartelization.

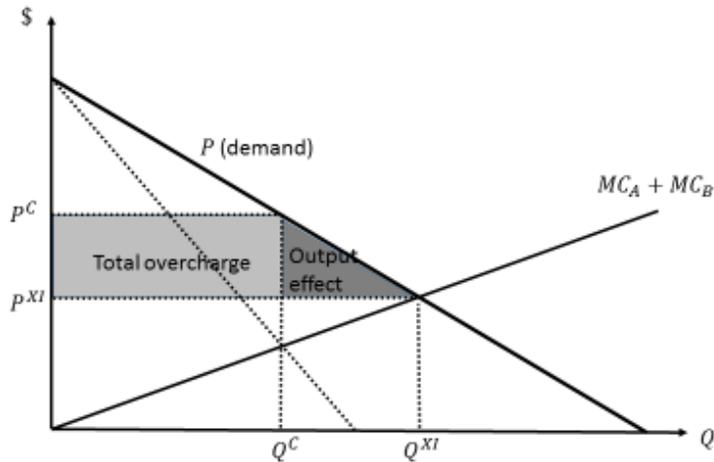


Figure 2: Total overcharge and output effect under integration of A and B

⁶¹ Efficiency in production without trade between firms requires that the marginal costs are perfectly correlated across the two components.

We now turn to an environment in which components A and B are produced by separate firms. *With cartelization* for product A, we postulate that all producers of product A participate in the cartel and that they sustain the monopoly price. Thus, the cartel maximizes industry profits for product A, taking into account that: in situation (1), $MC_B(Q_B)$ will be added to the price that the cartel charges downstream firms; in situation (2), the complementary product B will be sold separately at marginal costs; and in situation (3), it will enter as an input cost $w = MC_B(Q_B)$. Thus, independent of the organization of the selling of the complementary product, the cartel will maximize the product of the average price-cost margin $P(Q) - C_A(Q)/Q - MC_B(Q)$ and the number of units sold, Q , with respect to Q . Profit maximization by the cartel leads to cartel quantity Q^C , which is determined by marginal net revenue equal to marginal costs of A, where net revenue is $(P(Q) - MC_B(Q))Q$.⁶² The price for the bundle $P(Q^C) = P_A^C + P_B^C$ under the cartel for product A. A producer of product B will sell a unit of product B at price $MC_B(Q^C)$ and a producer of product A at price $P(Q^C) - MC_B(Q^C)$. The outcome under the cartel is illustrated in Figure 3.

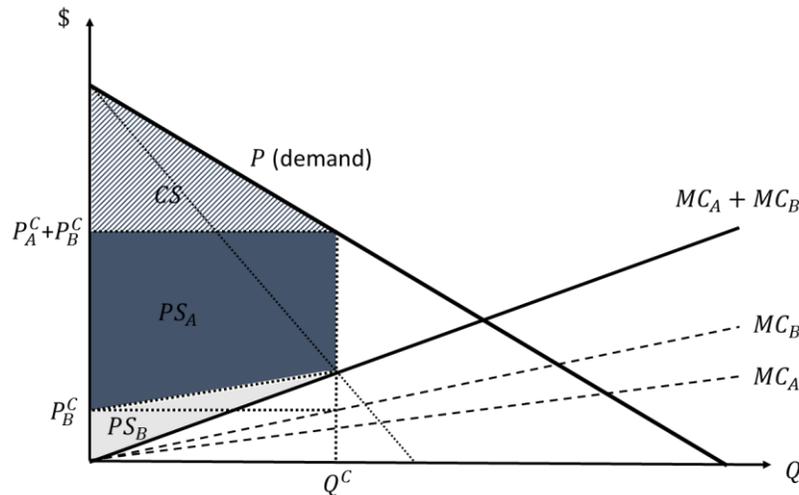


Figure 3: The outcome under cartelization of A

Absent cartelization, there would be perfect competition, and the market output under competition, Q^X , is determined by the intersection between the inverse demand function and the sum of marginal costs of the two products, $P(Q) = MC_A(Q) + MC_B(Q)$. The competitive price that consumers have to pay is $P^X = P(Q^X)$. When the two products are sold separately, consumers

⁶² If $MC_B(Q)$ depends on the quantity Q , the cartel quantity Q^C is different from the integrated solution Q^{CI} because the cartel among the A producers does not account for the profits that producers of B make on all inframarginal units.

have to pay $P^X = P_A^X + P_B^X$, where the price of each product is equal to the marginal cost at the competitive output level, as illustrated in Figure 4.

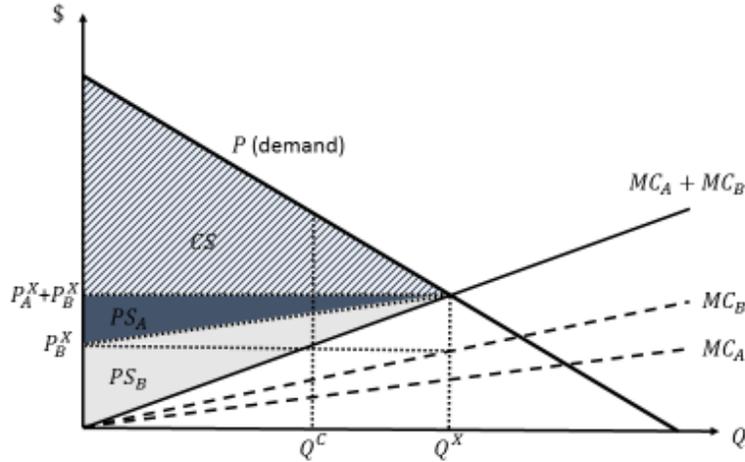


Figure 4: The competitive outcome

B. Coherence and Optimal Antitrust Damages

Recall that we speak of optimal antitrust damages when the damages (possibly together with fines) that cartelists expect to pay are equal to the economic net harm suffered by directly or indirectly affected parties. Our framework allows us to evaluate the economic net harm inflicted on other parties and the gains from cartelization for producers of A. The consumer surplus, producer surplus for product A and producer surplus for product B under cartelization of A are illustrated in Figure 3. Consumers are willing to pay $P(Q)$ for the Q 'th unit. Thus, consumer surplus is the sum over all units between 0 and the collusive output Q^C of the difference between willingness-to-pay for that unit and the collusive price $P^C = P_A^C + P_B^C$. Producers of product B obtain a price equal to the marginal cost of the last produced unit. Hence, their surplus is the light grey triangle in Figure 3. Producers of product A sell all their units above marginal costs and obtain a surplus measured by the dark grey area in Figure 3.

Absent cartelization of A, surpluses are markedly different. Consumer surplus (CS), producer surplus for product A (PS_A) and producer surplus for product B (PS_B) are illustrated in Figure 4. The market outcome under perfect competition is efficient, and the corresponding surpluses measure what the surplus should be if competition is not disturbed by cartelization in part of

the industry. When detecting a cartel, under our assumptions,⁶³ this would be the appropriate counterfactual scenario to take into account when calculating welfare losses and the corresponding damages. We note that the market outcome and the surplus distribution are independent of how the selling of the complementary goods is organized.

Taking a closer look at these surpluses, the consumer surplus is the sum over all units between 0 and the competitive output Q^X of the difference between willingness-to-pay for that unit and the competitive price P^X . This consumer surplus is larger than the consumer surplus under cartelization, as consumers have to pay a higher price when buying one unit of product A and one unit of product B. The difference in consumer surplus is the damage that consumers suffer from cartelization among producers of product A.

The producer surplus for product B covers all inframarginal profits on all units up until Q^X . Thus, each such unit $Q < Q^X$ contributes with $P_B^X - MC_B(Q)$. Summing over all units, we obtain the producer surplus PS_B as the light grey area in Figure 4. In other words, the producer surplus of producers of product B is the sum of the difference between the price of product B (which is equal to the marginal cost of the last unit sold) and the cost associated with the production of each produced unit.

The producer surplus of producers of product B is larger without cartelization than with it. The difference in producer surplus is the damage that producers of product B suffer from cartelization among producers of product A. Thus, their damage should be included in an “optimal” level of damages, as defined above.

Most familiar to practitioners is the purchaser case. Here, the per-unit input cost for producers of product B increases from $MC_A(Q^X)$ to $P(Q^C) - MC_B(Q^C)$ due to the cartelization of A. This captures the “cost effect.” A “pass-on effect” exists because producers of product B sell the product at $P(Q^C)$ instead of $(Q^X) = MC_A(Q^X) + MC_B(Q^X)$. With strictly increasing marginal costs MC_B , there is always partial pass-on. In addition, we note that there is an “output effect” since $Q^X > Q^C$.

Comparing the outcome under a cartel for product A to the outcome under competition, we observe that the price for the bundle increases and that production levels for product A and product B decline; i.e., $Q^C = Q_A^C = Q_B^C < Q^X = Q_A^X = Q_B^X$. It is obvious that cartelization leads to reduced production of A. Due to the complementarity between A and B, it also results in reduced production of B. Since product B is provided competitively, its price also declines under cartelization of A. This provides the first important take-away: the producer surplus of firms producing product B is necessarily reduced due

⁶³ A court that constructs a counterfactual scenario has to take into account other (real-world) market imperfections.

to cartelization. Thus, they are negatively affected independently of how the selling of the two complementary products is organized.

More generally, it is important to point out that the allocation and the distribution of surpluses do not depend on the way that the selling of the complementary product is organized. This independence holds true under both competition and cartelization. Thus, to the extent that a pass-on effect is considered in one case, for coherence, comparable effects should not be neglected in the other two cases.

Figure 5 illustrates the losses incurred by final consumers and producers of B. These losses consist of the total overcharge and an output effect that consumers suffer and of an underpayment and an output effect that producers of B suffer. The output effect for producers of B results from units that are not produced under cartelization because of the lower price paid to producers of B as separate sellers (separate seller case) or suppliers to A (supplier case) or because of the lower price difference between the retail price and price paid to suppliers of A when producers of B are purchasers of product A (purchaser case). Each of these units has an associated marginal cost $MC_B(Q)$ and would contribute to the surplus of producers of B with price P_B^X absent cartelization.

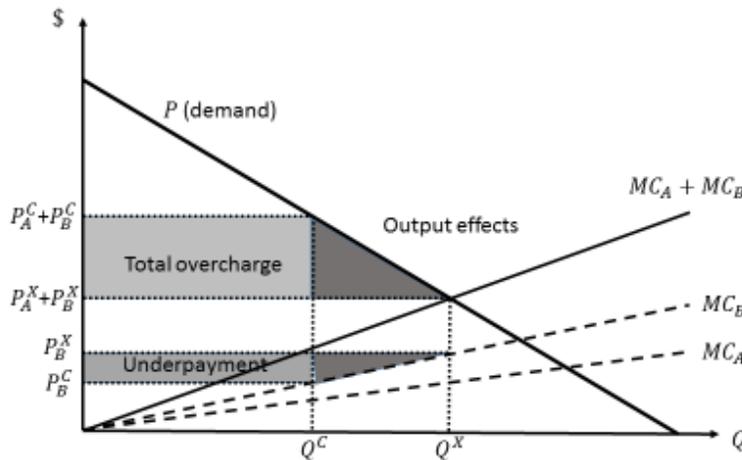


Figure 5: Losses from cartelization for producers of B and final consumers

Result 1: *With and without cartelization, surpluses for consumers and producers of product B do not depend on the way the market is organized. Thus, these parties suffer the same net harm across the three market organizations. For coherence, producers of product B should be treated*

symmetrically across all three organizations and be awarded the same level of damages.

Our analysis shows that optimal antitrust damages are implemented if producers of product B and final consumers can claim damages that cover the economic harm they suffered under the cartel. In particular, the former should have the right to sue for damages, regardless of whether they take the role of a (direct) purchaser, a separate seller or a supplier (optimal antitrust damages argument).

In the following numerical examples, we illustrate the market outcomes and the size of individual gains and losses from cartelization. In the first example, we consider the case in which the cartelization of A does not affect the producer surplus of B. By contrast, in the other two examples, producers of B are negatively affected by cartelization. These latter two examples differ in the fact that in the third example, producers of A do not enjoy any surplus under competition, whereas they do in the second example. We will return to these examples below to analyze the relationship between overcharge and total damages.

Numerical examples: Suppose that producers of A have the cost curve $C_A(Q) = \alpha Q^2$ leading to marginal costs $MC_A(Q) = 2\alpha Q$, and producers of B have the marginal cost curve $MC_B(Q) = (1 - \alpha)Q$, where α is a parameter taking a value between 0 and 1. Suppose, furthermore, that the inverse demand curve is given by $P(Q) = 60 - Q$.

Under cartelization of A, the cartel solves the maximization problem $\max_Q [P(Q) - MC_B(Q)]Q - C_A(Q)$. Solving this maximization problem gives the quantity under cartelization, $Q^C = 15$. Producers of B obtain $MC_B(Q^C) = (1 - \alpha)15$ as payment for producing one unit of B, and the price for the bundle consisting of products A and B is $P^C = P(Q^C) = 45$.

Absent cartelization, both products are supplied competitively. The competitive quantity is determined by $P(Q) = MC_A(Q) + MC_B(Q)$. This gives rise to quantity $Q^X = 60/(2 + \alpha)$ and a price for the bundle of products A and B, $P^X = P(Q^X) = 60(1 + \alpha)/(2 + \alpha)$. This counterfactual would be obtained using comparator-based methods (if these methods worked perfectly).⁶⁴

We observe that, by construction, the bundle price and quantity are independent of α under cartelization. The total surplus as the sum of producer and consumer surpluses when A is cartelized is equal to $225(3 - \alpha/2)$, while the total surplus in the case of competition is equal to $60Q^X/2 = 1800/(2 + \alpha)$. The difference measures the deadweight loss due to cartelization.

⁶⁴ While comparator-based methods provide a counterfactual, they do not recover the value of α . This value must be obtained through other methods (in particular, following a market-structure-based approach).

In the first example, we consider the special case that the surplus of producers of B is *not* affected by cartelization of A; this is the case if $\alpha = 1$, as this implies that the marginal costs of producers of B will be constant and equal to zero, and, therefore, their price will be zero when they sell to consumers or producers of A, and surplus will necessarily be zero. Thus, the cartel will reduce only the consumers’ surplus. The quantity decreases from 20 to 15 due to the cartelization of A. The consumer surplus loss is calculated to be 87.5, while producers of A make a gain of 50. Since producers of B are not affected, optimal antitrust damages are 87.5.

In the second example, we consider a case in which marginal cost curves of the production of A and B are increasing. We pick the case $\alpha = 1/2$. Absent cartelization, the quantity $Q^X = 24$. Producers are compensated for their marginal costs for 24 units and, thus, receive a price of 12 if they sell their product to consumers or producers of A. With cartelization production is reduced, and producers of B are compensated by the respective marginal cost for 15 units and receive a price of 7.5. Independent of the market organization, producers of B suffer a loss of 87.75 due to cartelization, and consumers incur a loss of 175.5. Hence, optimal antitrust damages are 263.25. Given the restrictions on antitrust standing under U.S. case law, this is the amount that should be awarded to consumers in the supplier and the separate seller cases, while this amount should go to producers of B in the purchaser case.

In the third example, we postulate that producers of A incur constant marginal costs of production (here, 0) and that producers of B incur $MC_B(Q) = Q$ (i.e., $\alpha = 1$). In this case, producers of B incur a loss of 337.5 from cartelization, as do consumers. Thus, optimal antitrust damages are 675.

Table 1 lists surpluses and surplus changes in these three examples, where “C” stands for the outcome under cartelization of A and competition among producers of B, and “X” stands for market setting with competition also among producers of A. The columns with “ Δ ” stand for the change when moving from cartelization to competition.

	Ex. 1			Ex. 2			Ex. 3		
	C	X	Δ	C	X	Δ	C	X	Δ
PS_A	450.0	400	50.0	450.00	288	162.00	450.0	0	450.0
PS_B	0	0	0.0	56.25	144	-87.75	112.5	450	-337.5
CS	112.5	200	-87.5	112.50	288	-175.50	112.5	450	-337.5
TS	562.5	600	-37.5	618.75	720	-101.25	675.0	900	-225.0

Table 1: Surplus Effects in the Numerical Examples

C. Cartel Damages and Overcharge

In this section, we point to the frequent use of the total overcharge as a proxy for cartel damages. Using comparator-based methods, it appears straightforward to obtain a “but for” price without cartelization for direct purchasers. Using the observed cartel quantity and the observed cartel price, all of the information needed to calculate the total overcharge is available.

These methods also show that the ratio of total damage to total overcharge varies with market structure, when the opportunity cost of offering an additional unit of B depends on whether firms producing product A operate as a cartel. We define the overcharge as the percentage price increase that purchasers of product A encounter as a result of the cartelization of A. More precisely, we define the overcharge as the price increase as a fraction of the cartel price, $(P^C - P^X)/P^C$. The total overcharge is then the overcharge times the cartel price times the number of units sold by the cartel, $(P^C - P^X)Q^C$. It is well known that the total overcharge neglects the output effect—i.e. the loss suffered by purchasers due to a reduction in the number of units sold. It has also been pointed out that compensating only direct purchasers by the total overcharge accounts for all overcharges incurred by direct and indirect purchasers but misses the output effect in each layer and, therefore, results in too low a level of damages paid by the cartel.⁶⁵ We add to this debate by pointing out the incoherent treatment of markets in which the same economic relationship holds, but that are organized differently in terms of who contracts with whom. We will conclude that U.S. and E.U. cartel law practices are incoherent across the three different market organizations, not only as regards the parties with antitrust standing, but also the overall level of damages borne by the cartel. In our analyses, we presume that the court gets the facts right; that is, it obtains the correct information on prices and cartel quantity.

It is useful to return to the three examples from above to develop our insights. In example 1, no harm is inflicted on the producers of B, and product B is sold at price 0 whether or not A is cartelized; however, in the purchaser case, this means that producers sell the bundle at the same price as the purchase price they pay to producers of A. This implies that in the separate seller and supplier cases, the calculated “underpayment” suffered by producers of B would be zero, as they receive the same price with and without

⁶⁵ The economics literature has pointed out that there is no clear relationship between damages awarded on the basis of overcharge and the true harm. See, e.g., Frank Verboven and Theon van Dijk, *Cartel Damages Claims and the Passing-On Defense*, 57 *Journal of Industrial Economics* 457 (2009) and Martijn A. Han, Maarten Pieter Schinkel and Jan Tuinstra, *The overcharge as a measure of antitrust*, Amsterdam Center for Law & Economics Working Paper 2008-08 (2009). As the former emphasize, the output effect of a cartel is usually not accounted for.

the cartelization of B. Independent of the organization of selling, product A is sold at price 45 by the cartel and would have been sold at price 40 under competition. Thus, the overcharge is 11% and, based on the total overcharge, would be calculated as the price increase of five times the quantity sold by the cartel (15 units), which is equal to 75. This total overcharge is, necessarily, at least as large as the surplus gain enjoyed by the members of the cartel. Example 1 confirms that, regardless of whether pass-on is allowed, as long as one party can sue for damages, and these damages compensate for all losses incurred by outsiders of the cartel, optimal antitrust damages are achieved. In the present example, awarding damages equal to 117% of the total overcharge results in optimal antitrust damages independent of the market organization. According to U.S. doctrine, in the supplier and separate seller cases, only consumers can claim damages. To achieve optimal antitrust damages exclusively through private damages, they should receive (in expectation) damages of approximately 87.5, while in the purchaser case, it is the producers of product B who can claim damages; they should receive 87.5 even though, due to pass-on, they did not suffer any economic harm from the cartel. Under E.U. law, the situation is treated differently in the purchaser case. There, the cartel may invoke the pass-on defense, implying that producers of B should not be awarded damages. Then, consumers should be awarded damages and recover their economic loss of 87.5. From an incentive perspective, U.S. practice has advantages in the purchaser case if the firms acting as direct purchasers have better information than consumers helping to uncover the cartel. Where current U.S. practice necessarily fails in providing corrective justice, as some parties' benefit from being awarded damages differs from the harm they suffer from cartelization.⁶⁶

In example 2, a cartel *does* inflict an economic loss on the producers of B. The information available to the courts is that, in the purchaser and separate seller cases, 15 units are sold at the cartel price of 37.5, whereas using comparator-based methods, under competition, the price would be 24. In the supplier case, the cartel sells 15 units at a price of 45, while it would sell at a price of 36 under competition. Here, producers of A sell the whole bundle.

Through extending comparator-based methods to economic activities associated with the perfect complement—product B—the court will be aware of the fact that in the separate seller and supplier cases, producers of B would sell at a price of 12 without cartelization (while they are actually paid only 7.5 with cartelization). In the purchaser case, the court will know that producers of B would sell at a price of 36 under competition, while they sell at 45 under the cartelization of A.

⁶⁶ See, on this point, *infra* IV.B.

Under U.S. antitrust practice, the direct purchaser can sue for damages based on the overcharge; in the separate seller case, final consumers have antitrust standing, while, in the purchaser case, producers of product A have antitrust standing. The overcharge is calculated at 36%. The total overcharge $(P_A^C - P_A^X)Q^C$ is then calculated at the price difference $37.5 - 24$ times the cartel quantity of 15, which equals 202.5. This number is larger than the profit increase from cartelization (which is 162) that the producers of A enjoy and smaller than the total damage inflicted on other parties (which is 263.25 in this example).

In the supplier case, the overcharge is 20% and the total overcharge, $(P_A^C + P_B^C - P_A^X - P_B^X)Q^C$, would be calculated as 135, which is less than in the purchaser and separate seller cases. This total overcharge is now *smaller* than the profit gain of producers of A from cartelization. Hence, in this example, when using the total overcharge as an indication of the profit increase of cartelists, this number overestimates the gain in the separate seller and purchaser cases, while it underestimates the gain in the supplier case. In the former cases, optimal antitrust damages are achieved when awarding total damages of 130% of the total overcharge, while in the latter case, 195% of the total damages have to be awarded to implement optimal antitrust damages.

We observe that the calculated total overcharge depends on the prevailing market organization. For a coherent calculation of an overcharge or an underpayment, the surplus effects for producers of B and final consumers must be considered.

A possible extension is to allow the pass-on defense to be brought forward by the cartel in the purchaser case and to allow subsequent purchasers to claim damages based on the overcharge, as stipulated by the E.U. Directive on Cartel Damages. This means that producers of A can ask only for compensation for the reduction in their margin times the cartel quantity, $(P_B^X - P_B^C)Q^C$, while final consumers are compensated based on the price increase they suffer times the cartel quantity, $(P_A^C + P_B^C - P_A^X - P_B^X)Q^C$. In our numerical example, consumers pay a price of 45 under cartelization instead of 36 absent cartelization and, thus, incur a total overcharge of the price difference of 9 times the cartel quantity 15, which equals 135. Since the total overcharge in the purchaser case was calculated at 202.5, allowing pass-on leaves a residual of 67.5 for producers of B. As consumers can make the case that they are negatively affected and overcharged by a total of 135, this does not affect the sum attributed to consumers and producers of B.

A further option is to allow not only indirect purchasers, but also affected suppliers and separate sellers, to claim damages based on the fact that the cartel has underpaid them. Thus, this option leads to the same result as the above extension in the purchaser case. In the supplier and separate seller

cases, producers of B receive a price of 7.5 per unit when A is cartelized and a price of 12 absent cartelization. Thus, applying the same logic behind overcharge, producers of B suffer a total underpayment $(P_B^X - P_B^C)Q^C$. In our example, this results in 4.5 times 15—or 67.5—under either of those two market organizations (which would coincide with the residual when invoking pass-on in the purchaser case). However, since in the separate seller case the underpayment incurred by producers of B constitutes a transfer of rents from producers of B to consumers, this lower payment should be reflected in an adjustment of the total overcharge incurred by consumers in their relationship with producers of A, thus leading to $(P_A^C + P_B^C - P_A^X - P_B^X)Q^C$. In our numerical example, this means that the initially calculated 202.5 total overcharge among consumers has to be reduced by the underpayment of 67.5 suffered by consumers of B. In the supplier case, by contrast, there is no direct interaction between consumers and producers of B. Thus, the underpayment of 67.5 suffered by producers of B should be considered in addition to the initially calculated total overcharge borne by consumers: 135. Thus, the extended calculation of total overcharge gives rise to a coherent approach for calculating overcharge across different market organizations. It allocates damages according to net economic harm and requires only the “but for” price paid to producers of B as additional information. More precisely, for such an extended calculation, the court needs not only information on counterfactual prices paid by direct purchasers, but also, depending on the market organization, prices by suppliers or separate sellers of complements or by subsequent buyers. Compared to the optimal damages calculated in the previous section, the extended calculation suffers from the fact that the output effect is not taken into account, but it has the advantage that it is close to and improves upon current practice based on total overcharge.

Before briefly considering example 3, we summarize the key insight regarding the calculation of the total overcharge.

Result 2: *A coherent calculation of the total overcharge across different market organizations must consider not only parties that are overcharged, but also parties that are underpaid either directly (as in the supplier case) or indirectly (as in the separate seller case).*

In example 3, we use a different allocation of costs across the two components. It confirms the results obtained in example 2 but yields total damages that are even larger. The cartel inflicts large losses on consumers of the bundle and on producers of the complementary product. In the purchaser and separate seller cases, 15 units are sold at the cartel price of 30, while, under competition, 30 units are sold at price 0. Thus, the overcharge is 100%,

and the total overcharge amounts to 450.⁶⁷ In the supplier case, 15 units are sold at the cartel price of 45, while, under competition, 30 units are sold at price 30. Here, the overcharge is 33%, and the total overcharge is 225. Hence, in the supplier case, the calculated total overcharge significantly underestimates the true gains from cartelization. In the separate seller and purchaser cases, optimal antitrust damages are implemented when awarding total damages of 150% of the total overcharge, while in the supplier case, 300% of the total overcharge has to be awarded for optimal deterrence.

Table 2 summarizes the findings regarding surplus changes, total overcharge and total damages, depending on the cost parameter and market structure. Here, ΔPS_A denotes the surplus change from the cartelization of producers of component A, and ΔPS_B of producers of complementary component B. ΔCS denotes the surplus change from the cartelization of final consumers. The total surplus change and, thus—in absolute terms—the deadweight losses are denoted by ΔTS . The total overcharge of direct purchasers is denoted by TO . Finally, total damage (TD) reports the total economic harm inflicted on producers of the complementary product B and final consumers.

	Ex. 1			Ex. 2			Ex. 3		
	PuC	SSC	SuC	PuC	SSC	SuC	PuC	SSC	SuC
ΔPS_A	50.0	50.0	50.0	162.00	162.00	162.00	450.0	450.0	450.0
ΔPS_B	0.0	0.0	0.0	-87.75	-87.75	-87.75	-337.5	-337.5	-337.5
ΔCS	-87.5	-87.5	-87.5	-175.50	-175.50	-175.50	-337.5	-337.5	-337.5
ΔTS	-37.5	-37.5	-37.5	-101.25	-101.25	-101.25	-225.0	-225.0	-225.0
TO	75.0	75.0	75.0	202.50	202.50	135.00	450.0	450.0	225.0
TD	87.5	87.5	87.5	263.25	263.25	263.25	675.0	675.0	675.0

Table 2: Surplus Changes, Total Overcharge, and Total Damages in the Numerical Examples

The three numerical examples show that where the calculated total overcharge is restricted to effects on the cartel's direct purchasers, it provides little guidance about the gains from cartelization or about the total damage. This indicates that awarding damages equal to the total overcharge incurred by direct purchasers of the cartel, using comparator-based methods, provides a reliable estimate of neither the cartelist's gains from cartelization nor the

⁶⁷ Since producers of A have constant marginal costs (here, zero) the total overcharge is equal to their gains from cartelization.

total damage inflicted on other parties. In addition, the parties actually harmed by the cartel are also unlikely to receive full compensation.

Result 3: *Optimal antitrust damages would need to be a multiple of the total overcharge calculated for direct buyers. This multiple depends not only on supply and demand conditions for the cartelized product and for complementary products, but also on the market organization.*

To assess damages, market-structure-based approaches are needed. Table 1, above, provided the outcome of such calculations in the three examples.

IV. COMPETING AND CONCURRING POLICY CONSIDERATIONS

The above analysis demonstrates that a normative negation of the antitrust injury suffered by suppliers and separate sellers of complements entails risks of systematic under-deterrence, which may not be completely offset by a corresponding over-compensation of the cartelists' (direct) purchasers. This raises issues about potentially competing or concurring policy considerations that should be taken into account to determine whether and to what extent cartel victims other than direct purchasers should have a right to sue for cartel damages. We first consider various factors other than the amount of recoverable damages that determine how effective and efficient antitrust damages claims may play their role as an enforcement mechanism. Then, we discuss corrective justice as a guiding principle of antitrust damages law.

A. Effective and Efficient Enforcement

1. Detection of Cartel Infringements

The prospect of being compensated for their individual harm may motivate market players to harness their information about breaches of the law.⁶⁸ Such private information about cartel infringements is activated not only through stand-alone litigation against a cartel,⁶⁹ but also when a victim

⁶⁸ There is wide recognition of this aspect in the private vs. public enforcement debate; see, e.g., Kent Roach and Michael J. Trebilcock, *Private Enforcement of Competition Laws*, 34 Osgoode Hall L.J. 461, 472, 480; Barton H. Thompson, Jr., *The Continuing Innovation of Citizen Enforcement*, U. Ill. L. Rev. 2000, 185, 191 et seq.; Steven Shavell, *Foundations of Economic Analysis of Law* (Cambridge, Mass. and London: Harvard Univ. Press, 2004), 578 et seq.; Matthew C. Stephenson, *Public Regulation of Private Enforcement: The Case for Expanding the Role of Administrative Agencies*, 92 Va. L. Rev. 93, 108 et seq. (2005).

⁶⁹ At least in the U.S., stand-alone cases play a significant role. In an analysis of 40 cases before courts in the U.S., Lande and Davis find fifteen cases that did not follow federal, State, or E.U. enforcement actions. The authors emphasize that for each of those cases it was the

of a cartel informs an antitrust authority, trusting that the authority will persecute the cartel, which, in turn, makes it easier to sue for compensation by way of a follow-up action. These considerations point to the potential gain from granting antitrust standing to parties that have been affected by a cartel and that possess superior or complementary information that may help to uncover and prosecute the cartel. In *International Raw Materials*, the U.S. Court of Appeals for the Third Circuit assumed that participants in a market—i.e., buyers, sellers and competitors—are in the best position to be aware of restrictive practices.⁷⁰ There are, however, good reasons to believe that in particular suppliers to a cartel—due to their intimate knowledge of an industry and their person-to-person contacts with the cartelists’ staff—are among the first that might become suspicious that a decline in demand in an industry might be the result of an artificial output reduction. In any case, suppliers’ stronger incentives to uncover a cartel infringement will make it more costly to cartelize, as it will be more important to cover up collusion. Possibly, similar arguments can be made in the case of separate sellers, as they may have intimate knowledge of the market for complementary products. Moreover, where producers of complementary goods compete with the cartelists in other markets—a situation that is not uncommon—they may have private information on cartelization at their disposal. Thus, the implementation of a broad concept of antitrust standing may improve cartel detection and deterrence.

private plaintiffs “that completely uncovered the violations, and initiated and pursued the litigation.” See Robert H. Lande and Joshua P. Davis, *Benefits from Private Antitrust Enforcement: An Analysis of Forty Cases*, 42 *University of San Francisco Law Review* 879, 897-9 (2008). In a subsequent article, referring to the same study, the authors conclude “that sixteen of these forty cases originally had been discovered by private parties and their counsel, ten were follow-ons to government enforcement actions, and the others had mixed or uncertain origins.” Moreover, they ascertained that “at least nine of the private follow-on cases [...] were significantly broader than the DOJ case: they involved more defendants than the DOJ case, more causes of action, greater relief (in some instances the only relief), or longer periods of illegality.” See Robert H. Lande and Joshua P. Davis, *Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws*, 2011 *Brigham Young University Law Review* 315, 346. In a second study, the authors analyzed 20 cases, ten of which they identified as not preceded by government action. See Joshua P. Davis and Robert H. Lande, *Toward an Empirical and Theoretical Assessment of Private Antitrust Enforcement*, 36 *Seattle University Law Review* 1269, 1292 (2013).

⁷⁰ *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318, 1329 (3rd Cir. 1992) (“Because IRM is neither a producer nor a consumer of soda ash, it is not the plaintiff best suited to challenge ANSAC’s allegedly unlawful conduct in the soda ash market.”).

2. Ensuring Incentives to Bring Suit

Market players that are in a long-standing business relationship with firms that cartelize are more likely to hesitate to take action—for fear of retaliation or for the benefit of reaping a share of the cartel overcharge. With regard to the latter aspect, it has been demonstrated that through rationing inputs at low prices, an upstream cartel may shield itself from private damages claims by forwarding a share of the cartel profits to its direct purchasers.⁷¹ Thus, a monopolization of the right to claim damages to the benefit of direct purchasers entails the significant risk that private antitrust enforcement will be thwarted through (tacit) collusion between a cartel and the potential antitrust claimants. This risk may be reduced considerably when a broader class of aggrieved parties enjoys antitrust standing rights and, in particular, when this also includes parties that are not in a direct business relationship with the cartel infringers, such as indirect purchasers or separate sellers of complementary products.

Moreover, it is by no means clear that the (direct or indirect) purchasers suffer the greatest loss due to cartelization. Depending on the particular market conditions, the suppliers of complementary components ultimately bear the largest proportion of the damage from a cartel. Under such circumstances, it is obviously the latter who may have stronger incentives to bring suit.

3. Social Costs of Litigation

Damages calculation. Calculating the exact and complete amount of damages that a cartel inflicted on a supplier or a separate seller of complementary goods involves an assessment of reduced demand effects on the cartelized product and of how this, in turn, affected the profits of the producers of a complement. Thus, constructing a perfect but-for scenario is necessarily more complex than the calculation of a cartel overcharge suffered by a direct purchaser, where, for reasons of simplification, reduced demand effects typically are omitted. However, a similar simplified method is also available for calculating suppliers' damages. Multiplying the quantity sold under cartelization by the cartel underpaying—i.e., the difference between the price realized and the price with no cartel, which can be calculated following comparator-based approaches—produces a figure that represents the minimum damage inflicted on suppliers. Thus, damages calculation does not necessarily appear to be more costly or prone to error.

However, we recommend not hastily putting aside a forensic use of more complex methods of damage calculations that produce statements about

⁷¹ Maarten Pieter Schinkel, Jan Tuinstra and Jakob Rüggeberg, *Illinois Walls: How Barring Indirect Purchaser Suits Facilitates Collusion*, 39 RAND Journal of Economics 683 (2008).

demand effects. Such a higher level of economic complexity certainly entails higher social costs in terms of costs on the part of the judicial system, such as fees of economic experts and lawyers, as well as error costs. However, we submit that this should not be regarded as a compelling argument against such approaches, as that can prematurely take away every incentive from potential antitrust plaintiffs to strive for advanced and more efficient methods to meet the legal standards of proof. One should not underestimate the innovative capacity of private plaintiffs and, in particular, of the considerable number of law firms and consulting economists that specialize in cartel damages actions and that compete with each other. In particular, it seems as if courts have not yet fully realized the potential of an implementation of empirical analyses to gather evidence with respect to the complex issues of quantification of damages.

Unmeritorious actions. Private antitrust cases that are brought without merit, in the hope that a defendant that might be pushed into a positive settlement or a court that might award damages on a whim, are certainly an evil in terms of social welfare. It appears, however, that there is no sound empirical evidence demonstrating that meritless cases do, indeed, result in settlements.⁷² What is more, it seems far from clear why granting antitrust standing to firms that supply a cartel or purchasers from a cartel would, in relative terms, increase the number of meritless claims. Furthermore, preventing meritless claims should not be considered a sufficient reason to deny standing to certain categories of plaintiffs, solely on the grounds that the type of cartel damage they claim to have suffered seems rather remote or difficult to prove. Rather, unmeritorious suits should be discouraged through procedural arrangements—in the U.S. context, for example, by adjusting the standard for defendants to obtain summary judgment⁷³ and for plaintiffs to survive a motion to dismiss,⁷⁴ as well as through appropriate fee allocation

⁷² Joshua P. Davis and Robert H. Lande, *Defying Conventional Wisdom: The Case for Private Antitrust Enforcement*, 48 *Georgia Law Review* 1, 7 (2013).

⁷³ See, e.g., *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 588 (1986) (“To survive a motion for summary judgment or for a directed verdict, a plaintiff seeking damages for a violation of § 1 [Sherman Act] must present evidence ‘that tends to exclude the possibility’ that the alleged conspirators acted independently.”).

⁷⁴ In *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 556 (2007), the U.S. Supreme Court modified the pleading standard, holding that a complaint alleging a conspiracy in violation of Section 1 of the Sherman Act must provide “enough factual matter (taken as true) to suggest that an agreement was made,” and must do so by “identifying facts that are suggestive enough to render a § 1 conspiracy plausible.” Meeting this standard prior to discovery appears not to be an easy task for plaintiffs; see, e.g., *In re Travel Agent Comm’n Antitrust Litig.*, 583 F.3d 896, 902-11 (6th Cir. 2009), cert. denied, 131 S. Ct. 896 (2011); *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042, 1048-50 (9th Cir. 2008); *In re Elevator Antitrust Litig.*, 502 F.3d 47, 50-52 (2d Cir. 2007) (per curiam).

rules. Regarding the latter, a loser-pays rule—the general rule throughout the E.U.⁷⁵—could more effectively prevent frivolous claims⁷⁶ than the one-way fee-shifting regime established under U.S. Federal Antitrust Law.⁷⁷

B. Corrective Justice

It is a widely shared supposition that private actions for antitrust damages exist alongside enforcement of antitrust laws to “compensate” the victims of cartelization. Both the U.S. Supreme Court and the ECJ have ruled accordingly.⁷⁸ On closer inspection, however, it becomes apparent that the notion of compensating the victims alone cannot explain the correlativity and bipolar nature of cartel damages claims: why is it the cartelists against whom the action for damages must be directed? Thus, fair and just compensation as an underlying rationality of antitrust damages law must rather be conceived as a pursuit of “corrective justice”—i.e., of “the idea that liability rectifies the injustice inflicted by one person on another.”⁷⁹ Thus, while “compensation” understood as “corrective justice” may provide a justification for the availability of antitrust damages claims as such,⁸⁰ even a rigorous

⁷⁵ Ashurst, Denis Waelbroeck, Donald Slater and Gil Even-Shosham, *Study on the conditions of claims for damages in case of infringement of EC competition rules, Comparative Report* (2004), p. 116.

⁷⁶ For a summary of the theoretical and empirical literature on the impact of different fee allocation schemes on the incentives to sue, see CEPS, EUR and LUISS, Andrea Renda et al., *Making antitrust damages actions more effective in the EU: welfare impact and potential scenarios, Final Report* (2007), pp. 176-192.

⁷⁷ See Section 4 Clayton Act, 15 U.S.C. § 15, according to which (only) successful plaintiffs are entitled to recover “the cost of suit, including a reasonable attorney’s fee.”

⁷⁸ See *supra* note 17 (U.S. Supreme Court) and *infra* note 106 (European Court of Justice).

⁷⁹ Ernest J. Weinrib, *Corrective Justice in a Nutshell*, 52 University of Toronto Law Journal 349 (2002). Weinrib develops a formalist idea of corrective justice that denies that “compensation” or “deterrence” could be conceived as “goals” of tort law; see, e.g., *Formalism and Practical Reason, or How to Avoid Seeing Ghosts in the Empty Sepulchre*, 96 Harvard Journal of Law and Public Policy 684, 697-98 (1993).

⁸⁰ It must be borne in mind, however, that in particular in U.S.-style litigation involving contingency fees, the lawyers pocket a considerable share of the awarded recovery. Based on a study of 45 (large) cases, it has been ascertained that the percentage of recovery awarded as attorney’s fees averaged 14.3% (weighted average) or 25.6% (unweighted average). The difference results from the fact that larger cases tend to produce relatively lower attorney’s fees. See Joshua P. Davis and Robert H. Lande, *Toward an Empirical and Theoretical Assessment of Private Antitrust Enforcement*, 36 Seattle University Law Review 1269, 1294-5 (2013). Another study ascertained that legal fees made up 9.15% (median fees) or 21% (mean fees) of the recovery. See Theodore Eisenberg and Geoffrey P. Miller, *Attorney Fees and Expenses in Class Action Settlements: 1993-2008*, 7 Journal of Empirical Legal Studies 248, 266 tbl. 5 (2010). In addition, parts of the recoveries have to be used to administer the payment process. According to the study by Davis and Lande, 4.1% of the recoveries were, on average, allocated to administration, *id.*, at 1307-08 tbl. 11.

implementation of corrective justice does not require that any individual loss associated with an antitrust infringement should be compensated.⁸¹ Instead normative criteria must be identified which allow us to distinguish whether or not the compensation of a certain type of loss is to be regarded “fair and just.” Those criteria must thus be apt to guide and rationalize established doctrines of tort law and cartel damages law such as remoteness, proximate causation, or directness of injury that exactly include the possibility that certain damages caused by unlawful conduct do *not* have to be compensated by the wrongdoer and that certain classes of potential plaintiffs are a priori excluded from bringing suit.⁸²

It appears to be inappropriate to try to operationalize to this end a structural idea of corrective justice as classically described by *Aristotle* as equality in arithmetic proportion.⁸³ This notion does not amount to a fully elaborated conception of corrective justice. Such a substantial conception rather depends on normative principles outside of the (structural) idea of corrective justice. Therefore, based on a structural idea of corrective justice one may not establish that corrective justice *requires* compensation of a certain type of harm but only that its compensation is *compatible* with the idea of corrective justice. There are, nevertheless, compelling normative reasons to support a corrective-justice claim for the compensation of the harm we are concerned with here. In our context, such arguments can be derived either from notions of substantive antitrust law or from comparisons of the damage inflicted upon suppliers and separate sellers of complements with categories of damage whose compensation is established jurisprudence.

On this basis, one might at first sight find that antitrust standing on the part of purchasers from the cartel (and, arguably, also of umbrella plaintiffs) does serve corrective justice particularly well, as it entails the prospect of compensating for the harm done to consumers. It is indeed widely assumed

⁸¹ But see, e.g., CEPS, EUR and LUISS, Andrea Renda et al., *supra* note 76, p. 46 (“We consider this goal [of corrective justice] to be fully achieved whenever private plaintiffs are granted *restitutio in integrum*, and accordingly neither over- nor under-compensation are likely to be observed.”) and p. 79 (“We can assume that, in order to achieve perfect [...] corrective justice, all these groups [that potentially sustain an economic loss from a price-fixing conspiracy, including suppliers to the cartel or to other firms who sell products that contain the cartelized input] should be granted access to justice to recover damages”); Davis and Lande *supra* note 72, pp. 8-9 (“As to compensation, in an ideal world, we might identify every antitrust violation . . . , determine the amount of harm each victim suffered, and assess whether private or public enforcement best compensated victims for harm. We might also determine every time a private plaintiff obtained compensation in excess of actual damages.”).

⁸² See Franck *supra* note 46, pp. 150-152.

⁸³ See Aristotle’s treatment of justice in *Nicomachean Ethics*, V, 2-5, 1130a14–1133b28.

that the welfare of consumers is of particular concern in antitrust law.⁸⁴ However, one cannot conclude that damage done to firms that supply close complements to a cartel or to the cartel's purchasers should be of less concern in terms of corrective justice than the damage done to the cartel's purchasers. Such an argument would fall short in two respects. Under the given legal framework, it is far from certain that the consumers will get their actual cartel-induced damage compensated. This is, first of all, true with regard to those consumers who are not in a position to buy a cartelized product at the inflated price and who will purchase a less-preferred substitute instead. But effective compensation is also the exception with regard to final consumers who purchase a product whose price has been inflated due to cartelization. This is because identifying, locating and indemnifying the final consumers who suffer a cartel-induced overcharge is a relatively complex and costly endeavour. But there are also legal choices involved. Insofar as final consumers are only indirectly affected by a cartel, they lack standing under U.S. federal law and may only recover damages through state law actions.⁸⁵ While indirect purchasers have antitrust standing under the E.U. Directive on Cartel Damages,⁸⁶ the persistent problem in Europe remains the lack of effective mechanisms to overcome the collective action problem, as U.S.-

⁸⁴ Consumer welfare concerns are explicitly referred to in Article 101(3) TFEU and Article 2(1)(b) of the EC Merger Regulation 139/2004. See, e.g., European Commission, Notice, Guidelines on the application of Article 81(3) (now Article 101(3) TFEU) of the Treaty (2004/C 101/08), para. 33 ("The aim of the Community competition rules is to protect competition on the market as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources.") and Joined Cases 41-73, 43 to 48-73, 50-73, 111-73, 113-73, 114-73, *Général Sucrière v. Commission* EU:C:1973:151, para. 7 ("Since it is the particular objective of the Union to represent and protect consumers, it can show an interest in the correct application of Community provisions in the field of competition, which not only ensure that the common market operates normally but which also tend to favour consumers."). In the U.S., it is, for example, the Merger Guidelines that indicate support for a consumer welfare standard, see U.S. Department of Justice & the Federal Trade Commission, Horizontal Merger Guidelines, p. 30-1 (2010) ("The Agencies will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market. To make the requisite determination, the Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market"). See Steven C. Salop, What Is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard, 22 *Loy. Consumer L. Rev.* 336, 338-48 (2010) (Providing evidence that "the standard legislated by Congress in adopting the Sherman Act - the standard currently used by antitrust agencies and our judicial system - is the true consumer welfare standard.").

⁸⁵ See *supra* note 9.

⁸⁶ See Article 12(2) of the E.U. Cartel Damages Directive.

style opt-out class actions are generally not available.⁸⁷ Hence, while direct (and partly also indirect) purchasers from the cartel have antitrust standing, neither the law in the U.S. nor the law in the E.U. is designed in a way to assure full corrective justice to those consumers that have suffered an actual cartel-induced loss. Moreover, suppliers of a cartel or of firms that purchase from the cartel suffer a loss because they reduce their prices in response to the cartel's output reduction. In doing so, they mitigate the deadweight loss and shoulder a part of the cartel overcharge that the purchasers and, ultimately, the final consumers would otherwise have to bear. Therefore, even assuming that consumers should be particularly protected by competition law, this indicates that compensation of the cartel-induced underpricing suffered by suppliers and separate sellers seems to be equally just and fair.

The directness or remoteness of an injury inflicted by cartelization is often a crucial consideration in deciding whether or not compensation should be granted to restore justice. This rests upon the natural principle of "casum sentit dominus". It is the owner that has to bear the risk of *accidental* loss or destruction of his property.⁸⁸ Consequently, any market player should bear general market risks. Thus, it is inferred that when an injury is only remotely or indirectly connected with an antitrust infringement—e.g., via individual price setting of various intermediate parties—such damages should (normatively) be considered as a materialization of a general market risk. Based on this approach, it might seem natural to argue that in the case of a price-fixing cartel, for example, the purchasers are the most directly harmed, whereas the suppliers to the cartel are harmed only as a consequence of a decline in demand following the purchasers' reaction to cartelization. However, even if one accepts this simplistic way of describing dynamic market processes as a sequential course of events, it seems far-fetched to justify underpaying the cartel's suppliers because their harm was merely "incidental," as if it were an unforeseeable consequence of cartelization. Under E.U. law, this is reaffirmed by the decision to grant antitrust standing to indirect purchasers and to umbrella plaintiffs.⁸⁹ When compared with these recognized categories of antitrust plaintiffs, the damage done to firms that

⁸⁷ Under European policy, a widespread rejection of U.S.-style class actions prevails, and there is a preference for opt-in collective actions and for representative actions brought by consumer associations. There are, however, various reasons to be skeptical about the effectiveness of these instruments; see, e.g., Roger Van den Bergh, *Private Enforcement of European Competition Law and the Persisting Collective Action Problem*, 20 *Maastricht Journal of European and Comparative Law* 12-34.

⁸⁸ See, e.g., Reinhard Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition* (Oxford University Press: Oxford, 1996), p. 154.

⁸⁹ See *supra* sub II.B.

supply complementary product components to a cartel or to purchasers from the cartel must not be characterized as too remote or indirect, especially when the possibility of such effects was foreseeable from the cartelists' point of view.⁹⁰

Ultimately, coherence must be regarded as crucial in implementing corrective justice. Recall from the economic analysis that cartelization may affect producers of complementary product components equally and regardless of whether they purchase from the cartel or supply the cartel or the cartel's customers. This indicates that when compensation for purchasers' overcharges is considered just and fair, the same should hold true for compensating the underpayment to suppliers and separate sellers of complementary products. Otherwise, market organization would become the decisive factor in implementing corrective justice—an idea for which we see no justification.

C. Summary

Antitrust standing in favor of suppliers and separate sellers of complements creates incentives to reveal private information about cartel infringements. It also opens up the possibility of bringing a private antitrust action by parties who are in no direct business relationship with the cartelists and, thus, are less likely intimidated or corrupted. Moreover, from the point of view of corrective justice, coherence across alternative market organizations indicates that compensation for the underpayment of firms that supply a cartel or sell complements should be considered as just and fair as compensation for purchasers' cartel overcharge. Besides, such a broad definition of standing does not involve unmanageable risks of excessive social costs in terms of an increase in more complex or meritless claims. Taken together with the argument of the optimal damages award, as demonstrated above, we see a clear case for granting suppliers and separate sellers of complements a right to sue for antitrust damages.

⁹⁰ Cf. Case C-557/12, *Kone AG and others v. ÖBB-Infrastruktur AG*, EU:C:2014:1317, para. 34 where the ECJ stipulates that a liability for umbrella damages requires that “it is established that the cartel at issue was, in the circumstances of the case and, in particular, the specific aspects of the relevant market, liable to have the effect of umbrella pricing being applied by third parties acting independently, and that those circumstances and specific aspects could not be ignored by the members of that cartel.”

V. LEGAL IMPLICATIONS

A. U.S. Antitrust Law

Our analysis demonstrates that the assumptions which underlie the rigid concept of antitrust standing under U.S. law have to be considered ill-founded. First, while courts and commentators justify the denial of standing to suppliers and separate seller of complements because of the danger of over-deterrence due to risks of duplicative recovery,⁹¹ this argument has been rebutted. On the contrary, to neglect the harm done to suppliers and separate sellers of complements may result in a risk of *under*-deterrence. Moreover, while Section 4 of the Clayton Act provides for treble damages to make up for risks of under-deterrence, treble damages are already associated with closing deterrence gaps that result from a variety of other shortcomings of cartel damages claims: the probability that a cartel may be detected and prosecuted is below one⁹²; pre-judgment interests are generally not permitted in federal courts⁹³; and the deadweight loss remains unaccounted for insofar as courts deny standing to non-purchasing consumers.⁹⁴ Thus, it seems questionable whether treble damages can do justice to all these shortcomings.⁹⁵

Second, as explicitly described in *International Raw Material*, the idea that, in general, only buyers and competitors are regarded as suitable plaintiffs lies in the assumption that other market players are less likely to

⁹¹ See *supra* note 20, see also Page *supra* note 50, at 1493 (“[...] suppliers in such cases should not have standing. Because these harms are the result of the violator’s attempt to minimize costs, they are entirely offset by a cost saving to the defendant.”) and Thomas Eilmansberger, *The Green Paper on Damages Actions for Breach of the EC Antitrust Rules and beyond: Reflections of the Utility and Feasibility of Stimulating Private Enforcement through Legislative Action*, 44 *Common Market Law Review* 431, 461 (2007) (“Those affected by the declining fortunes of a firm harmed by conduct restricting competition could be [...] suppliers [...]. Injuries to these persons constitute separate damages in addition to the damages caused by the (primary) injury to the immediate victim of the anti-competitive behaviour. Granting claims for those indirect and remote injuries would therefore necessarily lead to multiple damages.”).

⁹² Areeda, Blair, Hovenkamp and Durrance *supra* note 12, at ¶330b, p. 40. See on the detection rate *supra* note 52.

⁹³ Franklin M. Fisher, *Economic Analysis and Antitrust Damages*, 29 *World Competition* 383, 387 (2006).

⁹⁴ Edward D. Cavanagh, *Detrebling Antitrust Damages: An Idea Whose Time Has Come?*, 61 *Tulane Law Review* 777, 785-86 (1987).

⁹⁵ See Christopher R. Leslie, *Antitrust damages and deadweight loss*, 51 *Antitrust Bulletin* 521, 531-534 (2006).

know about those practices and, therefore, to bring an antitrust suit.⁹⁶ However, precisely those cases where the courts rejected suppliers' standing rights show that there are, indeed, parties other than purchasers or competitors that might contribute to detecting and remedying antitrust infringements. Through their narrow concept of antitrust standing, the courts deliberately forgo this potential and settle for a less than optimal exploitation of private parties' incentives to bring an antitrust suit. This has been explicitly conceded in *Exhibitor's Service*, as there it was held that in cases in which denying a remedy "is not likely to leave a *significant* antitrust violation undetected or unremedied," it should be regarded as acceptable or even preferable that *not* "every restraint must become the subject of a private action even when those directly injured do not choose to make it so."⁹⁷

Third, courts regard the infringements inflicted upon suppliers and separate sellers of complements as too complex and costly to prove ("speculative"). Thus, they insist on a narrow concept of antitrust standing out of fear that an increased number of unmeritorious antitrust suits might unduly burden the court system. However, we believe that these concerns should have less impact. Note that these arguments have to do with the state of empirical methods and of their forensic practice of the 1970s and 1980s. Moreover, while one may adjust some features of the institutional framework, such as the fee allocation rules, the concerns mentioned certainly do not legitimate excluding categories of plaintiffs from antitrust standing.

There are, hence, good reasons to reconsider certain arguments on which the courts base their narrow concept of antitrust standing. Courts should make use of the leeway left by the Supreme Court's adjudication to expand the concept of antitrust standing. As the Court of Appeals for the First Circuit remarked, plaintiffs other than competitors and consumers are only "presumptively disfavored," and, thus, "there can be exceptions, for good cause shown" that the court explained further:

"The most obvious reason for conferring standing on a second-best plaintiff is that, in some general category of cases, there may be no first best with the incentive or ability to sue."⁹⁸

However, while the Supreme Court has so far abstained from clarifying the weight of the factors it stipulated and their interrelation, it seems fair to assume that the lower federal courts have little room to expand the concept

⁹⁶ *International Raw Material v. Stauffer Chemical Company*, 978 F.2d 1318, 1329 (3rd Cir. 1992) ("That is, IRM cannot be depended upon to advance the strongest arguments identifying the anticompetitive effects in the soda ash market, in which it does not participate.").

⁹⁷ *Exhibitors' Service, Inc. v. American Multi-Cinema, Inc.*, 788 F.2d 574, 581 (9th Cir. 1986) (emphasis added).

⁹⁸ *SAS of Puerto Rico, Inc., v. Puerto Rico Telephone Company*, 48 F.3d 39, 45 (1st Cir. 1995).

of antitrust standing.⁹⁹ Thus, a change in the Supreme Court’s case law would represent an improvement over the current state of the law. In particular, it seems advisable to abandon or at least to ease the current criteria based on “the existence of more direct victims of the alleged conspiracy.”¹⁰⁰ The court should, as a matter of principle, grant antitrust standing to other injured parties. This is necessary to eliminate weaknesses of the current state of private antitrust enforcement and to deliver its full potential.

Finally, opinions differ about the proper role of fair and just compensation of cartel victims.¹⁰¹ As far as we can ascertain, courts in the U.S. have mentioned corrective justice as an objective of cartel damages actions, but they have not explicitly considered this aspect as an argument for a broader concept of antitrust standing.¹⁰² In fact, one may well argue that optimal deterrence is the best one can strive for, in terms of corrective justice, as well. In any event, what should give the courts some food for thought is the striking incoherence of the current approach. Producers of goods that are complements to a cartelized product enjoy a right to claim damages as purchasers, but they are denied compensation for their antitrust injury when they supply a cartel or act as separate sellers to the cartel’s purchasers. Given the lack of convincing reasons for this different treatment—solely on grounds of a different market organization—the rigid concept of antitrust standing is not convincing in terms of corrective justice.

B. Competition Law in the E.U.

1. Full Effectiveness of Article 101(1) TFEU

The first issue to be considered is the core criteria stipulated by the ECJ in *Courage*¹⁰³: would it put the “full effectiveness” of the prohibition of cartels at risk if antitrust standing for suppliers and separate sellers of complements were rejected? And, in particular: if implemented under domestic law, would such a rule render the right to claim damages “practically impossible or excessively difficult”? In answering the question of whether, judged by this yardstick,¹⁰⁴ certain limits on a cartel’s liability are

⁹⁹ See Areeda, Blair, Hovenkamp and Durrance *supra* note 12, at ¶339e, pp. 139-142.

¹⁰⁰ *Associated General Contractors v. California State Council of Carpenters*, 259 U.S. 519, 545 (1982).

¹⁰¹ See *supra* sub IV.B.

¹⁰² See *supra* at note 17.

¹⁰³ See *supra* notes 28 and 29.

¹⁰⁴ Note that the (positive) standard set by the Court with regard to the rights that must be deduced from Article 101 TFEU to ensure its “full effectiveness” and its “practical effect” appears to coincide with the (negative) standard that the Court enforces with regard to the question of which measures by domestic law should be declared inapplicable, as they do not

acceptable or even necessary, one has to consider the rationale that underlies the right to claim antitrust damages, as laid out in Article 101(1) TFEU. In *Courage*, the Court referred, in essence, only to the objective of an effective enforcement when explaining why it considered the “full effectiveness” and the “practical effect” of Article 101(1) TFEU to be endangered “if it were not open to any individual to claim [cartel] damages.”¹⁰⁵ Several years later, in *Donau Chemie*, the ECJ, allegedly summarizing its own case law, extended the meaning of “practical effect” by explicitly referring to corrective justice while first emphasizing again the role of cartel damages claims as an enforcement mechanism:

“[F]irst of all, the right of any individual to claim damages for loss caused to him by conduct which is liable to restrict or distort competition contrary to, *inter alia*, Article 101(1) TFEU strengthens the working of the Community competition rules, since it discourages agreements or practices, frequently covert, which are liable to restrict or distort competition, thereby making a significant contribution to the maintenance of effective competition in the European Union [...].

Secondly, that right constitutes effective protection against the adverse effects that any infringement of Article 101(1) TFEU is liable to cause to individuals, as it allows persons who have suffered harm due to that infringement to seek full compensation not only for actual loss (*damnum emergens*) but also for loss of profit (*lucrum cessans*) plus interest [...].”¹⁰⁶

This statement may be read as indicating that the Court sees the right it established in *Courage* primarily as an instrument to improve the enforcement of Article 101(1) TFEU. At any rate, the Court puts the objective of effective enforcement on an equal footing with the aim of corrective justice. It can be inferred from this that the Court’s famous statement regarding the “full effectiveness” of Article 101(1) TFEU being “put at risk if it were not open to *any* individual to claim damages for loss caused to him”¹⁰⁷ must not be read as an outright ban on any restriction on antitrust standing. On the contrary, such restrictions may be regarded as imperative when they are necessary to achieve effective private enforcement or fair and just compensation.

comply with the principle of effectiveness as derived from the duty of loyal corporation pursuant to Article 4(3) TEU; see Case C-557/12, *Kone AG and others v. ÖBB-Infrastruktur AG*, EU:C:2014:1317, para. 33: “The full effectiveness of Article 101 TFEU would be put at risk if the right of any individual to claim compensation for harm suffered were subjected by national law, categorically and regardless of the particular circumstances of the case, to the existence of a direct causal link while excluding that right because the individual concerned had no contractual links with a member of the cartel, but with an undertaking not party thereto, whose pricing policy, however, is a result of the cartel that contributed to the distortion of price formation mechanisms governing competitive markets.”

¹⁰⁵ Case C-453/99, *Courage v. Crehan*, EU:C:2001:465, para. 27 (“Indeed, the existence of such a right [...] discourages agreements or practices, which are frequently covert, which are liable to restrict or distort competition.”).

¹⁰⁶ ECJ, 6.6.2013, Case C-536/11, *Bundeswettbewerbshörde v. Donau Chemie and others*, EU:C:2013:366, paras. 23-24 (references omitted).

¹⁰⁷ See *supra* note 28.

In view of our analysis there are, on the one hand, strong arguments supporting the view that the ECJ's criteria developed in *Courage* requires the conferral of antitrust standing on firms that supply a cartel and on the purchasers from the cartel with complementary product components. This view applies both to effective enforcement of the prohibition of restrictive practices and to fair and just compensation for the harm done by a cartel. On the other hand, there is much to be said for the cautious use of the principle of effectiveness in the context of Article 101 TFEU. While Court statements that make reference to this principle are regularly directed towards the Member States, they have the capacity to bind the E.U. legislature, too. This may unduly restrict the latter's ability to regulate damages actions for breaches of E.U. competition law and, thus, may jeopardize the institutional balance within the E.U. Thus, the Court must not overstretch its use of the principle of effectiveness and should, indeed, take its own rhetoric seriously and restrict itself to setting standards for cartel damages actions only insofar as any other concept would render it "practically impossible or excessively difficult" to achieve the purposes of those private actions for cartel damages.¹⁰⁸

However, if we take the ECJ's judgment in *Kone*¹⁰⁹ as precedent, there seems to be a strong case for a broad concept of standing under E.U. law. In *Kone*, the Court asked the Member States to grant standing to "umbrella plaintiffs," even though their compensation created risks of systematic over-deterrence.¹¹⁰ Moreover, it can hardly be argued that "umbrella plaintiffs" were in a better position to provide information on infringements of competition law or that they had stronger incentives to bring suit than suppliers and independent sellers of complements.¹¹¹ It is also not apparent that compensation for "umbrella plaintiffs" was more warranted than compensation for the harm done to suppliers and independent producers of complements in order to achieve corrective justice.¹¹² Furthermore, the calculation of a cartel's underpayment to suppliers or separate sellers of complements is not necessarily more burdensome than a calculation of losses sustained by umbrella transactions.¹¹³ Therefore, appraised in the light of its *Kone* judgment, it would seem to be consistent that the Court – if asked – declared that an outright denial of antitrust standing to suppliers and separate sellers of complements was in breach of Article 101 TFEU in conjunction with the principle of effectiveness.

¹⁰⁸ For a more detailed account of this aspect see Franck *supra* note 46, pp 154-59.

¹⁰⁹ See *supra* note 32.

¹¹⁰ See *supra* note 51.

¹¹¹ See *supra* sub IV.A.1 and IV.A.2.

¹¹² See *supra* sub IV.B.

¹¹³ See *supra* sub IV.A.3.

2. E.U. Cartel Damages Directive: A Plea for Clarification

The E.U. has the legislative power to regulate the availability of cartel damages actions for breaches of E.U. competition law. Article 103(1) TFEU provides for a competence of the Union insofar as a legislative measure is “appropriate” to give effect to the “principles set out in Articles 101 and 102 [TFEU].” The requirement of “appropriateness” has to be read as a reference to the principles of subsidiarity and proportionality, as laid down in Article 5(1) and (4) TEU, which limit the Union’s leeway to exercise its legislative power. The ECJ, however, grants the E.U. legislature a broad margin of discretion in this respect. Thus, while a legislative measure by the Union must hold the promise of improving the effectiveness of cartel damages actions in the light of the objectives pursued (i.e., enforcement and corrective justice), only a measure that is obviously unsuitable in this respect will not meet this condition. In the light of the arguments set out above, it is certainly within the legislative power of the E.U. to grant antitrust standing to firms that supply complementary products to a cartel or to the cartel’s customers.

While the E.U. legislature (apart from a non-conclusive hint in recital 43¹¹⁴) refrained from addressing the issue in the recent E.U. Cartel Damages Directive, an affirmative legislative decision in this respect would be preferable. For one thing, this would create legal certainty. In addition, and perhaps more important, such a rule would be perfectly compatible with two essential normative choices laid out in the Directive. First, in Articles 12(2) and 13 of the E.U. Cartel Damages Directive, standing for indirect purchasers and the recognition of a passing-on defense are stipulated. This suggests that the E.U. legislature has, at least in principle, committed itself to a concept whereby the right to claim cartel damages is based on individual true harm caused by a cartel infringement. To grant standing to suppliers and separate sellers of complements would amount to a coherent completion of the legal framework created by the Directive. Second, and equally consistent with a principle of cartel damages claims based on “true harm,” Article 3(3) of the E.U. Cartel Damages Directive forbids Member States to foresee punitive or multiple damages and other types of over-compensatory damages.¹¹⁵ Thus, by the Directive, the Member States have lost the option to offset risks of systematic under-compensation that a refusal of standing for suppliers and separate sellers of complementary goods will cause by means of a deliberate over-compensation of direct purchasers. Hence, to grant standing to the

¹¹⁴ See *supra* sub II.B.

¹¹⁵ On the Member State level, over-compensatory damages were available in England and Wales, Ireland and Cyprus; see Ashton and Henry *supra* note 33, para. 5.24.

latter¹¹⁶ appears to be the preferable option to avoid a significant gap in the system of private enforcement of E.U. competition law.

3. Coherent Completion of the E.U. Law Framework through Domestic Legislation

As has been noted, presently, in Europe the ball is in the court of the Member States. First, their courts could initiate a preliminary reference to the ECJ in order to clarify whether Article 101(1) TFEU, in connection with the principle of effectiveness, does require standing for suppliers and independent producers of complements. Second, while this question remains unsettled (or after the Court should have answered it in the negative) and while it remains unaddressed by the E.U. legislature, it is for the EU Member States' laws to define this matter of antitrust standing. However, in light of the above analysis and given that their regulatory leeway is constricted by the fundamental choices made through the E.U. Cartel Damages Directive and that they, in particular, have lost the option of multiple damages for (direct) purchasers, we recommend an approach along the same lines that grants standing not only to indirect purchasers and "umbrella plaintiffs" (as already prescribed by E.U. law), but also to suppliers and to independent producers of complements.

VI. CONCLUSION

Wrongdoers should not be held liable for every harm linked to their illegal activity. We submit that the dividing line between recoverable and non-recoverable antitrust injuries should not be drawn in a way that excludes the harm done to firms that supply cartelists or firms that purchase from the cartel with closed complements. Even though U.S. antitrust law and competition law in the E.U. are characterized by different institutional frameworks, we believe that this statement holds true on both sides of the Atlantic. While its implementation requires a change in the case law of the Supreme Court and, thus, is not likely to happen in the U.S. in the near future, it is a good fit with essential normative choices taken both in the jurisprudence of the ECJ with regard to Article 101 TFEU and by the E.U. legislature in the Cartel Damages Directive. Our analysis shows that to limit damages claims to a recovery of the overcharge incurred by customers may substantially underestimate the extent of the damages necessary to create sufficient deterrence. Moreover, we demonstrate the incoherence of the approach in

¹¹⁶ When firms that sell complementary products to the cartel's purchasers can sue for damages due to underpayment, for coherence, the cartelists should have a right to invoke a pass-on defense against claims by direct purchasers, as the latter benefit because they have to pay less for the components they purchased from the separate sellers.

which producers of closed complements enjoy antitrust standing to sue for recovery of the cartel overcharge when they have purchased the cartelized product, but they are declined standing to sue for compensation of their underpayment when they supply a cartel or the cartel's purchasers. Taking into account various factors—such as private information on cartel infringements, incentives to bring suit, and the social costs of litigation—that determine the effectiveness and efficiency of antitrust suits in terms of private enforcement, and also keeping in mind considerations of corrective justice, a concept of standing that includes these parties should, indeed, be regarded as the preferable option. This broadening of perspective is needed for a coherent policy on cartel damages.