The volume effect in cartel cases—a special challenge for damage quantification?

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ABSTRACT
Cartel damage occurs in many different shapes. Actors that are beyond doubt heavily affected by a cartel agreement are the purchasers of the cartel—the direct same as the indirect ones. Economic insights teach us that they do not only suffer damage in the form of the overcharge they paid or of shares of this overcharge that are passed-on to lower levels in the supply chain, but also in the form of the volume effect: a price increase as induced by a cartel agreement leads to a reduction in quantities sold, the consequence of which is typically lost profit—ie the volume effect. Whereas this effect is firmly established in economics, on the legal side it is so far discussed only on a superficial level with legal practice lacking behind in its recognition altogether. This is particularly surprising in the German and Spanish legal order where the highest courts many years ago did recognize the relevance of this damage component in pass-on situations. This article thoroughly analyses the economic and legal perspectives in respect of volume effects.

KEYWORDS: antitrust law, illegal behavior and the enforcement of law, horizontal anticompetitive practices, volume effect, facilitations of proof, comparative law

I. INTRODUCTION
Cartel damage occurs in quite a variety of shapes. The actors that are heavily affected by a cartel agreement are the cartel purchasers. Economic insights teach us that they do not only suffer damage in the form of the overcharge they paid or in the form of

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shares of this overcharge that are passed-on to lower levels in the supply chain, but also in the form of the volume effect: a price increase as induced by a cartel agreement leads to a reduction in quantities sold, which is typically followed by a loss in profit—ie the volume effect. Taking a cartel agreement as an exemplary case of an antitrust violation, from the point of view of a purchaser, who is not the final consumer,\(^1\) the interplay between three main damage components is legally relevant and economically founded: the overcharge he or she paid because the cartel is seeking to optimize its profit and therefore increases prices,\(^2\) the pass-on rate if he or she transferred part or all of this overcharge to the next level of the supply chain and the volume effect, because at higher prices his or her purchasers buy less which regularly results in some lost profit. This is also how the European Antitrust Damages Directive (the Directive) and, hence, the European Member States (MS) antitrust damages regimes, understand ‘full compensation’\(^3\) from a purchaser’s point of view. For compensation purposes, the sum of: ‘overcharge’ — ‘pass-on’ + ‘volume effect’\(^4\) needs to be calculated. In Germany and Spain, the pioneering MS chosen for the purpose of this publication, awareness of this was already in existence before the enactment of the Directive. In the cartel judgments during the last few years, that was in essence decided upon according to the law in force prior to the Directive, it is a fact that the component ‘overcharge’ gets most attention (regarding its actual quantification in essence in Spain only), ‘pass-on’ is touched upon, but regularly denied, and the ‘volume effect’ is only mentioned very exceptionally. This is surprising given that the Supreme courts of both countries many years ago did recognize the relevance of the volume effect in pass-on situations.\(^5\) Furthermore, from an economic point of view, the failure to consider the volume effects is shown to result in

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1 This contribution will not look at the consumption loss of the final consumers, but will consider only the intermediate purchasers—those that can engage in pass-on. I wish to thank two anonymous referees for their helpful comments.

2 Other measures with the same ultimate effect are possible too – eg agreements on quantities, distribution of customers, etc. This article deals with the effect of so-called hardcore cartels that are shown to considerably disturb competition in markets and focuses on a price cartel for illustrative purposes.

3 Recital 3 and following and art 1(1) 1st sentence and art 3 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 laws for infringements of the competition law provisions of the Member States and of the European Union [2014] OJ L349/1; Proposal for a Directive of the European Parliament and of the Council 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 COM (2013) 404, 11 June 2013 (Proposal for a Directive), 13; the cartel damages regimes in the European Member States were already geared towards this goal before the implementation of the Directive, see Christian Heinz, Schadensersatz im Unionsprivatrecht (Mohr Siebeck 2017) 161; Barry J Rodger, Miguel Sousa Ferro and Francisco Marcos, ‘A Panacea for Competition Law Damages Actions in the EU? A Comparative View of the Implementation of the EU Antitrust Damages Directive in sixteen Member States’ (2019) 26(4) Maastricht Journal 470, 18.

4 Communication from the Commission, Guidelines for national courts on how to estimate the share of overcharge which was passed on to the indirect purchaser, 2019 (Commission, Guidelines 2019) para 69, 135; RBB Economics/Cuatrecasas Gonçalves Pereira (2016) ‘Study on the Passing-on of Overcharges’, European Commission (hereinafter, Pass-on Study 2016); see also Robin Noble and Robert Lauer, ‘Pass-on and Volume Effects in Private Damages Actions: An Economic Perspective’ (2018) 4(4) Competition Law & Policy Debate 30, 36.

5 Germany in 2011 with BGH judgment of 28 June 2011—KZR 75/10, BGHZ 190, 145; Spain in 2013 with the TS judgment of 7 November 2013, ECLI:ES:TS:2013:5819.
underestimating the damage that purchasers suffer. This article seeks to determine whether there is anything peculiar about loss of profit caused by the volume effect compared to other situations which generate a loss of profit that can explain the major judicial scepticism. To do so it looks at the volume effect in detail from an economic point of view and from the legal perspective of the two chosen jurisdictions.

**II. ECONOMICS OF THE VOLUME EFFECT**

The volume effect endured by the purchaser level is economically relevant. Any price increase leads to a reduction in demand as determined by the demand curve. This reduction in demand under normal circumstances means some loss of profit. Whereas a cartel agreement sets the chain of negative effects in motion, a purchaser’s pass-on decision ultimately determines the volume effect. Where there is pass-on, there is typically a volume effect. Normally pass-on and volume effect are illustrated as two separate damage components. However, effectively they are heavily interlinked. The volume effect can be of a considerable amount. Even in the light of a total pass-on, there is regularly damage in the form of the volume effect. It can be the only damage component left for the purchaser level. Often, however, the situation will be mixed in the sense that there is a partial pass-on and, hence, some

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6 Partially the hesitation rests also with the claimants who do not actually in all situations have incentives to sue for the volume effect.

7 The following explanations will in essence be theoretical. There is to date no empirical literature that looks at the volume effect specifically in the antitrust scenario. However, dealing with a cartel induced price increase is from a company’s point of view no different than dealing with a tax increase or other cost changes. Therefore, some inspiration may be found in related literature by analogy.

8 European Commission, *Practical Guidelines* (2013) 52; Roman Inderst and Stefan Thomas, *Schadensersatz bei Kartellverstößen: Juristische und ökonomische Grundlagen und Methoden* (2nd edn, Handelsblatt Fachmedien GmbH 2018) 439; Oxera, comments on 2011 draft guidance, 4. It is acknowledged that the decision of the cartelists and the volume effect they expect because of the price agreement are a very decisive factor here.

9 Inderst and Thomas (n 8) 453, 454; Pass-on Study 2016, 50; Pass-on Study 2016, 196: ‘When a claimant passes on part or all of an overcharge, it will almost invariably lose sales volumes and will suffer harm in the form of the lost profit margins that would have been earned on those sales.’; Van der Veer, Jan Peter and Andrea Lofaro, ‘Estimating Pass-on’ [2010] The CPI Antitrust Journal 2, 4: ‘Again, economic theory offers some useful insights into the likely magnitude of the output effect under different scenarios’, European Commission (n 8) 49; Benoît Durand and Iestyn Williams, ‘The Importance of Accounting for Passing-on When Calculating Damages That Result from Infringements of Competition Law’ [2017] ERA Forum 79, 86: ‘If a firm increases its prices, then the volume of its sales will fall compared to the scenario in which those prices are unchanged. Passing-on will therefore result in the loss of the profit that would have been earned on those lost sales volumes.’; Ulrich Schwalbe, ‘Lucrum Cessans und Schäden durch Kartelle bei Zulieferern, Herstellern von Komplementärgütern sowie weiteren Parteien’ (2017) 5(4) NZKart 157, 157; Inderst and Thomas (n 8) 452.

10 Some economic scholars attribute the volume effect directly to the overcharge decision by the cartelists, rather than with the pass-on decision, see Martin Hellwig, ‘Private Damage Claims and the Passing-on Defense in Horizontal Price Fixing Cases: An Economist’s Perspective’ in Jürgen Basedow (eds), *Private Enforcement of EC Competition Law* (Wolters Kluwer 2006) 137. This is not the approach followed by the European cartel regime.

11 Schwalbe (n 9) 158; der Veer, Peter and Lofaro (n 9) 4: ‘… in a downstream market characterized by imperfect competition, the output effect can be very significant’.

12 Justus Haucap and Torben Stühmeier, ‘Wie hoch sind durch Kartelle verursachte Schäden: Antworten aus Sicht der Wirtschaftstheorie’ [2008] Wirtschaft und Wettbewerb 413, 421.
volume effect. The precise quantification depends on a large number of factors and is regarded as a major challenge from an economic point of view. Measuring the effect accurately by way of the price elasticity of demand is challenging. However, this observation does not remove the fact that its general existence is well founded. Generally speaking, the volume effect can be calculated by multiplying the experienced reduction in sales by the profit margin that the company would have had per unit in the circumstances if it were not for the infringement. Hence, the quantity of the volume effect depends upon the reduction in demand and the original profit margin. The inter-relation looks like Figure 1.

The cartelized (increased) price causes the marginal costs for the purchaser at the next level to rise \(c_0 \rightarrow c_1\). This is the overcharge effect \(O\). As a result, the purchaser increases his own product price, thereby passing on the damage; \(p_0 \rightarrow p_1\) (illustrated by pass-on \([P]\)). A reduction in demand emerges, which regularly leads to a loss of profit (illustrated by volume effect \([V]\)). In other words, the purchasers could have sold more, had they not had to increase their own prices. They make losses because some people will refrain from buying the now more expensive product. Concerning all the product units which they sell despite raising their own product price, the pass-on rate compensates for the increase in marginal costs—depending on how complete the pass-on is. This is generally true for any direct or indirect purchaser. Direct purchasers are indeed directly confronted with the overcharge that emerges due to the competition law infringement. The dynamic for

Figure 1. Interaction of pass-on and volume effect.

Note: This graph is taken from Pass-on Study 2016, page 10 and was marginally adjusted.

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13 Inderst and Thomas (n 8) 456.
14 Nils von Hinten-Reed and Frederick Wandschneider, ‘Ökonomischer Nachweis der Wirkungen des Kartells und der Höhe des Schadens’ in Fabian Stancke, Georg Weidenbach and Rüdiger Lahme (eds), Kartellrechtliche Schadensersatzklagen (2nd edn, Fachmedien Recht und Wirtschaft/dv Mediengruppe 2017) 406.
15 Pass-on Study 2016, 48.
16 European Commission (n 8) 12, 52.
purchasers at a lower level in the supply chain—the indirect purchasers—looks the same, except that they are not directly confronted with the overcharge as such but with whatever rate of the original overcharge was passed on to them. In essence, such a purchaser faces a ‘passed-on overcharge’. This can still be the full overcharge or just a share of it. We can refer to some particular situations: imagine that, hypothetically speaking, despite full pass-on no reduction in demand occurred (i.e. completely price inelastic demand), then there would be no damage on the purchasers’ side as overcharge and pass-on rate would be identical and cancel each other out. With the exception of this very unusual, special case, any pass-on leads to a reduction in sales. The follow-up question that needs answering is whether this reduction in demand, which typically occurs with any price increase, also leads to a volume effect.\(^{17}\) Generally speaking in order for the volume effect to be positive, both its components need to be confirmed as a reduction in demand and the existence of a positive profit margin in the but-for scenario.\(^{18}\) So, first, the lack of a reduction in demand leads to no volume effect. As stated previously, this would be highly exceptional. Secondly, the lack of a profit margin in the counter-factual scenario excludes a volume effect as well. This is the case in one special economics textbook scenario, namely the unrealistic market with full competition.\(^{19}\) This needs some further explaining: if at a certain level of the supply chain all purchasers are affected by an overcharge, under the condition of full competition in this after-market all purchasers will fully pass-on their damage. This is the case because by definition, with full competition they only earn their marginal costs. This means that they do not make any profit.\(^{20}\) Given they did not have any profit margin in the first place, they could by definition not lose any profit either.\(^{21}\) This is logical. However, this scenario will not happen in the real world. Lastly, there will, of course, be no volume effect, if both its components are equal to zero.

Let us look in more detail at the situation where the purchaser is a monopolist in the after-market. A monopolist will maximize its revenue in a different way than a company that is facing competition can.\(^{22}\) It will consider the marginal cost increase due to the overcharge imposed and that it loses profit when demand is reduced.\(^{23}\) It can be shown that in a simplified scenario a monopolist will pass on 50 per cent of the overcharge suffered.\(^{24}\) It can, furthermore, be shown that the volume effect

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\(^{17}\) der Veer, Peter and Lofaro (n 9) 4: “most likely’ there will be a reduction in demand.

\(^{18}\) Inderst and Thomas (n 8) 441.

\(^{19}\) ibid 454: That extreme case may be of little practical relevance.

\(^{20}\) Ulrich Schwalbe and Daniel Zimmer, Kartellrecht und Ökonomie: Moderne ökonomische Ansätze in der europäischen und deutschen Zusammenschlusskontrolle (2nd edn, Verlag Recht und Wirtschaft GmbH 2011) 20: Zero profit means, however, that the company obtains the imputed entrepreneurial profit.

\(^{21}\) Inderst and Thomas (n 8) 443; der Veer, Peter and Lofaro (n 9) 4: ‘For example, in the textbook model of perfect competition, the output effect does not exist. Since firms do not earn any margin over their sales in such markets, lost sales do not imply any reduction in profit’; Frank Verboven and Theo van Dijk, ‘Cartel Damages Claims and the Passing-on Defense’ (2009) 7(3) Journal of Industrial Economics 457, 464: ‘The output effect can only be ignored if the plaintiff is active in a perfectly competitive market.’ This result corresponds to the one in a market with Betrand competition, see Hellwig (n 10) 129.

\(^{22}\) Inderst and Thomas (n 8) 442.

\(^{23}\) ibid 441.
dominates the pass-on rate in the monopolist’s after-market.\(^\text{25}\) It can also occur that in a special case volume effect and pass-on exactly compensate each other.\(^\text{26}\) Independently, however, of whether the purchaser acts as a monopolist, the volume effect can supersede the pass-on rate in quantity.\(^\text{27}\)

Overall, the volume effect seems to increase with decreasing market competition.\(^\text{28}\) This can be explained by the fact that with less competition in the but-for scenario higher profit margins are possible there. Hence, the loss per unit increases. However, this margin needs to be set in relation to the size of the demand reduction.\(^\text{29}\) The intensity of competition is, therefore, clearly an important determinant of the volume effect.\(^\text{30}\) It is at the current stage not possible to formulate general predictions for oligopolies, though.\(^\text{31}\) Those markets have to be assessed on a case-by-case basis.

Looking at market coverage of a cartel ceteris paribus, the hypothesis seems reasonable that there is only a low volume effect if the whole industry is affected by the overcharge (or the passed-on overcharge).\(^\text{32}\) If the whole industry is not affected apart from one company, the individual volume effect for the only affected company would be very considerable as the other competing companies would seize that profit.\(^\text{33}\) Thus, the volume effect is higher with regard to the company-specific demand, as opposed to the market-wide demand. However, drawing an overall conclusion for the interaction of cartel coverage and volume effect is difficult.\(^\text{34}\) Cases where the volume effect can be expected to be low are, furthermore, those in which the cartelized price increase only constitutes a small share of the sales price.\(^\text{35}\) It is

\begin{itemize}
\item \(^\text{24}\) Hellwig (n 10).
\item \(^\text{25}\) Durand and Williams (n 9) 86: ‘In other words, the damage-reducing effect of passing-on will be more than offset by an adverse volume effect. In this case, the overcharge measure alone will understate the damages suffered by the affected firm. Passing-on will still reduce damages compared to the scenario in which the affected firm would maintain its original price in the face of the overcharge.’; Inderst and Thomas (n 8) 442 (true for the monopolist as a direct purchaser); Durand and Williams (n 9) 86: ‘Moreover, if competition on the downstream market is sufficiently muted—most obviously when the affected purchaser is a monopolist—this volume effect will exceed the passing-on effect’; Hellwig (n 10) 139.
\item \(^\text{26}\) Verboven and van Dijk (n 22) 466. Here they refer to Hellwig (n 10) and George Kosicki and Miles B Cahill, ‘Economics of Cost Pass Through and Damages in Indirect Purchaser Antitrust Cases’ (2006) 51(3) The Antitrust Bulletin 599.
\item \(^\text{27}\) Hellwig (n 10) 125.
\item \(^\text{28}\) Inderst and Thomas (n 8) 443.
\item \(^\text{29}\) ibid 443—it depends on how well the product can be substituted.
\item \(^\text{30}\) ibid 445.
\item \(^\text{31}\) ibid 445—but that is the goal (452).
\item \(^\text{32}\) Durand and Williams (n 9) 86: ‘The greater the increase in competitor prices, the smaller will be any reduction in the firm in question’s own sales volumes. That suggests a smaller volume effect, all else being equal, when competitors are also affected by an infringement and resulting overcharge than when only the firm in question is adversely affected. For instance, a whole industry may be impacted by a cartel affecting an essential input. When that is the case, all firms are likely to face similar incentives to increase prices.’; Kosicki and Cahill (n 26) 623.
\item \(^\text{33}\) Verboven and van Dijk (n 22) 470; der Veer, Peter and Lofaro (n 9) 4.
\item \(^\text{34}\) Inderst and Thomas (n 8) 447.
\item \(^\text{35}\) der Veer, Peter and Lofaro (n 9) 4: ‘If the retail price increase is tiny, the corresponding reduction in consumer sales would likely be small as well’; Oxera compelling economics, ‘Passing Game: The Ongoing
prima facie also not coherent to sue for a substantial volume effect without having passed-on any of the damage.

Quantifying the volume effect precisely is challenging from an economic point of view.36 There are a number of conceptual challenges.37 Its occurrence as such is beyond doubt, though. From an economic point of view, there is no compelling reason to leave the volume effect out of the picture if pass-on is looked at.38 On the contrary. Lastly, let us consider, even if this contribution will not be focused on such cases, that there can be a non-monetary volume effect if, for instance, companies compensate an overcharge with adjustments to product quality, reduced investments in marketing, or changes in the internal incentives (eg lower bonus payments).39

The consequences of these economic insights for the legal systems have to be, in line with what the Directive also aspires to, that when assessing damage for different purchasers all three components—overcharge, pass-on rate, and volume effect—need to be considered.

III. LEGAL PERSPECTIVE ON THE VOLUME EFFECT

To understand the whereabouts of the volume effect in legal reality, the most promising European MS to meet the challenge of quantifying this damage component were selected. Germany and Spain are not only generally considered as attractive fora for cartel damages cases.40 Their Supreme courts have, furthermore, both ruled

Debate about Pass-on in Damages Actions’ [2014] Oxera Agenda, 3: ‘This harm is more likely to arise where the cartelized input makes up a greater proportion of the final-product price.’

36 Different determinants can be helpful, Roman Inderst and Stefan Thomas, ‘Pass-on bei entgelter Nutzungsüberlassung auf nachgelagerten Märkten’ (2018) 6(4) NZKart 158, 353—more cautious formulation than in Roman Inderst and Stefan Thomas, Schadensersatz bei Kartellverstößen (1st edn, Handelsblatt Fachmedien GmbH 2015) 353; Comments of the American Bar Association Sections of Antitrust law and international law on the European Commission’s proposal for guidelines for national courts on how to estimate the share of overcharge which was passed on to the indirect purchaser (2018) 9: ‘additional complications’, ‘difficult to quantify at all levels’.

37 Schwalbe (n 9) 158, 160; Pass-on Study 2016, 12; Andreas Weitbrecht, ‘Kartellschadensersatz 2017’ (2018) 6(3) NZKart 106, 108; Durand and Williams (n 9); Gunnar Niels and Robin Noble, ‘Quantifying Antitrust Damages – Economics and the Law’ in Kai Hüscherth and Heike Schweitzer (eds), Public and Private Enforcement of Competition Law in Europe (Springer 2014) 127; Kosicki and Cahill (n 26) 600; Inderst and Thomas (n 8) 7, 37, 71f, 440; Jens-Uwe Franck, Marktdoordnung durch Haftung (Mohr Siebeck 2016) 572.

38 Schwalbe (n 9) 160. For a selection of calculation methods, see Pass-on Study 2016 and the different guidelines by the European Commission; Hans P Logemann, Der kartellrechtliche Schadensersatz: Die zivilrechtliche Haftung bei Verstößen gegen das deutsche und europäische Kartellrecht nach Ergehen der VO (EG) Nr 1/2003 und der 7 GWB-Novelle (Dunker & Humbloht 2009) 432.

39 Inderst and Thomas (n 8) 448.

40 For Germany: OCDE, Relationship between public and private antitrust enforcement. Note by the Secretariat. 11 May 2015; ‘Commission staff working document – Impact assessment report – Damages actions for breach of the EU antitrust rules – Accompanying the proposal for a Directive of the European Parliament and of the Council 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’ COM (2013) 404 final, SWD (2013) 203 final, 11 June 2013, 19; for Spain: Francisco Marcos Fernández, ‘Competition Law Private Litigation in the Spanish Courts (1999-2012)’ (2013) 182(4) Global Competition Law Review 167; Paul Hitchings, Miguel Á Malo and Luis Loras, ‘Considerations Concerning the implementation of the EU Competition Law Damages Directive in Spain’ [2015] Concurrences - Revue des droits de la concurrence 25, 28; Barry J Rodger, ‘The Empirical Data Part 1: Methodology, Case-law, Courts and Processes’ in Barry J Rodger (ed), Competition Law Comparative
regarding the relevance of the volume effect in pass-on situations—in Germany with the ORWI-judgment (2011) and in Spain with the Azúcar-judgment (2013). This is exceptional, as European MS tended to, and still tend to, hesitate to engage with the volume effect. Therefore, these two jurisdictions showed promise in terms of advancing the volume effect in competition litigation. However, it will be shown that so far they fall short of it.

The Supreme court judgments, which will be reported in a moment, concern the law in force before the implementation of the Directive. The Directive, then, deals with volume effects only briefly when it stipulates them as a completely separate cause of action. It merely states that the provisions set out regarding pass-on are without prejudice to claiming lost profit. More specifically, Article 12(3) reads:

This Chapter shall be without prejudice to the right of an injured party to claim and obtain compensation for loss of profits due to a full or partial passing-on of the overcharge.

Private Enforcement and Collective Redress Across the EU, International Competition Law Series (Wolters Kluwer Law & Business 2014) 94.

See n 5.

Pass-on Study 2016, 13, 37; not much has changed see Jean-François Laborde, ‘Cartel Damages Claims in Europe: How Courts Have Assessed Overcharges’ [2017] Conferences N° 1 36; Jean-François Laborde, ‘Cartel Damages Claims in Europe: How Courts Have Assessed Overcharges (2017 ed.)’ [2017] Conferences N° 4 1; Jean-François Laborde, ‘Cartel Damages Actions in Europe: How Courts Have Assessed Cartel Overcharges (2018 ed.)’ [2019] Conferences N° 1 1. One notable later exception is So-og Handelsretten (Maritime and Commercial High Court, Denmark), judgment of 15 January 2015, case SH2015.U-0004-07 (Cheminova A/S v Akzo Nobel Functional Chemicals BV et al). It concerned the market for pesticides. The court first established a pass-on of 50%—the direct purchaser in question was a monopolist in the after-market. The volume effect was set at 20% of the overcharge amount.

See art 12(3). Of course, the entitlement to full compensation as such when it came to infringements of competition law dates back to the prior case law of the European Court of Justice (ECJ), see in particular ECJ, judgment of 20 September 2001, Case C-453/99, ECLI:EU:C:2001:465—Courage and ECJ (Third Chamber), judgment of 13 July 2006, Joint Cases C-295/04 bis C-298/04, ECLI:EU:C:2006:461—Manfredi. In the latter judgment, the court referred specifically to damnum emergens, lucrum cessans, and legal interests, see para 95; confirmed in ECJ (First Chamber), judgment of 6 June 2013, Case C-536/11, ECLI:EU:C:2013:366—Donau Chemie, para 24. Whereas according to the Manfredi judgment, a partial exclusion of the damage component loss of profit seems possible, see Gero Meessen, Der Anspruch auf Schadensersatz bei Verstößen gegen EU-Kartellrecht (Mohr Siebeck 2011) 448 who interprets para 96 in this way, and a punitive element was possible if the principle of equivalence required so (see para 99), both variations have been overruled by the Directive. Despite recent case law of the European court, handling the volume effect remains largely the responsibility of the MS. With a view to the most recent European case law ECJ (Second Chamber), judgment of 14 March 2019, Case C-724/17, ECLI:EU:C:2019:204—Skanska rules exclusively about passive legitimation and ECJ (Second Chamber), judgment of 28 March 2019, Case C-637/17, ECLI:EU:C:2019:263—Cogeco on prescription. The most relevant recent judgment seems to be ECJ (Fifth Chamber), judgment of 12 December 2019, Case C-435/18, ECLI:EU:C:2019:1069—Otis Gesellschaft m.b.H. u. a that deals with loss of profit in the special context of loss of investments. The short judgment has to be interpreted in such a way that the issue of causality still remains a matter of national law, also interpreted in this way by Andreas Weitbrecht, Kartellschadensersatz 2019, NZKart 8 (2020), 106. The fact that loss of profit as such is a share of damage worthy of compensation is in the ECJ case law outside of competition law for instance recognized in ECJ, judgment of 19 May 1992, Joined Cases C-104/89 and C-37/90, ECLI:EU:C:1992:217, para 26. However, further clarifications remain scarce.

With ‘this Chapter’, it is referred to ch IV—‘The Passing-on of overcharges’.
Hence, the traditional distribution of the burden of proof applies—and, therefore, the burden of proving the volume effect is borne by the claimant.45 As envisaged by the Directive, the courts’ powers to estimate when actually quantifying such damage must apply.46 These powers apply once it is established that a claimant suffered harm but it is practically impossible or excessively difficult to precisely quantify the harm suffered on the basis of the evidence available (see Article 17[1] 2nd sentence). Some additional facilitation of proof might be permissible; they are, however, not explicitly foreseen in the Directive. Its Article 17(1) 1st sentence, namely, speaks in general of the fact that the burden or the standard of proof required for the quantification of harm may not render the exercise of the right to damages practically impossible or excessively difficult. This gives a certain leeway to the MS.

The next sections will refer to the situations both before and after the implementation.

**Case-law analysis**

**Germany**

In the ORWI-judgment of 2011, the German Supreme Court Bundesgerichtshof (BGH) jointly considered pass-on and the volume effect under the heading of the legal institute ‘Vorteilsausgleichung’ (adjustment of profits).47 This institute reflects the prohibition of unjust enrichment in the sense that a harmed individual that passed on damage may not profit from this behaviour. For the concept of ‘Vorteilsausgleichung’ to apply, there have to be both positive and negative effects due to an infringement.48 In order for the positive effect to be deductible, the criterion of adequate causation with a view to the infringement has to be fulfilled.49 Secondly, the benefit may only be considered if this is in line with the purpose of the compensation rule. This means that the deduction may neither unduly burden the claimant nor unreasonably favour the defendant.50 The burden of proof for showing this benefit is borne by the defendant.51 In the context of the ORWI-judgment, a follow-on litigation related to the carbonless paper cartel the BGH applied these general principles for the first time to a competition law case confirming this distribution of the burden of proof.52 The defendant has to make it plausible with reference to the general market conditions in the after-market, in particular, with reference to the price elasticity of demand, the price development, and the product characteristics, that pass-on was a viable consequence.53 Importantly, the judges also ruled

45 As will be outlined, this overrules the previous European approach regarding pass-on, see s 3.1.2, according to which this burden of proof rested with the defendant.
46 There are not sufficient signs in the Directive to consider that the presumption of damage—art 17(2)—would stretch to the volume effect. See argumentation throughout the course of the article.
47 BGH judgment of 28 June 2011 (n 5) 145.
48 MüKoBGB/Oetker, 8th edn, 2019, BGB, s 249, para 231.
49 Friedrich W Bulst, Schadensersatzansprüche der Marktgegenseite im Kartellrecht (Nomos 2006) 124; not all agree with that, see MüKoBGB/Oetker, ibid, s 249, para 246 with further references.
50 Settled case law, instead of all BGH judgment of 16 May 1980—V ZR 91/79, BGHZ 77, 151, para 16.
51 Instead of all BGH judgment of 17 October 2003—V ZR 84/02, NJW-RR 2004, 79, para 17.
52 BGH judgment of 28 June 2011 (n 5) 145.
53 ibid 145, para 69.
specifically on the role of the volume effect and burdened the defendant with its proof: a defendant who invokes a passing-on defence has to establish that passing on the overcharge does not result in any detriment to the purchaser, in particular, a reduction in demand. The non-existence of the volume effect, therefore, needed to be shown by the defendant. Only in very closely defined circumstances would German law help the defendant with a so-called ‘sekundäre Darlegungslast’ allotted to the injured party, ie an obligation for this party to disclose information whenever the burden of proof is actually with the other side but the information can in essence, and for good reason, not be provided by the party in charge. In terms of procedure, this must mean that any volume effect would need to be calculated against the amount that was passed on, and only the remaining sum could then be subtracted from the overcharge amount. In fact, no such calculation has ever happened in a court case in reality. Aside from this specific set of circumstances, if purchasers wanted to sue for the harm that a cartel caused them in the form of the overcharge and the volume effect directly, such a writ would naturally require the claimant to sue for both overcharge and volume effect. In the light of the ORWI-rule, it seems reasonable for a claimant to expect that a passing-on defence by the defendant is unlikely. A claimant could, furthermore, successfully have followed the strategy to sue only for the overcharge and count on the fact that, if the defendant were to raise the passing-on defence, the defendant would need to subtract the volume effect from the pass-on rate. The judicial trend regarding pass-on in current case law is clear. It is denied on a variety of grounds: rational apathy of the next levels in the supply chain, the lack of an after-market with functional competition, the lack of a causal link with the price in the after-market, and because there was no congruency between the cartelized product and the way in which the product was used in the after-market. Hence, courts currently do not even reach the stage of quantifying pass-on; reaching the stage of the volume effect is, consequently, even further away. With a view to the overcharge, many German courts have confirmed its existence in principle; however, those confirmed overcharges have been quantified by German courts only in a handful of cases. A first case was recently reported in which all three

54 This contribution will not deal with other potentially negative consequences.
55 Appreciative of this outcome Stefan Thomas, ‘Schadensverteilung im Rahmen von Vertriebsketten bei Verstoß gegen europäisches und deutsches Kartellrecht’ (2016) 180 ZHR 45, 67; Inderst and Thomas (n 8) 361.
56 LG Dortmund judgment of 27 June 2018—8 O 13/17, BeckRS 2018, 13951, para 122; LG Frankfurt am Main judgment of 30 March 2016, 2 O 464/14, juris, para 160; OLG München judgment of 8 March 2018—U 3497/16 Kart, NZKart 2018, 230, para 87.
57 LG Berlin judgment of 6 August 2013—16 O 193/11 Kart, NZKart 2014, 37, para 60 (lift cartel); LG Hannover judgment of 18 December 2017—18 O 8/17, WuW 2018, 101, para 99 (truck cartel).
58 OLG Düsseldorf judgment of 22 August 2018—VI-U (Kart) 1/17, juris, para 145 (railway cartel).
59 LG Dortmund judgment (n 56) 13951, para 111 (truck cartel): it concerned the market for transportation services that were carried out with the purchased trucks; in this scenario, the purchaser acted like a final consumer and was therefore not in a position to carry out pass-on. For a more in-depth analysis, see Franziska Weber, ‘Tackling Pass-on in Cartel Cases: A Comparative Analysis of the Interplay Between Damages Law and Economic Insights’ [2020] European Competition Journal, online first.
60 Lukas Rengier, ‘Cartel Damages Actions in German Courts: What the Statistics Tell Us’ [2019] Journal of European Competition Law & Practice 1, 7. A very recent judgment by LG Dortmund did quantify
The volume effect in cartel cases

The claimant denied any pass-on and did bring up the volume effect as damage that she would have suffered despite a potential partial or full pass-on. In the court’s view, the claimant was not successful in pleading the volume effect. It was a very special case in the sense that the claim was denied because the final consumers did not generally consume fewer products in the store in question. Rather than buying the cartelized product of which the price was higher because of pass-on, they bought products of the store’s own brand which in total led to an increase in profit for it compared to the ‘but-for’ situation in which the store would have sold more products of other brands.

With the implementation of the Directive, the situation has become overall more defendant-friendly. Whereas pass-on as such still has to be shown by the defendant, Article 12(3) allots the burden of proving the volume effect clearly with the claimant. Article 13 makes clear that the passing-on defence is only concerned with the fate of the price overcharge. An emerging volume effect can thus not exclude the passing-on defence anymore. This regime prevails over the previous German regime for the new cases. This requires in particular that the volume effect is considered separately. The majority of scholars rightly regard it, therefore, as necessary that the ORWI-jurisprudence is revised and that the burden of proof for the volume effect is allocated to the claimant at all times. The German Act against Competition (Gesetz gegen Wettbewerbsbeschränkungen—GWB) in its current form after the implementation of the Directive regulates the pass-on in section 33c GWB. According to paragraph 1 (in its final sentence), the provisions regarding the pass-on are without prejudice to claiming loss of profit if this harm resulted from the pass-on. So, this is, in essence, the rather literal implementation of the Directive’s Article 12(3). It becomes clear from the explanatory memorandum to the new legislation that the German government did not see a conflict between the requirements from the Directive and the ORWI-judgement. The new GWB is ambiguous in this regard. To date, there have been no cases based on the new law in the courts concerning the volume effect.

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61 LG Stuttgart judgment of 14.12.2018 – 30 O 26/17, juris.
62 ibid, para 25.
63 ibid, para 73.
64 Franck (n 37) 575.
65 Heinez (n 3) 237; Inderst and Thomas (n 8) 355, 364f.
66 Heineze (n 3) 237, 617; Christian Kersting and Nicola Preuß, ‘Umsetzung der Kartellschadensersatzrichtlinie (2014/104/EU): Ein Gesetzgebungsvorschlag aus der Wissenschaft’ [2015] 48.
67 Heineze (n 3) 235.
68 Heike Schweitzer, ‘Die neue Richtlinie für wettbewerbsrechtliche Schadensersatzklagen’ (2014) 2(9) NZKart 335, 338; Franck (n 38) 575.
69 Kersting and Preuß (n 66) 48; Tilman Makatsch and Arif S Mir, ‘Die neue EU-Richtlinie zu Kartellschadensersatzklagen – Angst vor der eigenen “Courage”?’ [2015] EuZW 7, 12; Schweitzer (n 68) 337; Heineze (n 3) 219.
70 Drucksache 18/10207, 56. s 33c(1) aE.
71 According to hearsay, this does not look any different in settlement negotiations.
Spain
The Spanish Supreme Court *Tribunal Supremo* (TS) has, just like the German BGH, taken the opportunity to pronounce itself in a competition law case about pass-on in relation to the possible negative consequences it entails for the purchasers. Germany and Spain subsequently have developed similar mechanisms. The TS in the Spanish sugar cartel case Azúcar in essence followed, but without direct reference to it, the main rule established by the German ORWI-judgment. It was much rather inspired by the case law of the ECJ which, then again, was only referred to once in the ORWI-judgment. The topic of pass-on emerges in European Union law for the first time in 1979 in the *Ireks-Arkady* case. It comes up again in the ECJ case law regarding the entitlement to the repayment of charges levied by a MS contrary to EU law. If the recipient passed on this charge to the next level, any compensation payment for such a charge would lead to an unjust enrichment. In the European Commission’s terminology, the ‘defence of unjust enrichment’ applies. According to the ECJ’s case law, MS were at liberty to go against such situations of unjust enrichment but they were under no obligation to do so. The requirements of the defence are two-fold: first the proof of pass-on and second the proof that there were no negative consequences attached to pass-on. Hence, the volume effect is recognized and hinders in this sense, though possibly only to some degree, the occurrence of unjust enrichment. Pass-on and the *de facto* resulting unjust enrichment are considered cumulative conditions to grant the ‘defence of unjust enrichment’. The burden of proof for this rests with the defendant; it may not be the claimant that has to show that there was no such thing as pass-on. The scope of the defendant’s burden of proof, therefore, encompasses the volume effect. This case law can be

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72 TS judgment of 7 November 2013 (n 5).
73 BGH judgment of 28.6.2011, KZR 75/10, para 63 with further references.
74 ECJ judgment of 4 October 1979, 238/78, ECLI:EU:C:1979:226—*Ireks-Arkady*, para 14—this is not a competition law case; see Anja Schwietert, *Der effet utile und das Kartellzivilrecht: Die Vorgaben des Unionsrechts bei der Ausgestaltung der Zivilrechtsfolgen des Art. 101 AEUV* (Nomos 2018) 140; Pass-on Study 2016, 21. The matter also comes back in state aid cases, see eg judgment of the General Court judgment of 5 February 2012, Case T-500/12, ECLI:EU:T:2015:73.
75 Cp the judgments ECJ 9 November 1983, 199/82, ECLI:EU:C:1983:318—*San Giorgio*, para 12; ECJ 14. January 1997, Joint Cases C-192/95 bis C-218/95, ECLI:EU:C:1997:12—*Comateb*, para 20; ECJ 27 February 1980, 68/79, ECLI:EU:C:1980:57—*Just*, para 26; ECJ (Fifth chamber) 21 September 2000, Joint Cases C-441/98 und C-442/98, Slg 2000, I-7145-7181—*Michailidis*, para 34; ECJ (Fifth chamber) 2 October 2003, Case C-147/01, ECLI:EU:C:2003:172—*Weber’s wine world*, para 94; Bulst (n 49) 237 with further references; Meessen (n 43) 511.
76 Europäische Kommission, Arbeitspapier zum Grünbuch, 59.
77 *Just* (n 75) para 26; ECJ (Fifth chamber) judgment of 21 September 2000, Joint Cases C-441/98 und C-442/98, Slg 2000, I-7145-7181—*Michailidis*, para 31. This situation changes with the Directive, of course.
78 Representative *Just* (n 75) para 26; *Comateb* (n 75) para 31; Martin Ebers, *Rechte, Rechtsbehelfe und Sanktionen im Unionsprivatrecht* (Mohr Siebeck 2016) 604; Bulst (n 49) 238; Meessen (n 43) 514.
79 Europäische Kommission (n 76) 59.
80 *Weber’s wine world* (n 75) para 111; Schlussanträge des Generalanwalts Slynn vom 29. September 1987 in den verbundenen Rechtssachen 331/85, 376/85 und 378/85, ECLI:EU:C:1987:391—*Bianco und Girard*, 1111; Logemann (n 38) 116; Katrin Schürmann, *Die Weitergabe des Kartellschadens* (Nomos 2011) 57 with further references.
81 Pass-on Study 2016, 23; Schürmann, ibid 60.
transferred to the competition law context. Therefore, the status before the Directive was that MS were allowed to go against such pass-on situations in competition law but they were under no obligation to do so. The burden of proof rested with the defendant. This proof included the non-existence of the volume effect. This European case law was referred to in the Spanish Azúcar-judgment. The TS allows the passing-on defence to avoid unjust enrichment. In Spain, as in Germany, the defendant’s side was in the end allotted the burden of proof and had to show the non-existence of a volume effect. This was argued to be in line with the European requirements and also with Article 217 LEC (Ley Enjuiciamiento Civil—Spanish Civil Procedural Code) the relevant Spanish provision for the allocation of the burden of proof. Proving a partial pass-on was likewise an option. An equivalent to the German ‘sekundäre Darlegungslast’ is, as such, not evident. In the Azúcar-case, the passing-on defence was in the end not granted and the defendant had to pay the full amount of compensation—€4,100,000—plus interest. The TS carried out an economic analysis. It regarded it as simplified to look only at the price increase in the after-market. The assessment in its view has to deal with the question of whether the economic damage (‘el perjuicio económico, el daño’) resulting from the overcharge was actually passed on. Consequently, the price increase set by the purchaser is only a necessary but not a sufficient condition. An assessment is needed for any harm remaining for the purchaser. This can most prominently be the case if a volume effect emerges due to pass-on. It is the defendant who carries the burden of showing that there was no such thing as a volume effect. If a volume effect is shown, the

82 Bulst (n 49) 244; Heinze (n 3) 235; Meessen (n 43) 513; Schürmann (n 80) 37; Europäische Kommission (n 76) 57; Magnus Strand, The Passing-on Problem in Damages and Restitution under EU Law (Edward Elgar 2017) 338; Logemann (n 38) 117; Roth in: Jaeger/Kokott/Pohlmann/Schroeder, Frankfurter Kommentar zum Kartellrecht, 93. Lieferung 04.2019, s 33c GWB, para 12 with further references; Ebers (n 78) 604 with further references: unclear.
83 Courage (n 43) para 30; Manfredi (n 43) para 94, 99; Schürmann (n 80) 39; Ebers (n 78) 603; Bulst (n 49) 240; Meessen (n 43) 512; Heinze (n 3) 235.
84 Europäische Kommission (n 76) 64; Europäische Kommission, Weißbuch 2008, 9.
85 Schürmann (n 80) 60; Logemann (n 38) 118.
86 TS judgment of 7 November 2013 (n 5).
87 Hitchings, Malo and Loras (n 40) 27; Pedro-José Vela Torres, ‘Experiencia de la sala primera del Tribunal Supremo en aplicación privada de la competencia’ in Juan I Ruiz Peris (ed), La compensación de los daños por infracción de las normas de competencia tras la Directiva 2014/104/UE: Directiva y propuesta de transposición (Aranzadi 2016) 71.
88 TS judgment of 7 November 2013 (n 5) F.D., para S.1.
89 Francisco Marcos Fernández, ‘Damages Claims in the Spanish Sugar Cartel’ (2015) 3(1) Journal of Antitrust Enforcement 205, 223.
90 TS judgment of 7 November 2013 (n 5) F.D., para S.3; Enrique Sanjuán y Muñoz, Valoración de daños en los supuestos antitrust (Tirant lo Blanch 2017) 145; Fernando Peña López, La responsabilidad civil por daños a la libre competencia: Un análisis de las normas de derecho sustantivo contenidas en el Título VI de la Ley de Defensa de la Competencia, mediante las que se transpone la Directiva 2014/104/UE (Tirant lo Blanch 2018) 248.
91 The terms ‘sobrecoste’ and ‘daño’ are not synonyms, see Purificación Martorell Zulueta, ‘La cuantificación del daño desde la perspectiva de un experto’ in Juan I Ruiz Peris (ed), Derecho Europeo de compensación de los daños causados por los cartéles y por los abusos de posición de dominio de acuerdo con la Directiva 2014/104/UE: Proyecto europeo “Training of National Judges in EU Competition Law” (Tirant lo Blanch 2018) 170.
92 Hitchings, Malo and Loras (n 40) 27; Vela Torres (n 87) 71.
defensa ‘passing-on’ cannot be granted or at least not in its entirety. Hence, prior to the implementation of the Directive, similarly to the situation in Germany, in the event of proving pass-on, the case law gave an advantage to the claimants by relieving them of the necessity to prove the volume effect when the defendant alleged pass-on. Again as in Germany, there is no case according to old law so far that actually seriously deals with, not to mention calculates, volume effects.93 The matter of the volume effect came up only once in the case law post Azúcar in a follow-on litigation in the trucks cartel. Whereas its existence was shown in the party expert report, it could in the end not be quantified due to a lack of evidence.94 As a reason, it was said to be dependent upon a truly large number of factors. Like German courts, and even partly referring to them,95 Spanish courts have also denied the passing-on defence on a number of grounds: these include doubts that the original overcharge could be reflected in the price in the after-market,96 the fact that prices in the after-market had not changed in years97 and in particular the argument of the lack of identity of the two markets in question.98 Furthermore, whereas the TS did not clearly refer to the legal institution of compensatio lucrum cum damno when it comes to the pass-on, several judgments in the truck cartel follow-on cases do.99 Generally speaking the conditions for the Spanish variant of adjustment of profits are not so clear. It requires that the damaging event leads to both damage and benefit (‘ventaja’).100 Scarcely a mention of an equity control can be found.101 Also, it is somewhat unclear which factors are to enter the causality test. One author recently even pronounced himself against the existence of the legal institution in Spanish tort law altogether.102 Overall, it is, therefore, not so clear how the defensa ‘passing-on’ is handled after the implementation of the Directive. Clearly, the burden of proof for pass-on remains with the defendant. In contrast to the German resistance to quantify even the overcharge, Spanish courts

93 Very briefly Juzgado de lo Mercantil N 3 de Valencia judgment of 15 May 2019, ECLI:ES:JMV:2019:510, F.D. para 8.119 concerning the purchasers’ tax savings.
94 Juzgado de lo Mercantil N 1 de Murcia judgment of 15 October 2018, ECLI:ES:JMMU:2018:3256, F.D. para 7.2.
95 Juzgado de lo Mercantil N 3 de Valencia decision of 17 December 2018, ECLI:ES:JMV:2018:147A, F.D. para 18 makes reference to LG Dortmund judgment (n 56) 13951 and LG Hannover judgment (n 57) 101—both have been referred to above—where it was found that the markets were not identical (‘no pueda apreciarse esa identidad de mercados’).
96 Juzgado de Primera Instancia e Instrucción N° C14 de Cáceres judgment of 6 February 2020, ECLI:ES:PII:2020:1, F.D. para 4.
97 Audiencia Provincial de Valencia judgment of 16 December 2019, ECLI:ES:APV:2019:4151, F.D. para 9.1.
98 Truck cartel: Juzgado de lo Mercantil N° 3 de Valencia judgment of 13 March 2019, ECLI:ES:JMV:2019:187, later Juzgado de lo Mercantil N° 3 de Valencia judgment of 7 May 2019, ECLI:ES:JMV:2019:222, F.D. para 8.98; Juzgado de lo Mercantil N° 3 de Valencia judgment of 15 May 2019 (n 93) F.D. para 8.92; Juzgado de lo Mercantil N° 3 de Valencia judgment of 13 September 2019, ECLI:ES:JMV:2019:1002, F.D. para 7.83.
99 See instead of all Juzgado de lo Mercantil N° 3 (n 95) F.D. para 22.
100 For the context of contract law, see TS decision of 19 December 2018, ECLI:ES:TS:2018:13209A; further reading Díez-Picazo y Ponce de León, Luis, Derecho de daños, Madrid 1999; Yzquierdo Tolsada, Responsabilidad civil extracontractual, 2015.
101 Eduardo Pastor Martínez, ‘Cartelista con esfera reflectante: sobre la passing-on defense’ [2019] Boletín Mercantil, 9.
102 Antonio Robles Martín-Laborda, ‘La inaplicabilidad de la defensa basada en la repercusión del daño (passing-on) a los casos de los cárteles de sobres y camiones’ (Almacen de Derecho, 9 March 2020).
have, by the way, recently undertaken quite a number of quantifications of overcharges, with in fact quite varying results for similar cases.\textsuperscript{103}

Regarding the lost profit dimension, there is no specific provision introduced into Spanish law in the context of implementing the Directive. The Spanish legislator only introduced the definition of ‘full compensation’ twice and thereby referred to lost profit. These are the only two moments in the text that mention lost profit at all.\textsuperscript{104} This leaves ample scope for interpretation. The new Article 76(1) LDC generally allots the burden of proof to the claimant. In the Spanish literature, the need to clarify the volume effect situation is seen.\textsuperscript{105} Peña López argues that neither in the reformed LDC nor in the Directive is there a sufficient basis to keep up the reversal of the burden of proof.\textsuperscript{106} However, the line of the TS is also not rejected.\textsuperscript{107} This is in essence the same situation as in Germany. Overall the general distribution of the burden of proof stipulated in the Directive strongly suggests that, as in the German case, the previous case law has to be overruled in respect of the volume effect. Thus, the new law in Spain is also more defendant-friendly. No matter in which situation the volume effect comes up, the burden of proof rests now upon the claimant. Effectively there have been no cases that apply the new material provision implemented with the Directive yet.

In conclusion, despite the promising rulings by the BGH and the TS, the case law after that has not yet reached the stage where pass-on and the volume effect are considered as the standard matter that economics suggests it should be.

\textsuperscript{103} In the truck cartel among others Juzgado de lo Mercantil N° 3 de Valencia judgment of 20 February 2019, ECLI:ES:JMV:2019:34, F.D. para 2.18, 7.91—5%; Juzgado de lo Mercantil N° 1 de Bilbao judgment of 3 April 2019, ECLI:ES:JMBI:2019:547, F.D. para 5—15%; Juzgado de lo Mercantil N° 3 de Valencia judgment of 15 May 2019, ECLI:ES:JMV:2019:510—10%; Juzgado de lo Mercantil N° 1 de Pontevedra judgment of 10 September 2019, ECLI:ES:JMPO:2019:976, F.D. para 4—9%.

\textsuperscript{104} The Spanish version of the Directive reads that ‘Lo dispuesto en el presente capítulo se entenderá sin perjuicio del derecho de una parte perjudicada a reclamar y obtener una indemnización por lucro cesante debido a una repercusión total o parcial de los sobrecostes.’ art 78(1) last sentence in essence repeats the definition of the term full compensation ‘El derecho al pleno resarcimiento también conllevará el derecho del perjudicado a reclamar y obtener una indemnización por lucro cesante como consecuencia de una repercusión total o parcial de los sobrecostes.’ This provision, by the way, was not part of the draft implementing legislation yet. The second place in the RD where the definition is implemented is art 72(2) RD.

\textsuperscript{105} Hitchings, Malo and Loras (n 40) 27, similarly Fernando Cachafeiro, ‘Damages Claims for Breach of Competition Law in Spain’ in Henning Rosenau and Tang van Nghia (eds), \textit{Economic Competition Regime: Raising Issues and Lessons from Germany} (Nomos 2014) 195: ‘some inconsistencies in determining the value of the loss of profit may arise’; Antonio Robles Martín-Laborda, ‘La función normativa de la responsabilidad por daños derivados de infracciones del Derecho de la Competencia. Incidencia de la Directiva 2014/104/UE en nuestro derecho interno’ in María J Morillas Jarillo and others (eds), \textit{Estudios sobre el futuro Código Mercantil: Libro homenaje al profesor Rafael Illescas Ortiz} (Universidad Carlos III de Madrid 2015) 1117: Azúcar goes further than the Directive.

\textsuperscript{106} Peña López (n 90) 248.

\textsuperscript{107} ibid 249; no conflict is seen by Patricia Vidal Martínez and Agustín Capilla, ‘Título VI De la compensación de los daños causados por las prácticas restrictivas de la competencia (artículos 71 a 81)’ in Jaime Folguera and others (eds), \textit{Comentario a la Ley de Defensa de la Competencia y a los preceptos sobre organización y procedimientos de la Ley de creación de la Comisión Nacional de los Mercados y la Competencia} (5th edn, Aranzadi 2017) art 78, 2.
Facilitating compensation for the volume effect

It is recognized from an economic point of view that among the three main types of damage considered along a cartel’s supply chain, the volume effect is the most challenging one to quantify. From a legal point of view, any lost profit comes with a double uncertainty in the sense that (i) a hypothetical but-for scenario needs to be created in which (ii) the hypothetical gains need to be asserted with sufficient probability. This is true for profit margins with a view to the volume effect as well. With the overcharge, for instance, things seem somewhat different; in the sense that how much more purchasers paid for each unit they bought can be precisely calculated once the counter-factual scenario is established. The line is rather blurred because also this but-for scenario about the overcharge cannot be established with absolute certainty and the price that emerges in the counter-factual scenario is, thus, not entirely true.

Germany

Regarding lost profit, it is generally speaking accepted that there can be no certainty. In German law section 252 1st sentence, BGB stipulates that loss of profit constitutes damage that can be compensated. German law knows a general competence for courts to estimate damage if the exact quantification is disproportionately difficult on condition that the necessary leads are given to the court (according to section 287[1] of the German Civil Procedural Code—Zivilprozessordnung [ZPO]). Section 287 ZPO acts as a reduction of the standard of proof. Judges have to assess if a ‘minimum damage’ can be ascertained. When it comes to loss of profit, section 287 ZPO interacts with section 252 2nd sentence German Civil Code—Bürgerliches Gesetzbuch (BGB). This provision stipulates two situations of lost profit, namely the profit that could be expected according to the ordinary course of things or according to special circumstances. Section 252 2nd sentence BGB counts as a facilitation of proof that enhances section 287 ZPO. It is a reminder for the judge to keep the requirements of proof low. The two variants of section 287 ZPO in conjunction with section 252 2nd sentence BGB are even referred to as rebuttable presumptions.

108 OLG Düsseldorf judgment of 14 May 2008—VI-U (Kart) 14/07, WuW/E DE-R 2311, para 45: ‘soweit deren exakte Ermittlung unverhältnismäßig schwierig ist’.
109 In German: ‘Als entgangen gilt der Gewinn, welcher nach dem gewöhnlichen Lauf der Dinge oder nach den besonderen Umständen, insbesondere nach den getroffenen Anstalten und Vorkehrungen, mit Wahrscheinlichkeit erwartet werden konnte.’
110 BGH judgment of 16 March 1959—III ZR 20/58 (Hamburg), NJW 1959, 1079; BGH judgment of 27 September 2001—IX ZR 281/00, NJW 2002, 825, para 15; OLG Düsseldorf judgment of 13 November 2013—VI-U (Kart) 11/13, NZKart 2014, 68, S. Leitsatz; OLG Düsseldorf judgment of 9 April 2014—VI-U (Kart) 10/12, NZKart 2014, 280, para 102; Staudinger/Schiemann, 2017, BGB-Kommentar, s 252, para 4.
111 Staudinger/Schiemann, 2017, ibid, s 252, para 18.
112 BGH judgment of 24 April 2012—XI ZR 360/11, NJW 2012, 2266, para 17; BGH judgment of 12 July 2016—KZR 25/14, BGHZ 211, 146, para 46: ”d) Das Berufungsgericht ist auch rechtsfehlerfrei davon ausgegangen, dass § 252 Satz 2 BGB dem Verletzten für die Darlegung und den Nachweis eines entgangenen Gewinns eine § 287 ZPO ergänzende Beweiserleichterung in Form einer widerlegbaren Vermutung gewährt; OLG Düsseldorf judgment of 9 April 2014—VI-U (Kart) 10/12, NZKart 2014, 280, para 102: ‘Für die Darlegung und den Nachweis eines entgangenen Gewinns gewährt § 252 S. 2
preponderant probability, it can be compensated.\footnote{113} The actual standard of proof required can vary according to the case though.\footnote{114} Generally speaking the required probability in the context of section 252 2nd sentence BGB can even be lower than in the case of a pure application of section 287 ZPO.\footnote{115}

The volume effect constitutes a form of lost profit. With pure economic loss, the differentiation between the violation of a legally protected right and the resulting damage becomes challenging. It is more helpful to distinguish between the occurrence of damage as such and its precise value. Section 287 ZPO is applied broadly on the understanding that this lower standard of proof is sufficient to not only quantify the damage, but also prove its existence.\footnote{116} For volume effects, this was specifically recognized by the BGH in the Lottoblock II-judgment.\footnote{117} The case concerned lost profits due to the lottery companies’ anti-competitive refusal to accept stakes and pay brokerage commissions—basically because of a restriction of market access. The broad application of section 287 ZPO applies also for the volume effect along the supply chain. Again it acts jointly with section 252 2nd sentence BGB. As sufficient leads to estimate the volume effect, claimants could, for instance, bring averages from the past or market analyses.\footnote{118} It seems more difficult to bring specific leads for loss of profit according to special circumstances than it is for the ordinary course of things.\footnote{119} In order for any of the presumptions to be effective, quite a number of hypothetical leads need to be presented. Apart from the powers to estimate, the European Directive mentions in Article 17(1) 1st sentence in more general terms that ‘Member States shall ensure that neither the burden nor the standard of proof required for the quantification of harm renders the exercise of the right to damages practically impossible or excessively difficult.’ In the light of this, the facilitation of proof by provision section 287 ZPO in conjunction with section 252 2nd sentence BGB seems to be in line with the Directive as it is of help to the claimants but still imposes the major burden of providing leads on the claimants if they want to profit from the effect of the presumption, thereby not overly benefitting them.

The Directive, furthermore, introduces a presumption that cartels cause harm in the form of an overcharge in its Article 17(2).\footnote{120} It concerns the existence of damage
in principle and not its specific amount. The scope of this provision is rather unclear in the sense that some regard it as referring only to the overcharge and others argue that it applies to other damage components like volume effects or umbrella effects, too.\textsuperscript{121} When implementing this provision into German law, the majority of scholars argue that this presumption stretches also to the volume effect that is caused by a cartel.\textsuperscript{122} This is true from the point of view of the direct purchaser. A presumption that purely stretches to the existence is only of limited help to the claimant, which is why this widened interpretation of the presumption can be considered as in line with the Directive. It does not seem to conflict too harshly with the fact that the burden of proof for the volume effect, according to the Directive, rests with the claimants as the leads for quantification still need to be provided by them. Shifting this burden further to the defendant, however, would lead to a lack of conformity with the Directive. It can be expected that the ECJ will rule upon the precise scope of Article 17(2) once the volume effect becomes a matter that national courts are confronted with. On the other hand, the presumption of pass-on that is implemented due to the Directive to the benefit of the indirect purchaser only concerns pass-on and not loss of profit (see section 33c[2] GWB).\textsuperscript{123}

**Spain**

Spanish law used to be particularly demanding with a view to establishing loss of profit, which is paradoxical.\textsuperscript{124} The requirements have been attenuated over time. Even if there is no specific legal provision,\textsuperscript{125} Spanish judges also can estimate (‘estimar’) damages, once their existence as such is ascertained.\textsuperscript{126} The causality required for loss of profit amounts only to a ‘rayana en la certeza’ (almost certain). It is not sufficient to show ‘sueños de ganancia’ (dreams of profit).\textsuperscript{127} The cut-off point is set at ’meras esperanzas frustradas’ (pure thwarted hopes). The uncertainties related to

\begin{footnotesize}
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\item Only overcharge: Vollrath, ibid 440; Hanson and Holzwarth, ibid 4; broader: instead of all Christian Kersting, ‘Kartellsschadensersatz: Haftungstatbestand – Bindungswirkung – Schadensabwägung’ in Christian Kersting and Rupprecht Podszun (eds), Die 9. GWB-Novelle (C.H. Beck 2017) 135.
\item ibid 140; Inderst and Thomas (n 8) 154f, 455.
\item Kersting (n 121) 160.
\item Spanish law used to be particularly demanding with a view to establishing loss of profit, which is paradoxical.\textsuperscript{124} The requirements have been attenuated over time. Even if there is no specific legal provision,\textsuperscript{125} Spanish judges also can estimate (‘estimar’) damages, once their existence as such is ascertained.\textsuperscript{126} The causality required for loss of profit amounts only to a ‘rayana en la certeza’ (almost certain). It is not sufficient to show ‘sueños de ganancia’ (dreams of profit).\textsuperscript{127} The cut-off point is set at ’meras esperanzas frustradas’ (pure thwarted hopes). The uncertainties related to

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lost profit have caused judges generally to refrain from estimating them altogether.\(^\text{128}\) In the jurisprudence, there are different formulations about the required probability.\(^\text{129}\) There is no over-arching standard yet.\(^\text{130}\) It is recognized that it is necessary to make externalizations.\(^\text{131}\)

What is true generally also applies to competition cases. There are a few mentions of volume effects, however, but not in the context of the supply chain. In the boycott case ‘Musaat’, and this is argued to be typical for Spanish law,\(^\text{132}\) only \textit{damnum emergens} was granted but not \textit{lucrum cessans}.\(^\text{133}\) In the Azucar-judgment, the TS dealt with the requirements to estimate harm (at hand in the form of the overcharge). Difficulties for the claimant to show the cartel overcharge did not justify the absence compensation but were seen as a reason to enhance estimation powers of the judges (‘justificaría una mayor amplitud del poder de los jueces para estimar el perjuicio’).\(^\text{134}\) The limit was to be drawn at unjustified ‘Solomonic’ solutions (‘soluciones "salomónicas" carentes de la necesaria justificación’).\(^\text{135}\) The TS underlined that it was not totally unusual for damages law that a hypothetical scenario needed to be created.\(^\text{136}\) What the TS established for the overcharge must also be applicable to the volume effect. Before the implementation of the Directive Spanish law was rather hesitant to assume lost profit.\(^\text{137}\) There is a reference in the TS jurisprudence to the doctrine of \textit{ex re ipsa} though.\(^\text{138}\) There is a suggestion in the literature to operate via a legal presumption according to Article 386(1) LEC.\(^\text{139}\) However, the fact that the basis for the presumption would in essence itself be a presumption is regarded as problematic. In justified cases it is, furthermore, generally possible, to reverse the burden of proof.\(^\text{140}\) With a view to lost profit in competition cases, it is, however, problematic that the defendant does not seem to be close enough to the required

\(^{128}\) Garnica Martín (n 125) 36.

\(^{129}\) ibid 36. TS judgment of 15 July 1998, ibid, F.D. para 1; TS judgment of 19 January 2006, ibid, F.D. para 4; TS judgment of 16 December 2009, ECLI:ES:TS:2009:815, F.D. para 9

\(^{130}\) ibid 41.

\(^{131}\) ibid 42.

\(^{132}\) Fernando Díez Estella, ‘La aplicación privada del Derecho de la Competencia: Acciones de daños y pronunciamientos judiciales’ (2019) 11(1) Cuadernos de Derecho Transnacional 267 287.

\(^{133}\) Juzgado de lo Mercantil N° 12 de Madrid judgment of 9 May 2014, ECLI:ES:JMM:2014:3797, F.D. para 13.

\(^{134}\) TS judgment of 7 November 2013 (n 5) F.D. para 7.3.

\(^{135}\) ibid, F.D. para 7.4.

\(^{136}\) ibid, F.D. para 7.3.

\(^{137}\) Carrascos Perera (n 126) 16; Juzgado de lo Mercantil N° 3 de Madrid judgment of 25 February 2014, ECLI:ES:JMM:2014:11, F.D. para 4 there is no presumption that stretches to the quantity: ‘Además de no suplicarlo, solo habría daño cuando la disminución de ingresos por la retrasión de eventuales clientes superara el sobreprecio cargado a los clientes efectivos, lo cual no es en absoluto presumible y debería probarlo la demandante (art. 217.2 LEC), lo que no hace’—translation: Apart from the fact that this is not asserted, there would only be damage if the drop in income due to the withdrawal of potential customers exceeds the overcharge charged to actual customers, which in no case can be suspected and would have to be proven by the plaintiff (art 217.2 LEC), which she does not do.

\(^{138}\) Representative TS judgment of 19 September 2014, ECLI:ES:TS:2014:3907, F.D. para 1.

\(^{139}\) Garnica Martín (n 125) 46, 54ff.

\(^{140}\) ibid 46.
information to give sufficient leads to estimate the volume effect either.\textsuperscript{141} Therefore, such a reasoning fails. The necessary information varies depending on the damage component and on the quantification method.\textsuperscript{142} The data required to calculate pass-on and the volume effect partly overlaps, but not totally.\textsuperscript{143} What aggravates the difficulties in relation to assessing the volume effect is the fact that some information, such as the market-wide price elasticity of demand, is generally difficult to obtain.\textsuperscript{144} For the Spanish but also any other legal system, shifting the burden of proof on that basis is difficult. The same would, for instance, be true for the German construction of a ‘sekundäre Darlegungslast’.

With the implementation of the Directive, the burden for proving the volume effect clearly rests with the claimant (see Article 76[1] LDC) and options to reverse this burden are, thereby, limited. Article 76(2) LDC establishes the court's powers to estimate in line with the Directive’s requirements. When it comes to loss of profit, the Directive is said to have led to a paradigmatic change.\textsuperscript{145} Clearly less rigidity with a view to the requirements is of the essence. As in German law, in Spanish law also there is the presumption of harm—Article 76(3) LDC—that includes a presumption of the volume effect. Unlike in the German case, it seems, furthermore, not to be limited to direct purchasers, but stretches out to indirect purchasers, too.\textsuperscript{146} As said, this seems to be in conformity with the Directive. Further clarifications may be generated by the ECJ in preliminary rulings in application of the effectiveness principle.

\textbf{IV. DISCUSSION}

In contrast with economics and also not in line with the Directive’s goal of full compensation, the volume effect has not so far received any major attention in cartel cases. This omission cannot be entirely placed on the shoulders of the judges, because the litigating parties also do not seem to refer to it. Some litigation strategies might not require it: eg if the claimants can count on a denial of the passing-on defence, they might not get into the trouble of alleging volume effects in the first place, which would in essence also require admitting pass-on. They might put up with obtaining compensation (only) for the full amount of the overcharge. Also, it seems to result that parties (and their experts) and judges alike may have some trouble calculating the volume effect.

Comparing the situation before and after the implementation of the Directive, it can be ascertained that the claimants’ position regarding the volume effect in the context of the passing-on defence has worsened, both in Germany and in Spain with the burden of the non-existence of the volume effect not being placed upon the defendant.

\textsuperscript{141} Schürmann (n 80) 59; Comments on the European Commission’s draft guidelines on pass-on of overcharges Response to consultation on draft guidelines for national courts 4 October 2018 Oxera Consulting LLP, 11: ‘It might be hoped that a firm would be intimately familiar with its own-price elasticities, the cross-price elasticities with respect to competing products, and how these factors evolve over time. But as competition lawyers and economists know well from merger cases, this is rarely true.’

\textsuperscript{142} Commission, Guidelines 2019, para 137.

\textsuperscript{143} ibid, para 137.

\textsuperscript{144} Noble and Lauer (n 4) 37; Commission, ibid, para 153.

\textsuperscript{145} Martorell Zulueta (n 126) 82.

\textsuperscript{146} Carrasco Perera (n 126) 21.
anymore. In the context of the legal regime in place after the implementation of the Directive, both the German and the Spanish legal orders know ways to facilitate proving lost profit though (via extended powers to estimate or with the presumption of the volume effect as such). A presumption of harm was not a given before the implementation of the Directive in both countries. Clearly, after the implementation of the Directive establishing the existence of a volume effect as such should actually not, therefore, be a major challenge. However, the quantification challenge remains, even in the light of the availability of the judges’ powers to estimate.

Admittedly numbers can be high and a lot can be at stake for the companies in competition litigation. Judges estimate loss of profit in a variety of complex scenarios, though, for example, in accident law, medical law, or intellectual property law. As a general strategy with a view to loss of profit, judges tend to develop modules over time, which, in a way, is their own guideline to ensure that they treat similar cases similarly. Sometimes the legislator intervenes. So this seems to be an important factor, constituting more specific guidance as to the quantity in different sets of circumstances. Currently, the guidelines by the European Commission, that certainly take steps in the right direction, cannot provide such a pragmatic answer either. Further guidance and alignment regarding quantification methods might, furthermore, develop in ECJ case law. As it stands the costs and risks anticipated by litigants to engage in the quantification of the volume effect are regarded as too high. The trouble with the volume effect, just as with the other damage components but possibly to an even greater extent, when thinking about facilitation of proof, is its heterogeneity. Therefore, a suggestion to assume not only the existence of a volume effect as such but also a certain percentage does not seem feasible with the current state of the art in economics. However, the current situation which effectively results in zero compensation for the volume effect is clearly not in line with economics either.

Another issue might be that economics as a science suggests certainty. In fact, it is not true that all economic calculations are accurate, as they depend a lot on the underlying assumptions and the available data. However, once some calculations are on the table, there is a feeling that one can only deviate from them with a reasoned opinion. Economic research particularly with a view to the volume effect is still working on generalizable hypotheses. The continuation of the inter-disciplinary approach is key to finding adequate help for the quantification of the optimal trading of accuracy and pragmatism.

One development that would certainly encourage claiming the volume effect would be if the tide turned in terms of the pass-on effect. Once judges start to engage in this, the claimants’ interest in the volume effect as potentially the only remaining damage component, once pass-on is subtracted, would be bound to rise and the need to find suitable solutions enhanced. Also, less reliance on pure declaratory judgments could foster quantification of the volume effect.

147 One example would be the case of traffic accidents in Spanish law, where the adequate compensation amounts for different case scenarios are stipulated in the Annex of Real Decreto Legislativo 8/2004, de 29 de octubre, por el que se aprueba el texto refundido de la Ley sobre responsabilidad civil y seguro en la circulación de vehículos a motor, BOE-A-2004-1891.