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Recent Developments at DG Competition: 2018/2019

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Abstract
The Directorate General for Competition at the European Commission enforces competition law in the areas of antitrust, merger control, and state aids. This year's article provides first a general presentation of the role of the Chief Competition Economist's team and surveys some of the main achievements of the Directorate General for Competition over 2018/2019. The article then reviews the Siemens/Alstom merger, the Google Android case, as well as two state aid cases that related to a public service compensation for obligations that involved press delivery in France and Italy.

Keywords Antitrust · Competition policy · Mergers · State aid · European champions · Google · Net avoided costs

This article provides first an overview of the activity of the Directorate General for Competition of the European Commission (DG Competition) in 2018/2019 that is related to antitrust, mergers, and state aid (Sect. 1). In the following sections, the contribution by the Chief Economist Team (CET) to the economic analysis in

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specific cases is presented: Sect. 2 reviews the Siemens/Alstom merger; Sect. 3 discusses the Google Android antitrust decision; and Sect. 4 elaborates on recent state aid cases that related to a public service compensation for obligations that involved press delivery in France and Italy.

1 Main Developments in 2018/2019

1.1 The Chief Competition Economist Team

The CET is a part of DG Competition. Its staff consists of 30 economists (mostly holding PhDs) with a mix of permanent and temporary positions. The CET is headed by the Chief Competition Economist, who is an external academic who is recruited for a 3-year term.

The CET has both a support role and a scrutiny role. As part of its support role, the team provides guidance on methodological issues of economics and econometrics in the application of EU competition rules. It contributes to individual competition cases—in particular, the ones that involve complex economic issues and quantitative analysis—and to the development of general policy instruments, as well as assisting with cases that are pending before the courts of the European Union.

Members from the CET who are assigned to specific cases have a specific and independent status within case teams, and report directly to the Chief Competition Economist. As part of the scrutiny role, the Chief Competition Economist can report his opinion directly to the Director-General of DG Competition as well as to the Competition Commissioner, providing her with an independent opinion with respect to the economic aspects of a case before she proposes a final decision to the European Commission.

The CET is active in DG Competition's three main areas of policy: antitrust, merger control, and state aid.

1.2 DG Competition's Activities in 2018/2019[1]

1.2.1 Antitrust

Between January 2018 and July 2019, the European Commission took decisions in 16 (non-cartel) antitrust cases. Four of these cases—involving Qualcomm, Gazprom, Greek lignite, and Asus/Denon&Marantz/Pioneer/Philips—are listed and briefly discussed in Amelio et al. (2018). The Google Android case is reviewed in depth in Sect. 3 of this paper. The other 11 antitrust decisions by the European Commission

[1] A detailed overview of DG Competition's activity can be found in its Annual Activity Report. The report also illustrates how DG Competition enforced the competition rules of the European Union in 2018. The 2018 Annual Activity Report is available at https://ec.europa.eu/info/publications/annual-activity-report-2018-competition_en.

were: Bulgarian Energy Holdings (BEH) in December 2018[2]; Guess in December 2018[3]; Danish/German electricity interconnector in December 2018[4]; Mastercard in January 2019[5]; Google AdSense in March 2019[6]; Nike in March 2019[7]; Cross-border access to pay-TV in March 2019[8]; Mastercard and Visa, in April 2019[9]; AB InBev in May 2019[10]; Character merchandise in July 2019[11]; and Qualcomm predation in July 2019.[12]

During the 2018–2019 period there have been also important judgments by the European Courts on past antitrust decisions adopted by the European Commission. These include the three judgments in: *Servier*[13]; *Slovak Telekom*[14]; and *Canal+*[15] (all in December 2018).

In the *Servier* case, the General Court upheld the Commission's findings that some of the patent settlements that involved payments from the originator (Servier) to generic producers constituted "pay-for-delay" agreements that restricted competition "by object" (under Article 101 of the European Treaty). The Court also found

[2] Case AT.39849. See press release available at europa.eu/rapid/press-release_IP-18-6846_en.htm. The European Commission fined the Bulgarian gas incumbent for foreclosing access to the Bulgarian wholesale gas market.

[3] Case AT. 40428. See press release available at europa.eu/rapid/press-release_IP-18-6844_en.htm. The European Commission fined Guess for anticompetitive agreements to block cross-border sales within the European single market.

[4] Case AT. 40461. See press release available at europa.eu/rapid/press-release_IP-18-6722_en.htm. The European Commission accepted commitments by the German transmission system operator TenneT to increase electricity trading capacity between Denmark and Germany.

[5] Case AT. 40049. See press release available at europa.eu/rapid/press-release_IP-19-582_en.htm. The Commission fined Mastercard for obstructing merchants' access to cross-border card payment services, which limited cross-border competition.

[6] Case AT. 40411. See press release available at europa.eu/rapid/press-release_IP-19-1770_en.htm. The Commission fined Google for exclusionary conduct in online advertising.

[7] Case AT. 40436. See press release available at europa.eu/rapid/press-release_IP-19-1828_en.htm. The Commission fined Nike for restricting cross-border sales of merchandising products.

[8] Case AT. 40023. See press release available at europa.eu/rapid/press-release_IP-19-1590_en.htm. As part of this decision, the Commission accepted commitments from several major film studios to remove clauses that restricted cross-border sales in their licensing contracts for pay-TV with Sky UK.

[9] Cases AT 39398/AT 40049. See press release available at: europa.eu/rapid/press-release_IP-19-2311_en.htm. In this decision, the Commission accepted commitments by Mastercard and Visa to cut their inter-regional interchange fees.

[10] Case AT. 40134. See press release available at: europa.eu/rapid/press-release_IP-19-2488_en.htm. In this decision, the Commission fined AB InBev for restricting cross-border sales of beer.

[11] Case AT.40432. See press release available at: europa.eu/rapid/press-release_IP-19-3950_en.htm. In this decision, the Commission fined Sanrio €6.2 million for restricting cross-border sales of merchandising products that featured Hello Kitty characters.

[12] Case AT. 39711. See press release available at: europa.eu/rapid/press-release_IP-19-4350_en.htm. In this decision, the Commission fined Qualcomm for engaging in predatory pricing with respect to UMTS chipsets.

[13] Case T-691/14, *Servier and Others v Commission*, Judgment of the General Court of 12 December 2018.

[14] Case T-851/14, *Slovak Telekom a.s. v European Commission*, Judgment of the General Court of 13 December 2018.

[15] Case T-873/16, *Groupe Canal+ v European Commission*, judgment of the General Court of 12 December 2018.

that for one specific settlement agreement, the Commission did not prove a restriction of competition "by effect". Finally, the Court also annulled the Commission's finding that Servier was dominant, and hence that it had abused its dominant position (under Article 102 of the European Treaty).

In *Slovak Telekom*, the Court largely upheld the Commission decision that found that Slovak Telekom had abused its dominant position by refusing access to its local loop and by engaging in margin squeeze practices.

In *Canal+* the Court dismissed the application for annulment that was brought by Canal+ against the Commission decision that made binding the commitments that were offered by Paramount. The commitments addressed the Commission's concerns that clauses in Paramount's pay-tv film licensing agreement with Sky UK prevented cross-border passive sales and therefore amounted to absolute territorial protection that eliminated all cross-border competition between pay-tv broadcasters.

1.2.2 Mergers

During the period January 2018–June 2019, 569 merger investigations were concluded at DG Competition. The vast majority (438 cases) were unconditional clearances under a simplified procedure. 114 cases were concluded during a (non-simplified) phase I investigation, and 17 cases during a phase II investigation.[16] Of the (non-simplified) phase I cases,[17] 85 were cleared unconditionally; 23 could be cleared in phase I subject to commitments; and six were abandoned.[18] The phase II investigations resulted in: four unconditional clearances[19]; eight clearances that were subject to commitments[20]; three prohibitions[21]; and two abandoned transactions.[22] Therefore, around 7% of cases were not cleared unconditionally during this period.

[16] Mergers must be notified to the European Commission if the annual turnover of the combined business exceeds certain thresholds in terms of global and European sales. Notification triggers a 20 working day phase I investigation. In the majority of cases this follows a simplified procedure. If the transaction does not raise serious doubts with respect to its compatibility with the common market at the end of phase I, the Commission issues an unconditional clearance decision. If concerns are addressed in a clear-cut manner by remedies that have been proposed by the parties, the transaction can be cleared conditionally in phase I. Otherwise, the Commission will start a 90-working-day phase II investigation. At the end of phase II the transaction is either cleared (conditionally or unconditionally) or prohibited, if it finds that the transaction would lead to a significant impediment of effective competition even after taking into account any commitments that have been proposed by the parties. Details on the European Union merger regulation are available at http://ec.europa.eu/competition/mergers/procedures_en.html.

[17] Detailed statistics on the number of merger notifications and decisions are available at http://ec.europa.eu/competition/mergers/statistics.pdf.

[18] M.9178 Cargill/ADM/Grainbridge/JV, M.8854 Norsk Hydro/Rio Tinto Assets, M.8858 Boeing/Safran/JV (Auxiliary Power Units), M.8552 Axalta Coating Systems/Iva, M.8878 SEB/ALI, M.8492 Quaker/Global Houghton.

[19] M.8909 KME/MKM, M.8792 T-Mobile NL/Tele2 NL, M.8788 Apple/Shazam, M.8394 Essilor/Luxottica.

[20] M.8947 Nidec/Whirlpool (Embraco Business), M.8674 BASF/Solvay's EO abd P&I Business, M.8797 Thales/Gemalto, M.8480 Praxair/Linde, M.8444 Tronox/Cristal, M.8444 ArcelorMittal/Ilva, M.8084 Bayer/Monsanto, M.8306 Qualcomm/NXP Semiconductors.

[21] M.8713 Tata Steel/ThyssenKrupp, M.8677 Siemens/Alstom, M.8900 Wieland/Aurubis Rolled Products/Schwermetall.

[22] M.8547 Celanese/Blackstone/JV, M.8907 Aperam/VDM.

The CET was involved in all second-phase investigations as well as in many complex first-phase investigations.

In terms of broader policy themes, the prohibition of the Siemens/Alstom transaction in February 2019 led some commentators to call for more flexible EU merger control to allow for the emergence of European Champions—possibly even at the expense of reduced competition in Europe.[23] At the same time, there is mounting evidence that market power in many industries has been increasing considerably in recent times.[24] Other observers have therefore argued that merger control should instead be particularly vigilant, to prevent anti-competitive concentrations.[25]

In the same vein, active policy debates have continued regarding (1) mergers in the digital world (in particular with respect to platform competition) (2) mergers that eliminate potential competition (e.g. so-called "killer acquisitions"), as well as (3) transactions that may fall below EU notification thresholds. With respect to all of these themes, various commentators also seem to be suggesting that, if anything, merger control should become stricter rather than looser. In particular, several voices have advocated a closer and more thorough scrutiny of digital platforms—because of their ability and incentive to hamper competition.[26]

1.2.3 State Aid

Between January 2018 and July 2019, the Commission took almost 300 decisions in the area of state aid; most of those decisions concluded that the actions were compatible with the Commission's criteria for justifiable actions or did not actually involve aid.[27]

Positive decisions for important projects of common European interest—notably, IPCEI Microelectronics—were adopted also in the course of the last year. In the postal sector, various decisions were adopted, including: the Correos decision; the La Poste press distribution decision; and the Poste Italiane press distribution decision. These last two—which are described at more length in the remainder of this article—provided additional guidance with respect to the application of the net avoided cost methodology to the compensation of public service obligations. The Commission has also been active in the tax field: for instance, adopting decisions in the Gibraltar and UK CFC tax cases, and in banking with the HSH Nordbank decision. In the transport sector, the Athens airport decision and the Helsinki buses decision were adopted, amongst others. In the energy sector, several decisions with

[23] e.g., see http://bruegel.org/2019/03/the-alstom-siemens-merger-and-the-need-for-european-champions/. The Siemens/Alstom case will be discussed in greater detail in Sect. 2.

[24] e.g., see de Loecker et al. (2018).

[25] See Valletti and Zenger (2018, 2019) for a discussion.

[26] e.g., see the recent expert report that was commissioned by DG Competition on these topics: Crémer et al. (2019). Among other reports and hearings on digital platforms, we note: the FTC and the House of Representative hearings in the US; the French and German reports; the Furman report and the House of Lords report in the UK; the JFTC report on data in Japan; and a report from the Australian Competition Authority.

[27] Detailed statistics that are related to the Commission's State Aid activity are available at http://ec.europa.eu/competition/publications/annual_report/2017/part2_en.pdf.

respect to the support for renewable energy and combined heat and power (CHP, or co-generation) systems were also adopted. This list is of course not exhaustive.

The CET has been mainly involved in cases that are related to transport, energy, regional aid, and banks. In the transport sector, the CET worked with financial models and business plans to assess a wide range of issues, such as the valuation of concession extensions or assessments of the least distortive conditions for such extensions. A significant contribution took the form of applying the market-economy operator principle across various sectors—notably in the context of recapitalisation measures. The CET also contributed to the funding gap analysis—especially for "important projects of common European interest" (IPCEI). The CET also contributed to calculating proportionate amounts of investment or operating aid to regional airports. For "services of general economic interest" (SGEI)—e.g., in the postal or transport sectors—the CET continued to work on the calculation of proportionate compensation for the delivery of "universal" or "public service obligation" (PSO) contracts.

2 Siemens/Alstom

2.1 Background

On 6 February 2019, the Commission prohibited the proposed acquisition of Alstom by Siemens.[28] The transaction would have combined Siemens' and Alstom's rail transportation businesses.

Siemens, which is based in Germany, is active worldwide in several industrial areas with its mobility division offering a broad portfolio of rolling stock, rail automation, and signalling systems, rail electrification systems, road traffic technology, IT systems, as well as other products and services that involve the transportation of people and goods by rail and road.

Alstom, which is based in France, is active worldwide in the rail transport industry. The company offers a wide range of transport systems—from high-speed trains to metros, trams, and e-buses—and related services such as maintenance, as well as products that involve signalling systems, passengers, and infrastructure, rail electrification systems, and digital mobility.

The Parties held leading positions globally, and their activities overlapped considerably for rolling stock as well as railway and metro signalling systems[29] in Europe.

In rolling stock, the Parties' activities overlapped mainly in high and very high-speed trains[30] and mainline trains,[31] as well as urban and suburban metro systems.

[28] Commission decision in Case M.8677 Siemens/Alstom.

[29] This is equipment that is installed both on each train and along the rails to allow trains to operate safely.

[30] High-speed trains are those that run at 250 km per hour or more, while very high-speed trains are those that run at 300 km per hour or more.

[31] Mainline trains are those that run at up to 250 km per hour.

In particular, for very high-speed rolling stock, the merged entity would hold very high market shares within the EEA and also for a wider market that would include the rest of the world except South Korea, Japan, and China (which are not open to competition).

For signalling, the merged entity would have become the undisputed market leader in several mainline signalling markets: in particular, in ETCS[32] automatic train protection systems—including both the systems that are installed on a train and those that are placed along the tracks—in the EEA and in standalone interlocking systems in several Member States.[33] In metro signalling, the merged entity would also have become the market leader in the latest Communication-Based Train Control (CBTC) metro signalling systems.

Amongst these, the Commission ultimately concluded that the transaction would have harmed competition in markets for very high-speed trains and railway signalling systems (mainline and metro). It would have eliminated competition between two important and close competitors, with insufficient residual competitive pressure from the remaining competitors.

As part of its investigation, the Commission also considered the possible future global competition from Chinese suppliers outside of their home markets. The Commission found that the state-controlled supplier of trains in China—CRRC—has more than 90% of its activities inside China and has had less success outside its home market. Importantly, no Chinese supplier has ever participated in a signalling tender in Europe or delivered a single very high-speed train outside China. In addition, there was no prospect of Chinese entry (and especially qualification) in the European market in the foreseeable future.

The parties did not bring forward any substantiated arguments to explain why the transaction would create merger-specific efficiencies. At the same time, they did not offer remedies sufficient to address the Commission's concerns.

For the signalling markets that raised concerns, the parties' proposed remedies did not consist of a stand-alone and viable business that a buyer could have used to compete effectively and independently against the merged entity. The parties offered to divest a complex mix of assets from Siemens and Alstom; they would have transferred some assets while keeping others. Moreover, the buyer of the assets would have continued to be dependent on the merged entity for a number of licence and service agreements.

For very high-speed trains, the parties offered to divest a train currently not capable of running at very high speeds—Alstom's Pendolino—or, alternatively, a licence for Siemens' Velaro very high-speed technology, subject to multiple restrictive terms and carve-outs. Either option would not have given the buyer the ability and incentive to develop a competing very high-speed train.

The next two sections focus on the main contributions of the CET to the Commission's competitive assessment of this case: Sect. 2.2 summarises the analysis of

[32] European Train Control Systems.

[33] Interlockings are the signalling systems that prevent conflicting movements by governing the arrangement of tracks at junctions or crossings.

the bidding data that were collected; Sect. 2.3 discusses the assessment of the efficiency claims that were put forward by the merging parties.

2.2 Analysis of Bidding Data

In order to assess the importance and closeness of Siemens and Alstom in the various rolling stock and signalling markets, the Commission produced a number of statistics from the bidding data that were collected from the merging parties. Siemens and Alstom provided to the Commission a comprehensive list of tenders that took place over the period 2007–2018. The list included tenders in which either Siemens or Alstom participated, as well as the tenders in which neither participated. It provided details of the different tenders, including the participating bidders and the winner(s).[34]

The Commission based its bidding analysis on the "contestable" tenders, that is, tender procedures that were open to competition. Isolating the competitive tenders from the non-competitive ones is informative because it focuses the analysis on the tenders where there was effective competitive interaction between original equipment manufacturers (OEMs). These are the tenders that were more likely to be affected by a potential loss of competition between the merging parties.

The bidding analysis for contestable tenders complemented the information that was gained from market shares that were based on total order intake for each supplier, from both contestable and non-contestable tenders.

For each market, the Commission calculated statistics for the full period that was available (2008–2018), as well as for the last 5 years (2013–2018). Given the low frequency with which tenders take place in certain markets (such as very high-speed rolling stock), the Commission placed more weight on the statistics for the longer time span and interpreted these statistics in light of all the qualitative information available.

In terms of geographic scope, the Commission generally produced bidding statistics at the EEA level (including Switzerland). For very high-speed trains, market shares at the worldwide level (excluding China, Japan, and South Korea) were also considered[35]; while for interlockings market shares at national levels were considered.

The main components of the Commission's analysis of bidding data were the following: (a) market shares (overall and for contestable tenders only); (b) winning rates (the share of contestable tenders that were won by each supplier); (c)

[34] The Commission also requested that merging parties supplement the list of tenders with data that related to: (1) the ranking of competitors' offers for each tender; and (2) the economic margins of the merging parties in the tenders in which they participated—in order to assess the magnitude of the impact of one merging party's presence on the expected or realised margin of the other merging party. However, for most market segments the number of tenders for which such information was available on a consistent basis was limited and did not allow for a robust analysis.

[35] As agreed with the Parties, the geographic market definition at the worldwide level excluded China, Japan, and South Korea, to reflect the fact that procurement processes in these markets are either closed or restricted from foreign competition.

participation rates (the share of contestable tenders in which each player participated); (d) meeting rates (the proportion of contestable tenders in which the merging parties met, compared to the proportion of contestable tenders in which the merging parties met other rivals); (e) conditional participation and winning rates (the participation and winning rates when limited to the subset of tenders in which Siemens or Alstom participated); and (f) the average number of bidders that participated in tenders.

As a first indicator of market power, the Commission examined the market share by value of each supplier for all tenders (that is, including competitive and non-competitive tenders).

The Commission then calculated winning rates—the share of contestable tenders that were won by each supplier—for competitive tenders only. The Commission reported the winning rates for the number as well as the value of the projects that were won. While winning rates are informative because each project constitutes one interaction between suppliers, the shares of tenders that were won based on sales value are more apt to capture the full extent of the market power that is held by each supplier—for example, due to the substantial heterogeneity in the size of different projects.

To assess further the importance of the merging parties as compared to their competitors, the Commission calculated the frequency with which each firm participated in tenders in any given market. Given the significant commitment at the bidding stage—the stage when a firm bid is submitted—in terms of the cost of participation, time, and resources necessary, a supplier likely participates in tenders only when it believes that it has a reasonable chance of meeting the customer requirements and winning. Therefore, the Commission considered participation in tenders to be informative as to the commitment/strength of each player in a given market.

At the same time, the statistics on participation were examined together with the corresponding statistics for winning rates. Indeed, according to the data of the merging parties, certain rival suppliers appeared to have low winning rates compared to their participations.

In general, the Commission found that of the high-speed and very high-speed rival competitors that were active globally—including Bombardier, CAF, CRRC, Hitachi-Ansaldo, Hyundai Rotem, Kawasaki, Stadler, and Talgo—for very high-speed tenders in the EEA specifically the merging parties faced competition only from Bombardier and Hitachi-Ansaldo (which were very often in a consortium together), CAF, and Talgo. Within this restricted set of competitors, Siemens and Alstom were in many markets the most frequent tender participants and the ones with the largest share of wins (by tender count and value); while rivals had lower participation rates and significantly lower success rates for a given participation frequency; and certain rivals were successful mostly when bidding jointly in a consortium rather than on a standalone basis.

Similarly, the Commission found that for railway signalling projects the merging parties were: amongst the most frequent participants; had high combined shares of wins (by tender count and value); and were close competitors frequently bidding in the same tenders and frequently winning the tenders that were lost by the other merging party.

In order to assess the closeness of competition between Siemens and Alstom, the Commission also looked at their meeting rates, that is, the number of contestable tenders in which Siemens and Alstom have met as a proportion of the total number of contestable tenders that occurred in the market during the same period of time. These statistics are informative on the proportion of contestable tenders for which (based on ex-post information) the elimination of independent competition between Siemens and Alstom is more likely to have an effect.

When assessing the closeness of competition between Siemens and Alstom in any given market, the Commission also examined: (1) which were the most frequent bidders when Siemens (respectively, Alstom) participated; and (2) which were the most frequent winners when Siemens (respectively, Alstom) participated.

The statistics on meeting rates were considered in combination with the statistics on the conditional participation rates and conditional winning rates, as there may be markets in which all firms happened to meet relatively infrequently (for instance due to capacity constraints that induced each company to participate in only a limited number of projects a year) but nevertheless the merging parties may be bidders that met comparatively more often.

In general, the Commission found that Siemens and Alstom were in many markets close competitors and very often the closest.

The above bidding analyses also allowed the Commission to dispel concerns in a number of important markets such as mainline trains and metros.

2.3 Assessment of Efficiencies

The merging parties claimed that the transaction would generate a number of synergies relating to cost savings in procurement, bidding, and R&D.[36]

In the merging parties' view, these synergies would have allowed the merged entity to offer lower prices, as well as to participate in tenders in which the merging parties would have not participated.

The Commission concluded that these synergies were not verifiable: The merging parties could not substantiate their estimations, as these efficiencies were based on preliminary and high-level assessments. In any event, a large part of the claimed efficiencies related to fixed costs that are unlikely to be passed-on to customers in the form of more aggressive bidding behaviour. Moreover, it was unclear whether the claimed efficiencies would be merger-specific.

With regard to the claimed savings in procurement costs: The increased scale of procurement (which would be generated by the consolidation of the merging parties' respective orders) could in principle have allowed the merged entity to obtain larger discounts on procurement costs. Some procurement costs are not sunk at the time at which the bid prices are set and hence savings in the companies' procurement costs could be passed to a certain extent to the companies' customers in the form of lower bid prices.

[36] The merging parties put forward further fixed-cost savings that related to the optimisation of underutilised production sites.

However, the merging parties' estimates were based on very high-level assumptions (and limited information) that increasing scale generates volume discounts from suppliers and that the merger would generate material additional volume discounts compared to the discounts that were already obtained by the merging parties absent the merger (especially in light of the already considerable size of Siemens and of Alstom). Finally, it was unclear why these savings could not be obtained via alternative means to the merger such as joint purchasing agreements.

As regards bidding costs (the cost of preparing bids): The Commission noted that the savings that were claimed related to the elimination of the duplication of bidding in those tenders in which both parties would have participated pre-merger. As such, the cost saving appeared to relate more to the loss of competition between the merging parties on the tenders in which they overlapped rather than relating to a genuine reduction in the bidding cost that was sustained by Siemens and by Alstom for a given tender.

With regard to R&D costs: Similar to the bidding costs, these savings appeared to be related to the elimination of duplicative R&D for projects on which both parties would have competed. Therefore, it was unclear why such reductions would benefit their customers. To the contrary, the elimination of duplicate R&D projects could reflect a loss of innovation competition between the merging parties in tenders where their customers would have had both of the merging parties competing pre-merger and would instead have only the product of one of the merging parties post-merger.

The merging parties also claimed that combining the portfolio of products of Siemens and Alstom would increase the likelihood that their products would be closer to specific customer requirements. The Commission rejected this claim because European customers already had access to whatever product within Siemens or Alstom's portfolios best fit their requirements. The transaction as presented would have simply consisted of bringing the products in the portfolios of Siemens and Alstom under the same ownership. As a result, after the merger their customers would have had access to the same products as in the absence of the transaction (on the assumption that both product lines of Siemens and Alstom would be retained by the merged entity in the longer run)—with the downside that the two sets of products would be then controlled and priced by the same entity.

In summary, the Commission considered that neither the cost savings that were claimed nor the arguments in relation to product portfolio improvements could be accepted as efficiencies that would be generated by the transaction.

2.4 Conclusion

In light of the results of the competitive assessment—and in the absence of substantiated efficiencies and remedies that would mitigate the competitive harms that were identified, the Commission decided to block the transaction.

Considerable political pressure and reactions have been generated by the prohibition decision. In particular, the French and German governments announced initiatives that were aimed at relaxing European competition policy so as to favour

mergers among large European companies that are based on European industrial policy considerations—independent of efficiency considerations and the protection of the competitive process.

As suggested by a number of European industrial economists,[37] "the argument that it is sufficient for two firms to merge and increase in size to become more competitive in the international markets is fallacious". Indeed, as outlined in Sect. 2.3, the Commission concluded that this transaction was unlikely to generate material efficiencies to the benefit of European customers. Allowing the merger would have led to higher prices and lower quality and innovation, without unlocking synergies and complementarities that would support an even stronger European champion. As a result, the argument with respect to the expected anti-competitive effects on European customers prevailed, and the transaction was prohibited.

3 Google Android

3.1 Android

In July 2018 the European Commission imposed a fine of 4.3 billion EUR on Google for breaching antitrust rules. The Commission concluded that, since 2011, Google had imposed illegal restrictions on mobile device manufacturers and mobile network operators to strengthen the dominant position of the Google search engine.

The European Commission's investigation focused on three contractual agreements (European Commission 2018):

- Tying: In its mobile applications distribution agreements (MADAs) Google required manufacturers to pre-install the Google Search app and browser app (Chrome), as a condition for licensing Google's app store (the Play Store). This resulted in tying the Chrome and Search apps with the Play Store.
- Revenue share agreements (RSAs) that were conditional upon exclusivity: Google offered a share of internet search revenues to device manufacturers and mobile network operators on the condition that they exclusively pre-installed Google Search on their devices.
- Anti-fragmentation agreements (AFAs): Google's application licensing terms prevented manufacturers that wanted to pre-install Google apps from selling even a single smart mobile device that ran on "Android forks": alternative versions of Android that were not approved by Google.

The above agreements are interrelated: In order to enter into a revenue share agreement an OEM must have signed a MADA, which itself is conditioned on having agreed to the anti-fragmentation obligations that are contained in the AFA. The Commission established that these agreements pursued the same objective: to

[37] Open letter on "European champions" and merger enforcement. https://www.barcelonagse.eu/microupdates/open-letter-massimo-motta-european-industrial-economists.

protect and strengthen Google's market power in general search and, therefore, its search advertising revenues.

3.2 Background

Google acquired Android Inc. in 2005 and released the first public version of the Android mobile operating system in 2008.[38] Google became a major driving force in the Open Handset Alliance, which included: phone makers such as Samsung, HTC, Sony, Dell, and Motorola; chip manufacturers such as Intel, Qualcomm and Texas Instruments; and mobile network operators such as T-Mobile and Sprint. Android is open source. This means that Google publishes the source code of the Android operating system, and anyone can access and modify the published source code. Such modified versions of the published source code are called "Android forks". The open source nature of Android was a major selling point to get device and component makers and mobile network operators to join the Open Handset Alliance.

The years that followed Android's launch saw a shift in the usage of internet. While, in 2009 the internet was almost exclusively accessed via the desktop, in 2016 internet usage by mobile and tablet devices exceeded desktop worldwide.[39] In internet search—Google's core business—the rise of mobile internet implied a corresponding rise in the importance of mobile search.

Google offers its mobile apps and services to device manufacturers as a bundle for pre-installation: the Google Mobile Suite (GMS). This bundle of applications includes: the Google Play Store; the Google Search app; and the Google Chrome browser. While the Android mobile operating system and Google's mobile apps are free, the apps have licensing conditions attached that the Commission concluded made it impossible for manufacturers to pre-install rival apps.

Google's application licensing restrictions relate predominantly to the pre-installation of apps. Evidence shows that pre-installation—like a default setting or premium placement—can increase significantly the usage of online services on a lasting basis.[40]

3.3 Market Definition and Dominance

The Commission established that, since 2011, Google has been dominant in the following relevant markets: (1) the worldwide market (excluding China) for the licensing of smart mobile operating systems (OSs); (2) the worldwide market (excluding

[38] https://www.androidauthority.com/history-android-os-name-789433/.

[39] http://gs.statcounter.com/press/mobile-and-tablet-internet-usage-exceeds-desktop-for-first-time-worldwide.

[40] The fact that Google reportedly paid Apple US$9 billion in 2018 and $12 billion in 2019 to be the default search engine on the iPhone testifies the importance of defaults and prominence (Segarra 2018). In 2014 Yahoo's use increased by 20 percentage points as a result of becoming the default search engine in the Firefox version 34 in the U.S. (Williams 2014).

China) for Android app stores; and (3) each national market for general search services in the EEA.

A key consideration in the assessment of the competitive constraint that is faced by Google in the smart mobile OS and app store markets related to the role of non-licensable OSs and, in particular, of Apple smart mobile OS (iOS).

The starting point for the delineation of the product market for smart mobile OS was the product that is licenced to device manufacturers. The set of relevant alternatives consists of other smart mobile OSs that device manufacturers could licence in order to make their mobile devices functional. Given that Apple does not licence the iOS, it does not compete directly with Google for the licensing of smart mobile OSs to device manufacturers and could exert only an indirect constraint from its presence in the downstream market for mobile devices.

The Commission further assessed whether competition between Android devices and devices powered by non-licensable OSs, such as Apple iOS, generates a sufficiently strong indirect competitive constraint on Google's dominance in the market for the licensing of OSs. The Commission examined the drivers behind user purchase decisions and the extent of user switching between devices that run on Android and on iOS that would be triggered, in particular, by hypothetical changes in the quality of the OS. Developers' incentives to develop apps for different OSs were also analysed. The Commission also established that there are significant price differences between Google Android and iOS devices, substantial switching costs, and a significant degree of user loyalty to their existing OS.

The Commission concluded that the indirect constraint that is exerted by Apple through competition for users and developers is not sufficient to restrict Google's market power vis-à-vis device manufacturers in the market for licensable smart mobile OSs. Moreover, the effectiveness of any constraint from users who switch to Apple iOS should be seen in the context of the particular circumstances of the case: where Apple iOS users still use Google Search, which is the default search engine on the Safari browser, further diluting indirect constraints.

The Commission followed a similar methodology for the delineation of the relevant market for Android app stores and for establishing Google's dominance in that market. App stores are OS-specific and once a device manufacturer has decided to install Android on its devices, it can only pre-install an app store that has been developed for Android. A device manufacturer will have to install a different non-Android licensable OS in order to switch to an alternative non-Android app store. The Commission concluded that device manufacturers do not have an incentive to do so.[41]

The Commission further examined the strength of the indirect constraint that is exerted on Google by non-licensable app stores and concluded that it is insufficient. The evidence revealed that users of the Play Store are unlikely to switch to Apple or BlackBerry devices in the event of a hypothetical small but significant,

[41] The evidence indicated that neither developers nor users are likely to switch to a non-Android OS in the event of a hypothetical small but significant, non-transitory increase of the fees that app stores charge to developers or in the event of a hypothetical small but significant, non-transitory deterioration of the quality of the app store.

non-transitory increase in the price of the apps that are distributed on the Play Store. Similarly, switching by developers in the event of a hypothetical small but significant, non-transitory increase in the percentage of app-related revenues was found unlikely. Moreover, Google could exercise market power vis-à-vis device manufacturers in ways that do not increase the cost to users and developers and do not prompt their switching to rival Oss: for instance, by conditioning the licensing of the Play Store on the preinstallation of other Google apps.

3.4 Tying (MADAs)

Device manufacturers interested in pre-installing Google apps must sign a MADA. The MADA dictates that GMS apps may only be pre-installed as a bundle, including the Google Search app, Google Chrome and the Play Store. The Play Store is a particularly important application and consumers dislike devices that come without it. The Commission concluded that the MADA breached Article 102 of the TFEU, because it resulted in the contractual tying of the Google Search app with the Play Store as well as the tying of Google Chrome with the Play Store and the Google Search app.

The Commission concluded that the tying of these apps is capable of harming competition as it provides Google with a significant advantage that competitors cannot offset. The pre-installation of the tied apps (Google Search and Chrome) on all GMS devices gives these apps a level of prominence and competitive advantage that rival search and browser apps cannot offset by other means, including downloads and other promotion channels.

The Commission's arguments and approach in the case is aligned with economic theory on the dynamic foreclosure effects of tying. In particular, the case is in close analogy to the model of Choi and Stefanadis (2001). In the spirit of that theory, tying Play Store and Google Search (as well as Chrome) eliminates important options to combine these apps. For example, it eliminates the possibility to pre-install the Bing app along with the Play Store. It also eliminates the option to pre-install a rival app store (e.g. the Amazon Appstore) along with Google Search and/or Chrome.

Interest in the Commission's investigation fueled economic research. In a recent publication Choi and Jeon (2020) develop a model in which the fact that Google cannot subsidise searches creates a situation in which tying allows the firm to reap the full consumer surplus. Etro and Caffarra (2017) extend this model to consider the fact that while Google is unable to subsidise searchers, it is likely able to subsidise device manufacturers that take the decision of which search engines to promote on their devices. Both models show that tying in such a context can serve as a means to shift rents to Google to the detriment of rivals, and in the long run of consumers.

De Cornière and Taylor (2018) argue that tying may be a way to tilt complementarities between the bundled apps—such as users' launching more searches from the device if Play Store is pre-installed—in favour of Google. Bundling deprives search rivals such as Bing from these complementarities. It allows Google to offer lower payments to device manufacturers in exchange for pre-installing Google Search.

3.5 Revenue Share Agreements (RSAs)

The Commission established the abusive nature of Google's revenue share agreements with device manufacturers and mobile network operators in the period between January 2011 and March 2014. During this time, Google shared search revenues achieved on mobile devices in exchange for device manufacturers (OEMs) and mobile network operators (MNOs) not pre-installing any competing search service on Android devices.

In order to obtain these revenue shares, Google required that device manufacturers and mobile network operators not install any competing search engine on any device in their portfolio worldwide. This resulted in a payment scheme that rewarded device manufacturers and mobile network operators for exclusively pre-installing Google in a manner that could not be matched by rival search service providers. The Commission considered that the revenue share payments in exchange for exclusive pre-installation complemented the MADA in Google's effort to foreclose the search market to rivals. The payments granted to device manufacturers and mobile network operators affect the possibility for rival search apps to be pre-installed along with Google Search.

As part of its assessment, the Commission carried out calculations that illustrated how much search revenue share a hypothetically equally efficient competitor of Google would need to offer to compensate device manufacturers and mobile network operators for the search revenue shares that are lost if these firms violate Google's exclusivity requirements. This assessment took into account the search revenue shares that Google offers to device manufacturers and mobile network operators, as well as the share of search traffic by entry points on the device that are contestable and those that are non-contestable. Search entry points include, for example: the Google Search app; various browsers, including Google Chrome; and Google's homepage.

The Commission concluded that searches through Google Chrome—while accounting for a relatively large share of all searches on Android devices—were not contestable, because Chrome directs searches to Google by default.[42] The Commission also took into account that rival search apps may not be able to achieve an equal number of searches as the Google Search app—for example, because device manufacturers would in addition also pre-install Google Search. The Commission took the usage shares on computer desktops—an environment that is free from Google's revenue share restrictions—as a proxy for the share of contestable searches that rival search apps could achieve.

The Commission's calculations show that for a given revenue share that is offered by Google, a hypothetically equally efficient competitor—able to achieve the same revenue per user as Google and to make an offer that applies worldwide on the full

[42] In the period under consideration Google Chrome had a usage share among mobile browsers of around 60% in Europe, including Apple devices. Source: http://gs.statcounter.com/browser-market-share/mobile/europe/, retrieved on the 28th of May, 2019. This share is likely significantly higher on Android devices.

portfolio of the OEMs/MNOs—would need to offer a significantly higher revenue share to match Google. Given the revenue shares that Google offered, the Commission considered it unlikely that rivals would be able to make such an offer.

3.6 Anti-Fragmentation Obligations (AFAs)

Google licensed the Play Store and Google apps only to hardware manufacturers—such as device manufacturers, contract manufacturers and chipset manufacturers—that had also signed the AFA. The anti-fragmentation obligations that were in the AFA prevented those hardware manufacturers from distributing devices based on modified versions of Android that are incompatible with Google requirements ("Android forks") or software development kits derived from Android, as well as from taking actions that may cause or result in the fragmentation of Android.

All major entities at different levels of the smart mobile device production chain were AFA signatories. Importantly, the anti-fragmentation obligations were not limited to the mobile devices on which the Google proprietary apps are pre-installed but applied to a hardware manufacturer's entire device portfolio. This means that a hardware manufacturer that wanted to distribute even a single device that ran on an Android fork could not pre-install Google's proprietary apps on all other devices in that manufacturer's portfolio.

The Commission assessed the foreclosure potential of the anti-fragmentation obligations both in the market for licensable smart mobile OS and in the markets for general search services. As regards the former, the Commission established that the AFAs deprived Android fork developers of manufacturing and distribution opportunities and prevented device manufacturers from developing their own forks. An illustration of this is provided by Amazon's unsuccessful attempts to license its Fire OS (a forked version of Android) to a number of important device manufacturers.

With respect to general search, the Commission established that Android forks represent a platform for rival search engines to be pre-installed and gain scale. For example, Amazon preinstalled Bing on Fire OS devices. By preventing the development of Android forks Google deterred the entry or the expansion of competing search services—which strengthened its dominance in general search.

The efficiency arguments that were brought forward by Google focused on the characteristics of the Android business model, such as: multi-sidedness; its open-source nature; indirect monetisation; and the role of the anti-fragmentation obligations for ensuring the viability of that business model. The Commission concluded that the AFAs go beyond what is necessary for the achievement of the claimed objectives—while acknowledging Google's legitimate interest in ensuring the correct functioning of devices that pre-install its proprietary apps.

As a result, the Commission did not object to Google's maintaining reasonable, fair and objective measures in order to ensure the proper functioning of GMS devices; but the Commission maintained that AFAs are disproportionate, since their scope extends to devices with Android forks that do not preinstall Google proprietary apps. Moreover, Google can continue to rely on branding—e.g., the use of the "Android" name and logo—to differentiate Google Android from forks.

The Decision therefore strikes a balance between the need for Google to manage any potential negative externalities across the Android platform (even though Google had not demonstrated these) and the restriction of competition that stems from the AFAs at a time when the platform is well established and dominates the market.

3.7 Conclusions

The Commission concluded that the mobile application distribution agreements (MADAs), the revenue sharing agreements (RSAs), and the Anti-Fragmentation Agreements (AFAs) are capable of foreclosing rival general search service providers, thereby protecting Google's dominant position in general search. The potential foreclosure arises from the nature of Google's business model, which relies on indirect monetisation through search advertising. Consumers were harmed through less choice of search engines,[43] less innovation, and (indirectly) through increasing Google's ability to monetise search through online advertising.

4 Compensation for Obligation of Press Delivery in France and Italy

European Union member states can entrust the provision of service of general economic interest to undertakings in the form of a public service obligation (PSO). Postal service operators in Europe often operate to some extent under the legal obligation of providing a universal public postal service. This typically covers the distribution of letters and parcels under certain conditions and at regulated prices. The precise obligations and conditions of provision vary across countries.

The Third Postal Directive[44] of 2008 and the Framework for Services of General Economic Interest[45] (SGEI) of 2011 allow member states to compensate postal operators for the net costs that are generated by these PSOs and establish that "the amount of compensation must not exceed what is necessary to cover the net cost of discharging the public service obligations, including a reasonable profit". The Directive and the Framework identify the net avoidable cost (NAC) as the measure of the maximum compensation that postal operators can receive for fulfilling their public service obligations.[46] Under this approach, the net cost of a public service

[43] As well as web browsers and smart mobile OSs.

[44] The First Postal Services Directive 97/67/EC (OJ L 15, 21.1.1998, pp. 14–25), amended by the Second Postal Directive 2002/39/EC (OJ L 176, 5.7.2002, pp. 21–25) and by the Third Postal Directive 2008/6/EC (OJ L 52, 27.2.2008, pp. 3–20), establish together the regulatory framework for European postal services.

[45] The communication from the Commission—European Union framework for State aid in the form of public service compensation, adopted in 2011 (OJ C 8, 11.1.2012, pp. 15–22).

[46] Paragraph 21 of the 2012 SGEI Framework states that "(…) the amount of the compensation must not exceed what is necessary to cover the net cost of discharging the public service obligations, including a reasonable profit". In this respect, paragraph 24 of the SGEI Framework states that "[t]he net cost necessary, or expected to be necessary, to discharge the public service obligations should be calculated using

obligation is calculated as the difference between the profit of the operator with the public service obligation and without it.[47]

Since the introduction of the NAC in the Framework in 2011, the Commission has adopted several decisions that use this concept to assess the compatibility of compensation that is granted to postal operators. In the last year, two decisions have been adopted concerning the compensation for the obligation of distributing the press at low regulated tariffs in France and Italy, in which particular attention has been devoted to the identification and analysis of competitive counterfactual scenarios.

In the remainder of this section we first discuss some key aspects for the quantification of the net avoidable costs and then describe the analysis performed in these two recent decisions.

4.1 The Net Avoided Cost of a Public Service Obligation (PSO)

The net cost of discharging a PSO is by nature an avoidable cost. This reflects the fact that the PSO, whenever it implies a change of behavior by the undertaking, results in a reduction of profits (or an increase of losses) of the undertaking. If the undertaking does not perform any other service but the obligatory public service and no service at all would be provided absent the PSO, all costs that are incurred and all revenues that are earned by the undertaking would be avoidable and would stem from the public service obligation. In this case the net avoidable cost would simply be the difference between revenues and costs.

However, it is more frequent to observe that some level of service provision would persist even in the absence of the PSO. In that case, the impact of the PSO would be to increase the costs incurred to a larger extent than the revenues that would be earned by the undertaking, resulting in a reduction of profits that constitutes the net cost of the PSO for the undertaking. This net cost cannot be identified by reference to the total costs and revenues of providing the services that are covered by the PSO. It can only be identified by reference to the avoidable costs and revenues that result from the additional level of service that stem from the PSO and therefore requires a counterfactual analysis.

4.1.1 The Avoidable Cost Can Embed Portions of Fixed and Variable Costs

It is important to distinguish between the notion of avoidable cost and the notions of variable and fixed cost. Not all variable costs are avoidable and some fixed costs

Footnote 46 (continued)
the net avoided cost methodology where this is required by Union or national legislation and in other cases where this is possible.".

[47] According to paragraph 25 of the 2012 SGEI Framework, "Under the net avoided cost methodology, the net cost necessary, or expected to be necessary, to discharge the public service obligations is calculated as the difference between the net cost for the provider of operating with the public service obligation and the net cost or profit for the same provider of operating without that obligation."

can be avoidable: in the sense of stemming from the PSO. For instance, when a PSO imposes the undertaking to deliver a service at a lower price than it would otherwise charge, it likely generates an increase in demand and output, and therefore also an increment in the total variable cost that is incurred by the operator. However, this does not mean that all variable costs that are incurred by the operator become avoidable; only the variable cost that is associated with the additional quantity of service delivered is in fact avoidable.

Similarly, when a PSO requires (for instance) delivery of services in remote areas, then additional infrastructure may be required. This leads the operator to incur additional fixed costs that would not be incurred in the absence of such obligation. Here the cost of the additional infrastructure is incremental—while being at the same time a fixed cost, in the sense that it is not proportional to output. Hence, the net avoidable cost of a PSO can include both a variable cost and a fixed cost component.

4.1.2 Common Costs May or May Not Be Avoidable

Often undertakings that are obliged to deliver a given public service also deliver voluntarily other services that are traded in the market. Undertakings that operate simultaneously within and outside the scope of a PSO may exploit economies of scope and optimize their cost structure, sharing assets and procedures across services to avoid inefficient duplication of efforts. Common costs are often significant. It is important that the same principle of avoidability is applied to common costs as to any other cost category. The net cost of a PSO may or may not include a share of these common costs, depending on whether they could have been avoided absent the PSO.[48]

4.1.3 Changes in Revenue Affect the Net Avoidable Cost

Revenues of the undertaking may increase or decrease as a result of the PSO. If the revenues increase, they partly compensate the avoidable costs incurred and therefore moderate the net avoidable cost of the public service obligation. Conversely, if revenues decrease, they add to the avoidable costs that are incurred and therefore further increase the net avoidable cost of the PSO. For instance, the low tariffs and higher quality that are often imposed by PSOs tend to expand output and lead the undertaking to incur larger variable costs.

On the revenue side, the effect of such a PSO obligation is a priori ambiguous: lower prices reduce revenue on existing sales; but lower prices and higher quality can increase output and revenue. Note also that the PSO may affect not just the

[48] Note that this principle of avoidability typically leads to a different split of common costs than the accounting cost allocation approach that is used for other applications. The latter involves assigning "cost keys" to different services that are proportional to some observed variable, such as volume or sales value. As these keys are a priori arbitrary from the point of view of avoidability, such accounting keys that are based allocation of common costs across different services cannot be used for the calculation of the net avoidable costs.

revenues of the services that are covered by the PSO, but also any other complementary services that are provided by the undertaking outside the scope of this obligation.

All of these effects must in principle be considered.

4.1.4 Counterfactual Competitive Constraints Must Be Taken into Account

The net avoidable cost approach therefore requires the identification of a counterfactual scenario where the postal operator is not subject to the PSO that is the object of compensation. The analysis includes the estimation of costs and revenues of the undertaking in this counterfactual scenario—considering all of the competitive constraints that may realistically emerge. Competitive constraints are a crucial element of the counterfactual, because otherwise the exercise could mistakenly lead to the compensation of counterfactual monopoly profits.

4.2 Case SA.48883—Distribution of Press by La Poste in France

In January 2019 the Commission decided not to raise objections with regard to the compensation that was proposed by the French authorities to La Poste for its PSO to transport and distribute press (e.g., newspapers, magazines, etc.) during the period 2018–2022 ("the press mission"). France entrusted La Poste with the obligation of providing this service of general economic interest, which aims at preserving the plurality of the written press by charging reduced rates for transport and distribution services to publishers of certain categories of press.

The Commission concluded that the proposed compensation constituted State aid in the sense of article 107(1) of the TFEU and that it was compatible with the internal market on the basis of article 106(2) of the TFEU. In particular, after assessing the net avoidable cost of the press mission, the Commission concluded that the proposed measure did not entail any overcompensation because the compensation amounts were clearly below its estimated net avoidable cost.

4.2.1 The Factual Scenario

The French authorities described in their submissions the likely factual scenario for the period 2018–2022. Tariffs for the press mission had been regulated in advance until 2020 and were assumed to follow a similar progression in years 2021 and 2022. Volumes of press that would be distributed under the press mission were projected to diminish gradually until 2022—in line with the structural trends that had been observed in previous years.

The press mission is largely performed by La Poste with the use of the resources that are shared with the other transport and distribution activities of the company. The press mission relies on the same infrastructure that is used for the distribution of any other post items. The costs of such infrastructure and shared resources are therefore not incremental to the press mission and would not be avoided even if the press mission was not in place. The French authorities identified the unitary variable cost

of transporting and distributing press as being the only incremental cost of the press mission. This unitary variable cost was based on La Poste internal accounts.

4.2.2 The Counterfactual Scenario

In the counterfactual scenario—in absence of the obligation to transport and distribute the press at reduced tariffs—La Poste would remain under the universal service obligation of distributing the press at prices no higher than the regulated tariffs that are applicable to any postal items. When setting its pricing strategy, constrained by the regulated tariffs of the universal service obligation, La Poste would need to consider the impact on the overall demand for press distribution as well as the competitive constraints that are imposed by alternative providers of press distribution services (e.g., courier services).

4.2.2.1 The Demand for Press Distribution Services Given the lack of empirical studies that might estimate the price elasticity of the demand for postal distribution by press editors, the French authorities proposed deriving an estimate of such demand elasticity from the available empirical evidence on the final demand for newspapers by readers. The price elasticities of the final readers' demand for newspapers that were used in the analysis were based on available econometric estimates.[49]

The French authorities proposed deriving the editors' demand for postal services by assuming a demand function with constant elasticity and pass-through rates of 50% and 100% of the distribution costs by editors to the final readers. To test the sensitivity of the results to the choice of the functional form of the demand, the Commission requested that the exercise be also conducted with the assumption of a linear demand function. Given the specifics of the case at hand, a linear demand function was a more conservative choice: with larger demand reductions in response to price increases in the counterfactual scenario—and, hence, eventually implying a larger net avoidable cost estimate.

With regard to the pass-through rates: In a scenario with intense competition between editors and a symmetric impact of higher distribution costs across all editors, it is reasonable to expect that the pass-through rate would be in the upper side of the range that was proposed by the French authorities. At the same time, the press market is a two-sided market: with some level of network effects between readers and advertisers, which can moderate editors' incentives to pass through cost increases to final readers. In the view of the Commission, a pass-through rate of 100% constituted a conservative assumption.

The base scenario of the analysis was one with a constant elasticity demand function and an assumed pass-through rate of 100%. As a sensitivity check, an

[49] The underlying econometric study is summarized by Borsenberger and Muller (2017). The authors developed a demand model that captured the interactions between readers and advertisers. Readers' demand for newspapers is modelled as a nested logit form that considered the main features of newspapers—i.e., frequency, type of publication, number of pages, number of advertisements, price, etc.—as well as proxies for the intensity of the competitive constraint that is imposed on paper publications by online publications.

alternative scenario with linear demand and a pass-through rate of 50% was also considered.

4.2.2.2 Competitive Constraints in the Counterfactual Scenario In the counterfactual scenario, La Poste would be constrained by the maximum tariffs that are imposed on it by the universal postal service obligation in France. The French authorities showed—with the use of the two demand functions that were identified above—that a monopolist's profit-maximising prices for press distribution would be above the maximum tariffs that were allowed by the universal service obligation. On this basis, it was argued that these maximum tariffs would be binding and La Poste would charge precisely those tariffs to editors for the press distribution services.

However, this approach would not take into account the competitive constraints that would likely emerge in a counterfactual scenario with higher prices. The absence of alternative suppliers that are willing to compete with La Poste at the reduced tariffs that are imposed by the press mission could not be taken as an indication that such competitors would not constrain La Poste in a counterfactual scenario with higher prices. The French authorities acknowledged that when facing the higher prices of La Poste in a counterfactual scenario, editors would likely adjust their demand for La Poste services: for instance, by turning to alternative providers of distribution services—such as courier services—in the geographic areas where they are available.

In order to take into account the impact of these competitive constraints, the French authorities submitted estimated diversion ratios from the postal services to courier services for the distribution of press. While this approach did not fully consider the competitive constraints that could be exercised by press shops and online alternatives, it identified the constraint that would be exercised by the closest substitute of postal distribution. Consequently, the firm-specific demand of La Poste would indicate a higher price elasticity than would the total demand of press distribution services, and the counterfactual volumes that would be retained by La Poste after a price increase would be lower.

4.2.3 The Net Avoidable Cost of the Press Mission in France

The net avoidable cost of the press mission was then obtained by comparing these factual and counterfactual scenarios. This comparison allowed the identification of the losses that were incurred by La Poste in the fulfilment of its obligation to distribute press at reduced tariffs compared to the losses or profits that La Poste would have incurred or enjoyed in a competitive counterfactual scenario. The calculations confirmed—including the sensitivity checks—that the proposed amounts to compensate La Poste for the press mission remained below its net avoidable cost and did not entail overcompensation.

4.3 Case SA.48492—Distribution of Press and Other Publications by Poste Italiane

The Commission approved in July 2019 under EU State aid rules a public service compensation that had been granted by Italy to Poste Italiane for distributing, at reduced tariffs, newspapers and publications of book publishers and non-profit organizations in the period 2017–2019 ("the press mission"). Italy entrusted Poste Italiane with the obligation of providing this SGEI, which aims at preserving and fostering media plurality and diversity of views by charging reduced rates to publishers and newspapers for the distribution of certain categories of press.

The Commission concluded that the proposed compensation constituted State aid in the sense of article 107(1) of the TFEU and that it was compatible with the internal market on the basis of article 106(2) of the TFEU. In particular, the Commission found that the level of compensation did not exceed the amount that was needed to cover the net avoidable cost that was borne by Poste Italiane for providing the service and, hence, that the measure did not lead to overcompensation.

The Commission arrived at this conclusion after assessing the analysis that was submitted by the Italian authorities of the NAC that was incurred by Poste Italiane in fulfilling the press mission. This exercise required the comparison of the factual scenario with PSO and the counterfactual scenario without such obligation.

Compared to the La Poste case, two interesting differences are worth mentioning: On the one hand, the assessment of the counterfactual competitive scene is simplified as no entry would be expected: Even Poste Italiane is likely making losses in the counterfactual scenario. On the other hand, because of the structure of the available data, the separation of avoidable and non-avoidable costs was more challenging than in the French case.

The issue was resolved using economic assumptions as to the form of the total cost function, and carrying out sensitivity checks.

4.3.1 The Factual Scenario

Poste Italiane was under a legal obligation to distribute the press at reduced tariffs that were regulated in 2002 and that were kept constant for 15 years, before being reviewed in 2018. The Italian authorities submitted data from the cost accounting system of Poste Italiane for 2015–2017 and projections for the years 2018–2019, based on the trends for 2015–2017. Volumes were projected on the basis of the observed trends in the previous years. As acknowledged by the Italian authorities, the press mission is largely performed by Poste Italiane using resources that are shared with other transport and distribution activities of the company: notably, the universal postal service obligation and its banking services.

4.3.2 The Counterfactual Scenario

Similar to the French case, in the absence of the PSO, Poste Italiane would remain subject to the universal service obligation (USO), which includes the obligation to transport and deliver the press at a higher regulated tariff. If Poste Italiane was not subject to the obligation of distributing press at reduced tariffs—it would seek to maximize its profit by optimizing its press delivery tariffs, constrained by the maximum that is imposed by the USO tariff. Poste Italian's strategy in the counterfactual scenario would depend mainly on the price elasticity of the demand for press delivery services, on Poste Italiane's cost structure, and on any potential competitive constraints that might emerge in the counterfactual scenario.

4.3.2.1 The Demand for Press Distribution Services The Italian authorities proposed a natural experiment to estimate the price elasticity of the publishers' demand for the services of Poste Italiane: There was a five-month period in 2010 when Poste Italiane applied the higher tariffs of the universal PSO to its press distribution mission. By observing the reduction in the demand for press delivery services that followed the increase in tariffs during this period, it was possible to obtain an estimate of the price elasticity of the demand.

This approach does not take into account that readers and press editors may have subscriptions and contracts that lasted for longer periods, and might therefore not have been in a position to change their behaviour over a 5-month period. Similarly, competitors would have been more likely to enter the market if the duration of the "high tariff" period was longer.

To address these shortcomings, the estimated price elasticity of demand would have to be adjusted to reflect a more elastic demand. However, the maximum tariff that Poste Italiane could charge for the distribution of press in the counterfactual scenario was the regulated tariff of the universal postal service obligation, which was shown to be lower than its unitary variable cost. Hence, a more elastic demand would lead to a lower counterfactual loss, and therefore a higher net avoidable cost.

In light of these considerations, the Commission considered that the use of the price elasticity as submitted by the Italian authorities constituted a conservative assumption.

4.3.2.2 Poste Italiane's Costs in the Counterfactual Scenario Cost accounting that is based on a separation of accounts does not readily identify avoidable costs; instead it allocates common costs across activities according to some discretional allocation criteria. Yet, the NAC approach requires identifying the costs that are specific to the PSO: costs that would not be incurred in its absence.

It was shown that direct costs may likely be avoided, in the counterfactual scenario, proportionally to the decrease in volumes of press distributed. Indirect production costs and central costs, however, are not so clearly specific to the press distribution mission. While Poste Italiane's accounting system allocates a share of these indirect and central costs to the press distribution activity, these costs are essential to

the other activities that Poste Italiane would continue to perform absent the PSO on the distribution of the press.

The Commission concluded that the Italian authorities did not demonstrate that these indirect and central costs were avoidable in the absence of the press distribution mission. Hence, these costs were retained in the cost structure of Poste Italiane in the counterfactual scenario, which reduced the net avoidable cost of the press mission.

With respect to the direct costs in the counterfactual scenario, the downward evolution of costs over the period 2015–2017 revealed that Poste Italiane experiences economies of scale in the distribution of press, with direct costs falling more than proportionally with volumes. Given the decreases in cost and the volumes that were experienced, the cost-output elasticity for the press mission of Poste Italiane was estimated, allowing the projection of the evolution of costs in relation to changes in volume. The Italian authorities proposed to assume a constant cost-output elasticity, which implied a cost structure that omits the presence of fixed costs.

The Commission considered that it was more appropriate to use a linear cost function that explicitly allowed for the presence of fixed costs for the press mission, consistent with the existence of economies of scale. The Italian authorities confirmed that a linear cost function captures well the fact that Poste Italiane's press mission has both fixed and variable costs.

4.3.2.3 Incentives to Enter and Compete in the Counterfactual Scenario If Poste Italiane were to set its counterfactual price for the delivery of the press at any point below the universal service tariff, it would further increase its losses (per item distributed and due to output increases). Hence, Poste Italiane would set its counterfactual price for press distribution at exactly the rate of the universal postal service tariff, a ceiling to which it is bound. Although the tariffs of the universal postal service obligation are significantly higher than the tariffs of the press mission, they are still comparatively low: set in 2002, they were kept constant for 15 years, and were raised only in 2018.

In addition, according to the Italian authorities, Poste Italiane's variable costs for press distribution are likely lower than its competitors', since to a large extent Poste Italiane relies on its more developed infrastructure. Potential competitors were considered unlikely to enter the press distribution market in those circumstances.

4.3.3 The Net Avoidable Cost (NAC) of the Press Mission in Italy

The NAC of the press mission was obtained by comparing these factual and counterfactual scenarios. The results of these calculations, submitted by the Italian authorities, and the assessment by the Commission confirmed that the proposed amounts to compensate Poste Italiane for the press mission remained below its net avoidable cost and did not entail overcompensation.

4.4 Conclusion

The decisions that were adopted by the Commission concerning the compensation of the press delivery missions in France and Italy illustrate some of the challenges that were faced in the assessment of the net avoidable cost of a PSO. The identification of a reasonable counterfactual scenario is a crucial part of this exercise. Detailed information on costs, prices, volumes, and revenues is necessary, as well as information on the competitive landscape. This detailed information may have to be combined with reasonable assumptions and sensitivity analysis, in order to test the robustness of the results.

As is shown by the French case, it is important to take full account of the competitive constraints that may arise in the counterfactual scenario, to prevent the risk of overestimating the NAC of the PSO and allowing compensation of unrealistic monopoly profits. As is shown by the Italian case, the allocation of common costs in analytical accounting systems is unlikely to provide an appropriate basis for identifying the avoidable costs of a PSO, and a more detailed assessment of the costs is therefore warranted.

5 Conclusion

The 2018–2019 season was another busy one for DG Competition and the CET. On the merger front, the Siemens/Alstom case triggered animated debates as to the future of the EU competition rules; while on the antitrust front, the Google Android case added to a growing body of work by the Commission in the digital space. Finally, recent postal cases offered an opportunity to shape further the Commission's economic analysis in state aid cases that relate to public service obligations.

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