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Effective remedies in digital market abuse of dominance cases

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Abstract: The paper considers effective digital market remedies in abuse of dominance cases by considering various tools such as Regulation 1/2003, the Digital Markets Act (DMA) Regulation 2022, and interaction between competition and sectoral regulators. The paper discusses certain radical remedies that have been envisaged by commentators and tries to apply those remedies and those provided also considered within the DMA obligations to seven infringements that relate to abuse of dominance in digital markets. The paper proposes the use of Article 102 TFEU mainly to remedy the harms but also considers the use of the DMA in this pursuit. The paper includes pricing and non-pricing-based infringements that mainly relate to past Article 102 TFEU cases.
The paper contributes to the literature on imposing remedies to specific digital market abuse of dominance cases. The paper considers the possible remedies that may be offered, the benefits that may arise from the remedies, and the cost of imposing those remedies. These possible remedies are based on past literature that will be discussed in the paper. The paper also brings to light the use of the DMA and uses Article 5 and 6 DMA obligations to ascertain the most effective remedies in the seven infringements that it considers remedies for. The paper finds that each digital market case needs to be assessed on a case-by-case basis for implementation of effective remedies.

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Section 1- Introduction

The scale of growth of digital platforms has brought about a sense of alarm among competition law enforcers and legislators leading to several reports being published on reform of competition law for digital platform markets from the EU,[1] the US,[2] the UK,[3] Australia,[4] and others.[5] There have been many suggestions to make the rules that govern the working of large digital platform firms stricter along with calls for effective behavioural remedies.[6] There has also been discussion of structural remedies in the form of break-ups and vertical separation to reduce the market power of dominant digital platforms.[7] Separation of an already existing dominant firm into different parts is not widely accepted yet in the EU and has never been used by EU Courts since the passing of Regulation 1/2003 which enabled this feature.

This paper will discuss the different tools that competition authorities in the EU can use, as well as potential remedies that can be imposed, to deal with competition law infringements in digital platform markets. The paper will begin by addressing the main legal powers that are bestowed on competition authorities in the EU to deal with infringements under Regulation 1/2003 in Section 2. After that, the paper will discuss their relevance in digital markets and address the challenges that exist making competition law remedies less effective in digital markets. Section 3 will evaluate the use of different tools such as market investigations, co-working between competition authorities and regulators, structural separation, and modern remedies suggested by past authors to nullify digital market infringements.

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[1] Jacques Crémer, Yves-Alexandre de Montjoye, Heike Schweitzer, 'Competition Policy for the Digital Era EU Digital Report- Final Report' (2019) European Commission.

[2] Fiona Scott Morton, Pascal Bouvier, Ariel Ezrachi, Bruno Jullien, Robert Katz, Gene Kimmelman, Douglas Melamed and Jamie Morgenstern, 'Market Structure and Antitrust Subcommittee, Committee for the Study of Digital Platforms', (2019), George J. Stigler Center for the Study of the Economy and the State, The University of Chicago Booth School of Business.

[3] Jason Furman, Diane Coyle, Amelia Fletcher, Phillip Marsden and Derek McAuley, Unlocking Digital Competition, Report of the Digital Competition Expert Panel, UK Government, March 2019.

[4] ACCC Digital Platform Inquiry, Final Report, (2019).

[5] Competition Commission of India, 'Market Study on E-Commerce in India', (08-01-2020), Key Findings and Observations, which only deals only with the E-commerce sector in India; See also Japan Fair Trade Commission, Guidelines Concerning Abuse of a Superior Bargaining Position in Transactions between Digital Platform Operators and Consumers that Provide Personal Information, etc. (December 17, 2019), which mainly deals with information acquisition from consumers; See also Stefan Haasbeek, Jan Sviták and Jan Tichem, , 'Price effects of non-brand bidding agreements in the Dutch hotel sector', (7 June 2019), Netherlands Authority for Consumer and Markets, which deals with a specific sector; See also Note by United Nations Conference on Trade and Development Secretariat, 'The value and role of data in electronic commerce and the digital economy and its implications for inclusive trade and development', (3–5 April 2019), which dealt with E-Commerce and trade. These 4 are examples of Reports by Competition Authorities in specific digital market areas.

[6] ibid; See also Monopolies Commission, Biennial Report XXIII, 2020.

[7] Lina Khan, 'Amazon's Antitrust Paradox' 126 Yale L. J. 710 (2017).

In Section 4, the paper contributes to the existing knowledge regarding remedies in digital markets by focusing on certain pricing and non-price related infringements and sets out to find the most effective remedies for seven infringements relating to digital markets. The infringements considered in Section 4 of the paper are: 1) excessive pricing and imposing unfair trading conditions such as unclear data extraction policies, 2) Self-preferencing, 3) Exploiting consumers by providing unauthentic results in return for collecting information on their preferences, 4) Predatory pricing through cross-subsidization by two-sided platforms, 5) First-degree price discrimination through price personalization, 6) Preventing data portability and data sharing between different platforms, and 7) Tying essential inputs with other products.[8] These infringements have been chosen as they are based on theories of harm that are a result of past Article 102 TFEU cases in areas such as price discrimination, predatory pricing, unfair trading condition, excessive pricing, tying and exclusive dealing. The 7 infringements that have been chosen help to consider the role of competition law and other legislation in stopping and remedying the harms caused by those infringements.

The first infringement relates to the *Facebook Germany* case which considered the role of competition law in data extraction policies of dominant online platforms. Self-preferencing is one of the most widely scrutinized topics of the last seven years following on from the *Google Shopping* case. Lessons on effectiveness of remedies that are a result of *Google Shopping* provide insights into possible remedies for the remaining digital market infringements. The third infringement is based on the assertion that consumers search in search engine platforms by providing information on their preferences expecting authentic results in return, but are provided unauthentic search results when conduct such as self-preferencing takes place. Predatory pricing is a phenomenon that has traditionally been assessed in one-sided markets. Aspects such as the two-sidedness of platforms which assist in cross-subsidization may make the assessment complicated if the tests for one-sided markets are to be used. The low to no marginal costs of certain online platforms such as search engines and social media platforms also make the price below average variable cost presumption of abuse test underinclusive.[9] Price personalization is also a relatively new phenomenon that has come into existence due to the collection of data from consumers which helps firms direct their advertising in a more specified manner. This practice has benefits such as increase to total welfare but may have anti-

[8] The *Google Android* remedies related to tying is another landmark area which deserves discussion to better understand how remedies can be implemented.
[9] Anush Ganesh, 'Predatory pricing in platform markets: A modified test for Article 3 DMA' 23-02 CCP Working Paper Series (Feb 2023).

competitive effects if firms try to exclude consumers with lower willingness to pay. Data portability concerns the transferability of consumer information from one platform to another at the will of the consumers. Preventing this may lead to foreclosure effects which is why the practice is considered in this paper. Tying of essential inputs in digital markets is another form of abuse carried out by dominant firms to try and monopolize the market. Here, the infringement will be considered in light of market foreclosure. With respect to digital market remedies, tying provides a useful example to assess the effectiveness of remedies due to the *Google Android* case remedies.[10] Before engaging on digital market related remedies, it is important to consider the tools that are available under competition law currently.

Section 2- Relevance of Regulation 1/2003

Regulation 1/2003 allows the Commission to impose remedies in cases where firms infringe Article 101 or 102 of the TFEU. It empowers both the Commission and National Competition Authorities to apply Articles 101 and 102 of the TFEU. Articles 7, 8 and 9 of the Regulation allows the Commission to impose remedies or accept commitments respectively.

Table 2 includes the three main provisions in EU Competition Law that can be used to rectify an infringement or to prevent firms from continuing to carry out a harmful business practice.

Table 1: Articles 7 to 9 of Reg. 1/2003

COMPETITION LAW PROVISIONS	DESCRIPTION
1) **ARTICLE 7 OF REG. 1/2003**	Gives the Commission the power to impose behavioural or structural remedies to correct a harm and bring an infringement to an end. The remedy imposed needs to be proportionate to the

[10] Case COMP/40099 Google Android

	harm and necessary to bring the infringement to an end.
2) ARTICLE 9 OF REG. 1/2003	Allows adopting binding commitments imposed on the undertaking concerned based on what is offered to the Commission by the infringing firm.
3) ARTICLE 8 OF REG. 1/2003	Allows the Commission to impose interim measures in cases of urgency due to the risks and seriousness of damage to competition.

2.1 Article 7 of Regulation 1/2003

In the EU, competition law remedies can be either structural or behavioural. According to Article 7(1) of Regulation 1/2003,[11]the Commission can impose structural or behavioural remedies which are proportionate to the infringement committed and can also order an Undertaking to cease an infringement and not commit it again in order to prevent competition from getting hampered in the market. Under Article 7 of Reg. 1/2003, the Commission can impose remedies for an indefinite period or for a specified period depending on the case and the effect on competition in the market concerned.[12]

Behavioural remedies can be based on either conduct or performance. Some examples of conduct-based remedies are- obligation to supply goods in a non-discriminatory way, obligation to share information or data, obligation to discontinue a certain activity.

[11] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ L 1, 04.01.2003.
[12] Cyril Ritter, 'How Far Can the Commission Go When Imposing Remedies for Antitrust Infringements?', (2016) 7(9) Journal of European Competition Law & Practice 587, 587-98.

Performance remedies are regulatory remedies such as price control and quality improvement. Conduct based remedies have been the more commonly used behavioural remedies in the past.[13] An example of a behavioural remedy is in the case of *Microsoft* where the Undertaking was ordered to offer a non-tied version of its product (Operating System without the Media Player) and had to provide interoperability information to competitors.[14] The Commission also has the power to order the undertaking concerned to propose remedies where the Commission might not be best placed to suggest remedies due to technical issues involved.[15]

Structural remedies are those that bring about a change to the existing business structure of the undertaking concerned. The most common structural remedy is a divestiture of an existing business.[16] It is also stated in Article 7(1) that structural remedies ought to be only imposed when there is no suitable behavioural remedy that can be imposed instead. Remedies under Article 7 of Regulation 1/2003 resemble permanent injunctions as they impose a form of permanent behavioural or structural change.[17] Under Article 7, the Commission is also allowed to pass a prohibition decision without any prospective remedy if it feels that the decision will bring an infringement to an end.[18] Infringements brought under Article 7 can deal with cases where a firm abuses its dominant position by actions such as refusal to supply,[19] tying,[20] or price cuts below cost to eliminate a competitor.[21] An alternative to remedies under Article 7 are commitments that the undertakings concerned agree to meet in order to avoid getting penalised unilaterally by getting involved in the remedy design process.

2.2 Article 9 and 8 of Regulation 1/2003

Article 9 of Reg.1/2003 gives the Commission the power to decide to adopt binding commitments on the undertakings concerned. Commitments are adopted if: 1) undertakings

[13] OECD, 'Roundtable on remedies and sanctions in abuse of dominance cases', DAF/COMP/WD(2006)34 [38-41].
[14] Case COMP/C-3/37.792 *Microsoft*; Was confirmed by the GC in Case T-201/04, *Microsoft v Commission* ECR 2007 II-03601.
[15] See Ritter 591-592.
[16] See OECD Roundtable (2006) [34].
[17] Cyril Ritter, 'Remedies for Breaches of EU Antitrust Law '(May 17, 2016), Available at SSRN https://ssrn.com/abstract=2781441.
[18] See OECD Roundtable (2006) [20].
[19] Joined cases 6/73 7/73- *Istituto Chemioterapico Italiano and Commercial Solvents v Commission* ECR 1974 -00223 [42-50]. The dominant firm was ordered to supply a certain amount of raw material to the complainant as a remedy.
[20] See *Google Android* Case [1393-400]. Firm was ordered to provide a choice screen in Android devices without a pre-installed search engine tied to the device.
[21] Case C-62/86, *AKZO v Commission* ECR 1991 I-03359.

under investigation are willing to offer commitments, 2) a fine would not be appropriate, and 3) adopting a commitment is more efficient than a prohibition order.[22] The Commission may apply Article 9 of Reg. 1/2003 where it would have applied Article 7 instead but for the commitment offered. Article 9(2) of Reg. 1/2003 allows the Commission to reopen proceeding where an undertaking does not abide by the commitments as was seen in the case of *Microsoft* where a fine was levied for breach of commitments.[23]

The principle of proportionality that governs Article 7 of Reg. 1/2003 applies differently to Article 9(1) of Reg. 1/2003. This was shown in the case of *Alrosa*,[24] where it was held that the undertaking that offer commitments under Article 9 of Reg. 1/2003 consciously accepts that they may go beyond what the Commission might impose on them under Article 7 in return of avoiding a thorough investigation and a fine.[25] It was clarified through this case that Articles 7 and 9 of Reg. 1/2003 pursue different objectives.[26] The Commission may choose to bring an infringement case even though commitments are offered if it is not satisfied that the commitments would be able to repair competition.[27] Commitment decisions have quicker impact, are more forward looking and can have swifter implementation of remedies as undertakings attempt to avoid a fine via an infringement investigation.[28] On the other hand, more commitment decisions lead to lesser clarity about the law and lack of judicial precedent which may also lead to third parties being disadvantaged as was seen in the case of *Alrosa.*[29] This is one of the reasons why the CJEU's *Alrosa* judgment has been criticized in the past.[30]

The case of *Aspen* in 2021 is one in which commitments offered by the dominant firm were accepted by the Commission in relation excessive prices being charged for critical medicines.[31] The Commission had asked other stakeholders regarding the price and supply commitments

[22] Commitment decisions (Article 9 of Council Regulation 1/2003 providing for a modernised framework for antitrust scrutiny of company behaviour), MEMO/04/217.
[23] *Microsoft* COMP/39.530, IP/13/196; See also Alison Jones, Brenda Sufrin and Niamh Dunne, *EU Competition Law: Texts, Cases and Materials* (7th Edition, Oxford University Press) 932, 940.
[24] C-441/07 P - *Commission v Alrosa* ECR 2010 I-05949. The appeal was brought up by an undertaking that was not dominant and was therefore considered a third party by the Court of Justice.
[25] ibid [48].
[26] ibid [46].
[27] Case COMP/39.525 — *Telekomunikacja Polska*; See also *Google Shopping*; Alison Jones, Brenda Sufrin and Niamh Dunne, *EU Competition Law: Text, cases and materials* (7th Edition, Oxford University press, 2021) 940-941.
[28] ibid Jones et al. 941-942.
[29] ibid 942-943.
[30] Frederic Jenny, 'Worst Decision of the EU Court of Justice: The Alrosa Judgment in Context and the Future of Commitment Decisions', (2015) 38 Fordham Int'l L.J. 701.
[31] Case AT.40394 – *ASPEN*, COMMISSION DECISION of 10.2.2021.

offered by Aspen and were met with positive responses.[32] This helped assuage the Commission's concerns regarding unfair prices being charged as the Article 9 Commitment that were offered were able to correct the harms arising out of the previous conduct.[33]

Article 8 of Reg. 1/2003 deals with interim measures giving the commission the authority to impose measures to tackle cases of urgency where an irreparable harm to competition may be caused. Interim measures are considered one of the least used tools in enforcement due to their underutilisation which is evidenced by the fact that the EC has only dealt with eight decisions that deal with interim measures.[34] The latest use of interim measures can be seen in the case of *Broadcom* where the Commission ordered the chipset supplier firm, Broadcom, to stop its conduct of applying anticompetitive provisions to its customers and to refrain from engaging in retaliatory measures.[35] Subsequently, the Commission accepted commitments offered by Broadcom in relation to suspension of its existing agreements with customers.[36]

While interim measures and commitments are important tools under Reg. 1/2003, the focus of this paper will largely be on imposing remedies as this has been the need in digital platform cases currently. However, as has been seen in the *Aspen* and *Broadcom* Decisions, commitments and interim measures may be a more effective method of rectifying anti-competitive effects in a timely manner as the *Broadcom* Decision took 1 year and 2 months from start to finish while the *Aspen* case took 3 years and 7 months. Contrastingly, the *Google Shopping* Decision took nearly 7 years for a Commission Decision (case was initiated in November 2010) and 4 years further for the General Court's Decision. The use of commitment Decisions and interim measures therefore cannot be ignored in digital markets as they may be effective tools for the Commission.

Whether the Commission adopts an Article 9 or an Article 7 decision depends on the seriousness of the infringement. Article 9 Commitment Decisions also help in making sure that the future behaviour of firms is adjusted in a manner that allows better functioning of the market.[37] In addition to that, the shorter time to adopt Commitment Decisions compared to adopting Article 7 remedies help fast innovating markets as was the case in *IBM- Maintenance*

[32] ibid [213-214]
[33] ibid [255-259].
[34] Stavros Aravantinos, 'Competition law and the digital economy: the framework of remedies in the digital era in the EU', (2021) 17(1) European Competition Journal 134, 155.
[35] CASE AT.40608 – *Broadcom*, COMMISSION DECISION of 7.10.2020.
[36] ibid [139-140].
[37] European Commission, 'Competition Policy Brief' Issue 3, ISBN 978-92-79-35543-1, March 2014.

Services.[38] In case a firm does not comply with the Commitments that it had offered, the Commission may impose financial penalties in the form of a fine. An example of that is in the case of *Microsoft* where Commission fined the firm 561 Million Euros for non-compliance.[39]

2.3 Application of Reg.1/2003 to digital market cases: Ineffectiveness of remedies adopted in Google Android and Google Shopping

One recent example of a remedy being imposed on a digital platform is in the case of *Google Android* where the Commission had ordered Google to provide a choice screen for its users to its Android devices. The choice screen remedy was in response to Google pre-downloading its Google Search and Google Chrome on the devices which foreclosed competition in those markets.[40] The decision was upheld by the General Court of the EU. However, the choice screen's effectiveness was questioned by Google's rivals as it only ended up allowing Google to charge the other search engines money to display them in the choice screen.[41] This was subsequently amended and participation in the choice screen was made free by Google.[42] The lawyers of one of the rival search engines (Qwart) found the amendment to address some of the pressing concerns and Google followed through with the updated choice screen in 2021.[43] The updated choice screen reflects the ability of users to freely choose the search service of their choice instead of providing a pre-downloaded option leading to an inference that the remedy might be effective.[44] However, the way the remedy was finally adopted can be questioned as the Commission had left it to Google to devise the remedy rather than construct it as is required under Article 7 of Reg. 1/2003.

The effectiveness of remedies were brought into the limelight in another recent example of the application of Remedies in the case of a digital platform firm in *Google Shopping* where

[38] European Commission Press Release, 'Antitrust: Commission makes IBM's commitments legally binding to ensure competition in mainframe maintenance market' 14 December 2011.
[39] European Commission Press Release, 'Antitrust: Commission fines Microsoft for non-compliance with browser choice commitments' 06 March 2013.
[40] See *Google Android* Case [1393-400]; See also Case T-604/18, *Google and Alphabet v Commission (Google Android)* ECLI:EU:T:2022:541
[41] Natasha Lomas, 'Google's EU Android choice screen isn't working say search rivals, calling for a joint process to devise a fair remedy' TechCrunch, 27 October 2020, https://techcrunch.com/2020/10/27/googles-eu-android-choice-screen-isnt-working-say-search-rivals-calling-for-a-joint-process-to-devise-a-fair-remedy/.
[42] Oliver Bethell, 'Changes to the Android Choice Screen in Europe' Google, 08 June 2021, https://blog.google/around-the-globe/google-europe/changes-android-choice-screen-europe/.
[43] Thomas Hoppner and Philipp Westerhoff 'Google finally amends Choice Screen remedy to prevent non-compliance proceedings in EU Android case' (Hausfeld, 09 June 2021), https://www.hausfeld.com/what-we-think/perspectives-blogs/google-finally-amends-choice-screen-remedy-to-prevent-non-compliance-proceedings-in-eu-android-case/.
[44] ibid.

Google was found to have abused its dominant position by favouring its own comparison shopping service than those of its competitors.[45] The Commission applied Article 7(1) of Reg. 1/2003 and decided that any measure that the dominant firm uses should treat competing comparison shopping services no less favourably than its own shopping service.[46] This included subjecting Google's own comparison shopping service to the same processes for selection of ranking and visibility as other competitors.[47] Within these processes, the Commission decided that they must include elements such as: a) those that determine the triggering of CSSs on the general search results pages, b) those that determine the positioning and display of comparison shopping services based on queries, c) visual appearance, d) granularity of information shown to users, e) possibility of interaction with users, and f) not charging competing shopping services a fee or another form of consideration that isn't charged to its own services.[48]

Similar to what had happened in the case of *Google* Android, the Commission did not throw light on how the process should be structured and left the onus on the dominant firm, Google, as a result of lack of expertise in complex algorithmic infringements. Some commentators are of the view that the remedy proposed by Google fulfils its obligation and is consistent with the decision of the Commission by bringing the infringement to an end.[49] Google's lawyers, Vesterdorf and Fountokakos opined that the principle of sound administration requires the Commission to merely consider whether a remedy proposed by the firm is appropriate or not during the negotiation period as the onus of choosing the appropriate method of bringing the infringement to an end was on the firm which is fulfilled in the case.[50] They argue that the auction based mechanism[51] employed as the remedy by Google makes sure that it doesn't gain an unfair advantage and is treated the same way as other comparison shopping services. In addition to that, they argue that the auction system leads to fairness in allocating scarce resources and prevents inefficient rivals from being subsidized by Google.[52]

[45] See *Google Shopping* Commission Decision. The remedies imposed by the Commission are relevant to the discussion which is why the Commission Decision is being referred to.
[46] ibid [693-699].
[47] ibid [700].
[48] ibid [700(c)] and [701].
[49] Bo Vesterdorf and Kyriakos Fountoukakos, 'An Appraisal of the Remedy in the Commission's Google Search (Shopping) Decision and a Guide to its Interpretation in Light of an Analytical Reading of the Case Law' (2018), 9(1) Journal of European Competition Law & Practice 3.
[50] ibid 6-8.
[51] A system where the highest bidder is presented with the position that is auctioned.
[52] ibid 10-17.

However, Marsden argues that the remedy in *Google Shopping* has led to invisibility of competitors rather than their visibility. This is because Google shows competitor shopping service results after they click on the additional option present in the first result which is Google's own shopping service result.[53] In addition to this, Google's comparison-shopping services are more prominently and clearly displayed which prompts more clicks than those of competitors. The value of other shopping services is diminished in the eyes of the user as the user does not have a meaningful interaction with them which leads to further dominance of Google's own shopping services.[54]

Others such as The European Consumer Organisation (BEUC) have argued that competition in the market has not been restored by this decision as Google's algorithms continue to downgrade other competing options as a result of addition of several criteria.[55] The BEUC notes that that the remedies of equal treatment of competitors in the case of *Google Shopping* can only occur when a structural change occurs separating Google's search engine from its comparison shopping services.[56] A study commissioned by Google's competitors three years after the decision found that less than one percent of the traffic is directed to competing shopping services.[57] In 2019, Competition Commissioner Vestager acknowledged the fact that the Commission does not see much traffic for rival competitors when it comes to comparison shopping.[58] Based on empirical data of 25 comparison shopping services (CSS), Hoppner found that Google's remedial conduct does not reflect equal treatment of other CSS.[59]

This raises further questions regarding the effectiveness of remedies concerning online firms and prompts a discussion on whether there are alternate mechanisms that can be used to deal with abuse of dominance cases in digital markets such as market investigations or radical

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[53] Phillip Marsden, 'Google Shopping for the Empress's New Clothes –When a Remedy Isn't a Remedy (and How to Fix it)' (2020) 11(10) Journal of European Competition Law & Practice 553, 553–560.
[54] ibid.
[55] BEUC, 'Open letter about Consumer concerns with Google's non-compliant remedy in Antitrust Shopping case (AT.39740) on behalf of BEUC to Commissioner Vestager', on 5th of April 2019; See also Aravantinos, (n 829) 151-52.
[56] ibid; See also Rowland Manthorpe, 'Google 'trying to circumvent EU ruling' with price comparison sites run by ad agencies' (skynews, 08 October 2018), https://news.sky.com/story/google-trying-to-circumvent-eu-ruling-with-price-comparison-sites-run-by-ad-agencies-11518376.
[57] Emily Craig, 'Google Shopping remedy has failed, study claims', (Global Competition Review, 29 October 2020), https://globalcompetitionreview.com/behavioural-remedies/google-shopping-remedy-has-failed-study-claims. .
[58] European Parliament, Parliamentary questions, 19 November 2019: https://www.europarl.europa.eu/doceo/document/E-9-2019-003869_EN.html.
[59] Thomas Hoppner, 'Google's (Non-) Compliance with the EU Shopping Decision' (Hausfeld, September 2020), https://www.hausfeld.com/uploads/documents/googles_(non)_compliance_with_google_search_(shopping).pdf.

remedies such as structural separation or whether reliance on new legislation is the way forward. The remedy adopted in the *Google Shopping* case in addition to other cases concerning digital platforms will be further discussed in Section 5.4 of the paper. One way in which remedies in digital markets can be made more effective is through ex-post evaluation of them after a few years to consider whether any modifications need to be made.[60] Owing to the novelty of the abuses and remedies in digital markets, it is important for an institution that is imposing remedies to learn and make them more effective as time passes. It is also important to note that both *Google Shopping* and *Google Android* are not cases that can be considered as benchmark cases that can be followed in future digital market cases due to the issues concerning who the author of the remedy is. This Section highlights the need for discussion. On digital market remedies which will be considered in Sections 3 and 4 of this paper.

The main takeaway from this case is that in order to make remedies effective in solving issues that arise as a result of certain behaviour by large online firms, expertise is required in understanding the general working of digital markets beyond a mere competition viewpoint. One feature of the Commission has been in imposing fines instead of engaging with Article 7 remedies in cases of infringements. Section 2.4 will discuss the use of Article 23(2) of the Reg. 1/2003 in relation to the Commission's ability to impose fines.

2.4 Imposition of fines under Article 23(2)

One of the least intrusive punishments that the Commission can adopt in terms of not interfering with the firm's day to day business is to impose fines. Under Article 23(2) Reg. 1/2003, the Commission can impose fines on undertaking where it deems fit of up to 10 % total turnover from the previous year. It is noted in the Commission's Guidance on setting fines that the amount of fine may be increased by up to 100 % if the undertaking persists in its abusive conduct.[61] This shows that there is some amount of flexibility with regard to imposition of fines. One interesting part within the guidelines is that the Commission may also increase fines for deterrence when concerning large firms.[62] The Commission has imposed higher fines where the duration of the abusive conduct has been longer.[63]

[60] OECD Global Forum on Competition, 'REMEDIES AND COMMITMENTS IN ABUSE CASES – Contribution from the European Union' 17 November 2022.
[61] European Commission, 'Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003', (2006/C 210/02) [27].
[62] ibid [30-31].
[63] ibid [5].

The imposition of the 2.42 billion Euro fine in the *Google Shopping* case suggests asking the question if fines may also be a suitable way of deterring abusive conduct by dominant platform firms. The Commission's unfettered discretion with respect to imposition of fines has been noted to have been condoned by EU Courts as well.[64] The Commission can be noted to choose the percentage increase in fines based on a certain methodology when past cases are referred to.[65] In some cases such as *Microsoft* and *Intel*, Dethmers and Engelen note that the Commission multiplied the initial fine and then went on to increase it based on the duration of the abuse.[66]

Volmer and Helmdach also noted that the use of competition law over the GDPR (limit on fines is up to 4% total turnover) is beneficial to issue higher fines.[67] The DMA resolves this issue as fines may be imposed of up to 10 percent total turnover. The purpose of fines in EU competition law is not to recover ill-gotten gains due to the abuse alone but also to deter large firms from engaging in certain actions. In digital platform market abuses, fines are only bound to increase as has been seen in the *Google Android* case where a fine of 4.34 billion Euros was imposed.[68] The case initiated against Meta/Facebook by Gormsen can be seen to be motivated by the imposition of such fines as the suit asks for a fine (as damages) rather than any other behavioural remedy.[69]

Perhaps, the use of fines can act as a suitable deterrent in how digital platform firms choose to organise their future conduct. The approach in the US is one that is often accompanied by fines in private lawsuits. Interestingly, the highest fine imposed in the US ($925 Million in Citicorp) so far is still lower than many of the fines imposed in the EU.[70] Under the DMA regime, Article 30 DMA allows fines of up to 10 percent worldwide turnover for non-compliance with the obligations listed under Articles 5 and 6 of the DMA. For firms designated as gatekeepers under Article 3 of the DMA, this removes the need to consider the GDPR and Article 102 TFEU jointly as the means to impose a higher fine have already been brought into force through the DMA. However, if a firm were to be dominant but not within the scope of Article 3 DMA,

[64] Frances Dethmers and Heleen Engelen, 'Fines under Article 102 of the Treaty on the Functioning of the European Union', (2011) 2 European Competition Law Review 86, 98.
[65] 10% increase per year of infringement.
[66] See Dethmers and Engelen 87-88.
[67] See Volmar and Helmdach.
[68] European Commission, 'Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine', Press Release, (18 July 2018).
[69] See Gormsen v. Meta.
[70] US DOJ, 'SHERMAN ACT VIOLATIONS RESULTING IN CRIMINAL FINES & PENALTIES OF $10 MILLION OR MORE', https://www.justice.gov/atr/sherman-act-violations-yielding-corporate-fine-10-million-or-more.

then such joint usage of legislations may still be warranted. This leads to Section 5.3 which engages on alternate remedies that may be available in digital market infringements.

Section 3- Alternate remedies and the best way forward

Competition law remedies in digital markets require specific knowledge about how the remedies would affect the market in the future and whether competition could be restored or brought to the market. The effectiveness of the remedies has been questioned which has prompted discussion on both radical remedies to restore competition and discussion of how remedies in digital markets are formed. This section of the paper will primarily consider the role that other regulatory authorities can play while identifying infringements and designing remedies along with competition authorities in Section 3.1 by relying on a forthcoming paper by Lancieri and Neto. Section 3.2 will consider modern remedies that have been suggested in the literature to deal with digital market infringements which will later play a role in Section 5 while determining the suitable remedies for the seven abuses listed in the introduction of this paper. Section 3.3 will consider the role of structural separation as a suitable remedy. Section 3.4 will consider he role of market investigations in engaging with digital market infringements. Section 3.5 will consider whether fines are an effective solution in some cases.

3.1 Working of competition authorities with regulatory authorities in digital markets

A competitive environment is one that is sought in most markets to prevent a monopoly situation. However, regulatory authorities are an essential body in many industries that ensure the sustainable functioning of that market by attempting to advance public interest, prevent market failure, and promote a competitive environment.[71] Regulation can be used as substitute for competition, a means for competition, or a stop-gap till a market can show that it can be competitive and does not need regulatory supervision.[72] Regulation can also have a negative impact on competition as firms may find their incentives to compete being taken away due to

[71] Paul Crampton, 'Striking the right balance between competition and regulation: The key is learning from our mistakes', 'APEC-OECD Co-operative Initiative on Regulatory Reform: Third Workshop,' Report, (16-17 October 2002) [13-26].
[72] ibid [27].

regulatory rules.[73] The Swedish Competition Authority's 2017 Report also contends on the basis of past literature that regulatory action might inhibit future entry.[74] Considering this, it might be ideal to have competition authorities and regulatory authorities play a joint role for the betterment of consumers and competition. The CMA is one of the competition authorities that plays an active role in coordinating with industrial regulators while considering competition law enforcement.[75] This is reflected in the formation of the Digital Regulation Cooperation Forum (DGCF) that includes the CMA, Information Commissioner's Office (ICO),[76] and the Office of Communication (Ofcom).[77] It also includes the Financial Conduct Authority (FCA)[78] as an observer.[79] The aim of this forum is to maintain competition and protect data rights of consumers through effective regulation of communication services.[80] Owing to the novelty of digital markets, regulators and competition authorities having a joint role in the assessment and remedy design process is important.

Lancieri and Neto suggest closer working of competition authorities with regulatory authorities (where there are regulatory authorities involved such as the EDPS in data markets) when it comes to identifying, designing and monitoring remedies due to the common ties between the two. While there have been numerous reports on digital competition and how dominant platforms can be dealt with, the lack of a structured framework to facilitate interplay between general competition law remedies and specific regulatory remedies is argued to be a reason for the lack of effectiveness of remedies by them.[81]

Lancieri and Neto suggest a two-level framework to deal with the errors of authorities when they may design overly narrow or overly broad remedies which may have underenforcement or overenforcement implications. The first level consists of a compounded error-cost approach when it comes to substantive remedy design. This involves evaluating how an infringement

[73] Swedish Agency for Economic and Regional Growth, 'Regulation and competition– A literature review, Report 0218', (March 2017).
[74] ibid, 12-13/24.
[75] Competition and Markets Authority, 'Regulated Industries: Guidance on concurrent application of competition law to regulated industries' (March 2014),
[76] The ICO upholds information rights in the public interest under the Department for Digital, Culture, Media & Sport, UK.
[77] The Ofcom is a UK Government approved regulatory body in charge of broadcasting, telecommunications and postal industries.
[78] The FCA is an independent financial regulatory body.
[79] Competition and Markets Authority, 'Digital Regulation Cooperation Forum: Plan of work for 2021 to 2022', Policy Paper, (10 March 2021).
[80] ibid.
[81] Filippo Lancieri and Caio Mario da Silva Pereira Neto, 'Designing Remedies for Digital Markets: The Interplay Between Antitrust and Regulation' (2021) Journal of Competition Law and Economics (forthcoming).

impacts welfare and how harmful it is to competition to a level of certainty before deciding to intervene by assessing the risks of overenforcement and underenforcement. While designing the remedies using the error-cost approach, they argue that regulatory and antitrust remedies need to be classified in terms of legal requirement, breadth, scope of intervention and ease of adaptation with assessment of whether a broad remedy leads to overenforcement such as a sectoral remedy or whether a narrow remedy leads to underenforcement such as forbidding tying in a particular case.[82]

The second level involves designing remedies by assessing the strengths and weaknesses of antitrust authorities and regulatory authorities. Antitrust authorities oversee a wide range of industries while regulatory authorities oversee a narrow set of industries. They argue for the breaking up of vertically integrated authorities for better identification, design and monitoring of remedies.[83] They argue for division of tasks for the three levels of remedy implementation between competition and regulatory authorities depending on the violation concerned by considering aspects such as legal mandates, technical expertise in dealing with the industry, risk of regulatory capture and administrative costs. Functional separation would be best practice in digital market cases as it would allow the authority that has expertise to weigh in more on either the enforcement or remedies. However, being legal authorities, consistency in practice is an aspect that would need to be dealt with primarily which would require clear delineation of the functions.

Regarding allocation of functions, Lancieri and Neto argue that violations and remedies relating to exclusive dealing, MFNs, tying and bundling could be identified, designed and monitored by competition authorities since they deal with exclusionary abuses which is primarily the mandate of competition authorities. Violations such as discriminatory conduct, self-preferencing, refusal to deal and data interoperability is argued to need constant interaction between both authorities as it requires a wide range for remedy implementation while also requiring specific industry knowledge.[84]

They argue for competition authorities to identify the violations and let regulatory authorities design the remedies and monitor them as they have both exclusionary and exploitative aspects involved. When it comes to violations of data processing, nudges and exploitative conduct by digital firms, they argue that regulatory authorities should be the primary body to deal with

[82] ibid 20-30.
[83] ibid 30-32.
[84] ibid 38-40.

identification, remedy design monitoring as in-depth technical analyses is required to assess exploitative harm to consumers which antitrust authorities lack. For all types of remedies, they argue that constant adaptation is required in order to make them effective.[85]

The framework developed for joint working of competition authorities and regulators by Lancieri and Neto with respect to decentralizing work depending on the function may allow better enforcement action and for effective remedies to be adopted. The suggestions made are unique ones which may be the best assessment method in coming to effective solutions when digital market infringements are concerned. Importantly, one of the major issues that a cross-institutional framework as suggested in this section can rectify is the lack of effectiveness of remedies that have been noticed in cases such as *Google Android* and G*oogle Shopping* mainly due to the Commission's lack of expertise in designing the most effective remedies in those cases. A firm like Google which will most likely be designated a gatekeeper under Article 3 of the DMA could be regulated under that regime itself. However, effectiveness of competition enforcement which allows to maintain effective competition in markets has been considered one of key aims to allow the application of competition law in regulated sectors.[86]

The implementation of the DMA may have been a sign of relief for competition law enforcement agencies in the EU as the breach of any obligations listed in Article 5 or 6 by designated gatekeepers under Article 3 DMA would allow the use of this complementary regime instead of evaluating using Article 101 or 102 TFEU whether certain conduct is abusive. Article 4 DMA allow the Commission to amend or repeal an earlier decision which allows it to capture any new action that a core platform firm might engage in as abusive. On the one hand, digital market abuse of dominance cases has not been dealt with effectively so far by the EU as is evidenced in the *Google Shopping* remedy. The powers in Article 4 DMA will allow for better identification of harms. On the other hand, this might allow the Commission to intrude into the day-to-day activities of digital platform firms and reduce their autonomy.

3.2 Modern remedies to deal with novel infringements: Some radical remedies

Data portability can be considered a remedy in digital markets such as social media platform markets where switching costs and network effects play a role regarding interoperability

[85] ibid 40-48.
[86] Niamh Dunne, 'The Role of Regulation in EU Competition Law Assessment' LSE Law, Society and Economy Working Papers 09/2021.

concerns. Graef suggests mandatory data portability as a remedy to allow easier switching between different platforms for users. A remedy such as this is argued to prevent social lock-ins.[87] She also suggests regulatory authorities to play a role in maintaining interoperability between different platforms as competition authorities can only impose an obligation.[88]

Schneider argues for mandatory data sharing to prevent data silos from restricting the free flow of information. Where data or information is indispensable for innovation and competition, she argues that in such cases the principles established in refusal to deal cases such as *Magill*[89] and *IMS Health*[90] can be applied to mandatory data sharing. The broadening of the scope of the essential facilities doctrine in *Microsoft* provides another justification for mandating data sharing in order to allow competitors to be able to compete with the dominant firm.[91] There are limitations regarding data sharing such as disincentivizing generation of large datasets due to mandatory sharing and also the danger of over enforcement. However, Schneider argues that using Article 102 TFEU along with the provisions of the GDPR in a strict manner will allow mandatory data sharing to be a possible remedy. There are hurdles in the interworking of the two departments as the purpose limitation under the GDPR may be contradictory to data sharing remedies. However, she argues that it may fall under legitimate interest as the data sharing allows innovation and competition to thrive in the market.[92] This seems to be a reasonable view to take as mandatory data sharing will help engage with dominant digital platforms' hold over personal data of consumers which may lead to smaller firms being provided the ability to compete with the platform. Consumer data would be protected under Article 6 GDPR in any case. Allowing sharing of the data between platforms allows consumers to access other platforms freely which is why this may indeed fall within legitimate interest under Article 6 GDPR.

Article 20 GDPR mandates data portability which includes the right to move personal data from one platform to another. Gormsen and Morales note that the right only extends to personal

[87] Inge Graef, 'Mandating portability and interoperability in online social networks: Regulatory and competition law issues in the European Union', (2015) 39(6) Telecommunications Policy 502, 502-514.
[88] ibid.
[89] Joined Cases C-241/91 P and C-242/91 *P RTE and ITP v Commission* [1995] ECR I-743. The cases dealt with refusal to license copyright and lists of lists of television programmes and the conduct was found to be abusive under Article 102 TFEU.
[90] Case C-418/01, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*. Case dealt with refusal to provide intellectual property (regional sales data) to another undertaking and was found to be abusive under Article 102 TFEU.
[91] Giulia Schneider, 'Designing Pro-Competitive Research Data Pools: Which EU Competition Remedies for Research Data Silos in Digital Markets?' (2020) 21 YARS 161, 170-175.
[92] ibid 176-182.

data and does not cover non-personal data.[93] In the case of social media platforms, consumers can benefit if they are able to transfer all data to a different platform.[94] For this to be useful for consumers, social media platforms ought to be interoperable.[95]

One reason for the ineffectiveness (or at least alleged ineffectiveness) of competition law remedies in digital markets is because they do not create a deterrent effect on the infringing dominant digital firm. In order to tackle infringements by dominant digital firms, competition authorities require the use of remedies that would create a long-lasting deterrent effect. With the need for a rethink on how designing remedies for digital markets takes place, Gal and Petit have formulated three untested radical remedies that could be used in digital markets. [96]

Gal and Petit suggest the use of mandatory sharing of algorithms to level the playing field between the dominant firm and other competing firms. Algorithms help firms in making predictive decisions more easily which would be a tedious human process. The sharing of algorithms that were involved in unlawful activities such as preventing rival firms from accessing data allows competition to be restored as it allows rivals to overcome the first mover advantages associated with digital markets.[97] Some of the problems associated with such sharing are reduction of incentives to innovate, delineating the exact part of the algorithm that was used for unlawful purposes and possible coordination between firms.[98] However, this might help solve the issue raised by Prufer and Schottmuller regarding innovation being stifled due to the lack of access to data for competitors which will in turn increase the quality of the services provided by zero-price platforms.[99]

One other issue that can arise is of firms colluding with each other and copying each other's business strategies which may be counter intuitive to making the market more competitive as this leads to a different type of competition issue. Firms may be able to set similar pricing algorithms that are able to exploit consumers and due to algorithmic sharing, consumers would not have the option to switch to a firm that does not engage in such exploitative behaviour.

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[93] Lisa Gormsen and JT Llanos, 'Facebook's Anticompetitive Lean in Strategies', (2019), Available at SSRN: https://ssrn.com/abstract=3400204.
[94] ibid 95.
[95] A Diker Vanberg and MB Ünver, 'The right to data portability in the GDPR and EU competition law: odd couple or dynamic duo?' (2017) 8(1) European Journal of Law and Technology. Their argument regarding data portability is that for it to be effective, there ought to be interoperability between different platforms.
[96] Michal Gal and Nicholas Petit, 'Radical Restorative Remedies for Digital Markets', (2021) 37(1, Berkeley Technology Law Journal (forthcoming) 1-10.
[97] ibid 16-18.
[98] ibid 19-21.
[99] Jens Prüfer and Christoph Schottmüller, 'Competing with Big Data', (2021) 69 Journal of Industrial Economics, 967, 992-94.

Ezrachi and Stucke highlight the need to consider algorithmic tacit collusion an emerging concern as it can go undetected.[100] With algorithm sharing, this can become a reality. While there may be a benefit in terms of more firms that are able to compete in the market due to newly acquired technologies and algorithms, the cost is that the same firms are now empowered to engage in collusive conduct. One way that such sharing can be justified is if it falls within the scope of Article 101(3) TFEU, though there are diverging opinions on how that may be applied.[101]

Gal and Petit also suggest subsidization of competitors as a remedy where the firm that is the closest competitor to the dominant firm is subsidized in order to be able to compete with the dominant firm and make the newly formed market competitive. The limitations are regarding choosing whom to subsidize and there not being immediate results in terms of the market becoming competitive while there is also the possibility of the subsidized firm replacing the more efficient dominant firm.[102] They also make the suggestion of temporary shutdowns where the infringing dominant firm is forced to shut down on a short-term basis in order to allow the rivals to gain a part of the market. The limitations are of short-term disruptions occurring to users, user opinion not being changed and shutdowns also being a costly process.[103]

The three remedies suggested by Gal and Petit have their limitations, but they may be more effective in dealing with dominant digital firms and create competition for the market along with a strong deterrent effect about abusing the dominance. At the same time these remedies could have unintended consequences that damage consumer welfare especially considering temporary shutdowns. This paper will consider the use of subsidization of the next best competitor in some of the remedies that will be proposed in Section 5.5.

3.3 Structural separation

One other remedy that is relevant when considering digital markets is that of structural separation. This refers to separating parts of the business that is found to have infringed Article 101 or 102 TFEU in accordance with Article 7 of Regulation 1/2003. Rigaud makes a comparison between the use of structural separation in Mergers and in abuse of dominance

[100] Ariel Ezrachi and Maurice E. Stucke, 'Sustainable and Unchallenged Algorithmic Tacit Collusion' (2020) 17 Northwestern Journal of Technology and Intellectual Property 217.
[101] Or Brook, 'Struggling With Article 101(3) Tfeu: Diverging Approaches Of The Commission, Eu Courts, And Five Competition Authorities', (2019) 56 (1) Common Market Law Review 121, 156.
[102] See Gal and Petit 24-30.
[103] ibid 30-34.

cases and argues that a suspected substantial lessening of competition is treated more fiercely than an already existing abuse of dominance.[104] When considering structural separation as a remedy in abuse of dominance cases, Article 7 of Reg. 1/2003 prevents its use until all possible behavioural remedies that are possible are considered unsuitable. Rigaud argues that this approach is not logically consistent as a behavioural remedy requires the competition authority to intrude into the practice of the firm and requires more burdensome permanent monitoring of the firm's practices thereby constraining market forces.[105]

A structural remedy on the other hand does not require constant monitoring and also has the ability to remove any incentive that the firm has to continue in its infringing manner. A structural remedy allows the elimination of the effects of an anti-competitive infringement carried out by a firm. Under the *Ufex* judgement,[106] the Commission is required to eliminate the effects of an infringement and not only put a stop to that infringement. [107] The requirement under Article 7 of Regulation 1/2003 is of a remedy that is proportionate to the harm committed and one that is effective in bringing the infringement to an end. Rigaud argues that it is immaterial whether the remedy is structural or behavioural if it is not effective. [108] He proposes that remedies be structured based on necessity, proportionality and effectiveness with the firm being able to choose between an equally effective behavioural or structural remedy if a case arises where there are two such remedies.[109] Article 9 of the Regulation 1/2003 allows a firm to choose commitments which can be accepted or rejected by the Commission, but no firm would actively choose to undertake an operational separation. The Commission can offer firms a behavioural or structural remedy themselves and leave it to the firm to decide which remedy to undertake like the process under Article 9.

This would not differ substantially when it comes to digital markets. The remedies in *Google Shopping* have been criticized for not having effectively dealt with the issue of exclusion of competitors as the remedy imposed only made competitor firms more invisible.[110] Marsden argues that even considering the current rules and practices around the use of Article 7 of

[104] Frank Maier-Rigaud, 'Behavioural versus Structural Remedies in EU Competition Law' in Philip Lowe, Mel Marquis and Giorgio Monti (eds.) *European Competition Law Annual 2013: Effective and Legitimate Enforcement of Competition Law* (Hart Publishing, 2016) 207-224.
[105] ibid.
[106] Case C-119/97, *P Union française de l'express (Ufex), formerly Syndicat française de l'express international (SFEI), DHL International and Service CRIE v Commission* [1999] ECR I-1341.
[107] ibid [88] and [94].
[108] See Rigaud 215.
[109] ibid 216-224.
[110] See Marsden.

Regulation 1/2003, a structural remedy may be considered proportionate and can effectively deal with the issue of exclusion of competitors. This is because the very structure of Google makes it likely that the infringement would be repeated in a different form unless the incentive to infringe is not taken away. This can be done by separating parts of the business which can bring the infringement and its effects to an end effectively.[111] This would be consistent with the holding in *Ufex* which requires the Commission to end the infringement effectively and end the distortive effect of the infringement.[112] The factual similarity in the two cases with respect to favouring the downstream subsidiary places the two in the same category of cases.

Structural separation can occur in many ways. Martin Cave suggest six levels of structural separation in the Telecommunications sector that are possible ranging from separating the accounting statements for the two entities to ownership separation.[113] The six levels described start from creating a separate unit within the same entity to operational separation which involves separating certain assets based on their purposes to separation of a mergers and directors for the two different entities to having completely different owners.[114] This can be used as a template when structural separation is considered in digital markets. The requirement would be further engagement with technical experts to ascertain the most suitable form of structural separation in a case involving a digital platform which may involve interaction with a sectoral regulator and the Digital Markets Act.

Cave argues that separation is the answer to questions involving discrimination carried out by an upstream incumbent by favouring its own downstream affiliate, but the form differs depending on whether the discrimination is price or non-price related.[115] In a case involving non-price discrimination of downstream competitors such as in the example of self-preferencing, he proposes a remedy that is based on operational separation to ensure equal treatment for both the firms' subsidiaries and other competitors.[116] Price discrimination that leads to excessive prices to certain downstream competitors can be solved by accounting separation as the excessive returns from certain transactions will show up in the accounts.[117]

[111] ibid.
[112] ibid.
[113] Martin Cave, 'Six Degrees of Separation- Operational Separation as a Remedy in European Telecommunications Regulation', (2006) 64 COMMUNICATIONS & STRATEGIES 89.
[114] ibid.
[115] ibid 91-92.
[116] ibid.
[117] ibid.

The example of the telecom market can be extended to online platforms as well considering the similarity in terms of network effects and economies of scale.[118]

This is a clear example of regulation being used to make sure that conduct by large digital platforms does not harm the market or consumers failing which competition law sanctions could be in place. This is like the DMA and DSA drafted by the EU. They can be used as complements to Articles 102 and 101 by being able to engage with digital markets in a more specific manner. The wide powers of the DMA under Article 4 where it can amend or repeal an earlier decision allows it to capture any new action that a core platform firm might engage in as abusive. On the one hand, digital market abuse of dominance cases has not been dealt with effectively so far by the EU as is evidenced in the *Google Shopping* remedy. The powers in Article 4 DMA will allow for better identification of harms. On the other hand, this might allow the Commission to intrude into the day-to-day activities of digital platform firms and reduce their autonomy.

Lancieri and Neto also suggest the joint working of regulatory and competition authorities while determining levels of structural remedies. Competition authorities oversee a wide range of industries while regulatory authorities oversee a narrow set of industries. They argue for the breaking up of vertically integrated authorities for better identification, design and monitoring of remedies.[119] They argue for division of tasks for the three levels of remedy implementation between competition and regulatory authorities depending on the violation concerned by considering aspects such as legal mandates, technical expertise in dealing with the industry, risk of regulatory capture and administrative costs. Functional separation would be best practice in digital market cases as it would allow the authority that has expertise to weigh in more on either the enforcement or remedies. However, being legal authorities, consistency in practice is an aspect that would need to be dealt with primarily which would require clear delineation of the functions. One other alternate method of dealing with digital market infringements is through market investigations which could allow in understanding the needs of specific digital markets.

3.4 Market Investigations

[118] See Ganesh (n 9).
[119] See Lancieri and Neto 30-32.

The case of *Google Shopping* is one of the primary examples of remedies requiring over reliance on the infringing firm to come up with suitable solutions. At OECD's Global Forum where Abuse of Dominance in Digital Markets was discussed, it was widely concurred by delegates from different Competition Law bodies from around the world that the effectiveness of remedies concerning digital platforms needs to be reassessed. The Forum concluded with agreement on the fact that there is a threat of over enforcement which needs to be considered while applying competition law to digital platform cases. However, it was discussed by Amelia Fletcher and a delegate from the BEUC regarding the application of behavioural economics and choice architecture to make remedies effective. This could be done by engaging with the different types of biases that consumers may have while they use the services of digital platforms.[120]

Fletcher proposes the use of market investigations in digital platforms as a complementary tool to competition law enforcement due to the limitations of competition law in areas such as abuse of dominance. She notes that market investigations may increase the scope by considering not just an ex-post evaluation, but also by restricting behaviour ex-ante.[121] In an example of the increase in scope for remedies, she presents that market investigation could potentially have extended the scope of the ruling in *Google Shopping* to other aspects of Google's business such as hotel search, job market search apart from just limiting it to online shopping which was the result of the competition law ruling.[122] Market investigations may also be able to achieve behavioural remedies on a broader level such as facilitating consumer control and choice as a result of imposing more transparency requirements.[123]

The CMA's Online Platforms and Digital Advertising Market Study is an example of an agency using market investigation to identify remedies that provide consumers more control such as choice over use of data, mandating interoperability, mandating data separation which are part of this Market Study's recommendations.[124] It also listed down behaviours that could weaken competition and harm both consumers and the market which could not have been possible from a purely ex-post evaluation of firm behaviour.[125] One of the aspects of the market investigation tool is that very specific sector regulators would also have to be involved in the process of

[120] OECD, Global Forum on Competition, Abuse of Dominance in digital platforms, DAF/COMP/GF(2020)8.
[121] Amelia Fletcher, 'Market Investigations for the Digital Platforms: Panacea or Complement?: Economist's Note' (2021) 12(1) Journal of European Competition law & Practice 44, 44-55.
[122] ibid 48.
[123] ibid 50.
[124] CMA, 'Online Platforms and Digital Advertising', (1 July 2020), Market Study Final Report.
[125] ibid 312-21.

determining remedies rather than a competition agency determining them due to the complexities involved in the different aspects involved in digital platforms such as interoperability, data sharing and algorithmic design. The global nature of large digital platforms firms and the inflexibility of remedy design involved with market investigations would it make for using the tool a hard task in digital markets.[126]

Using the lessons learnt from the UK's market Investigation tools, Marsden and Podzun suggest the use of market investigation at an EU level for digital markets by considering a framework that consists of transparency, a statutory time limit, and independence in decision-making.[127] They suggest this as a complement to the competition law to correct the failures of markets through the lens of market specialists rather than competition experts.[128] This suggestion allows to engage with the firms that may come within the scope of Article 3 DMA who may be able to influence their respective markets significantly.

Article 16 to 19 of the DMA allows the Commission to conduct a market investigation in cases where a firm may seem to possess the characteristics of a core platform which allows the Commission to designate them accordingly in order to bring them within the ambit of the DMA. The market investigation tool can also be used to investigate infringements of Articles 5 and 6 of the DMA or non-compliance by gatekeeper firms based on which the Commission can then impose behavioural or structural remedies. These wide powers in the proposed DMA would allow the Commission to thoroughly scrutinize the activities of large platform firms. On the other hand, such wide powers can also have an over-reaching effect and disincentivize growth which may reduce consumer incentives in the long run.

3.5 Imposition of fines: Analysis from past digital market cases

Under Article 23(2) Reg. 1/2003, the Commission can impose fines on undertaking where it deems fit of up to 10 % total turnover from the previous year. It is noted in the Commission's Guidance on setting fines that the amount of fine may be increased by up to 100 % if the

[126] Amelia Fletcher 'Market Investigations for the Digital Platforms: Panacea or Complement?: Economist's Note' (2021) 12(1) Journal of European Competition law & Practice 44, 52-53.
[127] Philip Marsden and Rupprecht Podzun'Restoring Balance to Digital Competition – Sensible Rules, Effective Enforcement' (2020) Konrad-Adenauer-Stiftung 59-62.
[128] ibid 77-78.

undertaking persists in its abusive conduct.[129] This shows that there is some amount of flexibility with regard to imposition of fines. One interesting part within the guidelines is that the Commission may also increase fines for deterrence when concerning large firms.[130] The Commission has imposed higher fines where the duration of the abusive conduct has been longer.[131]

The imposition of the 2.42 billion Euro fine in the *Google Shopping* case suggests asking the question if fines may also be a suitable way of deterring abusive conduct by dominant platform firms. The Commission's unfettered discretion with respect to imposition of fines has been noted to have been condoned by EU Courts as well.[132] The Commission can be noted to choose the percentage increase in fines based on a certain methodology when past cases are referred to.[133] In some cases such as *Microsoft* and *Intel*, Dethmers and Engelen note that the Commission multiplied the initial fine and then went on to increase it based on the duration of the abuse.[134]

Volmer and Helmdach also noted that the use of competition law over the GDPR (limit on fines is up to 4% total turnover) is beneficial to issue higher fines.[135] The DMA resolves this issue as fines may be imposed of up to 10 percent total turnover. The purpose of fines in EU competition law is not to recover ill-gotten gains due to the abuse alone but also to deter large firms from engaging in certain actions. In digital platform market abuses, fines are only bound to increase as has been seen in the *Google Android* case where a fine of 4.34 billion Euros was imposed.[136] The case initiated against Meta/Facebook by Gormsen can be seen to be motivated by the imposition of such fines as the suit asks for a fine (as damages) rather than any other behavioural remedy.[137]

Perhaps, the use of fines can act as a suitable deterrent in how digital platform firms choose to organise their future conduct. The approach in the US is one that is often accompanied by fines

[129] European Commission, 'Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003', (2006/C 210/02) [27].
[130] ibid [30-31].
[131] ibid [5].
[132] Frances Dethmers and Heleen Engelen, 'Fines under Article 102 of the Treaty on the Functioning of the European Union', (2011) 2 European Competition Law Review 86, 98.
[133] 10% increase per year of infringement.
[134] See Dethmers and Engelen 87-88.
[135] See MN Volmar and KO Helmdach 'Protecting consumers and their data through competition law? Rethinking abuse of dominance in light of the Federal Cartel Office's Facebook investigation' (2018) 14(2-3) European Competition Journal 195.
[136] European Commission, 'Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine', Press Release, (18 July 2018).
[137] *Dr Liza Lovdahl Gormsen v Meta Platforms,* Inc. and Others, CASE NO. 1433/7/7/22.

in private lawsuits. Interestingly, the highest fine imposed in the US ($925 Million in Citicorp) so far is still lower than many of the fines imposed in the EU.[138] Article 30 DMA allows fines of up to 10 percent worldwide turnover. This removes the need to consider the GDPR and Article 102 TFEU jointly as the means to impose a higher fine have already been brought into force through the DMA. However, if a firm were to be dominant but not within the scope of Article 3 DMA, then such joint usage of legislations may still be warranted. This leads the paper to Section 5.5 which contributes to the literature on digital market remedies by considering remedies for seven infringements in a systematic manner by using a cost-benefit framework.

Section 4- Remedies to deal with particular infringements

This section of the paper brings together all the substantive content covered in this thesis. It will discuss how particular infringements can be dealt with using competition law remedies or other mechanisms. Table 3 consists of seven different types of competition law infringements that are relevant to digital markets. This section will discuss how these infringements have been dealt with and whether they can be dealt with in a better manner using alternate remedies discussed in the previous section.

The section will also consider whether the DMA could be the legislation to be used to deal with the infringement or whether competition law remedies are the right tool. The parallel working of competition law and the DMA to deal with the infringements will also be considered. Each of the infringements and the applicable remedies will be discussed using four steps

1) The first one will contextualize the infringement and look at examples of its occurrence currently or consider how it might occur.

2) The second step will consider the applicable remedies to that infringement including the remedy/ approach in past competition law cases that may have dealt with the infringement and consider whether the DMA can play a role by itself or with competition law.

[138] US DOJ, 'SHERMAN ACT VIOLATIONS RESULTING IN CRIMINAL FINES & PENALTIES OF $10 MILLION OR MORE', https://www.justice.gov/atr/sherman-act-violations-yielding-corporate-fine-10-million-or-more.

3) The third step will involve looking at the benefits of the remedies considered in the second step.

4) The final step will consider the costs of the remedy and weigh them with the benefits to see whether the remedy that is identified would be effective.

The infringements discussed in this paper have been discussed in the previous substantive papers. The ones relating to tying and data portability have been discussed to a lesser extent, but are important lessons that need to be learnt in relation to structuring of digital market remedies justifying their inclusion in this paper.

Table 3: Digital market infringements and remedies

INFRINGEMENT	REMEDY
1. EXCESSIVE DATA COLLECTION AND IMPOSING UNFAIR TRADING CONDITIONS SUCH AS UNCLEAR DATA EXTRACTION POLICIES	Excessive data collection violates can be prevented using Article 5(2) DMA which is a result of the joint working of Article 102 TFEU and data and consumer protection legislations. Double opt-in can be an effective remedy.
2. SELF-PREFERENCING: PLACING COMPETING FIRMS AT A DISADVANTAGE	The *Google Shopping* decision can be used as a template in leading enforcement action the infringement. With respect to the remedy, consultation with industry specialists that work in algorithms is vital for an effective remedy as previous works has suggested that the remedy in *Google Shopping* is ineffective.[139] Operational separation is a possible option.
3. EXPLOITING CONSUMERS BY PROVIDING UNAUTHENTIC RESULTS IN RETURN FOR COLLECTING INFORMATION ON THEIR PREFERENCES	Can invoke Article 102(a) of the TFEU with consumer protection authorities playing a role in designing an appropriate remedy. Relates back to the *Google Shopping* case where the competition law angle to the case was a purely exclusionary one. The limitation of competition law authorities to deal with exploitative abuses and come up with ideal remedies can be solved by working with consumer protection authorities.

[139] See Marsden.

4. CROSS-SUBSIDIZING BY A TWO-SIDED PLATFORM WHICH AMOUNTS TO PREDATORY PRICING	The remedy in this case would be complicated considering that the current test to detect predatory pricing in digital platforms may not be as effective.[140] Ideal remedy would be compensation being provided to the smaller firms that were forced to exit the market.[141] A radical remedy could be to separate the firm if there are high concerns relating to foreclosure of competition.
5. FIRST-DEGREE PRICE OR PERFECT DISCRIMINATION THROUGH PRICE PERSONALIZATION	Requires close interaction of competition law and other legislations as such as Anti-Discrimination law and consume protection legislations. Requires economic analysis to come up with appropriate remedy as price discrimination has differing effects on welfare.
6. PREVENTING DATA PORTABILITY AND DATA SHARING BETWEEN DIFFERENT PLATFORMS	Mandating data portability after consultation with data protection authorities can help bring back competition. Ex- Social media markets requiring mandatory data portability to allow consumers to easily switch to other platforms.
7. TYING ESSENTIAL INPUTS WITH OTHER PRODUCTS	The *Microsoft* case can be used as a template. Competition authorities can come up with the ideal remedy but may require consultation with industry regulators in case technical aspects are involved. Example- Using technical experts to consider whether a dominant digital platform firm cannot sell its products separately.

[140] See Ganesh (n 9).
[141] See Dethmers and Engelen (n 935) 89. Predatory pricing cases have been dealt with severe fines.

4.1 Excessive data collection and unfair trading conditions in digital markets

Infringement- This infringement concerns online platforms that collect consumer data in return for providing their services such as social media platforms like Facebook, Twitter and Instagram. The infringement concerns collection of data from users without active consent of users such as in the case of third-party tracking where a site that is not the one that is being used by the user collects data on the user's preferences regarding their web search preferences. The personal data of consumers is used by the social media platform firms to direct relevant advertisements to the consumers and is sold to third-party firms which pay a monetary sum to the platform. In order to view the content provided on the platform and to be able to connect to other users, consumers pay by parting with their data and by providing their attention to view advertisements. The Infringement occurs when the consumers are provided 'take-it-or-leave-it' options by the firm when it comes to data sharing in addition to complicated privacy policies provided by the platforms that restrict the consumer's ability to know how much data they are sharing with the platform. The German case of *Facebook* is one of the only cases to deal with this issue so far. In the case, Facebook was found to have abused its dominance by engaging in third-party tracking by embedding cookies on user devices and imposing a take-it-or-leave it situation for users by the Bundeskartellamt.[142] The unsuccessful class action case initiated in the UK by Liza Gormsen against Meta/Facebook has a similar set of facts to the German case.[143] The remedy sought in that case were damages to the whole class rather than a behavioural remedy. The CJEU has also confirmed that such an infringement may be brought by a competition authority and that use of data protection legislations in an Article 102 TFEU case as would be in a case relating to excessive data collection by a dominant digital platform firm can be possible.[144]

Remedy- The decision of the German Supreme Court, which is so far the final decision by a court in the case of *Facebook Germany* prohibited Facebook from processing consumer data

[142] Bundeskartellamt, decision no. B6-22/16 of Feb. 6, 2019 (Henceforth, *Facebook* Bundeskartellamt Decision).
[143] See *Gormsen v. Meta.*
[144] Case C-252/21, Meta Platforms v Bundeskartellamt, EU:C:2023:537 (Henceforth, *Facebook Germany* CJEU Decision.

without additional consent when it came to data outside the website.[145] This allowed the Bundeskartellamt to come to its finding that Facebook's conduct amounted to abuse of market power as it encroached upon fundamental rights of consumers as the lack of choice leads to infringing of their right to self-determination.[146] The GDPR is another tool that was referred to in the case and can be used in data extraction cases along with the DMA.

Article 5(2) of the DMA prevents processing, combining, cross-use of personal data without the active consent of the end users under Article 5-7 GDPR. Article 5 of the GDPR limits the acquisition of data to what is necessary in relation to the purpose for which it is processed. This provision limits data extraction from third-party sources where it may not be deemed necessary. For data to be lawfully processed, Article 6 of the GDPR needs to be complied with while active user consent is a must under Article 7 of the GDPR. Consumer protection legislations such as Unfair Commercial Practices Directive and the Unfair Contract Terms Directive seek to protect consumers from misleading actions of firms and from unfair contract terms by mouth or writing respectively, which are relevant in the case of unclear data collection policies. One of the remedies that has been suggested is the use of a double opt-in policy which makes sure that consumers are informed of how much data they are providing to the firm.[147]

The *Facebook* case and Article 5(2) DMA make it clear that the main remedy that could be suggested in this case is to prevent gatekeeper firms from extracting consumer data unless the conditions stated above have been complied with. A monetary penalty may be possible as demanded also in the *Gormsen v. Meta* case (though it was rejected). Another remedy is to provide consumers the option to pay to use the service in case they do not wish to share their data. This is set to be available to consumers in the near future.[148]

Benefits of remedy- The use of competition law, consumer protection law and data protection law together allow aspects such as unfairness, transparency and proportionality to be considered from a more holistic approach as all three facets of the law have similar principles and uphold consumer protection as one of their main goals. The emergence of the DMA makes it easier to deal with such infringements (assuming the firm is designated as a gatekeeper which brings it under the purview of the DMA regime) as Article 5(2) of the Act refers exactly to this

[145] See *Facebook* Bundeskartellamt case. In the case, the Bundeskartellamt and the Court relied on Section 19 of the German Competition Act (GWB) which is a power provided to National Competition Authorities (NCAs) under Article 3 of Regulation 1/2003. Under Article 3(2), NCAs can even implement stricter national laws.
[146] See *Facebook* Bundeskartellamt [539].
[147] See Economides and Lianos.
[148] Geoffrey Fowler, Facebook's new $12 fee is straight out of Don Corleone's playbook, Washington Post, (17 March 2023), https://www.washingtonpost.com/technology/2023/02/23/facebook-instagram-fee/.

infringement removing any need to consider interplay between the different laws which may be more tedious. As was seen in the *Facebook Germany* case, the approach of equating a consumer protection or data protection infringement to an unfair condition under Article 102(a) TFEU would allow the competition authority to pass a fine of up to 10 percent of annual revenue which is higher than the 4 percent under the GDPR while it is significantly less under consumer protection legislations.[149] However, the DMA allows the Commission to impose a fine of up to 10 percent as well. The DMA can be seen to have also included data extraction cases within Article 5(2).

The remedy relating to a double opt-in seems to be a valid one that will allow consumers to make the sovereign decision of allowing the firm to process, combine or cross-use their data. It may be possible to also issue a fine for the sake of deterrence which is within the powers of the Commission and has also been imposed in past cases.[150]

Costs of remedy- The High Court of Dusseldorf's view in the case of *Facebook Germany* was that there was no damage to competition as users suffered no financial loss and that there was no causality between the market power of Facebook and its privacy and data collection policies.[151] The High Court also opined that consent for data combination from users was obtained freely in return for using the platform's services as users had an option of not using the services of the platform. These reasons made the Court view the case as one that does not concern competition law mainly because there is no relation between the dominance of Facebook and its practices with regard to data collection.

Consumer data is an essential requirement for the existence of social media platforms and them providing their services for no monetary cost. A decision that prohibits collection of consumer data may lead to quality deterioration of the platform's services and may lead to the platform charging consumers to use their services.[152] While it is important that consumers do not get exploited by platforms, remedies requiring firms to limit data collection may lead to a move away from how these firms function which may not be beneficial to consumers. One of the limitations of the DMA is its wide scope and while the use of Article 5(2) will prevent unfair

[149] See Volmer and Helmdach.
[150] See Section 4.5.
[151] OLG Dusseldorf, Order of Aug. 26, 2019, Case VI-Kart 1/19 (V).
[152] See Justus Haucap 'Data Protection and Antitrust: New Types of Abuse Cases? An Economist's view in light of the German Facebook Decision', (2019) CPI Antitrust Chronicle 1.

data collection, it may also lead to the various benefits to consumers in terms of free services being eliminated.

It may be hard to calculate the fine based on the level of harm that has occurred due to data not being valued as a unit of currency. Fining a firm may also lead to disincentivizing innovation rather than promoting it. Overall, a strong disclosure regime consisting of a double opt-in seems to be the most effective remedy in this case.

4.2 Self-preferencing

Infringement- This infringement refers to a case where a dominant entity promotes its own products over those of competitors in the downstream market by leveraging its power or dominance in the first market. When concerning digital platforms, the case of *Google Shopping* has contextualized this infringement very clearly. When a dominant firm or core platform engages in promoting its own brand more than those of rival brands, a case of self-preferencing occurs as its downstream competitors are unable to access the upstream service under equal terms.[153] The main concern here is that the dominant firm can exclude smaller rivals from competing with its own brand due its ownership of the platform. In the case of *Google Shopping*, the Commission noted that evidence showed that the results that were shown higher on Google's search results received far more clicks and views from consumers which is a significant setback for smaller firms on Google's platform that are trying to establish their brands. The main issue in the case of self-preferencing is that the results that may seem better ones when ranking is carried out in an organic manner do not appear on the top. The Commission showed that consumers click on the top results most of them time showing a harm to competition in this case.[154]

Remedy- The remedy in *Google Shopping* can be considered a template for remedies concerning cases related to self-preferencing which can lead to discussion on the effectiveness of such a remedy for an infringement of this sort. The Commission fined Google 2.4 billion Euros as they considered it a grave infringement and ordered Google to stop the infringement by taking measures to make the process of allotting search rankings uniform for rival

[153] Case T-612/17, Google LLC v. Commission ECLI:EU:T:2021:763 (Henceforth, *Google Shopping* GC Decision) [155].
[154] ibid [336-43].

comparison-shopping services and its own shopping services. In the case, an auction-based mechanism was accepted as an appropriate remedy which would treat every bidder equally.[155]

Under the DMA regime, Article 6(5) of the DMA obliges a core platform form refraining from favouring its own products or those of its subsidiaries and apply fair and non-discriminatory conditions to the ranking process. This provision can be seen to be a direct result of the *Google Shopping* case. This is also similar to an abuse under Article 102(c) TFEU under the *MEO* criteria which was not considered in *Google Shopping*.[156]

A different remedy that can be imposed in this case is of separating the different operational units of Google that are involved in the process of allotting and bidding search places from those that are direct subsidiaries of it competing with other downstream competitors. This will prevent Google from being able to discriminate between its own brand and other brands.[157] While a full divestiture may not be needed in a case such as this, physical barriers can be set up between the two units of business which allowed the anti-competitive action.

Benefits of remedy- In the case of *Google* Shopping, it was noted that user traffic is important for comparison shopping services as it allows the firms to generate reviews and allows them to know about the relevance of products.[158] It was found that the first three clicks accounted for up to 65 percent of clicks on desktop and 70 percent on mobile devices while the top ten results account for all 95 percent of clicks.[159] This shows the importance of being placed higher on the search results. The remedy imposed on Google regarding making the process of allocation of search ranking fair and non-discriminatory seems to be proportionate to the response while the fine of 2.4 billion Euros creates a deterrent effect. If designated as a gatekeeper under Article 3 DMA, the activities of a search engine like Google can be kept under check using Article 6(5) of the DMA in future cases of self-preferencing.

Another remedy that could be imposed in the case of self-preferencing is a structural one where the incentives to engage in the infringement are taken away. Such a remedy can makes sure that the dominant firm does not have the opportunity to engage in committing the infringement

[155] ibid.
[156] Elias Deutscher 'Google shopping and the quest for a legal test for self-preferencing under Article 102 TFEU' (2022) 6(3) European Papers, 1345.
[157] See Cave.
[158] Case AT.39740 Google Search (Shopping)[444-453].
[159] Competition and Markets Authority, 'Online Search: Consumer and Firm Behaviour, Review of the existing literature' (7 April 2017) [1.6(c)]; See also *Google Shopping* Commission Decision [455].

again in a different form and does not require constant supervision as is the case with the remedy that was accepted in *Google Shopping*.[160]

Costs of remedy- While that may seem to be an infringement, there is a shift in the logic used when considering other markets such as supermarkets where the supermarket places its own products at more visible places than those of competitors. In that case, the dominance of the supermarkets is not questioned (though there is more competition in the supermarket sector),[161] and they can place their products at better locations than those of competitors. There are also no clear reasons regarding the different feeling for a consumer when they view a product at a supermarket compared to viewing one in a website. In the case of a website and a supermarket, the reason that a consumer would choose to buy the brand's own product compared to those of a competitor may be because there are clear benefits in terms of a lower price or in terms of better quality. It may be possible that competition authorities allow online platforms such as Google to engage in self-preferencing as they do in the case of supermarkets if there are more able competitors in the market

Another issue that arose as a result of the remedy is a question regarding its effectiveness. It was even admitted by the Commission that traffic to rival comparison shopping services did not occur but rather made rival services even more invisible as discussed earlier in this paper.[162] From a consumer viewpoint, the BEUC condemned the decision of the Commission to accept the auction-based mechanism as a suitable remedy in the case as there is a possibility of impartial results still being shown to consumers since the auction-based remedy would grant the highest bidder with the higher search ranking rather than the most relevant result being shown higher.[163] A structural remedy may be more effective than this remedy, but the implementation of a structural remedy is not an aspect that has been considered in the past and Article 16 of the DMA also maintains the status quo where behavioural remedies are preferred over structural ones and only the failure of behavioural remedies may allow for a structural remedy. Even if a structural remedy is considered, it would be hard to justify why such a remedy is required in the case of an online platform firm and not in the case of physical

[160] This has been further explained in Section 2.3 of this Paper. See also Rigaud; See also Marsden.
[161] Statista, 'Leading grocery retailers ranked by market share in Europe in 2017', https://www.statista.com/statistics/1102477/leading-retailers-by-market-share-in-europe/.
[162] See Section 2.3 of the paper.
[163] BEUC, 'Re.: Google case: Consumer concerns on auction-based model for shopping services', Ref.: BEUC-X-2017-098, (21 September 2017).

supermarkets even though both engage in the same practice but only the former's actions are brought under competition law scrutiny.

4.3 Unauthentic search results

Infringement- This infringement concerns dominant online search engines providing unauthentic results in return for searches carried out on their website of a dominant firm which may amount to an exploitative abuse under Article 102(a) TFEU as was introduced in Paper 3. In the *Google Shopping* case, one aspect that was not dealt with was of consumers providing information regarding their preferences to the firm but getting results that may not be genuine in return. As is the case with competition law in general, an exclusionary harm once shown supersedes the exploitative one caused in the case as competition authorities mainly concern themselves with exclusionary harms more than exploitative ones. However, in a case such as this one, there are both types of harms occurring which ought to be considered in the assessment.[164]

The harm in such a case is similar to the harm caused due to deception or misleading actions of a dominant firm. In the case of a search engine, the consumer assumes that they are provided valid results which allow them to make a choice based on the different options provided to them. Unauthentic results lead to consumers making a manipulated choice which can also be considered an infringement under Article 102(a) of the TFEU in addition to other consumer protection Directives also being invoked. The consumer also provides the online firm with their information by virtue of having searched for something and is provided unfair results as a result of self-preferencing by the online firm. This can also amount to an unfair pricing abuse under Article 102(a) TFEU if consumer data can be quantified in terms of price as suggested in Gormsen's suit against Meta/Facebook.[165]

Remedy- Since the infringement deals with deceptions and misleading actions, Article 6(2) of the Unfair Commercial Practices Directive can be invoked which deals with misleading actions

[164] Pinar Akman, *The Concept of Abuse in EU Competition Law: Law and Economic Approaches* (Hart Publishing, London, 2012) 218-20. Akman argues that for an exploitative harm to be considered an exclusionary harm should also be shown.
[165] See *Gormsen v. Meta*.

by businesses. Article 5(1)(a) of the GDPR deal with lawfulness and transparency. In a case where personal data is obtained and unauthentic results are provided in return, the case can be considered one where data has been obtained unlawfully. Similarly, Article 6(1)(d) of the GDPR stipulates that data processing shall be lawful only when it is in the interest of the data subject. In the case of unauthentic results, this is not the case. These can be considered unfair conditions under Article 102(a) TFEU which can involve assessment from the Commission as past cases of unfair trading condition have allowed for a condition to be considered unfair when there has been breach of a different facet of the law.[166] A suitable remedy can be to impose a stop order and either compensate users or for a fine to be imposed under Article 23 of Regulation 1/2003. In a more recent case law, the French Competition Authority ordered Google to negotiate with press publishers for remuneration for publishing their content as they held that denying it would be an unfair condition.[167] A similar remedy can be imposed in the case of unauthentic search results where Google can be ordered to provide complete information regarding the process of placement of search results.

To make the search engine market more competitive, Argenton and Prufer and suggested that all search engines disclose their data on consumer clicking behaviour which might help increase the quality of search engines by changing the market structure from a monopoly to a competitive oligopoly.[168] This could help in furthering innovation in search engine markets.

Benefits of remedy- EU Competition law cases relating to exclusionary harms outweigh cases that deal with exploitative ones as there is a tendency to invoke competition law only when other business users are harmed rather than when end consumers are harmed. In a case concerning misleading actions by firms, the role for competition law is to prevent a dominant firm from further entrenching their dominance. By using consumer law, data protection and competition law together, the economic use or misuse of data can be considered from a wider viewpoint. This can assist in designing the ideal remedy on a case-by-case basis.

Disclosing data on consumer behaviour would lead to other firs being able to compete with the current dominant search engine firm (Google). This is similar to using the essential facilities

[166] See *SABAM*; See also *GEMA.* It was held in both cases that abuse copyright clauses would be considered an unfair trading condition.
[167] B Spitz, 'Press Publishers' Right: the French Competition Authority orders Google to negotiate with the publishers', (Kluwer Copyright Blog, 14 April 2020), http://copyrightblog.kluweriplaw.com/2020/04/14/press-publishers-right-the-french-competition-authority-orders-google-to-negotiate-with-the-publishers/.
[168] Cedric Argenton and Jens Prufer 'Search engine competition with network externalities' (2012) 8(1) Journal of Competition Law and Economics 73.

doctrine with the goal of increasing search quality for end users. This is however achieved as a result of increase in competition and a change to the market structure.

Costs of remedy- One concern for competition law remedies to play a role in cases concerning deception is the link to the infringing act and the dominance of the firm. Using competition law only to be able to create a higher deterring effect through a higher fine may not seem logical. Instead, the possibility of imposing higher fines to consumer protection violations can be addressed separately without involving competition law. The case of unauthentic results may also be contested on grounds of whether they are unauthentic as the issue also deals with whether a dominant platform can place its own results in better positions than those of competitors. The lack of clarity regarding why platforms are different from supermarkets or other similar markets where dominant firms can place their own products at more favourable places than those of competitors is one reason that leads to more questions regarding self-preferencing.

Though the application of the essential facilities doctrine may be advised, EU Courts have rejected such application so far and chosen to apply a new criterion (no economic sense test) as there is no refusal to supply which is inherent to the essential facilities doctrine according to the General Court.[169] Another issue is regarding sharing of consumer data which may lead to breach of privacy. Therefore, even if search engines were to share data on consumer behaviour, data of individual users needs to be omitted as that may lead to exploitative outcomes.[170]

4.4 Cross-subsidizing between different sides: Predatory pricing

Infringement- Predatory pricing occurs when a dominant firm charges a price that is below a measure of cost of the product or service. In brick-and-mortar markets which are usually characterized by a seller selling a product or service to a buyer, finding a predatory price is more straightforward as it only requires an assessment of the price and cost. In digital markets, the emergence of platforms has made this process more complex due to the multiple sides involved in the market. A platform engages in predatory pricing in digital markets usually by charging below cost to one side of the market (usually the end user side) while subsidizing the losses from another side (usually the intermediate seller side). An example of predatory pricing

[169] See *Google Shopping* GC Decision.
[170] See Argenton and Prufer 99.

concerning a platform market is where a platform charges one side a low to no price such as in the case of online search, while charging advertisers a price that subsidizes the price charged on the other side. The assessment of harm that is caused as a result of a dominant entity engaging in predatory pricing differs from jurisdiction to jurisdiction as some jurisdictions like the US prefer a higher standard of proof and require recoupment of prices at a later stage to be shown while in the EU, the Commission does not require recoupment to be shown.[171] A past paper by the author proposed a new test to assess predatory pricing in the EU by considering the use of LRAIC as the measurement of cost rather than AVC to find a presumption of abuse in the case of platform firms that come under the scope of Article 3 DMA.[172]

Remedy- As far as remedies in the EU go, the most recent case concerning predatory pricing was of *Qualcomm*, where a chip manufacturer was fined 242 million Euros for selling its chipsets below cost with the aim of forcing its competitors out of the market which was 1.27 percent of the firm's turnover from the previous financial year.[173] The fine was imposed to deter similar anti-competitive practices from occurring in the future. The fine can also be used to subsidize the next best competitors in the market. A structural remedy may also be imposed in case there are high concerns regarding foreclosure of competition. This could be done by joint working of the industrial experts and competition law authorities similar to the case of *Severn Trent* where a divestiture of operations was accepted by the Regulator, Ofwat.[174]

Benefits of remedy- Firms within the scope of Article 3 DMA have significant influence over their respective markets. The element of choice is important for the long-term benefit of consumers and the market which cannot be substituted by short term price cuts that lead to elimination of competition.[175] A fine that subsidizes competitors who may have been eliminated or harmed due to cross-subsidization by a dominant platform in a predatory manner will allow competition to be restored in the market. The aim of the DMA has been to make markets more contestable. Imposing a fine may deter a firm from not engaging in predatory pricing, but using the fine to improve the quality of a competitor may be more beneficial. A

[171] Contrast the US case of *Brooke Group v Brown and Williamson Tobacco Co. (1993)* with the EU case of *AKZO v Commission*.
[172] See Ganesh (n 9).
[173] EU Commission Press Release, Antitrust: Commission fines US chipmaker Qualcomm €242 million for engaging in predatory pricing, 18 July 2019.
[174] OFWAT, Decision to accept binding commitments from Severn Trent PLC, Severn Trent Water Limited and Severn Trent Laboratories Limited, (17 January 2013).
[175] See Lina Khan.

structural remedy can be imposed if competition authorities can work with industrial digital market experts who would be able to suggest the best method of operational divestiture.

Costs of remedy- The main cost of applying competition law to prohibit firms from offering lower prices that may be below cost is that consumers will end up paying higher prices. If the goal of competition law is consumer welfare, then the benefits to consumers in terms of lower prices must be weighed against the removal of competitors who may not have been as efficient as the dominant firm that was offering lower prices. In the case of a firm like Amazon, the ability to price below the price offered by other firms is also a result of the firm being able to cut its costs due to the increase in size. This can be beneficial to consumers as well as force other firms to become more innovative to compete against the more efficient dominant firm. Subsidizing competitors will have repercussions for innovation and dominant firms attempting to initiate conduct that may have benefits to end users.

Overall, finding of an abuse under the proposed test allows a core platform firm to provide an objective justification to show efficiencies arising out of the conduct such as in the case of *Bottin Cartographes*.[176] This shows that firms that price below overall LRAIC do not have a competitive intent which justifies the imposition of a fine. A structural remedy can be hard to implement and may not be directly relevant or proportionate to pricing below cost abuses.

4.5 First-degree or perfect Price Discrimination

Infringement- Personalized pricing refers to price discriminating between consumers based on their personal data. There are distributional benefits that arise from personalized pricing such as more consumers being able to afford a particular product.[177] While there are many benefits that consumers gain from personalized pricing, one of the aspects of concern is that it leads to dominant firms having the ability to engage in First-Degree price discrimination. This refers to pricing exactly at the maximum willingness to pay of a consumer based on information shared by the consumer. By engaging in this, a firm would be able to appropriate all the consumer surplus. While this is possible in theory, it is not possible in practice currently as firms do not have such accurate information on the WTP of consumers that they will be able

[176] See *Bottin v. Google*.
[177] Christopher Townley, Eric Morrison and Karen Yeung, 'Big Data and Personalised Price Discrimination in EU Competition Law', King's College London Law School, Research Paper No. 2017-38.

to price discriminate perfectly. However, there are concerns that the use of algorithms will allow perfect price discrimination to occur in the future unless there are steps taken to prevent this.[178] While this can still be beneficial, there is a possibility of all the consumer welfare being expropriated by the price discriminating firm.

Remedy- Article 102(c) TFEU can be used in cases relating to price discrimination that may seem to harm end users and intermediate customers.[179] However, there are no cases concerning digital platform firms that deal with personalized pricing as a competition law abuse. Most of the non-platform cases also deal with intermediate customers and not end users which makes its application to find suitable remedies in digital markets even harder even though such application can be possible under Article 102(c) TFEU.[180] In addition to that, the ambiguous effects of personalized pricing on end users makes the application of competition law even tougher as it is hard to show an increase or decrease in consumer welfare.

However, Consumer Protection such as Unfair Commercial Practices Directive deal with preventing harm to vulnerable consumers and with misleading actions. These can be relevant in the case of personalized pricing while Anti-Discrimination Directives such as the Race Directive[181] and Gender Directive[182] provide blanket bans on discrimination when concerning certain criteria. The data minimisation principle under Article 5 of the GDPR can be inferred to mean that it prevents data usage for activities such as price personalization unless the user actively consents for it. Under Article 22 of the GDPR, the end user may be able to contest a decision in case they feel that their data has been used to their detriment.

Article 6(2) DMA prohibits a dominant firm from using data not publicly available. This refers to not using the personal data of users unless it is explicitly provided to the platform. They are required to refrain from using data that may be generated through activities on the platform by end users. This provision seems to tackle the use of big data towards exploitative ends which may include perfect price discrimination. Article 5(2) DMA also requires firms to refrain from combining data from different sources unless the user actively consents to such use which is another provision that can be used to prevent firms from perfectly price discriminating. These

[178] See Ezrachi and Stucke 485-492.
[179] See Townley et al.
[180] See *1998 Football World Cup* case. This is one of the very few end user price discrimination cases.
[181] Council Directive 2000/43/EC of 29 June 2000.
[182] Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006.

two provisions of the proposed DMA could be relied upon along with Article 22 of the GDPR in order to deal with instances of price personalization that may seem harmful to consumers.

A possible remedy to allow the positive effects of price personalization to take place while preventing certain types of price discrimination can be achieved by implementing a strong disclosure regime which informs consumers regarding the different variables used to price discriminate. Adding an option to opt-out of price discrimination would make the process even more feasible.

Benefits of remedy- Competition law can be used in the case of personalized pricing by considering redistribution considerations. The use of competition law and the other legislations to prevent perfect price discrimination prevents dominant firms form exploiting consumers and creates a deterrent effect. Personalized pricing may by itself be detrimental to consumers as it uses consumer data in a manner that is not previously agreed for by the consumers as it requires data combination from different sources which goes against Article 5 GDPR. This can also be construed to be an unfair condition under Article 102(a) and the Commission can pass appropriate remedies to stop such a practice. The use of the DMA to personalized pricing cases can act as a further deterrent to exploitative actions by core platforms. In the case of personalized pricing, the cost of intervention may outweigh the benefits if the learnings from Paper 2 of the thesis are considered.

Costs of remedy- The use of competition law in price personalization cases to prevent perfect price discrimination would lead to harm to consumers as it would prevent firms form being able to price discriminate and allow new consumers to enter the market. If competition law allowed for total welfare to be considered the metric to judge whether price discrimination leads to an increase or decrease of welfare, then such a case would allow competition law to be used as a tool to accurately judge whether personalized pricing in a case has led to efficient outcomes. However, the current structure of competition prevents this from happening as computing consumer surplus in the case of personalized pricing would be an impossible task.

The other legislations may be used to prevent discrimination in a certain manner or on certain grounds. However, there are provisions in the various legislations mentioned in the ‘remedy’ section that allow for discrimination to occur even on prohibited grounds if there is a tangible benefit to consumers. Disallowing price personalization due to the fear of perfect price discrimination will only lead to eroding of the benefits to consumers. A strong disclosure

regime may also lead to collusion and price fixing taking place in case there are more than one firm in the market.

Personalized pricing is one of those practices which have arisen as a result of growth of digital platforms that has more positive effects attached to it than negative ones. Using competition law or other consumer protection legislations to prevent the practice may cause more harm than lead to benefits for consumers. The best remedy in the case of price personalization can be to let the market balance itself as the distributional effects in terms of new consumers being added to the market cannot be accounted for by viewing the practice purely from a discrimination point of view. It is important to judge the overall effects to the market before decided whether there is a benefit to society.

4.6 Preventing data portability

Infringement- Dominant platform firms can restrict data transfer by users from their platform to a different one. Platforms such as social media platforms can try to lock-in consumers by resorting to techniques such as only allowing consumer data and information to be used on their website. An example of this is to prevent multi-homing between different social media platforms and disallow sharing of information from one platform to another. This creates barriers for consumers to be able to transfer their data to other competing services as users are locked-in which can lead to exclusion of competitors. The exclusion would depend on high how the switching costs are. A dominant firm may be able to block other platforms from being able to access any data shared on their platform which may lead to higher switching costs for users as the users will have to provide all their information from scratch in order to use the services of competitors which may lead to hesitancy among users to switch.

Remedy- Article 15 of the GDPR allows a data subject to access data provided to a controller. Under Article 20 GDPR, the data subject has the right to receive and transmit the data provided to a controller. The data subject also has the right transfer the data to another controller at their will. Under competition law, Article 102 TFEU can be applied as there are both exploitative harm to consumers and an exclusionary one to other sellers. Its use along with the GDPR will allow imposing harsher penalties.

Considering the use of the DMA regime, Article 6(9) of the DMA requires core platform firms to provide effective data portability in line with the provisions of the GDPR. Article 6(6) of the DMA requires a core platform to refrain from preventing end users from switching between different online service providers while Article 5(7) DMA requires allowing end users to interoperate. By utilising these provisions, data portability related infringements can be dealt with. In case of non-compliance, the ideal remedy can be a fine of up to 10 percent in line with the proposed DMA and an order to allow interoperability.

Use of radical remedies such as mandatory data sharing can allow consumers to access the services of different platforms with easier switching.[183] Mandatory sharing of algorithms may also be a remedy in this case which can allow the development of competing platforms that allows in increasing the number of platforms to choose from for consumers.

Benefits of remedy- The main benefit of mandatory data portability is that consumers will be able to use the services of different platforms by combining their data from different websites at their will. This helps with consumer welfare which is a common goal of data protection and competition law as far as the use of data is concerned as can be inferred from Article 1 GDPR which relates to rules relating to the protection of fundamental rights of natural persons. Similarly, competition law has considered consumer welfare its main goal going by past EU case laws. It would also lead to smooth functioning between the services of different platforms leading to a benefit to consumers and may also be able to increase the traffic of competing platforms as they may now be able to complement each other. An example of this is social media platforms such as Twitter and Instagram allowing each other's users to share information form the others' platform. Regarding user privacy, data portability only takes place when the user wishes it and therefore would adhere to the conditions of consent mentioned in Article 7 of the GDPR. Mandatory data sharing can be suitable in allowing consumers to port their data from one platform's website to another's. Mandatory algorithm sharing can act as a remedy to reduce the dependency on one platform's service as other competing platform may be able to develop their own websites that can provide consumers a better-quality service.

Costs of remedy- One of the costs of imposing portability measures are that firms would be disincentivized from creating proprietary information in the first place if they are aware that the information would be potentially shared with competitors.[184] This is because firms compete

[183] See Graef.
[184] Aysem Diker Vanberg, 'The right to data portability in the GDPR: What lessons can be learned from the EU experience?' (2018) 21(7) Journal of Internet Law, 12-21.

on being able to outdo each other in the market by competing on better techniques to increase the number of consumers. By allowing less efficient firms to also have access to consumer information generated on the platform's services, the overall efficiency of the market gets lowered. The benefits of data portability in terms of consumers being able to transfer their data freely need to be balanced with the harm to innovation that is possible. Usage of mandatory algorithm sharing would create the same effect of stifling innovation as the firm that dominates the market due to its efficiency and better-quality services is required to help in creating competitors for itself using its own technology. Gormsen and Morales have also noted that this remedy's success is dependent on interoperability of platforms.[185]

4.7 Tying essential inputs[186]

Infringement- A dominant firm may try to foreclose the market and exclude competitors by tying or bundling its products which is an abuse of dominance under Article 102 TFEU. Tying refers to requiring a customer that purchases one product to purchase another related or unrelated product with while bundling refers to offering products jointly.[187] Both may have positive effects for the customer in terms of being able to obtain better products at more cost-effective ways, but this may also be a way to foreclose the market for the products of competitor firms as the customer is required to buy all the products from the dominant firm. It can also have the effect of the dominant firm extending its dominance in the adjacent market where it wasn't previously dominant.[188] A case example of a digital platform engaging in such a practice is of Meta/Facebook potentially tying its Facebook platform with its online ads service, Facebook Marketplace which led to the Commission opening proceedings against the firm.[189] This can be considered akin to imposing an unfair trading condition as well since end consumers have little to no choice in using only part of the platform that they wish to use.

Remedy- In the case of tying in brick-and-mortar markets, the Commission can impose remedies in the form of an order to stop future tying of the product and impose a fine. While

[185] See Gormsen and Morales.
[186] This infringement has not been considered in detail in this thesis but the imposing of remedies provide important lessons.
[187] Communication from the Commission- Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, (2009/C 45/02), [47-49].
[188] ibid [50-58].
[189] *Facebook Marketplace*, AT.40684, Opening of Proceedings- (04/06/2021)

the *Facebook Marketplace* case has not been decided by the Commission, two cases related to tying in digital markets involve Microsoft and Google. The remedies imposed in the two cases may be able to inform regarding what the possible remedies could be in the *Facebook Marketplace* case.

The *Microsoft v. Commission* case is one that dealt with this issue. In the case, Microsoft was found to have illegally tied its Windows Media Player with its Microsoft Windows Platform and was fined 497 million Euros and was ordered to produce a version of the product without the tied Media Player as part of the remedy.[190] In another case, Microsoft was found guilty of tying its Internet Explorer browser to its operating system. The Commission accepted Commitments under Article 9 of Regulation 1/2003 by Microsoft where it would offer a choice screen to users to prompt them to choose between the various browsers in the market without setting Internet Explorer as the default browser.[191] However, the Commission found Microsoft to have not complied with the commitments and therefore imposed a fine of 561 Million Euros which was the first time the Commission had to fine a party for non-compliance with a commitments decision.[192]

The most notable case of tying concerning a digital platform firm is of *Google Android* where the Commission found that Google, which has a dominant position, had engaged in tying of its Google Search App on all its Android devices and its Google Chrome browser on all mobile Android devices as it creates a status quo bias among users.[193] The Commission subsequently fined Google 4.34 billion Euros for breach of competition law rules and ordered Google to stop mandatory tying of its Search Apps and Browser App.[194] This was later affirmed by the General Court in September 2022.[195]

The DMA may be applicable to Google if/when it is designated as a gatekeeper. The provisions of the DMA are in line with the *Google Android* decision. Article 5(7) of the DMA can be applicable to tying cases as it requires core platforms to refrain from requiring business users to subscribe or use other core platforms services to access the main services of the core

[190] Case T-201/04, *Microsoft v Commission*, [2007] ECR II-3601.
[191] *Microsoft (Tying)*, Case COMP/39.530.
[192] European Commission Press Release, Antitrust: Commission fines Microsoft for non-compliance with browser choice commitments, 6 March 2013.
[193] See *Google Android*.
[194] European Commission Press Release, 'Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine', (18 July 2018).
[195] Case T-604/18, *Google and Alphabet v Commission (Google Android)*, Press Release No 147/22, (14 September 2022).

platform. Article 6(3) also requires core platforms to allow the use of third-party software applications and application stores. With the DMA having come into force on 1 November 2022, it may be able to deal with such issues by itself without requiring the use of competition law.

A radical remedy that is possible in the case of the search engine market is of subsidizing the second biggest competitor in the search market (possibly Bing) in order to increase its market share and for it to be able to compete with Google.[196] If the fine imposed on Google can be used towards building an able competitor to Google, competition in the market can be restored. There are harms that can arise as a result of such a remedy such as choosing the competitor who should be subsidized.

Benefits of remedy- The benefit of the remedy in the Microsoft cases or the Google Android case is to create deterrence for dominant firms from tying their main product with another product to utilise their dominance in one market to become dominant in another. It leads to more choice for consumers in terms of being able to choose different brands or firms for their different needs instead of having to by a tied or bundled set of products form one firm.

The cost on the other hand is that this may lead to the consumer being forced to pay more to obtain the products differently. If consumers are offered the chance to buy either a tied product or just a part of it, then the situation may seem overall beneficial to consumers as they can choose to buy a possibly cheaper tied product from just one firm as was ordered in the case of Microsoft.

In the case of a digital platform like Google, their practice of imposing a mandatory download of the Google Search App in the *Google Android* case leads to restriction of innovation as development of new open-source versions of Android are restricted. It also led to harm to competition as other mobile based browsers were prevented from competing effectively due to the requirement of pre-installation of the Google Chrome browser.[197] A radical remedy such as that of subsidizing the next best competitor can solve the problem of lack of competition and limited choices for consumers. If a firm such as Google is considered superior in terms of the quality of its search engine and other products in other related markets, subsidization to the next best firm may allow that firm to product a better product and try to compete with the superior product of Google.

[196] See Gal and Petit.
[197] ibid.

Cost of the remedy- A fine such as in the case of Google is one that will create a deterrent effect among dominant platforms when it comes to practices such as tying. An alternate view of software licensing agreements such as in the case of *Google Android* is that they resemble franchising agreements.[198] It can also be inferred that the ecosystem created by Google is unable to rival one created by Apple which does not face the same competition law scrutiny when it comes to tying as faced by Microsoft and Google.[199] The decision in *Google Android* interferes directly with Google's business by making it seem that the Android platform is an essential entity and cannot be used to make profits by Google.[200] While there are many issues with regard to disincentivizing a platform from creating new ecosystems as they might not be able to profit from them, the Commission is of the opinion that other smaller players in the market will be incentivized to compete with a dominant platform such as Google which is why the provision is also seen to appear in the DMA.

It has been established that Google is dominant in the search engine market.[201] Their dominance is mainly due to their product being better than those of competitors such as Bing and Yahoo as was claimed by Google's lawyers in their appeal to the General Court concerning the fine imposed in the *Google Android* case.[202] This does not give Google the right to abuse their dominance at a later stage but the fact that the other competitors were not able to compete with the quality of the service provided by Google should be a factor in considering whether an action such as in this case of tying its search tool to the device actually leads to entrenchment of their dominance because there is a presumption that consumers end up using Google's search tool due to it being tied rather than due its superiority.[203] This assessment may be influenced by using the as-efficient competitor test.[204] If it is foreseen that Google's conduct is not competition on the merits, then imposing a remedy is sensible.

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[198] Pablo Ibanez Colomo, 'Android meets Pronuptia, or why software licensing is like a franchising agreement', (Chillin'Competition, April 2016), https://chillingcompetition.com/2016/04/25/android-meets-pronuptia-or-why-software-licensing-is-like-a-franchising-agreement/.
[199] ibid.
[200] Pablo Ibanez Colomo, 'The Android decision is out: the exciting legal stuff beneath the noise', (Chillin'Competition, July 2018), https://chillingcompetition.com/2018/07/18/the-android-decision-is-out-the-exciting-legal-stuff-beneath-the-noise-by-pablo/.
[201] Statista, Worldwide desktop market share of leading search engines from January 2010 to June 2021, https://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines/.
[202] Foo Yun Chee, 'Case T-604/18, Google vs European Commission;, 'Consumers aren't stupid': Google lawyer rejects EU market abuse ruling', (1 October 2021), Reuters, https://www.reuters.com/technology/consumers-arent-stupid-google-lawyer-rejects-eu-market-abuse-ruling-2021-10-01/.
[203] CPI, "Consumers Aren't Stupid" Google Tells EU, October 3, 2021, https://www.competitionpolicyinternational.com/consumers-arent-stupid-google-tells-eu/.
[204] Case C-413/14, *Intel v. Commission* [134].

A radical remedy such as subsidization of competitors will not be helpful in removing any problems associated with dominance as the firm that is subsidized can replace the previously existing dominant firm which would make the process of subsidizing futile or require repeated subsidization of the next best competitor. There is also no assurance whether the subsidization will make the competitor more efficient and benefit the market as it may be a case of the dominant firm being far more superior than its competitors.

Section 5- Conclusion

Abuse of dominance as a concept has evolved in digital markets. The need to rethink the remedy design and implementation process has brought about the emergence of the proposed DMA and other discussions regarding the interworking of different regulatory authorities and competition authorities. This paper discussed a list of alternate remedies mostly proposed by renowned competition law academics and assessed whether those proposals would be feasible. The DMA's role in assessing and remedying competition law infringements in the future will be vital which prompted a thorough discussion of its different aspects. This paper has addressed how some exploitative and exclusionary digital market abuses are dealt with currently and has attempted to find the most suitable method to deal with those offences using the different legislations available.

The first few sections of the paper are descriptive in nature including explanations on the powers available under Regulation 1/2003 and the discussion of types of remedies available. The case of *Google Shopping* was discussed extensively to understand digital market remedies and to understand the issues that arise with respect to effectiveness of them. This prompted a move towards a discussion on radical remedies that have not yet been used under competition law such as algorithmic sharing and structural separations. The application of alternate or radical remedies to seven infringements related to digital markets were considered along with their pros and cons. The part discussing each infringement separately is a part that is unique to this paper and has not been discussed previously in existing papers.

It was seen that competition law remedies would not be ideal in some cases such as price personalization while there they are very important in cases such as unauthentic search results or preventing data portability. In cases such as self-preferencing and tying, questions regarding the legal validity of the practice make it unclear whether imposing competition law remedies will be better for the market or not, while questions regarding prioritization of short-term

consumer gains versus long-term ones were discussed in the case of predatory pricing remedies. It can be concluded that each digital market case needs to be assessed on a case-by-case basis for implementation of effective remedies. The use of tools such as market investigations, alternate remedies and new legislations provide many options for the Commission and National Competition Authorities in the EU on how they could look to deal with digital market infringements. However, it is important that these tools be used carefully in order to prevent a case of over enforcement. In many cases, it would be in the best interest of markets and consumers for competition authorities to allow the market to function freely and let inefficient firms exit the market to allow invention and innovation to take place freely.[205] In some cases, the need might be for competition authorities to stop dominant firms from using their dominance to prevent other competitors from innovating and inventing. This paper provides insights into how that fine line ought to be treaded in certain situations.

[205] ibid.