

Economics at DG Competition, 2010–2011

Kai-Uwe Kühn · Svend Albak ·
Miguel de la Mano

Published online: 22 November 2011
© Springer Science+Business Media, LLC. 2011

Abstract This paper discusses a selection of cases and important policy developments in the enforcement activities of the Directorate General for Competition at the European Commission during the past year (2010–2011).

Keywords Antitrust · Merger control

1 Introduction

This report on EU competition enforcement offers insights into part of the economic analysis that was undertaken by the Directorate General for Competition (DG COMP) at the European Commission (the Commission) during the past year.

The next section describes the empirical analysis that was undertaken in two merger cases: *Olympic/Aegean* and *Unilever/Sara Lee*. These cases illustrate that the Commission draws from an extensive set of evidentiary elements to make its decisions. Moreover, the different outcomes illustrate that advanced econometric analysis is used judiciously by the Commission and should not be seen as indispensable to show that a merger leads to a significant impediment of effective competition.

The views expressed in this article are solely those of the authors and do not necessarily reflect those of the European Commission. The authors thank Aleksandra Boutin, Xavier Boutin, Jose Elias Cabrera, Rossitza Kotzeva, Greg Langus, Szabolcs Lorincz, Dimitrios Magos, Mario Marinello, Enrico Pesaresi, and Hans Zenger for help in writing the article.

K.-U. Kühn · S. Albak (✉) · M. de la Mano
Chief Economist Team, DG Competition, European Commission, Rue Joseph II / Jozef II Straat 59,
1000 Brussels, Belgium
e-mail: svend.albak@ec.europa.eu

Section 3 describes the economic reasoning that underlay the conditional clearance of the *Intel/McAfee* merger. This case stands out as one of the rare instances where the Commission recently has raised competition concerns in a non-horizontal merger.

As regards antitrust enforcement, the last year saw the adoption of revised horizontal agreement guidelines. The final section presents the new chapter on information exchange and the substantial revision of the chapter on standardisation agreements.

2 Empirical Analysis in Merger Cases

In this section we describe the empirical analysis done in two major merger cases: *Olympic/Aegean* and *Unilever/Sara Lee*. The main focus will be on *Olympic/Aegean* to show the type of empirical work that can be relevant in cases that do not lend themselves to econometric analysis because of a lack of data. In contrast, in *Unilever/Sara Lee* such data were available, and we briefly report on the econometric work that was done in that case.

2.1 Olympic/Aegean

On 22 February 2010, the two main Greek air carriers Aegean Airlines (“Aegean”) and Olympic Air (“Olympic”) (together “the parties”) announced plans to merge their operations. Both carriers are based at Athens International Airport and operate full service scheduled services, with an important focus on the Greek domestic market.

Aegean provides scheduled and charter air passenger transport as well as cargo transport in Greece and has also provided service on international short-haul routes since 1999. It serves approximately 45 short-haul destinations, including routes to the Greek islands. It has been part of the Star alliance (which is one of the major international airline alliances) since 2010. At the time of the notification, Olympic was a newly set up company that started its operations in October 2009 after acquiring the brand, licenses, and airport takeoff and landing slots from the liquidated Olympic Airlines.

The parties claimed that the economic conditions in Greece were such that in the short to medium term their competing operations were unsustainable. As with previous airline mergers, the Commission analyzed the effects of the proposed merger on the individual routes on which both companies operate.

(i) The merger in brief

The proposed merger would have led to a quasi-monopoly between Athens and Thessaloniki, the country’s second-biggest city, and between Athens and eight island airports.¹ The Commission concluded that the merging parties competed head-to-head on these routes and would continue to do so in the absence of the merger.

¹ None of these are routes covered by public service obligations. The market investigation did not find significant competition problems on short-haul international routes that were also operated by the parties.

Both airlines (i) base their operations at Athens, and (ii) have a strong brand in particular within Greece. They also have a similar business model. For example, both airlines offer one-way tickets, engage in yield management, and discriminate by offering passengers a menu of prices that varies over time. They both sell through the Internet but also rely on an extensive network of travel agencies and continuously monitor each other's prices and frequencies—in particular through automated software. All of the above leads to aggressive competition on routes out of Athens—both actual price competition on current overlap routes as well as potential (or ex-ante) competition in capacity/frequencies for each forthcoming summer or winter six-month scheduling “season” that the International Air Transport Association (IATA) helps coordinate.

The parties argued that one of the many existing small carriers that operate across the Greek islands would likely expand its operations and replace the competitive constraint that the merging parties exerted on each other. Alternatively a large low-cost carrier would set up a base at Athens airport to operate domestic routes. Unlike in previous airline cases, the airports on the affected routes are not generally slot constrained. However, certain entry restrictions affect potential entrants to different degrees. In the case of domestic carriers, these entry restrictions involve: (i) the need to invest in developing a well recognised brand to compete effectively with the Olympic brand; (ii) the risk associated with high entry costs, which are largely sunk; (iii) the need to have access to (international) connecting traffic, for which either international operations or membership in an international alliance appear necessary; and (iv) access to Greek distribution channels—in particular travel agencies. In the case of international carriers—and in particular low-cost airlines such as easyJet and Ryanair—the main disincentive to entry is the high airport charges at Athens airport. High airport charges lead to high final prices to passengers and hence do not fit these firms' business models, which are geared towards attracting price-sensitive customers.

The parties offered to release slots at Athens and other Greek airports as well as other remedies such as access to their frequent flyer programs and interlining agreements. However the main problem in this case was not the availability of slots. To exert a sufficient competitive constraint on the merged entity the entrant would need to set up a base at Athens and develop a well-recognised brand. The Commission considered that the proposed remedies would not lead to timely and likely entry on a sufficient scale. Furthermore, nothing in the parties' remedies addressed the need to have a strong brand or ensured that the beneficiary would set up a base in Athens. As a result the Commission prohibited the transaction. This decision is currently under appeal.

(ii) The debate about the counterfactual

The unilateral effects of a merger need to be assessed by reference to a realistic counterfactual. Normally, the observed competitive conditions pre-merger provide an adequate proxy or reference to identify the likely competitive scenario in the absence of the merger. However, in this case the parties argued that they were incurring significant losses that were not sustainable.

Initially, the parties submitted a discounted cash flow (DCF) analysis of each individual route. They claimed that for all of the current overlap routes one of the parties

(or both) would be forced to exit. In other words, no overlap route was thick enough to accommodate profitably two carriers competing head-to-head. If this counterfactual was valid, there should be no competition concerns.

On the basis of the information available, the Commission conducted for each of the routes concerned its own analysis of whether it was likely that the parties would cease operations in the foreseeable future in the absence of the transaction. The Commission took into account those changes to the parties' operations, route-by-route that could already be observed or reasonably predicted.

After thus reviewing the parties' financial data and business plans the Commission could not agree with the parties' analysis. The Commission found that there were no indications that the Greek market could not sustain operations by more than one airline. The Commission also noted that it would not be indispensable for Aegean and Olympic Air to remain in the market that they both operated as "full service national airlines". The Commission found that there were, for example for Olympic Air, various options to restructure its operations or to change its strategic positioning on the market.

The Commission therefore concluded that the most likely scenario in this case was that Olympic Air and Aegean would both be able to operate on the Greek market. Most likely, the two carriers would be in competition on 10 domestic as well as several international routes.

(iii) Limited reliability of quantitative evidence

The merging parties argued during the administrative proceedings that DG COMP economists had not undertaken any empirical analysis. They insistently referred to the econometric and survey analysis in the *Ryanair/Aer Lingus* decision as the benchmark to support a prohibition decision. More generally they claimed that traditional non-quantitative evidence cannot be relied upon in the absence of more sophisticated quantitative analysis.

The parties argued that Olympic Air was a very recent entrant seeking to acquire market share. Hence, data on the competitive interaction between the old Olympic and Aegean nine months earlier, let alone further back in time, would not be particularly informative of future competition between the merging parties. In line with the claims of the parties, the Commission considered that past data on prices, passenger numbers, frequencies, cost data, etc., would likely provide a distorted view of the counterfactual.

Complex inferences can indeed sometimes be validated or rejected by conducting sophisticated empirical analysis. However, at least three pre-conditions need to be met for such analysis to be informative:

- i. All of the necessary data are available to implement the chosen empirical methodology and the available data are of adequate quality;
- ii. Empirical analysis in mergers necessarily involves the use of historical data. However, these data need to be a good indicator of the likely impact of the merger on future competition; and
- iii. There has to be sufficient variability in the data to identify references for comparison.

Data Quality

In this case the data obtained were incomplete and/or inaccurate. For example DG COMP requested directional data and time-of-purchase data, but these data were not available from at least one of the parties. Data on passengers and revenues used by the parties for their Discounted Cash Flow (“DCF”) analysis were not in line with the parties’ internal documents or with the data used in the counterfactual analysis. The databases of the ferry operators were not as developed as the sophisticated systems/databases used by airlines. As a result, the split by type of ticket, time of travel and capacity was not always available from ferry operators and no relevant data were made available for the different tickets sold by the ferry companies.

The Relevance of Historical Data

The Commission accepted that, at best, any analysis that was based on historic quantitative data, to be informative, could only go back to October 2009 when the “new Olympic” started its operations. For instance, market data prior to this date were distorted by the fact that Olympic had been receiving subsidies. The merging parties could only submit data at a monthly level, as opposed (for example) to average prices by date of purchase. This meant that only 11 time series observations were available to undertake standard econometric analysis to inform market definition or competitive effects. Any analysis based on so few observations is normally not robust, if statistically significant at all.

Insufficient Variability in Data

The limited available data exhibited almost no variability after controlling for seasonality. Except for a few exceptions there were no (systematic) natural experiments that could be exploited.²

(iv) The parties’ econometric analyses

Despite these data difficulties the parties submitted several econometric reports from their retained economists. For example, to support the claim that ferries and air travel are in the same market in most if not all of the overlap routes the parties’ economists submitted a critical loss analysis (CLA) and a stationarity analysis.

Besides the anticipated data problems and a number of more technical methodological flaws we note that the CLA is generally applicable only where the categories of products that are being considered are largely undifferentiated. However, the airline transport industry relies on yield management to price its products, and product differentiation is an important competitive variable. Indeed, very few people travelling on a plane will actually have paid the same price for a ticket.

The stationarity analysis of the parties was also problematic. This type of analysis may be conclusive, at best, to identify separate market, but not, as the parties

² The exceptions were not of sufficient magnitude to allow for meaningful inference.

intended, to prove that due to overlapping competitive pressure at the margin across ticket types, all tickets, irrespective of price, class, or time of purchase, are in the same antitrust market. First, as a consequence of yield management practices that seek to discriminate effectively between passengers with different willingnesses to pay, there is a relationship in the fares of flexible and restricted tickets. Price differences would tend to track the seasonal and structural variations in the proportion of price sensitive to non-price sensitive passengers over time.

In any event, relative price changes over time that would allow testing for the presence of arbitrage are subject to common shocks. The technique that was employed by the parties' economists did not allow the disentanglement of these common sources of variation or the inter-relationship at the flight level among fares. Furthermore, a robustness test that was based on a counter-experiment where price series were *unrelated* to each other by arbitrage confirmed that the results were spurious.

The parties' economists also submitted a regression analysis on the impact of ferry presence on airline pricing. However, the study did not include necessary controls, and the results confirmed rather than refuted the limited significance of ferry presence. Moreover, the results further supported the Commission's finding that there exists a differentiation between price-sensitive and relatively non-price-sensitive passengers (proxied, *inter alia*, on the basis of whether a flexible or a non-flexible ticket was purchased). Finally, the selection of routes was suspect, as it excluded important overlap routes. Most important, the presence of Olympic was not taken into account in the estimation, due precisely to the absence of useful data.

(v) The Commission's analysis

In the *Ryanair/Aer Lingus* case DG COMP economists conducted three sets of empirical analysis that were intended to complement and reinforce the extensive qualitative evidence that was also available. However, none of the difficulties related to the data mentioned above was encountered in that case. The data were complete, accurate, and adequate for the methodologies for which they were used. Equally important, the quantitative analysis in the *Ryanair/Aer Lingus* case was intended to inform issues that were not controversial in the present case: the absence of airport substitutability, and the closeness of competition between the merging parties. Moreover, in *Ryanair/Aer Lingus* the General Court accepted that quantitative analysis could be useful but it is by no means mandatory.³

In the present case DG COMP economists explored all of the available quantitative data and decided to carry out more modest analyses, in line with the limited value added that was expected on account of data limitations and mindful of the opportunity costs in terms of the time and resources required for conducting more sophisticated analyses.

Nevertheless, the Commission's market investigation was comprehensive. The gathered evidence included: (i) hundreds of market questionnaires with market players;

³ More concretely the Court stated that "the applicant's assertion that the 'non-technical evidence' cannot be taken into account unless it is supported by 'technical evidence' cannot be upheld. There is no need to establish such a hierarchy". Case T-342/07 *Ryanair Holdings plc v Commission*, judgment of 6.7.2010, par 136.

(ii) minutes from dozens of meetings with the parties and third parties; (iii) industry reports; and (iv) the parties' own internal documents, emails, and accounts. Readily available quantitative data were also requested from both merging and third parties.

As is now routine, DG COMP economists undertook a descriptive analysis of quantitative data: passenger numbers, fares, and capacity (where the data were of sufficient quality). This empirical analysis directly informed the route-by-route assessment. More generally, the descriptive analysis led to questions regarding the competitive dynamics of every route and was used to reconstruct several different candidate markets and to compute alternative measures of market power.

It also proved helpful to inspect the weighted average fare evolution for the different fare classes and between the different operators that served the different routes of concern. A similar exercise was pursued for passenger data. This initial analysis raised questions that prompted the Commission to send further queries to the parties, competitors, ferry operators, and the national railway company for clarification points. These insights led to a better understanding of the complex yield management practices that were routinely used by the merging parties.

2.2 Unilever/Sara Lee

In contrast to *Olympic/Aegean*, *Unilever/Sara Lee* was a case in which it did make sense for the Commission to engage in sophisticated econometric modelling. Given the availability of high frequency product level scanner data, DG COMP economists estimated a standard econometric model of demand and used the results to run a merger simulation.

The case concerned Unilever's acquisition of the body care and laundry care businesses of Sara Lee Corp. The main concern was that the merger seemed to give Unilever a strong position in a number of deodorants markets by combining Unilever's Dove and Rexona brands with Sara Lee's Sanex. Post-transaction, Unilever would in six countries have had relatively high market shares with the incremental market share from the merger usually quite significant (at least double digits). In all of these countries the second-largest competitor would have significantly lower market shares than the merged entity.

DG COMP assessed the relative positioning of Unilever and Sara Lee brands in terms of product attributes, formats, and price points across various countries but also estimated a nested logit demand model.⁴ This model assumes that consumers view products as grouped into distinct sets or nests. Products that belong to a given nest are closer substitutes to each other than to products in other nests. Both one-level and two-level nested models were estimated.

In the one-level model the nesting factor was gender. Deodorants that the analysts considered were primarily targeted for men were grouped together into one nest. The same was done for products targeted for women. In the two-level nesting structure further product groups were formed within a given gender by the brands of the items. This two-level model assumed that consumers, compared to the one-level model, were

⁴ See, for instance, [Berry \(1994\)](#); [Verboven \(1996\)](#), and [Ivaldi and Verboven \(2005\)](#).

more heterogeneous in their preferences, and viewed products of a given gender-brand subgroup as closer substitutes than were other products.

The estimated parameters of the demand estimation and an assumption about firm conduct allowed for a simulation of post-merger prices. The results showed strong price increases for the Belgian deodorant market, and less pronounced but still economically relevant for the other deodorant markets. The main source of these average price increases was Sanex prices, which were predicted to go up substantially. Unilever's brands showed more moderate but still significant price increases. The simulation also showed that overall price increases typically were driven by the non-male market. In this non-male segment the overlap between the merging brands was stronger, while Sanex was comparatively weak in the male market. This was also reflected by the implied substitution patterns. The Commission performed extensive robustness checks and further checked whether predicted prices, costs, and margin behaviour were consistent with the reality of the industry.

Merger simulation will usually only be one part of the total evidence base when evaluating a merger investigation. Qualitative analysis of the elements that determine pricing behaviour and particularly of the aspects of competition not captured by the merger simulation exercise must be properly incorporated. Only when the model that is used in the merger simulation fits the facts on the ground and the prediction of the effects is consistent with the rest of the evidence, should a merger simulation be used as part of the evidence.

In this case the Commission concluded on that basis of the totality of the evidence that the transaction would lead to a significant impediment to effective competition in a number of deodorants markets. To remedy these concerns, Unilever offered to divest the Sanex brand in Europe, and the Commission cleared the transaction subject to conditions.⁵

2.3 Conclusion

The two cases discussed above show that the appropriate analytical approaches that the Commission can take will differ greatly depending on the available data. The Commission has to use the best evidence available, not an abstract notion of what the best evidence would be in a perfect world. It will therefore adjust the sophistication of its quantitative analysis to the features of each individual case.

3 Intel/McAfee

Intel is the leading manufacturer of central processing units ("CPUs"), which is the core chip of a computer, and chipsets, which are used in industries such as computing and communications, and are among the most important components of computers. Intel also develops platforms of digital computing technologies, which combine various types of hardware and software. McAfee is a security technology company that is

⁵ Unilever later sold Sanex to Colgate-Palmolive.

active in the design and development of security products and services that are focused on ensuring that Internet-connected devices are protected from malicious content.

Intel and McAfee are thus active in neighboring and complementary products markets. In most circumstances, conglomerate mergers do not give rise to competition problems. However, in certain circumstances—in particular, where the merged entity enjoys strong market power in at least one of the markets concerned—a conglomerate merger may create possibilities for exclusionary bundling or tying practices that could disadvantage or foreclose competitors and ultimately lead to their exiting the market. Following the proposed transaction, Intel would have the ability to offer both hardware (in particular CPUs) and security solutions. As a result, the Commission investigated whether there was a serious risk that Intel would bundle or tie Intel CPUs/chipsets and McAfee security solutions or degrade the interoperability of other companies' security products that are competitive with McAfee's products.⁶

Following the Commission's Non-horizontal merger guidelines,⁷ the Commission assessed whether the merged entity would have the ability and incentive to foreclose, and whether this would lead to consumer harm. Intel argued that even if it had the ability to tie CPU and security software, it would not have an incentive to do so since a less secure or more expensive security solution for Intel would reduce the attractiveness of the Intel platform and thereby diminish the rents that Intel could extract from its CPU sales. Such tying would also hurt the reputation of Intel and therefore invite competitive challenges. Generally speaking, Intel would have an interest to nurture an efficient security environment for its hardware products, because this would allow it to charge the highest prices on the hardware market. This argument is basically a variant of the "one-monopoly-profit" theory that has been advanced by the "Chicago school" of economics reasoning.

While the logic of the Chicago school argument is generally sound, plausible circumstances exist in which the one-monopoly-profit argument does not hold. There are three major theories of harm that are related to tying in the economics literature: (i) protection of market power on the tying good market (CPUs),⁸ (ii) leverage of market power into the tied good market (security software),⁹ and (iii) more effective price discrimination.¹⁰

Tying to protect an incumbent's strong market position in the tying good market (often an input or upstream good) can apply in cases where commercial success on the tied good market creates an important technological stronghold from which com-

⁶ According to complainants such business strategies would aim to leverage Intel's dominance in the CPU and chipset markets into the endpoint security markets, leading to the exit or at least significant weakening of McAfee's competitors within the next two to five years. The complainants were particularly concerned that the ensuing Intel/McAfee security monoculture would reduce competition and innovation in the endpoint security markets.

⁷ Guidelines on the assessment of non-horizontal mergers (OJ C 265, 18.10.2006).

⁸ A formalization with an application to the U.S. *Microsoft* case can be found in [Carlton and Waldman \(2002\)](#).

⁹ See [Whinston \(1990\)](#).

¹⁰ The incentive to use tying to price discriminate was already recognized by early Chicago school lawyers. A modern analysis with an application to the European *Microsoft* case can be found in [Genakos et al. \(2011\)](#). Although price discrimination was considered during the case, it will not be further discussed in this article.

petitors can challenge the incumbent's entrenched position of dominance on the tying good market. However, in the case of Intel and McAfee, there was no conceivable risk that Symantec or other security solutions vendors (SSVs) would grow into a competitive threat to Intel's CPUs themselves. Hence, the classical form of this theory of harm did not apply. One might instead argue that McAfee might refuse to interoperate with AMD-based computers post-merger, to harm AMD on the CPU market. However, McAfee was far from dominant in the security software market, so AMD's customers would have plenty of reasonable SSV alternatives at their disposal. A refusal to supply would instead seem to undermine McAfee's own sales revenues.

The most significant potential concern in the present case related to anticompetitive effects on the tied good market, namely the possibility that tying might allow Intel to monopolize the security software market. If Intel were to foreclose Symantec from Intel-processor computers, Symantec might be forced to exit the market because non-Intel sales would not be sufficient to finance Symantec's ongoing R&D or other fixed costs of production. If Symantec indeed did exit as a consequence of such foreclosure, Intel would be able to charge higher prices for its Intel/McAfee combination.

Before spelling out a bit more clearly the exact conditions under which this theory of harm would be valid, three things should be observed: First, the foreclosure of Symantec from Intel computers *as such* might not be profitable for Intel. Lack of access to Symantec software would likely be a nuisance to Intel customers and would not by itself increase Intel's market power. However, the exit of Symantec (i.e., the lack of availability of Symantec *to AMD users*) could generate increase profits for Intel/McAfee on the SSV market.

Second, even though the foreclosure of Symantec on Intel machines alone would not by itself increase McAfee's market power, full exit of Symantec would nonetheless not be needed for a finding of anticompetitive effects. For tying to create consumer harm it would be sufficient that Symantec's lack of scale post-tying be sufficiently pronounced to reduce Symantec's ability to compete.

Third, note that Intel would not wilfully induce a less innovative SSV market. The argument remains generally valid that Intel would benefit from more effective research and development (R&D) in the security ecosystem. If Symantec's potential marginalization or exit would benefit Intel, this would be despite Symantec's R&D being inhibited for Intel consumers. Lower R&D would be an unintended consequence of the partial or total exclusion (as would the reduced product variety in security software). And if this damage would have a major adverse consequence for the Intel platform, this would stop Intel from tying even if foreclosure would increase market power in the SSV market.

In the context of the present case, for the tie to have anticompetitive effects it would be necessary that (i) there are economies of scale in either production or R&D on the tied good market (security software); (ii) tying would foreclose a large part of the market; (iii) competitors on the tying good market (CPUs) could not be expected to nurture entry or to integrate into the tied good market (security software) themselves in an effective way; and (iv) foreclosure in the tied good market (security software) should have a limited negative impact on the attractiveness of the tying good (CPUs). The Commission advanced empirical evidence that supported the validity of these assumptions in this case.

Finally it was also important to show that the merged entity would have the ability to commit to the tying strategy. This is because, while Symantec's exit may be desirable, as long as it is still in the market, working with Symantec would be more profitable than foreclosing it.

There were basically three ways that this problem could be solved by the merged entity: The first solution was irreversible technical integration, which is a powerful commitment device. Second, there might be no severe commitment problem if tying would be profitable in its own right for reasons of price discrimination. Third, the merged entity might be willing temporarily to sacrifice profits, if this profit sacrifice was likely to induce exit of the complementary good competitors in due course. To be commercially viable, such a strategy would require the usual necessary conditions for rational predation to apply. In particular, a significant asymmetry between the predator and the prey (e.g., in terms of access to financing) was needed, which would induce Symantec to exit the market despite anticipating Intel would subsequently raise prices.

In the context of this case, the Commission concluded that the first of these commitment mechanisms—various forms of technical tying—was the likely commitment device. By contrast commercial tying alone was unlikely to be a sustainable exclusionary strategy.

On the basis of the evidence gathered at the end of the first-phase investigation, the Commission concluded that Intel had not demonstrated it had no ability or no incentives to technically tie its products with McAfee's endpoint security or that the negative effects of such a practice on the relevant markets would not be significant. Supported, *inter alia*, by the economic reasoning described above, the Commission could not exclude that the conglomerate effects that would result from a technical tie between the parties' products would lead to foreclosure of McAfee's competitors in the endpoint security markets and/or strengthen the current dominant position of Intel in chipset and CPU markets.

In order to address the Commission's concerns, Intel committed, among other things, to ensure that vendors of rival security solutions will have access to all necessary information to use the functionalities of Intel's CPUs and chipsets in the same way that those functionalities are used by McAfee. Intel also committed not to actively impede competitors' security solutions from running on Intel CPUs or chipsets. Finally, Intel committed to avoid hampering the operation of McAfee's security solutions when running on personal computers containing CPUs or chipsets sold by Intel's competitors.

4 Horizontal Agreement Guidelines

In December 2010, the Commission published revised Guidelines for the assessment of cooperation agreements between competitors: so called horizontal cooperation agreements.¹¹ These Guidelines provide a framework for the analysis of the most common forms of horizontal co-operation such as agreements in the areas of R&D, production, purchasing, commercialisation, standardisation, standard terms, and information

¹¹ Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union (TFEU) to horizontal cooperation agreements (OJ C 11/1 14.1.2011).

exchange. Two regulations allow exemptions from the competition rules for certain R&D, specialization, and production agreements that are unlikely to raise competition concerns.

The key features of the revision of the Guidelines are a new chapter on information exchange and a substantial revision of the chapter on standardisation agreements. In this section we will highlight the key economic principles underlying the policy choices made in these two chapters.

4.1 Information Exchange

The Guidelines provide general principles for the competitive assessment of information exchange, including the assessment under Articles 101(1) and 101(3) TFEU,¹² which are applicable to all types of horizontal cooperation agreements that include the exchange of information. Information exchange takes various forms, such as data that are shared directly between competitors or data that are shared indirectly through a common agency or a third party or through the companies' suppliers or retailers.

(i) Exchanges of intentions regarding future prices or quantities

The Guidelines state that: “exchanging information on companies' individualised intentions concerning future conduct regarding prices or quantities is particularly likely to lead to a collusive outcome”.¹³ As a result “information exchanges between competitors of individualised data regarding intended future prices or quantities should therefore be considered a restriction of competition by object”.¹⁴

Restrictions of competition by object “by their very nature have the potential of restricting competition”. They are presumed to have negative effects on competition, “based on the serious nature of the restriction and on experience showing that [they] are likely to produce negative effects on the market...”¹⁵ It is, however, possible to put forward an efficiency defense, so restrictions by object are not *per se* prohibited. Nevertheless, the Guidelines contain a strong message that exchanging individualized data about future prices or quantities is very likely to be considered anticompetitive by the Commission.

(ii) Restrictions by effect

Even in the absence of an explicit and structured agreement to collude, information exchange may allow firms to reach a common understanding on the terms of coordination as well as successfully identify and later punish firms deviating from such coordination. The Guidelines recognise that for information exchanges to support or

¹² Article 101(1) prohibits agreements between companies that restrict or distort competition; according to Article 101(3), Article 101(1) is not applicable to an agreement that “contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefits...”

¹³ Guidelines, § 73.

¹⁴ Guidelines, § 74.

¹⁵ § 21 of the Commission's Guidelines on the application of Article 81(3) of the Treaty (OJ C 101/97, 27.4.2004). Article 81(3) is now Article 101(3).

induce a collusive outcome markets need to be sufficiently transparent in the sense that firms can form mutually consistent expectations with regard to the information set and beliefs of rivals. High concentration, simple products, and stability of demand and supply conditions all contribute to ensure predictability and thus facilitate reaching a common understanding on coordination terms. Equally important, firms that differ significantly along the factors that are relevant for competition, such as capacities or costs, are not likely to reach a mutually satisfactory agreement (tacit or otherwise) as to what is the most effective and most profitable mechanism to coordinate.

The Guidelines emphasise that information exchange can enable companies to achieve a collusive outcome in market situations where they would not be able to do so in the absence of the information exchange. Information exchange can facilitate coordination on how to reach and enforce a mutually satisfactory agreement reducing market complexity, buffering instability, or adjusting for asymmetries. For example, in markets where collusion is feasible there are normally multiple possible collusive equilibria. Information exchange may reduce strategic uncertainty as to which equilibrium should be played. It is also important to coordinate on what is the best way to enforce the terms of coordination. In other words, firms must also coordinate on how they will respond (punish) when rivals deviate from the coordination terms. A precondition, of course, is that deviators are duly detected and their identity revealed—information exchange, for example, on customer lists can thus facilitate the enforcement of the coordination.

Firms that seek to exchange information for genuinely efficiency enhancing reasons need to know how to construct a system of information exchange that is unlikely to raise antitrust concerns. The Guidelines therefore provide extensive guidance about the circumstances in which a system of information exchange among competitors is unlikely to constitute a restriction of competition by object or effect.

4.2 Standardisation Agreements

Industry standards ensure that products from multiple vendors are compatible and interoperable. A standard can be defined as a set of technical specifications that provide a common design for a product or process. By allowing complementary or component products from different manufacturers to be combined or used together, standards may increase consumer choice and convenience, and reduce costs. However, standardisation may also reduce competition between rival technologies or rival platforms.

According to the new Guidelines, standardisation agreements will normally not fall within the scope of Article 101(1) if (a) they do not risk creating market power through a dominant standard, or (b) despite risking the creation of market power, they cumulatively satisfy the following conditions:

- i. All competitors in the market(s) that are affected by the standard enjoy unrestricted participation in the setting of the standard;
- ii. A transparent procedure is followed for the standard's adoption, so that stakeholders are effectively informed at every stage of the standard's development;
- iii. There is no obligation to comply with the standard; and

- iv. There is access to the standard on fair, reasonable, and non-discriminatory (FRAND) terms.

The new Guidelines also state that in cases of standards involving intellectual property rights (IPR), a clear and balanced IPR policy is necessary to benefit from the safe harbour. Such a policy would impose on participants two obligations: a “good faith disclosure” and a FRAND commitment.¹⁶

It can be difficult to identify all truly essential IPR until after the standard is set and implemented. Further, whether a patent or patent application is really essential to a potential standard is often hard to determine. The Guidelines therefore specify that a good faith disclosure obligation “could be based on ongoing disclosure as the standard develops and on reasonable endeavours to identify IPR reading on the potential standard”. Furthermore, the disclosure obligation can be limited in that “[i]t is also sufficient if the participant declares that it is likely to have IPR claims over a particular technology (without identifying specific IPR claims or applications for IPR)”.¹⁷

The Guidelines do not require “the standard setting organisation to verify whether licensing terms of participants fulfil the FRAND commitment. Participants will have to assess for themselves whether the licensing terms and in particular the fees they charge fulfil the FRAND commitment. Therefore, when deciding whether to commit to FRAND for a particular IPR, participants will need to anticipate the implications of the FRAND commitment, notably on their ability to freely set the level of their fees.”¹⁸

The Guidelines provide some indications for how to assess whether fees are “unfair or unreasonable”. They thus state that “it may be possible to compare the licensing fees charged by the company in question for the relevant patents in a competitive environment before the industry has been locked into that standard (*ex ante*) with those charged after the industry has been locked in (*ex post*).”¹⁹ Furthermore, it may “be possible to refer to *ex ante* disclosures of licensing terms in the context of a specific standard-setting process” and “[t]he royalty rates charged for the same IPR in other comparable standards may also provide an indication for FRAND royalty rates.”²⁰

5 Conclusion

The past year has seen DG COMP economists contribute to the analysis of a number of important merger cases. At the time of writing the coming year looks likely to present similar challenges in this respect.

On the policy development front the revision of the horizontal agreement guidelines led to a new chapter on information exchange and a substantial revision of the chapter

¹⁶ In the absence of these conditions’ being met there is no presumption that a standardization agreement would restrict competition within the meaning of Article 101(1).

¹⁷ Guidelines, § 286.

¹⁸ Guidelines, § 288.

¹⁹ Guidelines, § 289.

²⁰ Guidelines, § 290.

on standardisation agreements. These changes are yet another example of DG COMP guidelines based on solid economic foundations.

References

- Berry, S. (1994). Estimating discrete choice models of product differentiation. *RAND Journal of Economics*, 25(2), 242–262.
- Carlton, D. W., & Waldman, M. (2002). The strategic use of tying to preserve and create market power in evolving industries. *Rand Journal of Economics*, 33(2), 194–220.
- Genakos, C., Kühn, K.-U., & Van Reenen, J. (2011). Leveraging monopoly power by degrading interoperability: Theory and evidence from computer markets. NBER working paper no. 17172.
- Ivaldi, M., & Verboven, F. (2005). Quantifying the effects from horizontal mergers in European competition policy. *International Journal of Industrial Organization*, 23(9/10), 669–691.
- Verboven, F. (1996). International price discrimination in the European car market. *RAND Journal of Economics*, 27(2), 240–268.
- Whinston, M. D. (1990). Tying, foreclosure, and exclusion. *American Economic Review*, 80(2), 837–859.