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Tying and Bundling in Digital Markets under the European Union Competition Law and Digital Markets Act

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Preface.

This thesis is the final part of my master's education at Lund University, funded by the Swedish Institute scholarship. Therefore, I would like to express my gratitude to the Swedish Institute for being granted the privilege of studying in Sweden at one of the world's best universities.

I would also like to express my gratitude to all my professors and teachers who provided me with professional knowledge and helped me to improve during the last two years. I would like to specifically mention my thesis supervisor Julian Nowag who not only provided me with comprehensive guidance during my thesis but also genuinely encouraged me throughout the whole process.

Abstract.

The Digital Markets Act which newly came into force and its rules became newly applicable for undertakings deemed to have gatekeepers' status operating in the European Union digital markets caused huge controversies in the literature. One of the widely held concerns is that the most of the DMA's conduct rules are the same as the equivalent obligations dealing with the same practices under the EU Competition Law. However, this statement was never backed up by the sufficient analysis that is needed. This work tried to do that analysis for the rules governing tying and bundling practices in digital markets under both the DMA and EU Competition Law. The main purpose of this thesis is to identify where the DMA's rules governing tying and bundling practices constitute substitute or complementary effects to the EU Competition Law by comparing available obligations and prohibitions under both systems. For this purpose, this work will first analyse the rules governing tying and bundling under the EU Competition Law both in traditional and digital markets. While scrutinizing tying and bundling under the EU Competition Law, this work will shed specific light on economic theories and studies on tying and bundling to have a better understanding of these concepts and their legal regulation alongside their definition and classification. Then, this work will turn to scrutinize the DMA's provisions related to tying and bundling and institutionally analyse the DMA. To enable us to answer the main thesis question the discussions will also extend to differing the DMA and EU Competition Law together with the distinctiveness of the goals of the two legal systems in question. Answering the main thesis question brings about two main issues. The first one is that if there is the same set of rules aimed at governing the same illegal practices, this can possibly bring about discussions on the application of double jeopardy. Thus, this work will discuss the possibility of the limitations to the ne bis in idem principle while the DMA and EU Competition Law concerned with tying and bundling practices. Secondly, it will be observed while analysing economics of tying and bundling, these practices can be also pro-competitive, and EU Competition Law leaves possible space for such effects since efficiency claims are available under it being different from the DMA. Therefore, it will be discussed what can happen to the innovative effects of tying and bundling under the DMA.

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List of Abbreviations:

AFA – Anti-Fragmentation Agreements

CJEU – Court of Justice of the European Union

CPS – Core-Platform Services

DMA – Digital Markets Act

EC – European Commission

ECJ – European Court of Justice

EU – European Union

EUCFR – European Union Charter of Fundamental Rights

GAFAM – Google, Apple, Facebook, Amazon, Microsoft

GC – General Court

iOS – Iphone Operating System

iPadOS – Interactive Personal Application Device Operating System

MADA – Mobile Application Distribution Agreements

MNOs – Mobile Network Operators

MS – Member States

NCA – National Competition Authorities

NFC – Near-Field Communication

OECD – Organisation for Economic Co-operation and Development

OEMs – Original Equipment Manufacturers

PC – Personal Computer

RSA – Revenue Share Agreements

SMEs – Small and Medium-sized Enterprises

TEU – Treaty on European Union

TFEU – Treaty on the Functioning of European Union

US – United States

WMP – Windows Media Player

WOS – Windows Operating System

I. Introduction.

1. Background.

The rising role of technology and artificial intelligence poses new challenges in today's societies as traditional economies are getting transformed into digital markets. The emergence of digital markets makes public and private entities embrace increased digitalization to tackle these novel challenges. Because some giant internet platforms like the so-called GAFAM companies (Google, Apple, Facebook, Amazon, Microsoft) gained strong economic power, making them dominant in their relevant markets. These companies are also referred to as Big Tech. In recent years, there has been a significant number of expert reports on the Competition Law challenges that Big Tech can potentially cause.[1] The reports concluded that these multi-sided platforms use specific characteristics of digital markets to cement their incumbent position in the market. These wide-ranging characteristics vary from the network effects of multi-sided markets to large economies of scale and scope.

In the European Union ('EU'), the growing market power of GAFAM companies did not escape the attention of the European Commission ('EC'). Over the period of last decades, the EC has launched investigations into the abusive business strategies of GAFAM companies.[2] These investigations and decisions following them led to huge controversies. Because, the EC's major policy tool was Competition Law, especially the use of Article 102 of the Treaty on the Functioning of European Union ('TFEU') in the cases against Big Tech companies. Article 102 TFEU prohibits the abuse of a dominant position in the market. The enforcement of this provision against Big Tech companies' abusive behaviour caused many critiques. Obvious of them are investigations under Article 102 TFEU take longer periods, are administratively burdensome, carrying out complex economic assessments to establish the market power of incumbents and define the relevant markets are challenging in digital markets, and so on.

[1] Digital Competition Expert Panel, *Unlocking Digital Competition*, ('Furman Report' 2019); Stigler Committee on Digital Platforms, *Final Report* ('Stigler Report' 2019); J. Crémer, Y.-A. de Montjoye, and H.ga, *Competition Policy for the Digital Era*, ('Vestager Report' 2019).

[2] The EC held following investigations – against Google: Google Shopping 2017 (Case AT.39.740), Google Android 2018 (Case AT.40.009), Google Search (AdSense) 2019 (Case AT.4041), and Google AdTech (ongoing) (Case AT.40670); against Apple: Apple App Store SO (ongoing) (Case AT.40437), Apple Pay-NFC SO (ongoing) (Case AT.40452); against Facebook: Facebook /Whatsapp 2017 (Case M.8228), Facebook Marketplace (ongoing) (Case AT.40684); against Amazon: Amazon E-Book 2017 (Case AT.40153), Amazon Marketplace SO 2020 (Case AT.40462); against Microsoft: Microsoft Media Player 2004 (Case C-3/37.792), and Microsoft Internet Explorer 2014 (Case AT.39530), Microsoft/LinkedIn 2016 (Case M.8124).

Therefore, the EC proposed the Digital Markets Act ('DMA') to ensure fair and contestable digital markets at the end of 2020.[3] The proposed DMA was adopted by the European Parliament and the Council in its first reading according to the ordinary legislative proceeding. The DMA entered into force on the 1st of November 2022, and its rules became applicable from the 2nd of May 2023. The DMA introduces 22 *per se* conduct rules in the form of prohibitions and obligations for the gatekeepers of core platform services. To be qualified as a gatekeeper, platforms should meet some multi-billion-euro turnover thresholds under Article 3 DMA. Core platform services are listed as services of online search engines, online social networking services, operating systems, web browsers, virtual assistants, cloud computing services, online advertising services, etc under Article 2 DMA. Given these definitions, it can be easily pointed out that it is specially intended to bring giant undertakings including but not limited to Big Tech (GAFAM) companies under the scrutiny of the DMA.[4]

Speaking of Big Tech abuses in digital markets, the EC's first antitrust investigation against Big Tech was into Microsoft's tying and bundling practices in the 1990s. Tying and bundling refer to a situation when a seller of multi-product purchases one product subject to purchasing another.[5] These practices would constitute abuse under Article 102 TFEU if they were carried out by dominant undertakings[6] such as Big Tech companies.

In the digital markets, tying and bundling have also become common practices. In traditional markets, this form of abuse refers to the combined sale of more than one product. However, these abuses evolved to refer to a situation to describe the integration of software into an operating system.[7] That is to say, the concept of tying and bundling was broadened significantly through the emergence of digital markets. This pattern can easily be observed in the cases of Microsoft Media Player, Microsoft Internet Explorer, and Google Android. It will be further depicted in detail that the assessment of tying and bundling practices has changed in these cases. Because tying and bundling might generate both pro and anti-competitive effects in

[3] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act). OJEU Nº 265 of 12 October 2022, pages 1 to 66.
[4] Cabral L, Haucap J, Parker G, Petropoulos G, Valletti T, Van Alstyne M, *The EU Digital Markets Act a Report from a Panel of Economic Expert* (2021) p.9: "These thresholds are designed to capture the largest online platforms, where potential harm is the greatest. Effectively, it comes down to the GAFAM tech giants (Google, Apple, Facebook, Amazon, and Microsoft), possibly a few more."
[5] Alison Jones and Brenda Sufrin, *EU competition law: text, cases, and materials*, (7th edn, OUP 2019) chapter 7, p.99.
[6] Ibid.
[7] Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289.

digital markets.[8] This makes it difficult to differentiate the legal and illegal practices. Therefore, legal tests have evolved to address these issues.

On the other hand, the DMA also contains some provisions concerning tying and bundling practices in which the gatekeepers might be involved. These provisions are the prohibitions under Articles 5 (7) and 5 (8) DMA and the obligation under Article 6 (3) DMA. Though, the DMA is not a competition law tool as the EC did not base its proposal on Article 103 TFEU.[9] Instead, the DMA is based on Article 114 TFEU to promote the internal market.[10] In recital 11 of the DMA, it is depicted that it pursues objectives that are complementary to, but different from, that of the EU Competition Law. According to Article 1 (6) DMA, it will be applied without prejudice to the EU Competition Law. However, this will not be that easy since most of the provisions of the DMA are inspired by the EU Competition Law. This brings about the purpose and research question of this work.

2. Purpose and Research Question.

Currently, there are a lot of debates on similarities between the DMA and EU Competition Law. By pointing at these similarities some even argue that the DMA is *de facto ex-ante* sector-specific competition law (substitute) even though it is considered an *ex-ante* sector-specific market regulatory act (complimentary) by the EU legislator. When the comprehensive literature review is carried out, it is observed that the ones, who implies the same, only content themselves with showing the corresponding competition law cases or current EC investigations to the relevant provisions of the DMA.[11] However, an in-depth analysis should be done to

[8] QianWu and Niels J. Philipsen, 'The Law and Economics of Tying in Digital Platforms: Comparing Tencent and Android' [2022] Journal of Competition Law & Economics, 1–20, p.1.
[9] Article 103 of the TFEU enables the Council to adopt regulations or directives aimed at implementing the principles outlined in the EU Competition Law provisions.
[10] Article 114 TFEU enables the EU legislator to approximate national laws in order to create an internal market.
[11] See: Pettersson Daniel, 'Sector-Specific Ex Ante Regulation in Digital Markets - A Complement or Substitute to Antitrust Enforcement?' [2022] Europarättslig tidskrift vol.4; Budzinski Oliver and Mendelsohn Juliane, 'Regulating Big Tech: From Competition Policy to Sector Regulation?' [2022] Available at SSRN: <https://ssrn.com/abstract=4248116>. Komninos Assimakis, 'The Digital Markets Act: How Does it Compare with Competition Law?' [2022] Available at SSRN: <https://ssrn.com/abstract=4136146>. Bergkamp Penelope, 'The Proposed EU Digital Markets Act: A New Era for the Digital Economy in Europe' [2021] European Company Law Journal 18, no. 5: 152–161; Alexandre de Streel, Crémer Jacques, Heidhues Paul, Dinielli David, Kimmelman Gene, Monti Giorgio, Podszun Rupprecht, Schnitzer Monika, Scott Morton, and Fiona M., 'Enforcing the Digital Markets Act: Institutional Choices, Compliance, and Antitrust' [2022]. Available at SSRN: <https://ssrn.com/abstract=4314848>; Blockx Jan, 'The Expected Impact of the DMA on the Antitrust Enforcement of Unilateral Practices' [2023]. Available at SSRN: <https://ssrn.com/abstract=4341277>; Claudia Massa, 'The Digital Markets Act between the EU Economic Constitutionalism and the EU Competition Policy' [2022] 26 YARS 103.

comparatively establish whether the DMA is being a substitute or complementary to the EU Competition Law, namely Article 102 TFEU.

In this work, that analysis will be done on the tying and bundling obligations under the EU Competition Law and DMA. The following main thesis question will be addressed:

"Are tying and bundling rules under the DMA complementary or substitutes to the tying and bundling obligations in digital markets under the EU Competition Law?"

To answer the main thesis question, the following questions will be answered first:

"How has the legal assessment of tying and bundling cases under the EU Competition Law evolved to address tying and bundling abuses happening in the digital markets? Was the legal test addressing tying and bundling in traditional markets enough to assess tying and bundling practices in digital markets? What are the implications of the cases concerning tying and bundling practices in digital markets?"

"Does the DMA have clear personal, material, and geographical scope so as not to lead to fragmentation in digital markets? What do the conduct rules concerning tying and bundling practices entail under the DMA? How different are the DMA's goals of ensuring fair and contestable digital markets from those of EU Competition Law? How different the DMA is from the EU Competition Law?"

After answering the main thesis question the light will be shed on the following questions:

"Can the tying and bundling rules under the DMA and EU Competition Law be subject to the application of double jeopardy? How can the alleged undertakings or gatekeepers oppose such possible application of double jeopardy?"

"How much room does the DMA's per se approach leave for innovation through the tying and bundling practices of the gatekeepers? How can such innovation be achieved under the DMA?"

3. Delimitations.

As mentioned earlier, tying and bundling are not the only EU Competition Law obligations reflected in the DMA. For example, Articles 6 (7) and 7 of the DMA concern interoperability, Articles 5 (9) and 5 (10) of the DMA concern the refusal to supply, etc. However, tying and bundling obligations have been chosen as the research subject in this work. The main research question of this thesis will only be addressed on the tying and bundling obligations. There are

several underlying factors for this choice. Above all, by borrowing the words of another author it can be said that *"hardly any doctrine of competition law was broadened more markedly with the advent of the internet economy than the concept of tying and bundling."*[12] Secondly, the EC's decision-making practice and the cases from EU Courts are relatively new in the other Big Tech abuses meanwhile there is established case law in tying and bundling against Microsoft and culminated investigation against Google (Android) with the decision. On the contrary, for example, several investigations concerning interoperability are still ongoing. Thirdly, there are three provisions in the DMA concerning tying and bundling practices that enable the assessment in this work to be carried out comprehensively.

4. Methodology.

The doctrinal or so-called "black letter" approach will be utilized to answer the questions that are imposed by this work. This research methodology *"aims to systematise, rectify and clarify the law on any particular topic by a distinctive mode of analysis to authoritative texts that consist of primary and secondary sources."*[13] Doctrinal research helps to address the research goals through the description, prescription, and justification of existing laws.[14] Therefore, this paper will first describe the existing laws in a neutral and consistent way.[15] Doctrinal research entails that greater need for the systematic description of legal rules emerges as laws become more complicated.[16] Therefore, there is an indispensable need to descriptively establish rules concerning tying and bundling in digital markets since issues gained significant complexity with the adoption of the DMA. This will be complemented by the prescriptive approach towards the law governing tying and bundling issues in digital markets to analyse how it fits the system of EU Competition Law and the DMA. This prescription will be done in a systematic contextual interpretation to go beyond the wording of laws and examine the context in which they exist.[17] Lastly, but most importantly, the system of rules governing tying and bundling under both EU Competition Law and the DMA will be compared where the doctrinal approach serves as a justification for the existing set of rules.[18] To this end, doctrinal method

[12] Stefan Holzweber, 'Tying and bundling in the digital era' [2018] European Competition Journal, 14:2-3, 342-366, p.343.
[13] Mike McConville and Wing Hong Chui, *Research Methods for Law* (2nd edn, Edinburgh University Press 2017) p.4.
[14] Smits J, 'What is legal doctrine? On the aims and methods of legal-dogmatic research', [2015] M-Epli Maastricht European Private Law Institute Working Paper No. 2015/06, p.8.
[15] Ibid.
[16] Ibid 9.
[17] Eleanor Brooks, 'What is Judicial Interpretation: Definition, Methods' (Liberties, 22 November 2022) <https://www.liberties.eu/en/stories/judicial-interpretation/44577> accessed 6 April 2023.
[18] Smits (14) p.11.

will be used to comparatively asses the rules and concepts governing tying and bundling under the EU Competition Law and the DMA and analyse the complementarity between these rules and concepts with a purpose of solving unclarities in the existing law.[19]

5. Outline.

Following the introductory chapter, tying and bundling will be comprehended in traditional markets including its description, types, anti-competitiveness, and scrutiny under Article 102 TFEU in the second chapter. This will be followed by the third chapter where tying and bundling will be examined in digital markets under Article 102 TFEU including Microsoft Media Player, Microsoft Internet Explorer, and Google Android cases. In the fourth chapter, the paper will turn to the DMA to first institutionally analyse it and then scrutinize tying and bundling provisions under the DMA. Afterwards, the fifth chapter will differentiate the DMA from the EU Competition Law and the main research question will be answered in this chapter. Following this, light will be shed on the possible limitations to the ne bis in idem principle for the same breach under the DMA and EU Competition Law, and innovation concerns under the DMA in the sixth chapter. This work will culminate in the seventh chapter.

[19] Ibid 5.

II. Tying and Bundling under EU Competition Law in Traditional Markets.

1. Anti-competitive concerns of tying and bundling in traditional markets.

1.1. Definition and types of tying and bundling.

Tying and bundling refer to a situation when a seller of multi-product makes the purchase of one product subject to the purchase of another.[20] In EU Competition Law, tying and bundling practices might constitute abuse under Article 102 TFEU if they were carried out by dominant undertakings.[21] Before that, the classification of tying and bundling will be presented.

Competition Law literature differs three types of tying and bundling practices: pure bundling, mixed bundling, and tying.[22] The EC's Guidance Paper on the enforcement priorities in Article 102 TFEU ('Guidance Paper' hereinafter) also differs contractual and technical tying.[23] Moreover, the Guidance Paper defines tying and bundling separately.[24] All these will now be considered in detail.

The Guidance Paper refers to bundling by emphasizing the way products are offered and priced.[25]

In pure bundling, products are sold in fixed proportions and for a single bundle price.[26] This means, if a customer wants to buy one product that is offered in the pure bundle, that customer has to also buy the other product included in the bundle since those products are not available on a stand-alone basis. This kind of bundle is also called a 'package tie-in', and it is sometimes too common that customers do not even notice them.[27] An obvious example of this could be booking a hotel room with only breakfast included option.

In mixed bundling, products that are sold jointly in bundles remain to be available separately but it will be more expensive for customers to purchase them on a stand-alone basis. It has to

[20] Jones and Sufrin (n 5) chapter 7, 99.
[21] Ibid.
[22] Jurian Langer, *Tying and Bundling as a Leveraging Concern under EC Competition Law* (Kluwer Law International 2007) chapter 1, p.1.
[23] Commission, '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 undertaking' 2009/C 45/02, paragraph 48.
[24] Ibid.
[25] Ibid.
[26] Ibid.
[27] Langer (22) chapter 1, p.1.

be mentioned that it will be difficult in a practical sense to differentiate between mixed and pure bundling when the individual prices charged for the products in mixed bundling are significantly higher.[28] Because the (rational) way of purchasing those products will only be buying them in the mixed bundle as it was in a pure bundle for customers.

Turning to tying, products are tied together (the tying and tied products) as customers are required to buy both products. As mentioned, tying can happen in two ways, contractual or technical.

In contractual tying, there is a contractual stipulation either imposing a direct obligation or achieving the same obligation by indirectly imposing other conditions.[29] Contractual tying is the most common in traditional markets.

In technical tying, a tying product is developed in a specific way that does not work properly without the tied product.[30] Technical tying also happens when two products are physically integrated (like an operating system and software tied to it) that is impossible to separate them.[31] Technical tying is also considered a form of pure bundling.[32] Technical tying is most common in digital markets. Therefore, tying and bundling occurring in digital markets corresponds to technical tying and pure bundling explained here.

After categorizing tying and bundling, this paper now goes on to discuss the economic rationale behind tying and bundling in traditional markets.

1.2. Economic theories on tying and bundling and their legal implications.

The essential antitrust concern is the 'leveraging theory' under which tying and bundling are deemed to be harmful to the competition. According to this theory, the dominant undertaking in the tying product market could spread its dominance to the other – tied product market which is considered to be competitive with the motivation of establishing dominant power in the latter market.[33] By doing so, the dominant undertaking of the tying product market can foreclose sales in the tied product market, leading to the monopolization of both markets.[34] This scenario can have two undesirable effects. Firstly, customers are compelled to purchase a product at a

[28] Ibid 2.
[29] Richard Whish and David Bailey, *Competition Law* (9th edn, Oxford University Press 2018), chapter 17, p.7.
[30] Guidance Paper (n 23) p.48.
[31] Jones and Sufrin (n 5) chapter 7, p.100.
[32] Ibid.
[33] Ward S. Bowman, 'Tying Arrangements and the Leverage Problem' [1957] Vol. 67 no. 19 Yale Law Journal, p.2.
[34] Holzweber (n 12) p.347.

monopoly price that they did not want to buy. Secondly, the monopolist gains an unfair advantage in the competitive structure of the tied product market. Hence, the proponents of leveraging theory favour a *per se* illegality approach towards tying and bundling.[35]

Leveraging theory is disapproved by the Chicago School. According to the critics of this school, leveraging theory fails to explain why a dominant undertaking of the tying product market would want to monopolize the tied product market.[36] They go on to explain in detail that the monopolist of the tying product market is likely to face a loss of profits in the tying market because it can never impose monopoly prices in both markets.[37] Trying to monopolize the tied product market will also lead to the loss of sales to competitors in that market too since the tied product market is considered as competitive.[38] Instead, Chicagoans argue in a reverse way by expounding that the monopolist would achieve gains by keeping the market competitive. In a competitive market, an increase in the sales of the tied product would result in a corresponding increase in the sales of the already monopolized tying product market.[39] They, furthermore, draw attention to possible efficiencies that can be achieved by doing so. These efficiencies include inter alia: cost savings, consumption efficiencies, production-side efficiencies, quality assurance, product improvements, avoidance of double marginalization, price discrimination, etc.[40] This is called the single monopoly profit theorem. Thus, the proponents of the Chicago School favour a *per se* legality approach towards tying and bundling.[41]

Nonetheless, Chicago School's approach is not flawless in its turn. Because their approach is also built on assumptions that are quite simplified and restricted.[42] These assumptions include the tied market being perfectly competitive, products only sold in fixed proportions, and customers being perfectly informed. Therefore, the findings of leveraging theory can go head-to-head with the Chicago School's findings when these assumptions are relaxed.

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[35] See: Turner D. F., 'The Validity of Tying Arrangements Under the Antitrust Laws' [1958] 72 Harvard L Rev., p. 59.; Bauer J. P., 'A Simplified Approach to Tying Arrangements: a Legal and Economic Analysis' [1980] 33 Vanderbilt Law Review 283, p. 286.
[36] Langer (n 22) chapter 1, p.8.
[37] Daniel Mandrescu, 'Tying and bundling by online platforms – Distinguishing between lawful expansion strategies and anti-competitive practices' [2021] 40 Computer Law & Security Review, p.11.
[38] Ibid.
[39] Richard A. Posner, *Antitrust Law: An Economic Perspective* (University of Chicago Press 1976) p.170-173.
[40] Langer (n 22) chapter 1, p.3-5.
[41] Christian Ahlborn, David S. Evans and Jorge A. Padilla, 'The Antitrust Economics of Tying: a Farewell to Per Se Illegality' [2004] Vol. 49 Is. 1 Antitrust Bulletin, p.287.
[42] Mandrescu (n 37) p.11.

Additionally, other studies consider foreclosure effects that tying and bundling may potentially lead in the tied product market. This can happen when a monopolist has incentives to foreclose the market where competition is imperfect and network effects can play an important role.[43] Some studies also show that tying and bundling can be put into use to exclude other competitors from the tying product market as well.[44] Thus, the potential foreclosure effects of tying and bundling should also be taken into account.

A few things should be stated to conclude discussions on economic theories and show their legal implications. As it seems, economic theories provide that tying and bundling might have both anti-competitive and pro-competitive effects.[45] *Per se* legality approach would assume that tying and bundling are always pro-competitive. Where this fails to be true, it has to be the applicant's side to prove that tying and bundling failed to achieve those efficiencies and were used to leverage the market power. Therefore, competition policy has to acknowledge that tying and bundling are not anti-competitive in this scenario.[46] On the contrary, *per se* illegality would assume that tying and bundling are always anti-competitive. Economic theories provide that efficiencies can be claimed and proved by the defendants only in exceptional circumstances.[47] Thus, potential efficiencies can be significantly evaded in this scenario. Hence, the competition policy should ban and restrict the efficiencies under the *per se* illegality approach.

This paper draws a conclusion from these that both effects of tying and bundling should be considered and assessed as there is no consensus in economic theory.

2. Tying and bundling under Article 102 TFEU.

2.1. Scrutinizing tying and bundling as an abuse of a dominant position.

Both Article 101 (1) (e) and Article 102 (2) (d) TFEU read in the same way that making *"the conclusion of contracts subject to acceptance by the other parties of supplementary obligations*[48] *which, by their nature or according to commercial usage, have no connection with the subject of such contracts"*[49] will violate the treaty. As described above, tying and

[43] Michael D. Whinston, 'Tying, Foreclosure and Exclusion' [1990] Vol. 80 Is. 4 The American Economic Review, p.837.
[44] Dennis W. Carlton and Micheal Waldman, 'The strategic use of tying to preserve and create market power in evolving industries' [2002] Vol.33 Is. 2 RAND Journal of Economics, p.194.
[45] Langer (n 22) chapter 1, p.12-14.
[46] Ibid.
[47] Ibid.
[48] From tying and bundling perspective, the term 'supplementary obligations' in this provision means that both the tying (main) and tied (supplementary) products are required.
[49] Consolidated version of the Treaty on the Functioning of the European Union, [2007] OJ C 115/47, articles 101(1)(e) and 102(2)(d).

bundling can perfectly fit within these provisions when they become illegal practices. However, tying and bundling are analysed under Article 102 TFEU as a Competition Law violation. Because undertaking should be dominant in the market to be able to use tying and bundling as abusive behaviour to leverage market power.

Article 102 TFEU prohibits undertakings to abuse their dominant position in the internal market (or in its substantial part) which may have an impact on the trade between Member States.[50] Therefore, the following should be defined to establish any abuse of a dominant position under Article 102 TFEU: 'undertaking', 'dominant position' (to establish dominant position, firstly relevant market(s) both product and geographic should be defined, then market power of an undertaking within the market(s), dominance on the substantial part of the internal market should be measured, etc), 'effect within inter-state trade', 'abuse'.[51] Due to the purposes of this work, we will not go into the details of these elements.

The EC stated in its Guidance Paper that it will take action with regard to abusive tying and bundling practices if there are two different products tied or bundled together and if this leads to anti-competitive foreclosure.[52] Guidance Paper provides that the products will be considered distinct depending on customer demand.[53] If a significant number of customers would buy the tying product without purchasing the tied product from the same seller in the absence of tying and bundling, products are considered distinct.[54] Thus, this would allow stand-alone production of the products in the tie or bundle.[55]

When it comes to assessing foreclosure effects of tying and bundling, Guidance Paper refers to paragraph 20 to show that it will be done for tying and bundling in the same way as for other exclusionary abuses.[56] The following factors are vital in such assessment: the position of the dominant undertaking, conditions such as barriers to entry and expansion in the relevant market, the market position of competitors, the position of customers or input suppliers, the extent of the allegedly abusive conduct, possible evidence of actual foreclosure, and direct evidence of any exclusionary strategy.[57] While doing this assessment for tying and bundling practices, Guidance Paper refers to the duration of tying and bundling practices, their nature

[50] TFEU 2007, article 102(1).
[51] See to this effect: Wish and Bailey (n 29) chapter 5, and Sufrin and Jones (n 5) chapter 6.
[52] Guidance Paper p.50.
[53] Guidance Paper p.51.
[54] Ibid.
[55] Ibid.
[56] Ibid paragraph 52.
[57] Ibid paragraph 20.

(technical or contractual), the market power of the dominant undertaking over its product portfolio, etc.[58]

It seems from the given references to the Guidance Paper, all these are depicted by the EC in its enforcement priorities. However, there is no reference to the EC's decision-making practice in paragraphs 52-58 dealing with the foreclosure effects of tying and bundling. Even if there would have been any references to the EC decisions, they would be mostly to the cases related to the digital markets. Because the application of Article 102 (2) (d) TFEU by the EC and CJEU had been formalistic regarding the given legal test in early cases dealing with tying and bundling in traditional markets. The analyses in early cases contended to first establish the dominant position of an undertaking engaged in tying and bundling, secondly showing the existence of two distinct products, and then some degree of coercion on how distinct products are sold. After establishing these elements, it is assumed that tying and bundling can lead to foreclosure in the market.[59] The claims for objective justifications for the efficiencies did not succeed as well in these cases. Thus, a lot of criticism emerged that this kind of formalistic approach ignores efficiencies that can possibly be achieved through tying and bundling.[60]

This paper is now going to briefly examine these early cases including Hilti and Tetra Pak II to see how tying and bundling abuses in traditional markets are analysed under Article 102 TFEU.

2.2. Tying and bundling cases in traditional markets under Article 102 TFEU.

The aforementioned formalistic approach (*per se* illegality of tying and bundling) in the analysis of tying and bundling was subject in early cases including ones in the 1980s. The EC's investigations in the Napier Brown/British Sugar[61], London European/Sabena[62] cases, and the ECJ's decision in the Télémarketing v CLT case[63] are in the same line with this approach. In both, the Napier Brown/British Sugar and London European/Sabena cases, establishing the dominant position of the undertakings in the tying product market was enough for the EC to assume the effect on inter-state trade. Foreclosure effects of tying on rival companies in the tied market had not been essential in these cases. When it comes to the ECJ's position in the

[58] Ibid paras.53-54.
[59] This perspective was further noticed by the CJEU, and General Court brought about in the Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289, paras. 1009, 1035.
[60] David S. Evans, Jorge A. Padilla and Michel Slinger, 'A pragmatic approach to identifying and analyzing Legitimate Tying cases', in C. D. Ehlermann and I. Atanasiu, *European Competition Law Annual 2003: What is an Abuse of a Dominant Position?* (Hart Publishing, 2006), p.556-558; Barry Nalebuff, 'Bundling, Tying and Portfolio Effect' [2003] DTI Economics Paper No.1 Part 1.
[61] *Napier Brown v. British Sugar* (Case IV/30.178) Commission Decision [1988] OJ L 284/41.
[62] *London European-Sabena* (Case IV/32.318) Commission Decision [1988] OJ L 317/47.
[63] Case C-311/84, *Télémarketing v CLT* [1985] EU:C:1985:394.

Télémarketing v CLT case, the ECJ seemed to heavily rely on the leveraging theory while finding Luxembourg Radio and Television Station conducting monopoly extension through bundling.[64]

This formalistic approach towards the analysis of the foreclosure effects of tying and bundling is continued in the cases of the 1990s, including Hilti and Tetra Pak II. But these cases brought some changes in the EC's and ECJ's approach. These can be seen in the possibility of justifying tying and bundling practices, economic explanation of tying and bundling, and a more serious approach to establishing the market power of dominant undertakings.[65]

The EC held that Hilti illegally tied nails to cartridges, thus, violated Article 102 TFEU in its Eurofix-Bauco/Hilti decision.[66] To come to this conclusion, the EC first established that nail guns, cartridges, and nails are in distinct product markets. Hilti was found to be dominant in all three distinct markets. The EC provided that Hilti abused its dominant position by tying nails to cartridges with the aim of hindering independent producers of Hilti consumables from entering the market. Hilti tried to plead objective justification grounds that tie was necessary to achieve the safety standards. This was rejected by the EC after analysing the objective justification on safety and quality grounds. The GC did not accept Hilti's claims that the three products in question form a system.[67] The GC also refused that tie is justified by safety standards since that safety can be achieved within the product safety laws enforced by the local authorities. The ECJ in its turn upheld the GC's decision.[68]

Turning to the Tetra Pak II case, this case is also important with regard to the interpretation of Article 102 (2) (d) TFEU. The EC found that Tetra Pak illegally tied the machinery for packaging with the cartons by abusing its dominant position in the market.[69] Tetra Pak went on to defend its position by claiming that the tying and tied products formed integrated distribution systems and this tie was justified on the objective grounds of public liability and health. The EC refused to accept these claims by stating that Tetra Pak made "contracts subject to acceptance of conditions (the purchase of cartons) which have no connection with their purpose (the sale of machines), constitutes a serious infringement."[70] Tetra Pak appealed this decision and tried to seek annulment by referring to the wording of Article 102 (2) (d) that tying and

[64] Ibid para.27.
[65] Langer (n 22) chapter 4, p.7-8.
[66] *Eurofix-Bauco v. Hilti* (Case IV/30.787) Commission Decision [1988] OJ L65/19.
[67] Case T-30/89, *Hilti AG v Commission* [1991] EU:T:1991:70.
[68] Case C-53/92 P, *Hilti AG v Commission* [1994] EU:C:1994:77.
[69] *Elopak/Tetra Pak (Tetra Pak II)* (Case IV/31.043) Commission Decision [1992] OJ L72/1.
[70] Ibid para.117.

tied products (the subject of the contract) have a natural and commercial link in its case. The GC rejected these claims in its decision.[71] The GC mentioned that "consideration of commercial usage does not support the conclusion that the machinery for packaging a product is indivisible from the cartons."[72] The GC went on to reject claims about the objective justifications like in Hilti's case that safety regulations should be enforced by the relevant authorities not by private entities. The ECJ upheld GC's decision.[73] The ECJ ruled that the GC did not err in finding that there is no natural link in this case. However, the ECJ went on to give a broadening interpretation for tying and bundling practices by referring to the non-exhaustive characteristics of Article 102 TFEU.[74] The ECJ provided that *"even where tied sales of two products are in accordance with commercial usage or there is a natural link between the two products in question, such sales may still constitute abuse [under Article 102 TFEU] unless they are objectively justified."*[75] [Emphasise added] Thus, tying and bundling can still constitute abuse of a dominant position even when there is a natural or commercial link between products in the tie or bundle unless this practice is objectively justified.

3. Conclusion.

To conclude, this chapter first touched upon the definition and classification of tying and bundling before turning to the economic rationale behind these practices. Then, it is observed that there is no consensus between leveraging theory and proponents of the Chicago School in economic literature with regard to the illegality of tying and bundling practices. Therefore, the legal assessment should reveal whether tying and bundling is illegal on a case-by-case approach according to the implications drawn from economic literature. It is, however, also observed that the formalistic or *per se* illegality approach was favoured by EU institutions in the analysis of tying and bundling happening in traditional markets. This approach was continued and slightly modified in Hilti and Tetra Pak II cases. Overall, the foreclosure in the tied product market was assumed to exist once the dominant position of the alleged undertaking and distinctiveness of tied products were established in tying and bundling cases in traditional markets. No effect-based economic assessment or a detailed analysis of the alleged undertaking's efficiency claims was carried out in these cases.

[71] Case T-83/91, *Tetra Pak v. Commission (Tetra Pak II)* [1994] ECR 461.
[72] Ibid para.82.
[73] Case T-83/91, *Tetra Pak v. Commission (Tetra Pak II)* [1994] ECR 461.
[74] Ibid para.37.
[75] Ibid.

III. Tying and Bundling under EU Competition Law in Digital Markets.

1. Scrutinizing tying and bundling in digital markets.

1.1. Tying and bundling in digital markets.

It is observed that tying and bundling refer to the combined sale of two or more products in traditional markets. In digital markets, this concept extends to refer to the situations including integration of software applications into a platform's operating system[76] and more. This leads to vagueness as it is difficult to distinguish this integration from the combined sale of two products. From the Competition Law perspective, difficulties extend to the issues of establishing distinct products, how a formalistic or *per se* approach would be enough to assess possible effects of tying and bundling[77] and distinguishing the lawful expansion strategies from the tying and bundling.[78] These issues will be better examined when the relevant cases are examined dealing with tying and bundling in digital markets. Before that, there is a need for an explanation of how tying and bundling happen and cause competition law concerns in digital markets.

Those are online platforms (like GAFAM companies) that are engaged with tying and bundling practices in digital markets. These platforms are mainly scrutinized based on the economic model that they rely on under the Competition Law. The EC refers to these platforms as *"an undertaking operating in two (or multi)-sided markets, which uses the Internet to enable interactions between two or more distinct but interdependent groups of users as to generate value for at least one of the groups."*[79] These 'multi-sided markets' are defined as markets *"in which a firm acts as a platform and sells different products to different groups of consumers while recognizing that the demand from one group of customers depends on the demand from the other group"* by the OECD.[80] Hence, the fundamental characteristic of multi-sided

[76] F. Enrique Gonzalez Diaz & Anton Leis Garcia, 'Tying and Bundling under EU Competition Law: Future Prospects' [2007] 3 Competition L Int'l 13, p.18.
[77] Qiang Yu, 'Technically tying applications to a dominant platform in the software market and competition law' [2015] 36(4) Eur.Comp.LawRev., p.2.
[78] Mandrescu (n 37).
[79] European Commission, 'Public Consultation on the Regulatory Environment for Platforms, Online Intermediaries, Data and Cloud Computing and the Collaborative Economy' (24 September 2015), https://europeanbooksellers.eu/system/files/2020-02/European Commission's consultation on the regulatory environment for platforms, online intermediaries, data and cloud computing and the collaborative economy – EIBF Contribution_2020-02-19.pdf.
[80] OECD, 'Rethinking Antitrust Tools for Multi-Sided Platforms' (2018) p. 10 <https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf> accessed 18 April 2023.

platforms is to facilitate interaction and connection between different sides of the market by offering a technological interface.[81]

Sometimes platforms operating in multi-sided markets can use their market power which exists on the one side of the market to gain more power on the other side of the market. As mentioned earlier, they use the network effects (direct and indirect), scale and scope of their economies, zero-priced goods or services, and the data they collected from users in this process.[82] To this end, direct network effects refer to increasing the number of users that platform has since its services will be more appealing as its user base expands. When this expansion affects the other side of the market, indirect network effects occur. Meaning that one side of the market has a significant number of users, which subsequently drives the usage of another side of the market. These network effects impact how goods are priced on both sides of the market. To illustrate, users pay lower prices when they generate significant network effects, whereas the users on the other side of the market pay higher prices since they generated insignificant network effects.[83] Therefore, platforms can sometimes offer free or zero-priced goods or services to cause strong network effects to attract more customers or increase the prices on the other side of the market. It should also be mentioned that those goods and services are not completely free since the users pay for them with their personal data.[84] In this scenario, the first assumption is that platforms are looking for creating positive network effects without harming the competition in the markets. Otherwise can be proven by the relevant competition policy.

In light of the above-mentioned scenario, it can be understood for what purposes tying and bundling can happen in digital markets. For example, when platforms tie software applications (the tied product) to their operating system (the tying product) for free or at a low price they look for creating the same network effects. Now we will turn to analyse possible anti-competitive concerns of such tying and bundling.

1.2. Anti-competitive concerns of tying and bundling in digital markets.

Anti-competitive concerns of leveraging theory and the findings of Chicago School's tying and bundling practices are described in the second chapter of this work. When it comes to digital

[81] Tirole Jean, translated by Steven Rendall, *Economics for the Common Good* (Princeton University Press 2017) p. 379 <https://doi.org/10.2307/j.ctvc77hng> Accessed 15 Apr. 2023.
[82] See ref. N 1 to this effect.
[83] Jacques Crémer, Yves-Alexandre de Montjoye, and Heike Schweitzer, 'Competition policy for the digital era, Final report' for European Commission [2019], p. 44.
[84] R. O'Donoghue and J. Padilla, 'Abuses in Digital Platform Markets. In The Law and Economics of Article 102 TFEU' [2020] Oxford: Bloomsbury Publishing Plc, p.1046–1047.

markets, the question emerges that how those economic theories of harm are suitable for the platforms operating in multi-sided markets. This paper will now look at two seminal economic studies (post Chicago school's findings) that are conducted to test these economic theories of harm for the multi-sided markets. These are the economic studies conducted by a) A. Amelio and B. Jullien,[85] and b) J. Choi and C. Stefanidis.[86]

A. Amelio and B. Jullien's study depicts that tying practices can be utilized to leverage market power in digital markets too.[87] Their assumption is somehow the same as it is described above how tying and bundling can happen in digital markets. The study also mentions that when zero-priced goods are offered as tied products, it serves to increase user participation on that side of the market (A side).[88] By using the increased participation on one side of the market (A side) then the platform will increase the prices on the other side of the market (B side). This assumes that indirect network effects are significant.[89] The motivation behind this practice could be seen in maintaining user participation on both sides of the market.[90] Extra earnings that can be gained from the B side of the market will determine the profitability of these tying practices.[91] Therefore, the antitrust problems can be that users on the B side of the market will face increased costs due to increased participation on the A side where users will be exposed for example to the increased amount of advertisements or the amount of data collected from them.

J. Choi and C. Stefanidis's study, on the other hand, explains how this kind of tying in digital markets can lead to foreclosure effects in the tied product market as well as extracting monopoly gains.[92] Though their study is based on the assumption that both sides of the market are multi-sided and the degree of this multi-sidedness has considerable relevance in this assumption.[93] Thus, the same cannot be true when for example the tying product market is multi-sided but the tied product market is not multi-sided.[94] Going back to the main point of the study, it describes that the use of multi-sidedness in both markets will enable the dominant platform in both of these markets to lower the cost of participation to zero in both of them.[95]

[85] Andrea Amelio and Bruno Jullien, 'Tying and Freebies in Two-Sided Markets' [2012] Vol. 30 Is. 5 International Journal of Industrial Organization.
[86] Jay P Choi and Doh-Shin Jeon, 'A Leverage Theory of Tying in Two-sided Markets' [2016] CESIFO Working Paper No. 60073.
[87] A.Amelio and B.Jullien (n 85) p.436-437.
[88] Ibid.
[89] Ibid.
[90] Ibid.
[91] Ibid.
[92] J.Choi and C.Stefanidis (n 86) p.1-2.
[93] Ibid p.4.
[94] Ibid.
[95] Ibid p.1-4.

Therefore, the dominant platform will be able to offer a better deal for customers with zero-priced tied products on both sides of the market.[96] This will help to outcompete the other competitors who are not in the position of offering the same deal to the customers leading to the foreclosure in the market.[97]

Wrapping the discussions on these studies up, it is observed that these studies tried to address potential anti-competitive concerns of tying and bundling in digital markets by especially focusing on its effects. They especially tested economic theories of harm on tying and bundling for multi-sided markets. As a result, these studies showed that tying and bundling practices can also lead to anti-competitive behaviour like in traditional markets. Therefore, the use of zero-priced goods does not mean that these practices cannot cause anti-competitive concerns and violate the Competition Law.[98] By no means, this paper implies that the *per se* illegality approach should be sown towards tying and bundling in the digital markets due to this. However, it tried to show that those anti-competitive effects should be analysed under the Competition Law. Now this work turns to analyse the cases concerning tying and bundling in digital markets under the EU Competition Law.

2. Tying and bundling in digital markets under Article 102 TFEU.

2.1. Microsoft Media Player case.

2.1.1. European Commission's Microsoft decision.

The EC got the opportunity to assess tying and bundling in digital markets for the first time in its Microsoft decision.[99] After receiving a complaint from Sun Microsystems, the EC concluded its investigations against Microsoft that it violated Article 102 TFEU by bundling Windows Media Player (WMP) to its Windows Operating System (WOS). The EC found that this bundling let Microsoft abuse its market power and anti-competitively expand its market power to weaken competition in the media player market by foreclosing this market to competitors.[100] It is also provided that this foreclosure can possibly decrease the incentives of other competitors

[96] Ibid.
[97] Ibid.
[98] See more to this effect: David Evans, 'The Antitrust Economics of Free' [2011] Vol.7 Is.1 Competition Policy International, p.78-81.
[99] *Microsoft (*Case COMP/C-3/37.792) Commission Decision 2007/53/EC [2004] OJ L 32, 6.2.2007.
[100] Ariel Ezrachi, *EU Competition Law, An Analytical Guide to the Leading Cases* (6th edition, Hart Publishing 2018) p.305.

such as content providers, media companies, and software developers to develop competing rival media players to the WMP.[101]

The EC introduced a four-step test to find any tying and bundling practices as Article 102 TFEU violation in its Microsoft decision. Those include the following: *"(i) the tying and tied goods are two separate products; (ii) the undertaking concerned is dominant in the tying product market; (iii) the undertaking concerned does not give customers a choice to obtain the tying product without the tied product, and (iv) tying forecloses competition."*[102] We will now turn to briefly examine how these four elements are investigated by the EC. Even though it is not explicitly included among these elements, the EC also went on to examine Microsoft's efficiency claims. Thus, our examination will also include the objective justification grounds in the decision.

Microsoft was considered a dominant undertaking in the WOS market (tying product market) since it had more than 90% market share in this market.[103] When it is dealt with the existence of the two distinct products, the EC did not accept Microsoft's claims that WMP and WOS are one integrated product.[104] According to the EC, this cannot correspond to the reality of the markets.[105] It is added that the distinctiveness of the two products must be assessed based on consumer demand.[106] In the absence of an independent demand for the tied product, alleged distinctiveness will not be found.[107] In this vein, the EC went on to analyse the distinctiveness of WMP and WOS. The EC found that there is a separate consumer demand for the two products in question as supported by the fact that there are independent suppliers in the separate media player market supplying the media players.[108] The progressive part of this assessment is that the EC differs its analysis from the same *per se* approach by considering the non-significant consumer demand for the tied product so as not to ignore potential efficiencies of alleged bundling.[109] However, the EC did not find such non-significant consumer demand for alternative media players even four years later Microsoft commenced tying WMP with WOS. When it comes to the coercion element, the EC stated that Microsoft forces customers to obtain

[101] Ibid.
[102] Microsoft (n 99) p.794.
[103] Ibid p.799.
[104] Ibid p.800-802.
[105] Ibid p.801.
[106] Ibid p.803.
[107] Ibid.
[108] Ibid p.804-806.
[109] Ibid p.808.

products in bundles since there are no technical means to uninstall WMP.[110] According to some, the EC's Microsoft decision reformulated coercion criteria as dominant undertakings do not leave a realistic chance for customers to obtain bundled products on a stand-alone basis.[111]

After assessing the foreclosure effects of bundling at hand, the EC concluded that it can potentially foreclose the competition.[112] The EC mentioned that *"tying WMP with the dominant Windows makes WMP the platform of choice for complementary content and applications which in turn risks foreclosing competition in the market for media players."*[113] The EC supported its analysis by showing the indirect network effects of bundling. Since audio files are encoded in WMP format on WOS, this will make other stakeholders like software developers and content providers rely upon that format which would lead to increasing effects on the usage of WMP.[114] Thus, such effects on the increased usage of WMP would consequently tip it in the market over time.[115]

Though the possibility of objective justifications for illegal tying and bundling practices was acknowledged in previous cases (such as Hilti and Tetra Pak II), the EC went on to analyse the efficiency claims by the dominant undertaking in the Microsoft case. The EC provided that proportionality is observed while the efficiencies of tying and bundling must maintain the balance against its anti-competitive effects.[116] Therefore, undertakings have to show that alleged tying and bundling practices lead to efficiencies, this cannot be achieved through less restrictive means, and the balance of interests streak to the benefit of efficiencies.[117] The EC applied all these to Microsoft's efficiency claim and went on to state that Microsoft's choice for the designation of its product cannot lead to claimed efficiencies.[118] Microsoft was claiming that tying WMP to WOS could potentially enhance several other aspects of the operating system thanks to the interdependencies.[119] However, the EC concluded its assessment by rejecting this argument that "such inter-dependencies would be the result of a deliberate choice by Microsoft."[120]

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[110] Ibid p.829-834.
[111] M Dolmans and T Graf, 'Analysis of Tying Under Article 82 EC: The European Commission's Microsoft Decision in Perspective' [2004] 27 World Competition (2), 225-244, p.230.
[112] Microsoft (n 99) p.842.
[113] Ibid.
[114] Ibid p.879-896.
[115] Ibid p.968, 1016, 1071.
[116] Ibid p.970.
[117] Dolmans and Graf (n 111) p.14.
[118] Microsoft (n 99) p.971.
[119] Ibid p.963-967.
[120] Ibid p.1027.

As a result, Microsoft was fined approximately 497 million euros. The EC also ordered that Microsoft must develop and offer WOS without MWP bundled to it meanwhile can also offer products in bundles where they also exist on a stand-alone basis.[121] However, Microsoft was not permitted to make bundle offers more attractive to consumers via contractual, commercial, or technological enhancements.[122] Subsequently, Microsoft appealed this decision and looked for annulment before the GC.

2.1.2. General Court's Microsoft decision.

The GC upheld the EC's decision by providing that the EC based its reasoning on factually reliable, consistent, and accurate evidence.[123] It is also provided that the four elements that consisted of the core of the EC's bundling assessment such as dominance, distinct products, coercion, and foreclosure were not incorrect.[124]

On the EC's finding of two distinct products, the GC also confirmed that the consumer demand test must be applied to establish distinctiveness.[125] Thus, the GC did not agree with Microsoft that there was one integrated product in question. One of the main insights in GC's analysis can be seen when it is provided that consumers might want to obtain media players and operating systems from different sources.[126] Moreover, the GC stated that Microsoft's claim of the existence of one integrated product is not convincing since their internal communication documents reveal that integration of WMP into WOS aimed at increasing its competitiveness.[127]

Microsoft also claimed that it did not oblige customers with regard to bundled products with complementary obligations. Microsoft supported this by the fact that WMP was free, and customers do not pay anything extra for it, customers are not obliged to use it, they are free to install and use other media players.[128] The GC did not accept this argument. The GC stated that customers are not able to obtain WOS without WMP tied to it which means that the conclusion of their purchasing contract of WOS is made subject to acceptance of supplementary obligation within the meaning of Article 102 TFEU.[129] The GC also emphasized that it does not mean that

[121] Ibid p.1011-1042.
[122] Ibid p.1012.
[123] Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289.
[124] Ibid p.794.
[125] Ibid p.917-918.
[126] Ibid p.922-923.
[127] Ibid p.937.
[128] Ibid p.960.
[129] Ibid p.961.

customers obtain WMP free because they do not pay an additional amount for it but they do pay when they obtain WOS which includes an additional fee for WMP as well.[130] Additionally, it is not required that customers have to pay additional money for the tied product under Article 102 TFEU.[131]

Microsoft also claimed that the EC failed to establish the foreclosure effects of bundling at hand.[132] The GC analysed and found that the EC was correct in its assessment of foreclosure effects.[133] The GC referred to Microsoft's market power in the PC market and how WMP enjoyed this power as it existed in WOS thanks to bundling making it impossible for other media players to be the only media player in WOS.[134] Therefore, the other competitors are left at a disadvantage and this bundling could possibly lead to barriers to entry in the market.[135] The GC also stated that the EC was right in assessing the indirect network effects.[136] It was found that Microsoft can expand its market power in the media players market too and thanks to this expansion it can attract more attention to its operating system from other software developers.[137]

The GC also rejects Microsoft's claims that bundling is objectively justified by efficiency grounds.[138] The GC handled this by mentioning that WMP is tied to WOS in all Microsoft PCs in the world which helps to demonstrate its foreclosure effects and some of those efficiencies can be achieved without this integration.[139] The GC also did not agree that the removal of WMP might cause harm to the integrity of WOS and put a specific focus on the fact the EC did not order to remove the integration.[140] As mentioned, the EC ordered to offer two products without bundle too.

2.1.3. Implications of Microsoft Media Player case.

Thus, the Microsoft case shaped the legal test of finding tying and bundling as an abuse of a dominant position under Article 102 TFEU in these five steps:

- ✓ The accused undertaking must have a dominant position in the tying market;

[130] Ibid p.968.
[131] Ibid p.969.
[132] Ibid p.1031.
[133] Ibid p.1088.
[134] Ibid p.1037-1059.
[135] Ibid.
[136] Ibid p.1061-1062.
[137] Ibid.
[138] Ibid p.1167.
[139] Ibid p.1151.
[140] Ibid p.1164-1166.

- ✓ The tied or bundled products must be distinct products;
- ✓ Customers must be coerced (obliged) to obtain the distinct products together;
- ✓ The tie or bundle is likely to be capable of having a foreclosure effect;
- ✓ Grounds for objective justification (efficiencies).[141]

In addition to this, the Microsoft case showed for the first time that the integration of software applications into operating systems will cause tying and bundling. And this integration will not be considered as a single product since the matter will be approached from the consumer demand perspective. Moreover, the foreclosure effects of tying and bundling were for the first time acknowledged as a separate and independent step in finding illegal tying and bundling. And the effect-based analysis was carried out for the foreclosure in competition for the first time in tying and bundling cases.

2.2. Microsoft Internet Explorer case.

2.2.1. The EC's commitment decision.

The EC sent a statement of objections to Microsoft on the 15th of January 2009. The EC stated that the tying of Internet Explorer (Microsoft's web browser application) to the PC operating systems by Microsoft might constitute an abuse of a dominant position within the meaning of Article 102 TFEU.[142]

This issue is concluded in December 2009 when the EC accepted Microsoft's legally binding commitments. Accepting Microsoft's commitments meant that the EC did not have to carry out an antitrust assessment of the tying issue and provide detailed decisions based on the in-depth analysis. However, this case still has significant relevance on tying and bundling practices in digital markets since it aimed at boosting competition in web browser markets.[143]

The EC's preliminary concern was that tying in question might distort competition in that Microsoft had more than 90% market power in PCs market granting an artificial advantage in the distribution of Internet Explorer.[144] Most importantly this advantage did not stem from Internet Explorer's product merits.[145] Moreover, it was also the EC's concern that this tying

[141] Wish and Bailey (n 29) chapter 17, p.9.
[142] The European Commission, 'Antitrust: Commission accepts Microsoft commitments to give users browser choice' (2009) p.2.
[143] *Microsoft Tying* (Case No. COMP/C-3/39.530) Commission Commitment Decision [2009] OJ C 242, 9.10.2009, p.4-5.
[144] Supra note 142, p.1.
[145] Ibid.

therefore might pose obstacles to innovation by discouraging innovative incentives from other software developers in the web search product markets.[146]

The commitment decision addressed these concerns. Under this decision, Microsoft accepted to allow its users and computer manufacturers to choose among other web search browsers while using its Windows Operating Systems.[147] Microsoft also accepted to let users and computer manufacturers turn Internet Explorer on and off.[148] Microsoft also accepted making a 'Choice Screen' available to permit users of different types of its Windows Operating Systems to opt which web browsers they would like to use instead of or in addition to the Internet Explorer.[149] According to the decision, Microsoft had to make it available for five years in the European Economic Area.[150]

However, Microsoft failed to comply with these commitments and the EC fined Microsoft for approximately 560 million euros in 2013.[151] This was the first time that the EC fined undertaking for breaking their commitments under the EU Competition Law.[152]

2.2.2. Implications of Microsoft Internet Explorer case.

The EC's commitment decision was important from the perspective of especially users and developers of web search browsers. After this decision, the EC's Competition Commissioner stated that: *"Millions of European consumers will benefit from this decision by having a free choice about which web browser they use. Such choice will not only serve to improve people's experience of the internet now but also act as an incentive for web browser companies to innovate and offer people better browsers in the future."*[153] Even though Microsoft failed to comply with its commitments, the importance of the decision and opposing against such tying in web browser markets cannot be ignored. Microsoft Internet Explorer case also showed that tying web search browsers to operating systems can also raise concerns about the legality of such practices.

[146] Ibid.
[147] Microsoft Tying (n 143) p.1-6.
[148] Ibid.
[149] Ibid p.7-17.
[150] Ibid.
[151] *Microsoft Tying* (Case AT.39530) Commission Fine Decision C2013-1210 (2013) OJ C 36, 13.2.2010, p. 7.
[152] Wish and Bailey (n 29) chapter 17, p.11.
[153] Supra note 142, p.1.

2.3. Google Android case.

2.3.1. The EC's Google Android decision.

In July 2018, The EC adopted an infringement decision[154] against Google by imposing a 4.34 billion euro fine. The decision identified three different abusive practices that Google engaged with to breach Article 102 TFEU. These abusive practices were restrictions Google imposed on Mobile Network Operators ('MNOs') and device manufacturers which aimed at strengthening its dominant position in the general Internet search market.[155] These restrictions were contained in three different agreements:

- Mobile Application Distribution Agreements (MADA) – which enabled Google to make licensing of its app store – Play Store upon to demanding from manufacturers of the pre-installation of the Google Search and Chrome apps,[156]
- Revenue Share Agreements (RSA) – which allowed Google to make payments to mobile network operators and device manufacturers subject to the condition that they will exclusively pre-install the Google Search app,[157]
- Anti-Fragmentation Agreements (AFA) – which let Google forbid manufacturers from selling devices with different versions of Android (Android forks) if they want to pre-install Google apps.[158]

For the purposes of this work, we will only go through the EC's assessment with regard to the first agreement (MADA) dealing with the tying and bundling practices. This concerned the illegal tying of Google's app store (Play Store), search (Google Search), and browsing apps (Google Chrome).

The EC established the existence of four different markets including the markets for a) Licensing of smart mobile Operating Systems,[159] b) Android app stores,[160] c) General search services,[161] and d) Non-OS-specific mobile web browsers.[162] The EC found that Google had a

[154] *Google Android* (Case AT.40099) European Commission Decision C2018-4761 (2018) OJ C 402, 28.11.2019, p. 19–22.
[155] Sufrin and Jones (n 5) chapter 7, page 117.
[156] The European Commission, 'Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine' (2018) p.1.
[157] Ibid.
[158] Ibid.
[159] Google Android (n 154) p.218-267.
[160] Ibid, p.268-322.
[161] Ibid, p.322-366.
[162] Ibid, p.367-399.

market power of 70-90% across all these markets since 2011.[163] The EC concluded that Google is dominant in all these four distinct markets.

Google is found in being engaged with illegal tying as it offers the Google Play Store, Google Search, and the Google Chrome apps in the bundle to device manufacturers. The EC's investigations revealed that Play Store is a must-have app in that users expect to have this app on their devices pre-installed.[164] Therefore, Google is found committing illegal tying on two occasions 1) Tying Google Search to Play Store, 2) Tying Google Chrome to Play Store. To this end, the EC established that Google Search and Google Chrome (tied products) are distinct products from Play Store (tying product). This is explained on the grounds that these apps have distinct functionalities for users, other platforms are offering general search services and mobile internet browsers on a stand-alone basis, tied apps are designed by Google to also work on operating systems other than Android, tied apps can also be installed from Apple AppStore.[165] Moreover, as mentioned these apps could only be obtained as a bundle, thus, Google coerced customers to obtain products only as a bundle.

The most interesting finding of the Google Android case is that Google is dominant in both the tying and tied product markets. In the EC's decision, we could not see any specific attention with regard to this aspect. The EC went on to show the illegality of the tying practices in question by establishing restrictions on competition. The EC concludes that tying practices at hand can cause restriction of competition because of two reasons.[166] Firstly, the tying practices in question confer a substantial competitive advantage to Google which competing non-OS-specific mobile web browsers cannot offset.[167] Since Google Search and Chrome apps were pre-installed, it causes a status-quo bias, meaning that users expected to be more likely to use them.[168] Secondly, tying practices at hand prevent innovation, directly or indirectly harm consumers of tied products, and serve to maintain and strengthen Google's dominant position in general search service national markets.[169] The EC did not also accept Google's two-line objective justifications defence.[170]

[163] Ibid, p.446, 596-598 and 681-685.
[164] Ibid, p.271 and 292.
[165] Ibid, p.756-762 and 879-884.
[166] Ibid, p.896.
[167] Ibid.
[168] Ibid, p.775-857 and 898-968.
[169] Ibid, p.896.
[170] Ibid, p.993-1008.

2.3.2. General Court's Google Android decision.

Google went on to appeal the EC's decision and seek annulment before the GC. However, the GC dismissed Google's appeal claims and upheld the EC's decision in all relevant aspects of alleged tying.[171] The GC only annulled the EC's decision with regard to Revenue Share Agreements since Google had stopped using them since 2014. Thus, the GC reduced the amount of the fine from 4.34 to 4.125 billion euros.[172]

Therefore, we will not go into the details of the GC's decision for the sake of not repeating the findings of the EC. Google also appealed this decision, and the case is before the ECJ (C-738/22 P) at the moment of writing.[173]

2.3.3. Implications of Google Android case.

Above all, the Google Android case, especially the EC's assessment of illegal tying in this case drew significant attention and criticism in the Competition Law literature. For the purposes of this work, we will not go into details about them but will briefly mention a few. Some go on to put special emphasise on paying more attention to differing illegal tying and bundling practices from lawful expansion strategies.[174] Another author goes in the same vein and argues that Google's practices contain an appropriability strategy that can help Google create efficiencies as an innovator through the use the of Android ecosystem.[175] The other author, who criticizes the EC's analysis of tying in the Google Android case, claims that the current approach ignores the out-of-the-box functionality provided by the bundle that Google offers.[176]

Though the case is pending before the ECJ, the Google Android case provided interesting insights. Firstly, it showed that tying and demanding the pre-installation of app stores with other apps such as general internet search and internet browsing apps can amount to tying and bundling. Secondly, Google was dominant both in tying and tied product markets which made this case different than those of under traditional markets and Microsoft cases. Thirdly, tying and bundling can be illegal if it serves to acquire, maintain, or strengthen the dominant position

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[171] Case T-604/18, *Google and Alphabet v Commission (Google An-droid)* [2022] ECLI:EU:T:2022:541.
[172] Supra note 156, p.2.
[173] See to this effect: <https://curia.europa.eu/juris/liste.jsf;jsessionid=F0D237BD0D0608D09FB4E15DA10990B5?num=C-738/22&language=en> accessed on 26 April 2023.
[174] Mandrescu (n 37).
[175] D. Auer, 'Appropriability and the European Commission's Android Investigation' [2017] 23 Columbia J of European Law 647.
[176] P. Todd, 'Out of the Box: Illegal Tying and Google's Suite of Apps for the Android OS' [2017] 13 European Competition Journal 62.

in any affected markets including both tying and tied product markets. Fourthly, it acknowledged the Microsoft Media Player case as an established case law as it was the main reference point of both the EC and GC in the reasoning of their decisions.

2.4. The EC's Apple Pay Investigation.

The EC issued a Statement of Objections to Apple concerning its Apple Pay NFC practices on the 2nd of May 2022. On iPhones and iPads, Apple's proprietary mobile payment solution is Apple Pay.[177] Apply Pay operates as a contactless payment technology on these devices which is based on so-called Near-Field Communication (NFC) or 'tap and go' functionality.[178]

The EC's one of preliminary concerns related to this practice is that *"Apple's terms, conditions, and other measures related to the integration of Apple Pay for the purchase of goods and services on merchant apps and websites on iOS/iPadOS devices may distort competition and reduce choice and innovation."*[179]

The further details of this investigation are not known yet according to the publicly available information.[180] Therefore, we do not know yet if the integration in question will also be analysed as tying and bundling abuses. However, chances for that seem highly likely since Apple reserves access to NFC technology on its iOS operating system to Apple Pay according to the EC.[181]

3. Conclusion.

It is observed how the legal analysis of illegal tying and bundling practices has evolved in cases dealing with digital markets. Being different from traditional market cases, the EC's assessment became more effect-based and efficiency claims are analysed in depth in examined cases. Nevertheless, those efficiency claims did not succeed in any of the analysed cases. The backward here can be seen in the lack of a more realistic approach towards alleged efficiency claims. However, it is obvious that the formalistic approach is abandoned while dealing with tying and bundling practices in multi-sided markets. Given characteristics of multi-sided markets, difficulties in the identification of distinct products in software integration

[177] The European Commission, 'Antitrust: Commission opens investigation into Apple practices regarding Apple Pay' (Press Release 2020) p.1.
[178] Ibid.
[179] Ibid.
[180] See more on this: https://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp_result&policy_area_id=1,2,3.
[181] Ibid.

ecosystems, and more need for the economic analysis of the effects of tying and bundling in these markets are among the main reasons for this. The EC did not only acknowledge the existence of possible justifications on objective grounds but also analysed claims on such grounds in Microsoft Media Player and Google Android cases. The EC thoroughly examined the anti-competitive effects of tying and bundling which contains that these practices first might lead to the exclusion of equally efficient competitors in the tied product market, second these practices might serve to acquire, maintain, or strengthen the dominant position in any affected markets including both tying and tied product markets. It makes the assessment for the tying and bundling consistent with the assessment of exclusionary abuses under the EU Competition Law.

Therefore, the final picture of the assessment of illegal tying and bundling practices under Article 102 TFEU can be depicted as follows: 1) Dominant position on the tying market, 2) Existence of two distinct products, 3) Coercion, 4) Foreclosure effects on the tied product market; acquiring, maintaining or strengthening market power on the tying or tied product market, 5) Tying and bundling are not objectively justified.

To conclude, as the evolution of the legal test reveals, the rules developed under the traditional markets were not alone enough to empower the EC and EU Courts to analyse alleged tying and bundling practices. A more effect-based analysis and more cautious assessment of efficiency claims were needed while dealing with tying and bundling in multi-sided markets.

IV. Tying and Bundling under the DMA.

Before looking at the provisions related to tying and bundling under the DMA, this work will first scrutinize the DMA to institutionally analyse it.

1. Institutional analysis of the DMA.

The EC proposed the DMA at the end of 2020. The proposed DMA was adopted by the European Parliament and the Council in its first reading according to the ordinary legislative proceeding. The DMA entered into force on the 1st of November 2022, and its rules became from the 2nd of May 2023.

While DMA was still under discussion during the legislative process, the main concerns regarding DMA were its scope and enforcement. The reason behind these concerns was that if the DMA does not have a clear and predictable scope, strong coordination mechanisms, and effective enforcement setup, it could possibly lead to fragmentation in the digital markets.[182] This paper considers that these concerns are met to a great extent by EU legislators in the final draft of the DMA. However, some other concerns will be raised on the enforcement issues after completing the main assessment of this paper in the fifth chapter.

1.1. Material, personal, and geographical scope of the DMA.

The DMA's scope will not cover all platforms in digital markets. The DMA will be applied to gatekeepers that provide core-platform services (CPS). Therefore, to fall within the scope of the DMA, platforms may qualify or be designed by the EC as gatekeepers and their services may include CPS listed in the DMA. Article 2 (2) DMA lists these ten services as CPS:

1) *"online intermediation services;*
2) *online search engines;*
3) *online social networking services;*
4) *video-sharing platform services;*
5) *number-independent interpersonal communications services;*
6) *operating systems;*
7) *web browsers;*
8) *virtual assistants;*
9) *cloud computing services;*

[182] Cani Fernandez, 'A Regulation to Strengthen Competition in Digital Markets - A Note for an Effective Interaction of the DMA with Competition Law' [2021] 17 Competition L Int'l 107, p.109.

10) online advertising services, including any advertising networks, advertising exchanges and any other advertising intermediation services, provided by an undertaking that provides any of the core platform services listed in points (a) to (i).”[183]

Article 3 (1) DMA sets out three cumulative conditions for any undertaking to be designated as a gatekeeper where:

1. *“it has a significant impact on the internal market;*
2. *it provides a core platform service which is an important gateway for business users to reach end-users; and*
3. *it enjoys an entrenched and durable position, in its operations, or it is foreseeable that it will enjoy such a position in the near future.”*[184]

Article 3 (2) further specifies when these conditions will be presumed by the EC to be fulfilled in the designation process of the gatekeepers. In the light of this provision, the first and third conditions will be considered to be met where the undertaking has above 7.5 billion EU-wide annual turnover, or it has an average market capitalisation or equivalent fair market value over EUR 75 billion during each of the last three financial year.[185] The second condition will be assumed to be met where the undertaking has at least 45 million monthly active end users in the EU and 10 thousand yearly active business users in the EU in the last financial years.[186] Undertakings which meet these quantitative turnover and user-based thresholds are obliged to notify the EC and provide the relevant information for designation purposes.[187] In case of failing to do so, the EC can designate those undertakings as gatekeepers according to the publicly available information.[188]

Given these definitions and multi-billion-euro thresholds, it can be easily pointed out that it is specially intended to bring giant undertakings including but not limited to Big Tech (GAFAM) companies under the scrutiny of the DMA.[189]

[183] DMA 2022, Article 2.
[184] DMA 2022, Article 3(1).
[185] DMA 2022, Article 3(2).
[186] Ibid.
[187] DMA 2022, Article 3(3).
[188] Ibid.
[189] Cabral L, Haucap J, Parker G, Petropoulos G, Valletti T, Van Alstyne M, ‘The EU Digital Markets Act a Report from a Panel of Economic Expert’ (2021) p.9: “These thresholds are designed to capture the largest online platforms, where potential harm is the greatest. Effectively, it comes down to the GAFAM tech giants ... possibly a few more.”

The DMA's geographical scope is limited to the EU. It will be applied to the "core platform services provided or offered by gatekeepers to business users established in the EU or end users established or located in the EU, irrespective of the place of establishment or residence of the gatekeepers"[190]

Therefore, it is established that the DMA has a clear material, personal, and geographical scope.

1.2. Conduct rules and their per se character under the DMA.

The DMA introduces 22 *per se* conduct rules in the form of prohibitions and obligations for the gatekeepers of core platform services. Those are the obligations and prohibitions stated under Articles 5, 6, and 7 DMA. Article 5 DMA contains 9 conduct rules which are considered self-explanatory, self-executing or in other words directly applicable obligations and prohibitions. These include among others, prohibition on parity clauses, prohibition on anti-steering provisions, prohibition on requiring business users to use certain ancillary services, prohibition on tying different CPS, and obligation to ensure price transparency in advertising intermediation.[191]

On the other hand, 12 conduct rules under Article 6 DMA are also self-executing and directly applicable but might need further specificity from the EC. These include among others, the prohibition on using data of business users to compete against them, the obligation to allow app un-installing and changes to default settings, the prohibition on sideloading restrictions, the prohibition on self-preferencing in ranking, the obligation to allow (vertical) interoperability with hardware and software features.[192] Last but not least, Article 7 deals with horizontal interoperability for number-independent interpersonal communications services.[193] The further explanation of these rules can be in two forms. The EC either can adopt implementing acts or engage in a regulatory dialogue with undertakings.[194]

Moreover, those 22 rules can be updated by the EC through the adoption of delegated acts.[195] Non-compliance with these rules might lead to fines of up to 10% of an annual global turnover

[190] DMA 2022, Article 1(2).
[191] DMA 2022, Article 5.
[192] DMA 2022, Article 6.
[193] DMA 2022, Article 7.
[194] DMA 2022, Article 8.
[195] DMA 2022, Article 49.

of a gatekeeper imposed by the EC,[196] and behavioural and structural remedies in case of systematic non-compliance issues.[197]

These 22 rules are considered *per se* rules, and efficiency claims are not available for these provisions. Under the DMA, there are only two defences available for gatekeepers to get exceptions from these rules. However, it seems that those defences can only be successful only in exceptional circumstances. If the gatekeeper can prove that compliance with the *per se* rules might harm the economic viability of its operations in the EU because of exceptional reasons out of its control, the EC might suspend the applicability of the relevant *per se* rule under Article 9 DMA.[198] The exemption can also be granted by the EC on two grounds: public health and public security.[199] These concepts are established under EU Internal Market Law, and their interpretation has been restrictive in the ECJ's past decision-making practice.[200] Since the DMA is also based on Article 114 TFEU and considered a harmonisation tool, it is more likely that these grounds will also be applied in a stringent way for the exemptions under the DMA.

1.3. Enforcement of the DMA, EC and NCAs.

The EC is the sole enforcer of the DMA.[201] NCAs may start an investigation into alleged DMA violations, however, they do not have the authority to decide the case as they are obliged to report it to the EC.[202] The EC's main power as the enforcer of the DMA is to adopt a decision in case of finding non-compliance with the conduct rules.[203] As mentioned, the EC may impose fines and other remedies as a consequence of such findings.[204] And the EC's decision-making authority stemming from the DMA is subject to review by the CJEU according to the TFEU.[205]

The DMA also authorize the EC to monitor gatekeepers to make sure that gatekeepers are complying with the DMA's conduct rules.[206] The EC also have to submit a report to the Council and European Parliament about the implementation of the DMA every year.[207] Moreover, the

[196] DMA 2022, Article 30.
[197] DMA 2022, Article 18.
[198] DMA 2022, Article 9.
[199] DMA 2022, Article 10.
[200] See to this effect for example: Case C-145/09 *Tsakouridis* [2010] ECLI:EU:C:2010:708, paras.43, 44.; Case 15/74 *Centrafarm v. Sterling Drug* [1974] ECR 1147, para. 8.; Case C–465/01 *Commission v. Austria* (workers' chambers) [2004] ECR I–8291, para. 39.; Case 152/73 *Sotgiu v. Deutsche Bundespost* [1979] ECR 153, para. 4.
[201] DMA 2022, Recital 91 and Article 18.
[202] DMA 2022, Article 38(7).
[203] DMA 2022, Article 29.
[204] DMA 2022, Articles 30 and 18.
[205] TFEU 2007, Article 263(4).
[206] DMA 2022, Article 26.
[207] DMA 2022, Article 35.

EC is obliged to evaluate the functioning of the DMA regarding its goals and identify the possible needs for its amendment and send it to the Council and European Parliament as a repost every three years.[208]

The DMA also provides some provisions for the EC's cooperation with several enforcement agencies at the EU level, as well as national authorities.[209] Article 38 DMA sets out the details for cooperation with NCAs, and Article 39 DMA entails comprehensive information on the cooperation with the national courts.

Regarding the remaining powers of the Member States, the DMA includes the pre-emption rule. Article 1 (5) DMA to avoid fragmentation in the internal market provides that *"Member States shall not impose further obligations on gatekeepers by way of laws, regulations or administrative measures to ensure contestable and fair markets."*[210] To this end, Recital 9 DMA is important to fully understand the pre-emption rule. Its text entails that this fragmentation can only be avoided if Member States are deprived of the authority of imposing national rules that have the same scope and objectives under the DMA.[211] To this end, Article 1 (6) (a) DMA is also important which provides that the DMA should be applied without prejudice to the existing national competition law rules. It has to be stated that Article 1 (6) (a) DMA should not be interpreted as allowing member states to impose the same obligations to gatekeepers that they are obliged to comply with under the DMA. It should be interpreted in a way that the DMA's application should not consist prejudice to existing national competition laws dealing with anti-competitive practices.

Thus, Member States are not allowed to impose the same obligations for the gatekeepers under national laws as the ones that have already been imposed on them by the DMA. Moreover, Article 1 (5) also entails that Member States can impose other obligations on gatekeepers for matters falling outside of the DMA where it is compatible with the EU law.[212] This makes the purpose of this work even more important. In the outcome of the main thesis question, where tying and bundling obligations under the EU Competition Law is different from the DMA, MS can impose further obligations for the compliance with such obligations. Now we will turn to

[208] DMA 2022, Article 53.
[209] DMA 2022, Article 37.
[210] DMA 2022, Article 1(5).
[211] DMA 2022, Recital 9.
[212] DMA 2022, Article 1(5).

scrutinize the obligations and prohibitions related to the tying and bundling practices under the DMA.

2. Tying and Bundling under the DMA.

2.1. The prohibition under Article 5 (7) of DMA for gatekeepers.

Article 5 (1) DMA states that gatekeepers have to comply with all obligations specified in that provision itself with regard to each of its CPS.

Article 5 (7) DMA reads as follows:

"The gatekeeper shall not require end users to use, or business users to use, to offer, or to interoperate with, an identification service, a web browser engine or a payment service, or technical services that support the provision of payment services, such as payment systems for in-app purchases, of that gatekeeper in the context of services provided by the business users using that gatekeeper's core platform services."[213]

Now we will interpret the textual meaning of this prohibition to better understand what is prohibited under Article 5 (7) DMA.

Firstly, 'end users' and 'business users' are the beneficiaries of this prohibition imposed on gatekeepers. Under Article 2 (20) DMA, end users are defined as *"any natural or legal person using core platform services other than as a business user."*[214] Following this, business users are defined as *"any natural or legal person acting in a commercial or professional capacity using core platform services for the purpose of or in the course of providing goods or services to end users."*[215] Having the description of network effects in the third chapter of this work in rewind, end users can be understood as users that are on the A side of the market, business users can be understood as users on the B side of the multi-sided market where the platform, in this case, the gatekeeper is operating.

Secondly, gatekeepers are prohibited to coerce end users only 'to use', and business users 'to use', 'to offer', or 'to interoperate with' the further given four services while using gatekeepers' all CPS. Regarding business users, it is additionally provided that they should not be obliged so in the context of providing their own services through the use of the gatekeeper's CPS.

[213] DMA 2022, Article 5(7).
[214] DMA 2022, Article 2(20).
[215] DMA 2022, Article 2(21).

Thirdly, those four services include 'an identification service', 'a web browser engine', 'a payment service', or 'technical services that support the provision of payment services, such as payment systems for in-app purchases'. All these four services are defined under Article 2 DMA. Identification services are defined as services that enable any type of verification of the identity (of both end and business users) provided together with or supporting the CPS.[216] Web browsers are defined as applications allowing end users to get access *"and interact with web content hosted on servers that are connected to networks such as the Internet, including standalone web browsers as well as web browsers integrated or embedded in software or similar."*[217] To define the payment services and technical services supporting payment services, the DMA refers to the Directive (EU) 2015/2366 where there are detailed definitions of these services, respectively at Annex I and Article 3 (j) of the Directive.[218]

Thus, what is prohibited under Article 5 (7) DMA is the tying and bundling of identification services, web browsers, payment services or technical services supporting the payment services (tied products) with the gatekeeper's all CPS (tying products).

2.2. The prohibition under Article 5 (8) of DMA for gatekeepers.

Article 5 (8) reads as *"[t]he gatekeeper shall not require business users or end users to subscribe to or register with, any further core platform services listed in the designation decision under Article 3(9) or which meet the thresholds in Article 3(2), point (b), as a condition for being able to use, access, sign up for or registering with any of that gatekeeper's core platform services listed under that Article."*[219] [Emphasise added]

Now we will do the textual interpretation for Article 5 (8) to comprehend what is prohibited under this provision.

Firstly, end users and business users are also the beneficiaries of this prohibition imposed on the gatekeepers. Secondly, the gatekeepers cannot oblige both beneficiaries 'to subscribe' or 'to register with' given services.

Thirdly, those services are defined as any further CPS provided with the designation decision according to Article 3(9) or 3(2). Article 3 (9) DMA is important to understand this part. Its text provides that the EC can list relevant CPS for any given gatekeeper that are important

[216] DMA 2022, Article '2(19).
[217] DMA 2022, Article 2(11).
[218] See more to this end: Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market.
[219] DMA 2022, Article 5(8).

gateways for business users to reach out to end users in the designation decision. This means CPS that are being mentioned in this provision are the gatekeeper's own CPS under their designation decision.

Fourthly, this obligation to subscribe or register with the gatekeeper's one CPS should be imposed as a condition for being able to use, access, sign up for or register with that gatekeeper's other CPS.

Cumulating all these four elements is enough to understand what is prohibited under Article 5 (8) DMA. It is the prohibition of tying gatekeeper's CPS. In more detail, a *"gatekeeper cannot make use of, access to, sign-up for or registration with any of its CPSs conditional upon a business or end user also subscribing to or registering with another CPS of the gatekeeper."*[220] In this case, both tying and tied products are the gatekeeper's CPS defined in the designation decision.

2.3. The obligation under Article 6 (3) of DMA for gatekeepers.

Article 6 (1) DMA gatekeepers have to comply with all obligations specified in that provision itself with regard to each of its CPS.

The first paragraph of Article 6 (3) reads as follows: *"The gatekeeper shall allow and technically enable end users to easily un-install any software applications on the operating system of the gatekeeper, without prejudice to the possibility for that gatekeeper to restrict such un-installation about software applications that are essential for the functioning of the operating system or of the device and which cannot technically be offered on a standalone basis by third parties."*[221]

Now again, the textual interpretation will be done to comprehend the obligation imposed on gatekeepers with this provision.

Firstly, the beneficiary of this obligation is the end users. Secondly, gatekeepers are required to allow end users to uninstall any applications on their operating system. Thirdly, there is an exception for this obligation only if those software applications are vital for the functioning of the gatekeepers' operating system or of the device and when those applications cannot be obtained from third parties on a stand-alone basis.

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[220] N. Moreno Belloso, 'The EU Digital Markets Act (DMA): a Summary' [2022] Available at SSRN <https://ssrn.com/abstract=4109299> Accessed 9 April 2023, p.2.
[221] DMA 2022, Article 6(3).

Thus, it is easy to understand that Article 6 (3) obliges gatekeepers to allow end users to uninstall any pre-installed software applications without facing any difficulties. The exception can be made when those applications are vital for the functioning of the gatekeeper's operating system or the devices and applications in question cannot be obtained from other providers. Therefore, the obligation under Article 6 (3) serves to prevent possible technical tying or pure bundling of software applications to operating systems.

The second paragraph of Article 6 (3) DMA contains another obligation for gatekeepers. This obligation contains allowing or technically enabling end-users to change default settings on the gatekeeper's operating system, virtual assistant, and web browser that direct or steer end users to the gatekeeper's other products or services.[222]

3. Conclusion.

In this chapter, the institutional analysis of DMA was first carried out. It is established that DMA has a clear material, personal and geographical scope, and a centralised enforcement system. Conduct rules, their nature and limited exceptions for those rules are also described. All these and clearly defined cooperation mechanisms together with the pre-emption rule can serve to address the concerns of possible fragmentations in the digital markets.

Then, this work scrutinized conduct rules related to tying and bundling practices under DMA. It is described that Article 5 (7) DMA prohibits the tying of identification services, web browsers, payment services and technical means supporting payment services to gatekeeper's CPS. Article 5 (8) prohibits tying of gatekeepers' different CPS. Article 6 (3) DMA obliges the gatekeeper to allow end users to uninstall any pre-installed software applications with some exceptions.

[222] DMA 2022, Article 6(3).

V. Comparing Tying and Bundling under EU Competition Law and DMA in Digital Markets.

1. The DMA and EU Competition Law.

1.1. The goals of the DMA and EU Competition Law.

According to the EU legislator, the DMA is not a competition law tool as the EC did not base its proposal on Article 103 TFEU.[223] Instead, the DMA is based on Article 114 TFEU to promote the internal market.[224] In Recital 11 DMA, it is depicted that it pursues objectives that are complementary to, but different from, that of the EU Competition Law.[225] DMA differs its goals from the goals of competition law by providing that protecting undistorted competition in any given market is for the competition law.[226] Following this, DMA provides that its goals are *"to ensure that markets, where gatekeepers are present, are and remain contestable and fair, independently from the actual, potential or presumed effects of the conduct of a given gatekeeper ... on competition on a given market*."[227] Thus, contestability and fairness are the objectives of the DMA. And the main point of differentiating the DMA from competition law is the reference to their goals. This brings us to consider relevant issues from the old debate on the goals of the EU Competition Law. However, we will not go that much into the depths in this regard due to the purpose of this work.

First of all, it should be observed how contestability and fairness are defined in the DMA. Recital 32 states that contestability *"must relate to the ability of undertakings to effectively overcome barriers to entry and expansion, and to compete with the gatekeeper based on the intrinsic quality of their products and services."*[228] The recital further specifies that this contestability is aimed to be ensured by abandoning gatekeeper practices that are able to increase barriers to entry, especially deriving from network effects economies of scale and benefits from data.[229]

Secondly, Recital 33 DMA defines unfairness so that it *"must relate to an imbalance between the rights and obligations of professional users in which the gatekeeper obtains a*

[223] Article 103 of the TFEU enables the Council to adopt regulations or directives aimed at implementing the principles outlined in the EU Competition Law provisions.
[224] Article 114 TFEU enables the EU legislator to approximate national laws in order to create an internal market.
[225] DMA 2022, Recital 11.
[226] Ibid.
[227] Ibid.
[228] DMA 2022, Recital 32.
[229] Ibid.

disproportionate advantage."[230] The DMA aims to tackle this imbalance through the prohibitions imposed on gatekeepers by prohibiting them to use gateway positions and superior bargaining power so as not to hinder other market participants to reap the benefits of their own contributions and setting unilaterally unbalanced conditions of using CPS and related services.[231]

Turning to the goals of competition law, it has to be stated that there have been a lot of debates on the topic but still no consensus on the matter.[232] While reviewing the literature on this debate, we came across one comprehensive empirical research on the goals of competition law conducted by K. Stylianou and M. C. Iacovides.[233] Even such detailed empirical work had difficulty establishing the final say on the debate. Nonetheless, this study provides useful insights and provides that the priority of the EU Competition Law is the competition process itself (such as consumer welfare, efficiency, etc) rather than achieving direct outcomes.[234] The study also acknowledges fairness as the competition law objective but states that it does not appear as the main highlight in EU institutions' decision-making practice.[235]

However, A. Ezrachi includes fairness among the goals of competition law whereas he tries to clarify the goals of competition law, especially for digital markets.[236] He draws special attention to the use of fairness and unfair practices or conditions terms on several occasions at TFEU.[237] Another author – A. P. Komninos, by drawing attention to the ECJ's decisions, shows that fairness had been a guiding principle in some occasions for both exclusionary and exploitative abuse cases.[238]

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[230] DMA 2022, Recital 33.
[231] Ibid.
[232] For example, see: Laura Parret, 'Shouldn't we know what we are protecting? Yes we should! A plea for a solid and comprehensive debate about the objectives of EU competition law and policy' [2010] 6(2) ECJ, p. 345.
[233] Stylianou Konstantinos and Iacovides Marios, 'The goals of EU competition law: a comprehensive empirical investigation' [2020] Legal Studies, Available at SSRN: <https://ssrn.com/abstract=3735795>, Accessed 29 April 2023.
[234] Ibid, p.5.
[235] Ibid.
[236] Ariel Ezrachi, 'EU Competition Law Goals and the Digital Economy' [2018] Oxford Legal Studies Research Paper No. 17/2018, Available at SSRN: <https://ssrn.com/abstract=3191766> Accessed 29 April 2023.
[237] Ibid, p.13.
[238] Komninos Assimakis, 'The Digital Markets Act: How Does it Compare with Competition Law?' [2022] Available at SSRN: https://ssrn.com/abstract=4136146 Accessed 29 April 2023. He uses Case C-177/16, Autortiesību un komunicēšanās konsultāciju aģentūra / Latvijas Autoru apvienība v Konkurences padome, ECLI:EU:C:2017:689. and Case C-280/08 P, Deutsche Telekom AG v Commission, ECLI:EU:C:2010:603 as example in this regard.

On the other hand, for some fairness is no longer the goal of EU Competition Law. For example, A.C. Witt thinks the same and adds that EU Competition Law should not focus on barriers to entry that are not the result of anticompetitive conduct.[239]

When it came to contestability, this paper did not find such a goal literally called contestability as for the EU Competition Law. As it is observed, contestability is defined via the elements of "barriers to entry", "expansion", "challenge the gatekeeper", and "incentive to innovate" under the recital 33 of DMA. These elements create some similarities between contestability and some goals of EU Competition Law including protection of the competitive structure, protection of SMEs, market integration, and efficiency.

A few things should be mentioned to conclude these discussions. By no means, we are trying to establish that fairness and contestability under the DMA are exactly the same as the goals of the EU Competition Law. The purpose here was to show that fairness and contestability (especially fairness) are not totally stranger terms for the EU Competition Law. Since there is no consensus on the goals of the EU Competition Law, it was worth examining the difference that is made by the EU legislator by pointing out the objectives of these two systems. This paper agrees that pointing out protecting undistorted competition as the main goal of the EU Competition Law is also in line with the ECJ's Intel judgment.[240] However, using only these goals to establish whether the DMA is complementary to EU Competition Law or not cannot be sufficient enough. And it does not go any further than being a formalistic declaration. This brings about the main thesis question in this work, making it necessary to be answered.

We will now turn to establishing the main differences between the DMA and EU Competition Law.

1.2. Comparing the DMA and EU Competition Law.

According to Article 1 (6) DMA, it will be applied without prejudice to the EU Competition Law namely Article 102 TFEU too. However, it will not be that easy since most of the conduct rules of the DMA are inspired by the EU Competition Law.

Reminiscences in the contexts of some of the conduct rules under the DMA and EU Competition Law cases enable us to state so. These similarities can be seen between Article 5 (3) DMA and Amazon e-book case; Articles 5 (4), 5 (5) DMA and Apple App Store and Google

[239] Witt Anne C., 'The Digital Markets Act – Regulating the Wild West' [2023] 60(3) Common Market Law Review, Forthcoming, Available at SSRN: <https://ssrn.com/abstract=4395089> Accessed 30 April 2023, p.24.
[240] Case C-413/14 P, *Intel Corp. v. Commission* [2017] ECLI:EU:C:2017:632.

Play Store investigations; Articles 5 (7), 5 (8), 6 (3) DMA and Google Android, Microsoft Media Player, Microsoft Internet Explorer cases; Article 6 (2) DMA and Amazon Marketplace SO and Facebook Marketplace investigations; Articles 6 (4), 6 (7) DMA and Apple App Store SO and Apple Pay NFC investigations; Article 6 (5) DMA and Google Shopping case.[241] By pointing out this, many authors think that the DNA of the DMA is EU Competition Law.[242]

Nevertheless, showing these similarities is not alone enough to say that conduct rules under the DMA are exactly the same as the obligations imposed by these cases or implications drawn from the ongoing investigations. A thorough analysis is needed to establish whether these conduct rules are complementary or substitute to those under the EU Competition Law. This thesis aims to do this assessment for tying and bundling rules.

On the other hand, there are several differences between the DMA and EU Competition Law which can give an effect to the application of Article 1 (6) of the former. Above all, the DMA is a market intervention act meaning that it is an *ex-ante* sector-specific market regulatory act. As observed, its comprehensive rules are aimed at addressing anti-competitive practices arising in digital markets. And compliance with the DMA's conduct rules is required befo8re the market failure takes place. This differs from the EU Competition Law where Article 102 TFEU is applied ex-post after the abuse of a dominant position takes place. Secondly, the DMA's *ex-ante* applied rules release the EC from the burden of conducting timely and administratively burdensome complex economic assessments such as dominance, market power, foreclosure etc, differing it from Article 102 TFEU. By pointing out this, we can also say that the DMA addresses the shortcomings of Article 102 TFEU. Thirdly, as it is established the conduct rules under the DMA have *per se* character and are different from Article 102 TFEU, efficiency claims are not available for them. Fourthly, this enables us to say that the DMA is the system of prohibition whereas Article 102 TFEU is the system of control of an abuse of a dominant position. Moreover, the DMA has a centralised enforcement system, authorising the EC with enforcement, monitoring, and implementation powers, making the EC the sole enforcer of the DMA.

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[241] See supra note 11 for more to this regard.

[242] Moreno Belloso Natalia and Petit Nicolas, 'The EU Digital Markets Act (DMA): A Competition Hand in a Regulatory Glove' [2023] European Law Review (Forthcoming), Available at SSRN: <https://ssrn.com/abstract=4411743> Accessed 1 May 2023; Budzinski Oliver and Mendelsohn Juliane, 'Regulating Big Tech: From Competition Policy to Sector Regulation?' [2022] Available at SSRN: <https://ssrn.com/abstract=4248116> Accessed 1 May 2023, p.18; Fernando Díez Estella, 'The DMA: a new Regulation for -or against- Digital Markets in the EU?' [2022] Universidad Villanueva, p.9,

It must be stated that sector-specific regulations have previously been used in EU Law and proven effective such as in the telecommunications field.[243] The DMA is one of them. Some of the shortcomings of Article 102 TFEU in the fight against anti-competitive restraints in digital are introduced in the first chapter of this work. Above, it is also shown how DMA is addressing those shortcomings. The DMA also serves to achieve greater legal certainty for the undertakings that are deemed to get gatekeeper status. The *per se* conduct rules that they are obliged to comply with are all explicitly depicted in the DMA. And for those where further explanation is needed; it will be provided by the EC through the available means. It might be questioned how the *per se* rules are suitable given the fact that digital markets have a dynamic nature, and they evolve rapidly.[244] Considering that the DMA enables possible amendments and updates in these rules, this issue can be addressed as these enhancements can always ensure that DMA is in the same line with the swiftly evolving digital markets.

With regards to tying and bundling it has to be also stated that it was cases in digital markets that more effect-based analysis was conducted by the EC and foreclosure effects of these practices were analysed in this way under the EU Competition Law. Since the DMA is *ex-ante* applied, such analyses will not be needed for the tying and bundling practices that fall within the scope of the DMA.

2. Complementary or substitute prohibitions/obligations to EU Competition Law?

Now this work turns to complete the main assessment under its purposes – comparing tying and bundling obligations under the EU Competition Law and the Digital Markets Act.

While comparing Articles 5 (7) and 5 (8) DMA with the EU Competition Law, we will focus on the material scope of the provisions meaning that tying and tied products. Because the concept of 'gatekeepers' corresponds to the concept of 'dominant undertakings' in this comparison. And the concepts of *'to require end users to use, or business users to use, to offer, or to interoperate with'*, *'oblige business or end users to subscribe or register with'*, and *'as a condition for being able to use, access, sign up for or register with'* correspond with the concept of "coercion" within the meaning of Article 102 TFEU. Since the DMA is an *ex-ante* market

[243] Directive EU 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code, L 321/36.
[244] The European Commission, Commission Staff Working Document Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997 (SWD (2021) 199 final, 2021) p. 41.

regulation act, no effect-based analyses of foreclosure effects will be done for tying and bundling practices prohibited under the DMA. And grounds for objective justifications are utterly narrow and no efficiency claims are available under the DMA.

2.1. Article 5 (7) DMA and EU Competition Law.

As clearly depicted in the fourth chapter, Article 5 (7) DMA prohibits the tying and bundling of identification services, web browsers, payment services or technical services supporting the payment services (tied products) with the gatekeeper's all CPS (tying products). Therefore, the scope of this Article extends to all CPS stated under Article 2 DMA with regard to the tying products. As also mentioned in the fourth chapter, ten services are listed as CPS including online intermediation services, online search engines, online social networking services, video-sharing platform services, number-independent interpersonal communications services, operating systems, web browsers, virtual assistants, cloud computing services, online advertising services.[245] On the other hand, as the provision itself (Article 5 (7)) clearly provides tied products can be identification services, web browsers, payment services or technical services supporting the payment services. Therefore, this provision prohibits forty different possible tying and bundling practices: tying of each of these four tied products to each of the listed ten CPS – tying products.

Having the cases analysed in the third chapter of this work at hand, we will now comparatively assess this provision with the findings in all analysed cases.

Microsoft Media Player case concerned the tying of Windows Media Player to the Windows Operating System. The findings of the EC and GC in the Microsoft Media Player case can be scrutinized in two ways. The first one is a narrower interpretation which is to say this case brings about the illegality of tying media players with dominant undertakings' operating systems. Via this interpretation, Article 5 (7) DMA consists of no substitute effects to the findings of the Microsoft Media Player case. The second and broader interpretation would suggest that tying software applications that are different from operating systems (including but not limited to media players) to dominant undertakings' operating systems can raise concerns about the illegality of such practices. Through this interpretation, Article 5 (7) constitutes substitutes to the Microsoft Media Player case with regard to tying all four services mentioned in the text of the provision to operating systems. In the Google Android case, where Microsoft Media Player is acknowledged as an established case law, no trace could be found

[245] DMA 2022, Article 2.

that which of these two interpretations is favoured by the EC or GC. It will be up to the relevant authority (The EC or CJEU) to opt between two interpretations while commenting on complementariness. A broader interpretation suggests that Article 5 (7) DMA will be a substitute to Microsoft Media Player case when the four services are tied to the operating systems.

Microsoft Internet Explorer case showed that the tying of search browsers (Internet Explorer) to operating systems (Windows) can also raise concerns about the legality of such practices. Thus, Article 5 (7) DMA will contain a substitute to Article 102 TFEU, while dealing with the tying of web browsers to operating systems.

Google Android case demonstrated that tying and demanding the pre-installation of app stores (Play Store) with other apps such as general internet search (Google Search) and internet browsing apps (Google Chrome) can amount to tying and bundling. Therefore, whereas Article 5 (7) DMA is concerned about the tying of web browsers to online intermediation services (app stores qualify as online intermediation services)[246], it will have a substitute effect on the application of the Google Android case. The same effects will not appear with regard to the tying of general internet search apps to app stores with regards to Article 5 (7) DMA.

Now this paper turns to the EC's Apple Pay investigation which was the last case scrutinized in the third chapter. As mentioned, no further details of this investigation are publicly available, and it is not known yet whether Apple Pay as a payment service or its Near-Field Communication (NFC) functionality will also be scrutinized from the tying and bundling perspective to Apple's operating systems - iOS/iPadOS or not. Nevertheless, in case of such abuse of a dominant position concern will be raised in this investigation, eventual findings of such investigation can lead to substitute effects to Article 5 (7) DMA where this provision concerns tying of payment services or technological means supporting payment services to operating systems.

To conclude, it is observed that on some occasions the analysed provision of the DMA can constitute substitutes for the existing EU Competition Law in comparisons of Article 5 (7) DMA and EU Competition Law. When the above-mentioned comparisons are summed up, these substitute effects will only appear on five occasions out of forty occasions that are prohibited under Article 5 (7) DMA. Therefore, when the main thesis question is answered

[246] See for example: Stijn Huijts, 'The DMA is coming. Here's what it will mean for mobile gaming' (The Platform Law Blog, 16 March 2023) Available at here, Accessed 16 May 2023.

regarding Article 5 (7) DMA, it can be said that it is both substitute and complementary to EU Competition Law. The main observed pattern is that Article 5 (7) DMA constitutes substitute effects to existing EU Competition Law provisions, but its scope is broader than existing EU Competition Law rules dealing with tying and bundling. However, the complementariness that this provision can offer is considerably more than the possible substitutes that it constitutes to Article 102 TFEU. The table below helps to better depict the comparison that has been done in the subheading.

Article 5 (7) DMA	**Identification services**	**Web browsers**	**Payment Services**	**Technological Means Supporting Payment Services**
Operating systems	Microsoft Media Player	Microsoft Media Player Microsoft Internet Explorer	Microsoft Media Player Apple Pay (potentially)	Microsoft Media Player Apple Pay (potentially)
Online Intermediation Services		Google Android		
Online Social Networking Services				
Video-Sharing Platform Services				
Number-Independent Interpersonal Communications Services				
Web Browsers				

Virtual Assistants				
Cloud Computing Services				
Online Advertising Services				
Online Search Engines				

2.2. Article 5 (8) DMA and EU Competition Law.

Article 5 (8) DMA contains a prohibition of tying gatekeepers' different CPS. According to this provision, both tying and tied products are the gatekeeper's CPS defined in the designation decision. In more detail, gatekeepers cannot oblige business or end users to subscribe or register with gatekeepers' CPS as a condition for being able to use, access, sign up for or register with any of the gatekeeper's other CPS. As mentioned, business and end users are the beneficiaries of both prohibitions imposed on gatekeepers under Article 5 (7) and 5 (8) DMA. The difference between these two provisions can be seen in the broader scope of Article 5 (8) DMA. That is to say, Article 5 (8) can at least cover hundred tying and bundling practices since it covers tying and bundling of gatekeepers' all CPS listed in Article 2 DMA.

Ten services are listed as CPS including online intermediation services, online search engines, online social networking services, video-sharing platform services, number-independent interpersonal communications services, operating systems, web browsers, virtual assistants, cloud computing services, and online advertising services.

Thus, when it dealt with tying nine of these CPS (excluding operating systems) with operating systems, it can lead to substitute effects with the broader interpretation of the Microsoft Media Player case. Whereas web browsers are tied with operating systems by means of Article 5 (8) DMA, it can lead to substitute effects with Microsoft Internet Explorer case. Moreover, the tying of web browsers and online search engines with online intermediation services can bring about substitute effects of Article 5 (8) with the Google Android case. These substitute effects can be better observed in the below-given table.

Article 5 (8) DMA	Online Intermediation Services	Operating systems
Online Intermediation Services		Microsoft Media Player
Online Search Engines	Google Android	Microsoft Media Player
Web Browsers	Google Android	Microsoft Media Player Microsoft Internet Explorer
Operating systems		
Online Social Networking Services		Microsoft Media Player
Video-Sharing Platform Services		Microsoft Media Player
Number-Independent Communications Services		Microsoft Media Player
Virtual Assistants		Microsoft Media Player
Cloud Computing Services		Microsoft Media Player
Online Advertising Services		Microsoft Media Player

The same effect of Article 5 (8) DMA was not observed regarding the remaining situations that can fall within its scope. Therefore, only in eleven out of the possible a hundred occasions, Article 5 (8) can constitute a substitute effect to Article 102 TFEU. The main pattern that is observed again is that Article 5 (8) DMA constitutes substitute effects to existing EU Competition Law provisions, but its scope is broader than existing EU Competition Law rules dealing with tying and bundling. Therefore, when the main thesis question is answered regarding Article 5 (8) DMA, it can be again said that it is both substitute and complementary to EU Competition Law. However, the complementariness that this provision can offer is significantly more than the possible substitutes that it constitutes to Article 102 TFEU.

2.3. Article 6 (3) DMA and EU Competition Law.

As defined in the fourth chapter, Article 6 (3) DMA obliges gatekeepers to allow end users to uninstall any pre-installed software applications without facing any difficulties. The exception can be made when those applications are vital for the functioning of the gatekeeper's operating system or the devices and applications in question cannot be obtained from other providers.

The impossibility of uninstallation of pre-installed WMP was an issue of discussion while deciding on coercion in the Microsoft Media Player case in both the EC's and GC's assessment. In paragraph 829 of the EC's decision, it is stated that no technical means are available to uninstall WMP for OEMs[247] (Original Equipment Manufacturers).[248] In paragraph 963 of the GC's decision, the Court provides that coercion can also be technical in nature.[249] Then, the Court adds that it was not technically possible to uninstall WMP.[250] However, obliging Microsoft with the burden of allowing users to be able to uninstall WMP was not among the remedies applied to Microsoft.[251] This was only an issue of discussion while deciding on coercion in the Microsoft Media Player case.

The impossibility of uninstallation of pre-installed apps in the bundle was an also issue of discussion in the Google Android case both in the EC's and GC's decisions. In the EC's Google Android decision, the impossibility of uninstalling Google Search and Google Chrome apps was analysed while establishing that Google is conferring itself a significant competitive advantage.[252] To this end, the impossibility of uninstalling Google Search and Google Chrome apps was among the mentioned reasons. It was also provided that neither OEMs nor MNOs[253] but only Google can uninstall the Google Search and Google Chrome apps.[254] The matter was also scrutinized in the same vein in the GC's Google Android decision.[255] The GC considered the EC's approach and upheld the EC's decision with regard to this assessment. However, obliging Google with the burden of allowing users to be able to uninstall Google Search and Google Chrome apps was not among the remedies applied to Google.[256]

[247] OEMs can be scrutinized as business users.
[248] Microsoft (n 99), p.829.
[249] Microsoft v Commission (n 123), p.963.
[250] Ibid.
[251] Microsoft (n 99), paras.1011-1014.
[252] Google Android (n 154) p.775 and p.898.
[253] MNOs can be scrutinized as business users.
[254] Google Android (n 154) p.801-803 and p.913.
[255] Ibid, p.305-309.
[256] Ibid, p.1394-1397.

Therefore, Article 6 (3) DMA as an obligation imposed on gatekeepers to allow end users to uninstall any pre-installed software applications without facing any difficulties can be considered as complementary to the EU Competition Law. This is firstly because in the analysed cases, such an obligation was never imposed on the undertakings. Secondly, the impossibility of uninstalling pre-installed apps was mentioned directly by the business users not by the end users. Thirdly, Article 6 (3) DMA also provides a clear exemption when it is not illegal to make uninstalling pre-installed apps impossible. Utterly speaking when those applications are vital for the functioning of the gatekeeper's operating system or the devices and applications in question cannot be obtained from other providers.

3. Conclusion

In this chapter, this work first considered the goals of DMA and EU Competition Law and concluded that deciding whether DMA is complementary or substitute to the former is not sufficient enough by just pointing at the objectives of the two systems in question. The reason for this was that the concept of fairness and contestability is not totally stranger concepts to EU Competition Law, and also there is no consensus on the goals of EU Competition Law in literature. Following this, the paper provided the main differences between DMA and EU Competition Law. It was also shown that the mere reference to the similarities between the DMA's conduct rules and EU Competition Law cases is not enough to comment on complementarities.

When Article 5 (7) DMA is compared with EU Competition Law, it is observed that on some occasions, this provision can constitute substitutes to the existing EU Competition Law. When the above-mentioned comparisons are summed up, these substitute effects will only appear on five occasions out of forty occasions that are prohibited under Article 5 (7) DMA. Therefore, when the main thesis question is answered regarding Article 5 (7) DMA, it is both substitute and complementary to EU Competition Law. However, the complementariness that this provision can offer is considerably more than the possible substitutes that it constitutes to Article 102 TFEU.

When the main thesis question is answered regarding Article 5 (8) DMA, it is both substitute and complementary to EU Competition Law. These substitute effects were observed when it dealt with tying nine of these CPS (excluding operating systems) with operating systems, tying web browsers and online search engines with online intermediation services. Therefore, only in eleven out of the possible hundred occasions, Article 5 (8) can constitute a substitute effect

to Article 102 TFEU. Thus, the complementariness that this provision can offer is significantly more than the possible substitutes that it constitutes to Article 102 TFEU.

Lastly, it is observed that Article 6 (3) DMA as an obligation imposed on gatekeepers to allow end users to uninstall any pre-installed software applications without facing any difficulties can be considered as complementary to the EU Competition Law.

VI. The Ne Bis In Idem Principle, and Innovation.

1. Application of the ne bis in idem principle – the DMA and Article 102 TFEU.

1.1. Understanding the ne bis in idem principle and its place in the DMA.

Having complementary and substitute effects of the DMA to Article 102 TFEU being established brings about the issues of the dominant undertakings or gatekeepers potentially being faced with double jeopardy for the same breach.

The issue in question is depicted in Article 50 of the European Union Charter on Fundamental Rights ('EUCFR'). According to this provision, nobody should be tried or punished or accounted liable for an offence in criminal proceedings for which he or she was once acquitted or convicted within the EU in terms of the law.[257] This provision corresponds to the provision for the same right provided under Article 4 of Protocol No 7 to the Convention for the Protection of Human Rights and Fundamental Freedoms. For the purposes of these provisions, antitrust proceedings are considered criminal in nature.[258] Therefore, the ne bis in idem principle has a constitutional value under Article 6 (3) TEU as the principle enshrined in the EUCFR as a fundamental right.

The derogations from the ne bis in idem as a fundamental right can be made only on the basis of Article 52 (1) EUCFR. This provision first provides that these derogations can be made where the ground for them is provided by law and the respect towards the essence of fundamental rights is ensured.[259] Then, it is provided that such derogations should be subject to the principle of proportionality, they must be necessary and meet the objectives of the EU's general interest, or there must be a need to protect the rights and freedoms of others.[260] Therefore, it is established that the ne bis in idem principle are recognised as a fundamental right at the EU level and limitation to this principle can only be made by following the given provision of the EUCFR.

Going back to the DMA, Recital 86 DMA draws specific attention to the ne bis in idem principle. The recital provides that to ensure principles of proportionality and ne bis in idem, fines and periodic penalties for non-compliance with or breach of conduct rules should be laid

[257] European Union Charter of Fundamental Rights [2000] OJ C 202, 7.6.2016, pp. 389–405, Article 50.
[258] Case C-235/92 P, *Montecatini Spa* [1999] ECLI:EU:C:1999:362, paras.175-176.
[259] EUCFR 2000, Article 52.
[260] EUCFR 2000, Article 52.

down on appropriate levels and subject to appropriate limitation periods.[261] For this reason, it is further stated that the EC and the NCAs should coordinate their enforcement efforts to give effect to the application of the principles in question.[262] This work has already shed light on the coordination mechanisms between the EC and national authorities in the previous chapter. Thus, it can be said that the concerns relating to giving effect to the ne bis in idem principle were not just justified by the mere references in the DMA's preamble, but also further issues are clarified in detail, especially in its fifth chapter namely in Articles 29-32, and Articles 37-39. However, there is still more to consider on the topic, especially after the ECJ's findings in its bpost[263] judgment.

1.2. Ne bis in idem principle in the light of the ECJ's bpost judgment.

In the bpost judgment, the ECJ caught a chance to answer the question of the possible application of the ne bis in idem principle for an infringement of EU Competition Law and infringement of sectoral rules concerning the liberalisation of the relevant market after a request for a preliminary reference from Brussels Court of Appeal. The ECJ provided the following answer:

"Article 50 of the [EUCFR], ... must be interpreted as not precluding a legal person from being fined for an infringement of EU competition law where, on the same facts, that person has already been the subject of a final decision following proceedings relating to an infringement of sectoral rules concerning the liberalisation of the relevant market ... ."[264] [Emphasise added]

Then, the ECJ goes on to state which conditions should exist to allow such interpretation of ne bis in idem principle:

" ... provided that there are clear and precise rules making it possible to predict which acts or omissions are liable to be subject to a duplication of proceedings and penalties, and also to predict that there will be coordination between the two competent authorities; that the two sets of proceedings have been conducted in a sufficiently coordinated manner within a proximate timeframe; and that the overall penalties imposed correspond to the seriousness of the offences committed."[265]

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[261] DMA, Recital 86.
[262] Ibid.
[263] Case C-117/20, *bpost v Autorité belge de la concurrence* [2022] ECLI:EU:C:2022:202.
[264] Ibid, p.59.
[265] Ibid.

Thus, the ECJ provides when and how double jeopardy can happen under sector-specific regulations and EU Competition Law when it is dealt with the same infringement deriving from the same facts which have already been subject to the proceedings.

The most important part of the judgment is the reasoning behind the application of the proportionality test. The ECJ provided that application of the duplication of proceedings can take place as subject to the principle of proportionality whereas they are mandated by distinct laws and those laws pursue distinct legal objectives.[266] To this end, the ECJ further mentioned that public authorities can legitimately utilize complementary legal responses to practices that are deemed to be harmful to society via different procedures to address varying aspects of the social problem.[267] And the accumulated legal response should not constitute an excessive burden for an alleged undertaking.[268] To clearly conclude all these, the ECJ says that duplication of proceedings may be justified where they pursue complementary aims to competition law.

1.3. Findings of bpost and the DMA.

The findings of the ECJ's preliminary ruling in bpost judgment have a significant relevance for the DMA. This is because of the fact that the DMA is also a sectoral regulation.

The recital 86 DMA reflects the findings on how ne bis in idem should be applied in bpost to a great extent. To illustrate, coordination mechanisms between the EC and the competent national authorities (Articles 37-39), clearly set limitation periods for the imposition and enforcement of penalties (Articles 32-33), and it is already mentioned that the conduct rules of the DMA serve for the increased legal certainty. However, the main issue here seems to be the application of proportionality and the issue of complementariness.

This work has already discussed the goals of the DMA and the EU Competition Law. We concluded that using only the goals cannot be sufficient enough to establish whether the DMA is complementary to EU Competition Law or not in that fairness and contestability are not totally stranger concepts to the EU Competition Law.

However, the EU legislator's position is depicted clearly in Recital 11 DMA that the goals of the DMA (fairness and contestability) are complementary to that of the EU Competition Law

[266] Ibid, p.49.
[267] Ibid.
[268] Ibid.

(increasing consumer welfare). For some, this deliberately serves to address the future concerns of duplication of proceedings. To better illustrate, A. Witt emphasizes that *"by explaining the legal objectives of the DMA in such detail, and stressing both its distinctness from and complementarity to the aims of competition law, EU legislators were therefore likely also trying to preclude future arguments by gatekeepers that the parallel application of competition law and the DMA's conduct rules is incompatible with the principle of ne bis in idem."*[269] We agree with this author's position on the issue and want to go back to the formalistic approach in the distinctiveness of the goals of the DMA and EU Competition Law to reflect more to this end.

Because just a formal declaration that the DMA pursues different objectives than EU Competition Law is not enough as mentioned. While commenting on this formal declaration M. Belloso and N. Petit say that *"[i]t is another whether the DMA, taken as a whole, reflects this declaration. The DMA talks the talk, but it might not walk the walk. This matters for ne bis in idem assessments."*[270] [Emphasise added] Then, the authors go on to rightfully say that this complementariness and in turn the justification of the limitations to the ne bis in idem principle will be needed to be assessed by the CJEU in the future.[271] This work agrees with such a statement since it is established that relying only on the formalistic declaration cannot be enough.

Now we will draw conclusions from the discussions on the application of the ne bis in idem principle for the discussed tying and bundling provisions of the DMA. Under the second heading in this chapter, it has been demonstrated that Articles 5 (7) and 5 (8) DMA can some occasions constitute substitute effects to existing EU Competition Law rules. In the light of the findings of bpost, matters falling within Articles 5 (7) and 5 (8) DMA can be subject to double jeopardy where they can also be subject to antitrust proceedings under Article 102 TFEU. This can especially happen where Articles 5 (7) and 5 (8) DMA constitutes substitute effects to Article 102 TFEU. The formalistic character of the distinction of DMA's and EU Competition Law's goals under the DMA can be a good counter-argument against the derogations from the ne bis in idem principle.

[269] Witt (n 239) p.26.
[270] Belloso and Petit (n 242) p.29.
[271] Ibid.

2. Innovation through tying and bundling, the DMA.

2.1. Is innovation overlooked in the DMA?

In the fourth chapter, it is mentioned that the DMA's conduct rules have *per se* character and grounds for objective justifications are narrow and restrictive under the DMA. It is also mentioned that efficiency claims are impossible under the DMA being different from the EU Competition Law. However, it is also observed that tying and bundling can also lead to pro-competitive effects as the analysed economic theories and studies suggested. This was one of the main reasons that the legal assessment of alleged tying and bundling practices became more effect-based and economic while dealing with digital markets. Most importantly, the EC analysed alleged undertakings' efficiency claims in detail for the digital market cases. This brings about the last question that this work tempts to answer.

Some economic studies suggest that if the seller is compelled not to apply tying and bundling, a market failure can occur under moderately low production costs while higher consumer welfare can be achieved through the use of tying and bundling.[272] The other study puts specific emphasise on the issue that tying and bundling can lead to higher product quality in that applying such practices establish stronger incentives for undertakings to invest more in product quality.[273] By no means we are trying to say that in the absence of tying and bundling any of these cannot be achieved since these studies are also based on several assumptions. However, we are trying to show that the *per se* character of the DMA's tying and bundling provisions raises concerns about the innovation that can be achieved through these practices as economic studies suggest.

While commenting on the issue, A. Portuese refers to the DMA as a 'precautionary antitrust'[274] by stating that it prioritizes regulation over innovation.[275] Then, the author goes on to argue that the role of innovation in promoting competition is overlooked under this approach. A. Portuese suggests that the present competition is the result of past innovation, and future

[272] Gayer Amit and Shy Oz, 'A Welfare Evaluation of Tying Strategies' [2016] Available at SSRN: <https://ssrn.com/abstract=2670364> accessed 3 May 2023, p.29.
[273] Dana, James D. and Spier, Kathryn E., 'Do Tying, Bundling, and Other Purchase Restraints Increase Product Quality?' [2015] International Journal of Industrial Organization, Forthcoming, Northeastern U. D'Amore-McKim School of Business Research Paper No. 2587975, Available at SSRN: <https://ssrn.com/abstract=2587975> accessed 3 May 2023, p.1.
[274] Precautionary antitrust is the mean of regulating business practices to prevent potential anticompetitive behavior before it happens.
[275] Aurelien Portuese, 'Precautionary Antitrust: The Changing Nature of Competition Law' [2022] 17 JL Econ & Pol'y, p.549.

competition depends on the current innovation in the markets.[276] But the precautionary antitrust misses the value of technological and entrepreneurial innovation and instead heavily favours regulations based on certain values and principles.[277] The author also mentions that the Big Tech companies are considered *per se* monopolists in the EU and the intense rivalry that they face from other competitors is discounted by applying such severe approaches towards them.[278] In other words, the author considers that precautionary antitrust such as the DMA is too much focused on preventing potential problems rather than focusing enough on promoting innovation and competition in the long term.

However, there is more to consider in this discussion.

2.2. Innovation through the competition process in fair and contestable markets.

On the contrary, B. Landman approaches this issue from a different perspective.[279] This author refers to the DMA as an aggressive application of the 'Future Markets Model'[280] by the EC.[281] The author provides that the Future Markets Model can be applied aggressively in only some markets and the reasoning for such application should exist.[282] Then, the author mentions that Future Markets Model can be aggressively applied in digital markets because the network effects and use of data make digital markets particularly hard to predict.[283] Thus, the author tries to say that the relevant authority, the EC in our scenario, seeks to ensure the competitiveness of future digital markets through the adoption of such an aggressive application of the Future Markets Model. More specifically, the author states that the EC wants to indirectly encourage innovation in digital markets by protecting future competition and aggressively applying such a market model.[284]

The findings of both authors have their truth share but we agree more with the latter one since it better demonstrates what is tried to be achieved by the DMA. It was the EC's core belief that

[276] Ibid, p.631.
[277] Ibid.
[278] Ibid.
[279] Lawrence B. Landman, 'The future markets model: how antitrust authorities really regulate innovation' [2021] European Competition Law Review 42(9).
[280] The term "Future Markets Model" is not a specific, well-defined concept in the literature. Generally defining this concept, a "Future Markets Model" can be considered as a way of approaching business or economics that includes potential future developments or changes in the relevant markets. Such model can contain wide-ranging tools to forecast shifts in consumer demand, alterations in technology or regulation, or different issues that can affect the relevant markets.
[281] Landman (n 279) p.2-4.
[282] Ibid, p.4.
[283] Ibid.
[284] Ibid, p.5.

more competition generates more innovation as a direct link exists between competition and innovation while proposing the DMA.[285] In the DMA's preamble, there are several explicit references to the innovation for this reason. One of the most important among them is the recital 25 where it is depicted that the EC should chase the objective of preserving and fostering innovation while assessing the impact of conduct rules on the internal market.[286] It is also mentioned while defining the goal of contestability that weak contestability reduces the incentives to innovate and improve products.[287] The same undermining effects on the innovation are also mentioned to happen in case of not allowing interoperability with the gatekeepers' operating systems and not granting access to the data.[288] And then it is described that the DMA's conduct rules are to ensure competition in the digital markets and extract the innovation through the process of competition. To this end, it might be questioned how *the per se* rules are suitable given the fact that digital markets have a dynamic nature, and they evolve rapidly.[289] Considering that the DMA enables possible amendments and updates in these rules, this issue can be addressed as these enhancements can always ensure that DMA is in the same line with the swiftly evolving digital markets.

However, concluding this discussion by just merely mentioning the reference to the innovation in the DMA's preamble and the aims of conduct rules with this purpose, would be formalistic. More should be elaborated on the topic to better understand how anticipated innovation can happen through the DMA.

While assessing whether the DMA kills innovation or not, L. Pierre and S. Alexandre conclude that the DMA will not kill but rather promote innovation in Europe.[290] They mention that their outcome, thus, is in line with the ordoliberal tradition of regulation of economy and competition in the EU where the main purpose is maintaining open and competitive markets.[291] For this reason, the authors present three scenarios through which innovation can happen under the DMA by using its goals and conduct rules. The first scenario entails preserving the innovation

[285] Impact Assessment Report of the Commission Services on the Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), SWD (2020) p.279.
[286] DMA 2022, Recital 25.
[287] DMA 2022, Recital 32.
[288] DMA 2022, Recitals 57 and 59.
[289] The European Commission, Commission Staff Working Document Evaluation of the Commission Notice on the definition of the relevant market for the purposes of Community competition law of 9 December 1997 (SWD (2021) 199 final, 2021) p. 41.
[290] Larouche Pierre and de Streel Alexandre, 'Will the Digital Markets Act Kill Innovation in Europe?'[2021] CPI Columns Europe, University of Montreal Faculty of Law Research Paper, Available at SSRN: <https://ssrn.com/abstract=3855505> accessed 4 May 2023, p.6.
[291] Ibid.

incentives from the business users of gatekeepers' CPS which is intended to promote incremental innovation and sustain innovation.[292] So that users can deliver incremental type innovative offers using complementary products and, therefore, sustain the innovation within the platform ecosystem.[293] The second scenario is related to the contestability. This scenario focused on generating innovation through the frontal competition between different gatekeepers of the same CPS.[294] The third scenario, by being dependent on the maintaining first two scenarios, suggests the possible innovative effects that inventive rivals can bring about by disrupting the competitive market.[295] As it seems, all these scenarios are basically depicted as achieving innovation via the competition process itself.

Therefore, this paper concludes that innovation in digital markets is not completely evaded by the DMA. On the other hand, as it is observed in the third chapter where tying and bundling cases concerning digital markets were analysed, efficiency claims of alleged undertakings never succeeded. Thus, it is also not realistic to state that Article 102 TFEU encourages undertakings to achieve innovation through tying and bundling practices. With regards to the DMA's *per se* restricted tying and bundling practices, innovation in concerned digital markets can still be extracted through the achieving fairness and contestability of the markets in question, meaning that through ensuring competition. To this end, the three scenarios that are mentioned in the previous paragraph can be good examples. Nevertheless, time will reveal the truth that how DMA will achieve the fair and contestable digital markets and how innovation will be extracted from the undistorted competition process in such markets.

3. Conclusion.

This chapter first discussed the possibility of applying double jeopardy for illegal tying and bundling practices where the DMA and EU Competition Law concerned. It is identified that the findings of the ECJ's bpost judgment lay possible grounds for the limitations to the ne bis in idem principle for this purpose. To this end, the application of double jeopardy seems especially possible where tying and bundling practices under Articles 5 (7) and 5 (8) DMA constitute substitutes to Article 102 TFEU. However, the formalistic character in differing the goals of the DMA and EU Competition Law seems to be the main issue in opposing such application of double jeopardy.

[292] Ibid.
[293] Ibid.
[294] Ibid.
[295] Ibid.

Secondly, the concerns of whether the *per se* character of DMA's conduct rules possibly undermines the innovative effects of tying and bundling are discussed in this chapter. It is concluded that those pro-competitive effects of tying and bundling can be achieved by ensuring fair and contestable digital markets, therefore, through the competition process itself.

VII. Conclusion.

The last chapter of this work serves to bring all findings together and provide final remarks. The main purpose of this thesis was to seek an answer to the question of whether tying and bundling rules under the DMA are complementary or substitutes to the tying and bundling obligations under the EU Competition Law. To be able to answer this question we had to scrutinize rules concerning tying and bundling under both the EU Competition Law and DMA and the differences between the two legal systems in question.

In the second and third chapters, tying and bundling rules under EU Competition Law namely Article 102 TFEU were scrutinized respectively for traditional and digital markets. While the matter was analysed for traditional markets, it is observed the formalistic approach was favoured by EU institutions. The foreclosure in the tied product market was assumed to exist once the dominant position of the alleged undertaking and distinctiveness of tied products were established in traditional markets cases. No effect-based economic assessment or a detailed analysis of the alleged undertaking's efficiency claims was carried out in these cases.

However, the tables turned when tying and bundling practices are investigated in digital markets. It is observed in the third chapter that the EC's foreclosure assessment became more economic and effect-based, and efficiency claims are analysed in detail in cases concerning digital markets. Nevertheless, those efficiency claims did not succeed in any of the analysed cases. Overall, the formalistic approach is abandoned while dealing with tying and bundling practices in multi-sided markets. This meant that the rules developed under the traditional markets were not alone enough to empower the EC and EU Courts to analyse alleged tying and bundling practices in digital markets. The clear implications were also drawn from Microsoft Media Player, Microsoft Internet Explorer, and Google Android cases to depict the full picture of tying and bundling rules under the EU Competition Law.

Then, this work turned to the DMA to first institutionally analyse it to be able to comprehend its conduct rules related to tying and bundling practices in the fourth chapter. It is established that DMA's clear material, personal and geographical scope, centralised enforcement system,

and clearly defined cooperation mechanisms together with the pre-emption rule can serve to address the concerns of possible fragmentations in the digital markets. Then, this work scrutinized conduct rules related to tying and bundling practices under the DMA, namely Articles 5 (7), 5 (8) and 6 (3) DMA.

In the fifth chapter, it is first provided that a formalistic declaration of the goals of the DMA and EU Competition Law is not sufficient enough to establish that the DMA pursues complementary goals to the EU Competition Law. The reason for this was that the concept of fairness and contestability is not totally stranger concepts to EU Competition Law, and also there is no consensus on what are the goals of EU Competition Law. Following this, the paper provided the main differences between DMA and EU Competition Law. It was also shown that the mere reference to the similarities between the DMA's conduct rules and EU Competition Law cases is not enough to comment on complementarities.

Then, the main thesis question is answered with regard to the three described provisions concerning tying and bundling practices in the DMA. It is answered when comparing Article 5 (7) DMA to EU Competition Law, it can sometimes serve as a substitute in five out of the forty instances that are prohibited under Article 5 (7) DMA. Overall, Article 5 (7) DMA is both a substitute and complementary to EU Competition Law, with greater complementarity than substitutability to Article 102 TFEU. It is also answered that Article 5 (8) DMA is both a substitute and complementary to EU Competition Law. It serves as a substitute in only eleven out of the possible hundred instances when tying certain CPS with operating systems; web browsers, and online search engines to online intermediation services. Therefore, the provision's complementarity to Article 102 TFEU is significantly greater than its substitutability. Lastly, it is answered that Article 6 (3) DMA as an obligation imposed on gatekeepers to allow end users to uninstall any pre-installed software applications without facing any difficulties is complementary to Article 102 TFEU.

Answering the main thesis question brought about the application of double jeopardy and innovation concerning tying and bundling practices in digital markets. In the sixth chapter, it is established that the findings of the ECJ's bpost judgment lay possible grounds for the limitations to the ne bis in idem principle. To this end, the application of double jeopardy is considered possible for tying and bundling practices falling within the scope of Articles 5 (7) and 5 (8) DMA. However, the formalistic character in differing the goals of the DMA and EU Competition Law seemed to be the main issue in opposing such application of double jeopardy.

Then, the concerns of whether the *per se* character of DMA's conduct rules possibly undermines the innovative effects of tying and bundling are discussed. It is concluded that those pro-competitive effects of tying and bundling can be achieved by ensuring a fair and contestable digital market, therefore, through the competition process itself.

A few things should be mentioned as final remarks before the dead stop. Future enforcement actions and legal analyses dealing with alleged tying and bundling practices will involve a combination of both the DMA and EU Competition Law to address illegal tying and bundling practices in digital markets. The EU Competition Law will be utilized when market failure occurs. The DMA's provisions related to tying and bundling practices will shape the regulatory landscape in digital markets. It will be the relevant authorities (the EC and the CJEU) to analyse the complementariness that the DMA is deemed to have to the EU Competition Law while dealing with alleged tying and bundling practices. As the findings of the bpost judgment pave a smooth way for it, the application of double jeopardy can be anticipated while dealing with tying and bundling in digital markets. To this end, the relevant authorities (the EC and the CJEU) will possibly shed some light on the distinction that is made with regard to the goals of the DMA and EU Competition Law. Moreover, only time will show how deemed innovation via the DMA will be extracted through achieving fair and contestable digital markets. Striking a balance between addressing potential anti-competitive practices and promoting innovation will remain a key challenge for the EC and EU legislators in the future.

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2. Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital secotr (Digital Markets Act) [2020] COM(2020), 842 final;
3. Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (Digital Services Act) and amending Directive 2000/31/EC [2020] COM(2020) 825 final.

The European Commission documents:

1. The European Commission, ‘Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine’ (2018);

2. The European Commission, ‘Antitrust: Commission opens investigation into Apple practices regarding Apple Pay’ (Press Release 2020);
3. The European Commission, ‘Antitrust: Commission opens investigation into possible anticompetitive conduct by Google in the online advertising technology sector’ (Press Release on Google AdTech (Case AT.40670), 2021);
4. The European Commission, ‘Antitrust: Commission sends Statement of Objections to Apple clarifying concerns over App Store rules for music streaming providers’ (Press Release on Apple App Store SO (Case AT.40437), 2023);
5. The European Commission, ‘Antitrust: Commission sends Statement of Objections to Meta over abusive practices benefiting Facebook Marketplace’ (Press Release on Facebook Marketplace (Case AT.40684); 2022);
6. The European Commission, ‘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 undertaking’ 2009/C 45/02, paragraph 48;
7. The European Commission, ‘Public Consultation on the Regulatory Environment for Platforms, Online Intermediaries, Data and Cloud Computing and the Collaborative Economy’ (24 September 2015);
8. The European Commission, ‘The Digital Markets Act: ensuring fair and open digital markets’ <https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en>;
9. The European Commission, Commission Staff Working Document Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997 (SWD (2021) 199 final, 2021);
10. The European Commission, Commission Staff Working Document Evaluation of the Commission Notice on the definition of the relevant market for the purposes of Community competition law of 9 December 1997 (SWD (2021) 199 final, 2021).