Online Platforms and Vertical Integration: The Return of Margin Squeeze?

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ABSTRACT

When competition authorities struggle to assess abusive practices by online multi-sided platforms, the issue does not appear to be defining markets or determining market power; rather, the difficulty is finding a fitting theory of abuse. In the search for such theories, one candidate has been overlooked: margin squeeze. This class of abuse has for the most part been confined to the telecom sector, but its potential reaches beyond. Indeed, the tendency towards vertical integration and subsequent conduct of online platforms could renew the relevance of margin squeeze as an analytical tool. To test this relevance, the article first examines the foundations of margin squeeze theory, while also addressing possible misconceptions. It then investigates whether this theory could be applied to online platforms with the help of three case studies (involving app stores, search engines and online marketplaces). Where a company not only owns the digital infrastructure but also uses it to provide products, we find that margin squeeze can provide an appropriate assessment framework for anti-competitive conduct. Before concluding, the article contemplates the idea of neutrality underlying margin squeeze and related policies such as network neutrality.

Keywords: margin squeeze, vertical integration, telecom, online platforms, Apple, Google, Amazon

JEL classifications: K21, K24, L40, L41, L43

I. INTRODUCTION

Margin squeeze, an infringement of Article 102 TFEU, is defined as a situation where a dominant undertaking charges ‘a price for the product on the upstream market which, compared to the price it charges on the downstream market, does not allow even an equally efficient competitor to trade profitably in the downstream market on a lasting basis.’¹ In other words, an upstream operator forces his downstream competitor—who is just as efficient—off the market by squeezing his profit margins.

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¹ Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, para 80.

Margin squeeze knew a period of active enforcement in the 2000s. These antitrust actions followed (indeed, complemented²) the liberalization of the telecom sector under direction of the European Commission, which started in the 1990s.³ Many telecom incumbents were legally obliged to grant competitors access to their network for a fee (upstream market). If this fee was too high, or the retail price charged by the incumbent too low, entrants could not compete in providing end-users with services (downstream market). In that case, the European Commission would intervene.⁴

Fast forward to the present, when the most important network is not the telephone network, but rather the internet and the online platforms populating it. Then Director-General of DG COMP Alexander Italianer acknowledged this in a 2014 speech, stating: 'Indeed, the Internet is essentially a network. There are many types of networks, and all of them have been subject to competition enforcement: whether electricity and telephone networks, TV cable companies, railways, roads or airline industries.'⁵ Italianer spoke of both the internet itself as well as the online platforms on it when he warned for incumbents that block or throttle competing operators.⁶ Referring to Italianer's speech, another DG COMP official⁷ made the analogy between telecom and digital markets more explicit:

*It is normally not disputed amongst commentators that the Commission can and should intervene when, say, a telecom network operator abuses its market position at the level of the provision of wholesale access to local fixed networks in order to gain market share in the downstream market for retail access to local fixed networks. It is not clear why the Commission should not intervene when a similar conduct takes place in a digital market.*⁸

Accordingly, one could consider applying margin squeeze theory to online platforms that leverage their market power into another market. Let us consider this hypothesis with the following example of the market for mobile applications ('apps'). Consumers wishing to buy apps and developers wishing to sell apps have two viable options: Apple's App Store or Google Play. Moreover, from a consumer perspective, their choice is almost completely determined by the kind of phone (and corresponding operating system or 'OS') in their

² Erkki Liikanen, 'The European Union Telecommunications Policy' (Telecommunications Seminar, Sarajevo, 16 July 2001) <http://europa.eu/rapid/press-release_SPEECH-01-356_en.htm?locale=en>; see also Commission Directive 2002/77/EC on competition in the markets for electronic communications, networks and services [2002] OJ L249/21, art 3.

³ The most relevant legal instruments are Commission Directive 90/388/EEC on competition in the markets for telecommunications services [1990] OJ L192/10 and especially Commission Directive 2002/77/EC on competition in the markets for electronic communications, networks and services [2002] OJ L249/21, which is part of a broader 'telecommunications package'.

⁴ Also discussing this dynamic, see Zoltan Biro, George Houpis and Matt Hunt, 'Applying Margin Squeeze in Telecommunications: Some Economic Insights' (2011) 2 Journal of European Competition Law & Practice 588, 589-90; Damien Geradin and Robert O'Donoghue, 'The concurrent application of competition law and regulation: the cases of margin squeeze abuses in the telecommunications sector' (2005) 1 Journal of Competition Law & Economics 355, 360.

⁵ Alexander Italianer, Director-General for Competition, 'Competition policy in the digital age' (47th Innsbruck Symposium, Innsbruck, 7 March 2014) <http://ec.europa.eu/competition/speeches/text/sp2014_01_en.pdf>.

⁶ *ibid.*

⁷ A case handler at DG COMP, writing in personal capacity: Massimiliano Kadar, 'European Union competition law in the digital era' (2015) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2703062>.

⁸ *ibid.*, 9.

hand:⁹ the App Store for the iPhone (iOS) and Google Play for any other phone (Android).¹⁰ Apple and Google benefit from this crucial position by taking a 30% cut from the sale of any app and of subsequent in-app purchases.¹¹

Let us now add another element, and factor in the effect of vertical integration. Apple does not only run its App Store; it also offers apps via its App Store, such as the music streaming service Apple Music. In this market, it competes with another popular app, Spotify. Both companies offer their subscribers unlimited, advertising-free music streaming for €10 per month. However, when someone subscribes to Spotify through the iPhone app, Spotify has to deal with the 30% (or €3) fee claimed by Apple. Spotify externalizes this cost, which results in a subscription price of €13 per month for its users on iPhone.¹² The alleged result of this situation is that ‘Apple makes more off a Spotify subscription than it does off an Apple Music subscription’.¹³ In a 2016 speech, US Senator Elizabeth Warren confirmed that Apple was under investigation by the FTC for ‘plac[ing] conditions on its rivals that make it difficult for them to offer competitive streaming services.’¹⁴ The European Commission has reportedly also been looking into Apple’s practices in the music streaming market, but did not (yet) open a formal investigation.¹⁵ If it does, the question will be which theory of abuse to apply.

This article explores the suitability of margin squeeze theory to qualify certain exclusionary conduct by online platforms. It starts by laying out the essentials of this theory, as developed by the European Commission (‘Commission’) and the European courts, ie the General Court and the European Court of Justice (‘ECJ’). It then returns to the introductory

⁹ Disregarding the dangerous—and often illegal—ways of downloading apps outside of the integrated app stores, see footnotes 95-96.

¹⁰ Disregarding the 0,2% combined market share of Windows Phone and other OS: IDC, ‘Smartphone OS Market Share, 2017 Q1’ <<https://www.idc.com/promo/smartphone-market-share/os>>.

¹¹ The 30% fee has long been the industry standard (although the Google Play Store allows for certain exceptions). It applies to every in-app media purchase, but not to a purchase of services provided ‘outside’ of the app, eg an Uber ride or an Airbnb stay. Apple, followed by Google, has lowered its cut to 15% for long-term in-app subscriptions. For more on this: Lauren Goode, ‘App Store 2.0’ (The Verge, 8 June 2016) <<https://www.theverge.com/2016/6/8/11880730/apple-app-store-subscription-update-phil-schiller-interview>>.

¹² Chris Welch, ‘Spotify urges iPhone customers to stop paying through Apple’s App Store’ (The Verge, 8 July 2015) <<https://www.theverge.com/2015/7/8/8913105/spotify-apple-app-store-email>>.

¹³ Jordan Crook, ‘Spotify and Apple are staring each other down while flipping the bird’ (TechCrunch, 30 June 2016) <<https://techcrunch.com/2016/06/30/spotify-and-apple-are-staring-each-other-down-while-flipping-the-bird/>>.

¹⁴ Sen. Elizabeth Warren, ‘Reigniting Competition in the American Economy’ (New America’s Open Markets Program Event, Washington, D.C., 29 June 2016) <<https://www.warren.senate.gov/newsroom/press-releases/senator-elizabeth-warren-delivers-remarks-on-reigniting-competition-in-the-american-economy>>; for a first appraisal under US antitrust law: Julia Greenberg, ‘Apple Music’s Edge May Be Unfair, But Likely Isn’t Illegal’ (Wired, 27 May 2015) <<https://www.wired.com/2015/07/watchdogs-accuse-apple-sketchy-business-practices%E2%80%A8/>>.

¹⁵ The Commission previously investigated the potential collusion between Apple and major music labels to quash free music streaming services (such as those offered by Spotify). An article on the closing of that investigation reported that ‘the EU has asked Spotify and other music streaming services for information pertaining to Apple’s mobile App Store, according to people with knowledge of the situation’: Dawn Chmielewski, ‘EU Finds No Evidence of Apple and Music Labels Colluding to Kill Free Music’ (Recode, 7 August 2015) <<https://www.recode.net/2015/8/7/11615418/eu-finds-no-evidence-of-apple-and-music-labels-colluding-to-kill-free>>.

example that was given, discusses whether and how a margin squeeze assessment may have been appropriate in the Google Search decision, and tentatively applies the framework to Amazon's practices. Before concluding, the article considers how the idea of neutrality underlies not only margin squeeze but also related policies, in order to assess how a similar result may be achieved through different means, and which of those means is to be preferred.

II. MARGIN SQUEEZE: FOUNDATIONS¹⁶

II.i. Traditional theory

While margin squeeze was at its peak in the 2000s, the theory of harm dates back to 1975. In the *National Carbonising* case (an application for interim measures in the coal industry), the Commission identified margin squeeze for the first time.¹⁷ A dominant producer of coking coal (the upstream input) did not only sell its product to manufacturers of coke (the downstream product), but also manufactured coke itself in competition with those customers. The Commission argued that the dominant undertaking 'may abuse its dominant position if it acts in such a way as to eliminate the competition from its customers in the [downstream] market'.¹⁸ In that case, the dominant undertaking 'may have an obligation to arrange its prices so as to allow a *reasonably efficient* [downstream competitor] a margin sufficient to enable it to survive in the long term.'¹⁹ This is the so-called 'reasonably-efficient-competitor test'.

This initial test was modified in subsequent cases. In the 1988 *British Sugar* case, the Commission reproached British Sugar ('BS'), a wholesaler and retailer of sugar, of engaging 'in a price cutting campaign leaving an insufficient margin for a packager and seller of retail sugar, *as efficient* as BS itself in its packaging and selling operations, to survive in the long term.'²⁰ Thus, the Commission exchanged the reasonably efficient competitor for the as efficient competitor.

After an aberration by the General Court in the *IPS* case,²¹ margin squeeze theory was rationalized throughout the 2000s in a series of judgments originating in the telecom sector (*Deutsche Telekom*²², *TeliaSonera*²³ and *Telefónica*²⁴). As explained in the introduction, these cases

¹⁶ For an extensive overview, see Friso Bostoen, 'Margin squeeze: where competition law and sector regulation compete' (2017) 53 Jura Falconis 3-60, also available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2922633>. The article does not discuss online platforms. With regard to the general theory presented under this section, however, the author draws on his previous research.

¹⁷ Case 109/75 R *National Carbonising v Commission* EU:C:1975:133 [1975] ECR 1193.

¹⁸ *ibid*, 1197.

¹⁹ *ibid*, 1197-8 (emphasis added).

²⁰ *Napier Brown – British Sugar* (Case IV/30.178) Commission Decision 88/518/EEC [1988] OJ L284/41, para 65 (emphasis added).

²¹ Case T-5/97 *Industries des Poudres Sphériques (IPS) v Commission* EU:T:2000:278 [2000] ECR II-3755, where the (now) General Court required either abusive pricing in the upstream market, or predatory pricing in the downstream market (para 179).

²² *Deutsche Telekom* (Cases COMP/C-1/37.451, 37.578, 37.579) Commission Decision 2003/707/EC [2003] OJ L263/9; Case T-271/03 *Deutsche Telekom v Commission* EU:T:2008:101 [2008] ECR II-477; Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555.

²³ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527 (a preliminary ruling).

arose in the context of the Commission-led liberalization of the European telecom sector. Thus, they have in common that they sought to safeguard the access of (downstream) providers of telecom services to the (upstream) telecom network. Safeguarding the market access of competitors is traditionally seen as a task for *ex ante* regulation rather than for *ex post* competition law, which is why the Commission's approach in this area has been called 'activist'.²⁵ However, while margin squeeze indeed intersects with telecommunications regulation,²⁶ the Commission and the European courts have firmly grounded the theory in general competition law through reliance on two important principles. Firstly, margin squeeze was conditioned on the capacity to exclude as efficient competitors from the market, a legal standard not only used in previous margin squeeze cases (*supra*), but also central to other theories of harm under Article 102 TFEU (eg predatory pricing²⁷ and rebates²⁸). Secondly, an anti-competitive effect on the downstream market must be shown; another contrast with *ex ante* regulation, whose adoption assumes a lack of competition. These two principles are explained in more detail below, while additional requirements (or the absence thereof) are addressed under the next section.

In the first place, the presence of a margin squeeze must be established by using the *as-efficient-competitor test*.²⁹

*[T]he appropriate test for establishing the margin squeeze consist[s] in determining whether a competitor having the same cost structure as that of the downstream activity of the vertically integrated undertaking would be in a position to offer downstream services without incurring a loss if that vertically integrated undertaking had to pay the upstream access price charged to its competitors.*³⁰

In other words, this test establishes whether the vertically integrated dominant undertaking would have been able to offer its retail services to end-users profitably if it had first been obliged to pay its own wholesale prices.³¹ If the answer is negative, that undertaking

²⁴ *Wanadoo España v Telefónica* (Case COMP/38.784) Commission Decision; Case T-336/07 *Telefónica v Commission* EU:T:2012:172; Case C-295/12 P *Telefónica v Commission* EU:C:2014:2062.

²⁵ See eg Alexandre de Streel, 'The Antitrust Activism of the European Commission in the Telecommunications Sector' in Philip Lowe and Mel Marquis (eds), *European Competition Law Annual 2012* (Hart 2014), 189-208.

²⁶ See eg Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector' (2005) 1 *Journal of Competition Law and Economics* 355; Hendrik Aufmkolk, 'The "Feedback Effect" of Applying EU Competition Law to Regulated Industries: Doctrinal Contamination in the Case of Margin Squeeze' (2012) 3 *Journal of European Competition Law & Practice* 149; Margherita Colangelo, 'The Interface Between Competition Rules and Sector-Specific Regulation in the Telecommunications Sector: Evidence from Recent EU Margin Squeeze Cases' (2013) 14 *Competition and Regulation in Network Industries* 214.

²⁷ See eg Case C-62/86 *Akzo Chemie v Commission* EU:C:1991:286 [1991] ECR I-3359, para 72 (on how predatory prices 'can drive from the market undertakings which are [...] as efficient as the dominant undertaking').

²⁸ See eg Case C-23/14 *Post Danmark v Konkurrencerådet* EU:C:2015:651, para 66 ('it is sufficient to demonstrate that there is an anticompetitive effect which may potentially exclude competitors who are at least as efficient as the dominant undertaking') and Case C-413/14 P, *Intel v Commission* EU:C:2017:632, para 139 ('it is also required to assess the possible existence of a strategy aiming to exclude competitors that are at least as efficient as the dominant undertaking from the market').

²⁹ Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555, paras 196-202; Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, paras 31-3; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 194.

³⁰ Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 194.

³¹ Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555, para 201; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 194.

may be engaging in a margin squeeze. Note that, as the test only refers to the undertaking's own prices and costs, any dominant undertaking can assess the lawfulness of its conduct in the light of its 'special responsibility'. Thus, it conforms to the principle of legal certainty.³²

Secondly, an *anti-competitive effect* on the downstream market must be established.³³ However, this effect does not necessarily have to be concrete. It is 'sufficient to demonstrate that there is a potential anti-competitive effect which may exclude competitors who are at least as efficient as the dominant undertaking'.³⁴ This exclusionary effect is assumed when the wholesale price the undertaking charges to competitors is higher than the retail price it charges to end-users.³⁵ If this is not the case, it must be demonstrated that the application of that pricing practice was (by reason, for example, of reduced profitability) likely to have the consequence that it would be at least more difficult for the operators concerned to trade on the market concerned.³⁶

II.ii. Possible misconceptions

While the as-efficient-competitor test and the requirement of potential anti-competitive effect make margin squeeze a generally administrable theory, margin squeeze assessments have been restricted, for the most part, to utility sectors. Every judgment at the EU level after 2000 concerned telecom providers.³⁷ In addition to the telecom sector, national competition authorities have looked at margin squeeze in the gas, water, railways and postal services sector (amongst others).³⁸ But one should not read conditions into this correlation: margin squeeze does not have to involve industries that require extensive physical infrastructure. To address the factually justified but legally inaccurate perceptions of this utility-centred abuse, three clarifications with regard to the infringing undertaking are in order.

i. The undertaking must not be super-dominant on the upstream market

While telecom and other utility sector providers often enjoy(ed) a natural monopoly, a super-dominant position is not required to be found guilty of engaging in a margin squeeze. There must evidently be a dominant position to be abused, but the ECJ has stated that 'the degree of dominance in the market concerned is not relevant'.³⁹ Potential infringers can thus be assessed according to the established standards of dominance.

³² Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555, para 202; Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, para 44; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 192.

³³ Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555, paras 252-4; Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, paras 60-74; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, paras 267-71.

³⁴ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, para 64; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 268.

³⁵ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, para 73.

³⁶ *ibid*, para 74.

³⁷ The judgments in the aforementioned *Deutsche Telekom*, *TeliaSonera* and *Telefónica* cases plus the decision in the *Slovak Telekom* case: *Slovak Telekom* (Case AT.39523) Commission Decision; one case in the railway transport sector was also investigated, but eventually settled with commitments: *Deutsche Bahn I and II* (Cases AT.39678 and AT.39731) Commission Decision.

³⁸ OECD, 'Roundtable on Margin Squeeze' [2009] DAF/COMP (2009) 36.

³⁹ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, para 82.

ii. *The undertaking must not be dominant in the downstream market*

The ECJ has also clarified that dominance on the downstream market is not a condition to establish a margin squeeze.⁴⁰ Rather, condemning margin squeeze seeks to prevent that an operator in the upstream market strengthens its position or even acquires a dominant position in the downstream market by using means other than reliance on its own merits.⁴¹ In other words, margin squeeze concerns the unlawful leveraging of market power from one market into the other. It thus joins refusal to supply, tying, and certain rebates in the category of ‘leveraging abuses’.⁴² The Chicago School has criticized the scrutiny of leveraging abuses by reference to the ‘single monopoly profit’ theory, which argues that ‘an upstream monopolist [...] will already have the incentive and ability to charge a monopoly price, and [...] cannot profitably expand or extend its monopoly power, as by charging even higher prices, through practices that restrict downstream competition.’⁴³ However, this theory has been subject to fundamental criticism,⁴⁴ and its validity was limited to specific circumstances.⁴⁵ A more persistent argument against margin squeeze concerns its relation with refusals to supply.

iii. *The undertaking must not be under an obligation to supply competitors*

The relation between margin squeeze and refusal to supply has been heavily contested, within the EU and beyond. The issue first came up in the *Telefónica* case, where the telecom operator argued that the Commission was essentially accusing it of a refusal to supply, which meant the *Oscar Bronner* criteria⁴⁶ would have to be fulfilled (ie the telecom network would have to qualify as essential facility).⁴⁷ Telefónica contended that it was under no such obligation to supply, and its pricing policy could thus not infringe Article 102 TFEU.⁴⁸ The Commission accepted the argument but added two exceptions: the *Oscar Bronner* criteria do not need to be fulfilled to find a margin squeeze when (i) there is a sector-specific (as opposed to an antitrust) obligation to supply, or (ii) the incumbent has developed its infrastructure while special or exclusive rights shielded it from competition.⁴⁹ This theory was then crystallized in

⁴⁰ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, paras 83-9; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, paras 146 and 185.

⁴¹ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, I-527, para 88.

⁴² Extensively on the concept and forms of leveraging, see Giorgio Monti, *EC Competition Law* (Cambridge University Press 2007), 186-95.

⁴³ Jonathan Baker, ‘Note on “Single Monopoly Profit” Theory’ (2014), 1 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2496932>.

⁴⁴ Louis Kaplow, ‘Extension of Monopoly Power through Leverage’ (1985) 85 Columbia Law Review 515.

⁴⁵ See generally Jonathan Baker, ‘Note on “Single Monopoly Profit” Theory’ (2014) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2496932> and for an application to tying International Competition Network, ‘Unilateral Conduct Workbook Chapter 6: Tying and Bundling’ (presented at the 14th ICN Annual Conference, Sydney, April 2015), 18-20.

⁴⁶ Case C-7/97 *Oscar Bronner v Mediaprint* EU:C:1998:569 [1998] ECR I-7791, paras 40-6.

⁴⁷ *Wanadoo España v Telefónica* (Case COMP/38.784) Commission Decision, para 299-300.

⁴⁸ *ibid*, para 301.

⁴⁹ These are the so-called ‘Telefónica exceptions’: *Wanadoo España v Telefónica* (Case COMP/38.784) Commission Decision, paras 302-9; for a critical assessment, see Damien Geradin, ‘Refusal to supply and margin squeeze: A discussion of why the “Telefónica Exceptions” are Wrong’ (2011) TILEC Discussion Paper Series <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1750226>.

the Commission's Exclusionary Conduct Guidance Paper.⁵⁰ However, the whole exercise proved futile when the issue made it up to the ECJ, which decided—against the Opinion of its Advocate General—that an obligation to supply competitors is not required for a finding of margin squeeze.⁵¹ Nuancing this position slightly, the ECJ noted that without indispensable input, it will be more difficult to establish anti-competitive effect.⁵² In its next margin squeeze case, the Commission adopted the ECJ's position, reproducing its statement that '[m]argin squeeze constitutes an independent form of abuse distinct from that of refusal to supply.'⁵³

It must be stressed that the European approach to margin squeeze and the ECJ's viewpoint differ from that across the Atlantic. The US Supreme Court has taken a markedly different position in its *linkLine* judgment. It refused to accept margin squeeze as a form of unlawful monopolization under Section 2 of the Sherman Act, holding that 'if a firm has no antitrust duty to deal with its competitors at wholesale, it certainly has no duty to deal under terms and conditions that the rivals find commercially advantageous.'⁵⁴ In an OECD Roundtable, a number of authorities expressed a concurring opinion.⁵⁵ The US Supreme Court's argumentation has intuitive appeal: if an undertaking can lawfully refuse to provide its products, how can it be reproached for providing them at disadvantageous conditions? In fact, a similar argument was made in the *TeliaSonera* proceedings before the ECJ.⁵⁶ However, the ECJ rejected such reasoning, holding that

*it cannot be inferred from [Oscar Bronner] that the conditions to be met in order to establish that a refusal to supply is abusive must necessarily also apply when assessing the abusive nature of conduct which consists in supplying services [...] on conditions which are disadvantageous[.]*⁵⁷

The ECJ added that such a reading of the *Bronner* case law would 'amount to a requirement that before any conduct of a dominant undertaking in relation to its terms of trade could be regarded as abusive the conditions to be met to establish that there was a refusal to supply would in every case have to be satisfied', which would unduly reduce the effectiveness of Article 102 TFEU.⁵⁸ Additionally, several authors have argued that a stand-alone margin squeeze abuse addresses the negative consequences of vertical leveraging in a

⁵⁰ Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, para 81 for the principle and para 82 for the exceptions.

⁵¹ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, paras 54-9 (where the AG disagreed: Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2010:483 [2011] ECR I-527, Opinion of AG Mazák, paras 8-33); Case T-336/07 *Telefónica v Commission* EU:T:2012:172, paras 180-2 and 184.

⁵² Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, paras 69-72.

⁵³ *Slovak Telekom* (Case AT.39523) Commission Decision, para 822.

⁵⁴ *Pacific Bell Telephone Co. v. linkLine Communications, Inc.*, 555 U.S. 438 (2009), 9; the Court referred to the *Trinko* judgment for precedent (*Verizon Communications v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004)), and stressed that it has to be an *antitrust* duty to deal, while a duty to deal imposed by the regulator does not qualify.

⁵⁵ OECD, 'Roundtable on Margin Squeeze' [2009] DAF/COMP(2009)36, 8 ('it does not make sense to impose potential liability for engaging in a margin squeeze when the integrated firm has no duty to deal, since, in this case, the firm could avoid liability simply by refusing to sell the essential input at all').

⁵⁶ Case C-52/09 *Konkurrensverket v TeliaSonera* EU:C:2011:83 [2011] ECR I-527, para 54.

⁵⁷ *ibid*, para 55.

⁵⁸ *ibid*, para 58.

way that other theories of abuse cannot. Niamh Dunne, for example,⁵⁹ has argued that '[g]iven the potential for consumer harm and the difficulties in addressing price-squeezing behaviour though established competition abuses, there is a strong argument for recognising margin squeeze as a standalone offence'.⁶⁰ Whatever one's position in the scholarly debate, the current state of the ECJ case law is clear, and shall be taken as the starting point for the assessments that follow.

III. FROM TELECOM PROVIDERS TO ONLINE PLATFORMS

While the telecom sector still boasts highly valued companies, at the end of 2017, the biggest five companies in the world (by market capitalization) operated in part as platforms,⁶¹ which means their business consists of connecting different user groups. Google's app store connects app developers with mobile phone owners, while Microsoft does the same for personal computers—Apple does both. Amazon's Marketplace connects retailers of virtually any product with customers, and Facebook does not only connect friends, but gives advertisers access to over a billion potential customers. To verify whether online platforms could fit a margin squeeze assessment, it is necessary to study their business model and market power.

III.i. Online platforms and vertical integration

There is not (yet) a generally agreed upon definition of 'online platform'. As a part of its public consultation on the subject, the Commission proposed the following definition: '[A]n 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 so as to generate value for at least one of the groups'.⁶² However, it emerged from the replies to the public consultation that consensus could not be reached.⁶³ A debate in the House of Lords (UK) captured the differing opinions well: 'Broadly interpreted, the proposed definition could encompass "all of the Internet"; strictly applied, it would only capture specific elements of the

⁵⁹ For an economic point of view, see Nicholas Economides, 'Vertical Leverage and the Sacrifice Principle: Why the Supreme Court got *Trinko* Wrong' (2005) 61 New York University Annual Survey of American Law 379, 412 ('From an economist's point of view, *Trinko* is a poor decision' and 'the Supreme Court [...] missed the leveraging of monopoly power'); for an additional legal point of view, see Gianluca Faella and Roberto Pardolesi, 'Squeezing Price Squeeze under EC Antitrust Law' (2010) 6 European Competition Journal 255, 266 ('a properly defined analytical framework for the assessment of price squeeze allows for detection of potentially anticompetitive conduct of a discriminatory or predatory nature that is not directly observable due to the vertical integration of the dominant firm').

⁶⁰ Niamh Dunne, 'Margin squeeze: theory, practice, policy – Part 1' (2012) 33 European Competition Law Review 29, 32; see also Niamh Dunne, 'Margin squeeze: theory, practice, policy – Part 2' (2012) 33 European Competition Law Review 61, 61 ('a standalone margin-squeeze offence addresses the impact of vertical integration of the dominant firm in a way that assessing wholesale or retail prices separately for evidence of discrete abuses cannot').

⁶¹ The companies are: Apple, Google (Alphabet), Microsoft, Facebook, Amazon, see Jason Hall, 'The 30 Largest Companies on the Stock Market' (Yahoo! Finance, 5 December 2017) <<https://finance.yahoo.com/news/30-largest-companies-stock-market-150000142.html>>.

⁶² Commission, 'Regulatory environment for platforms, online intermediaries, data and cloud computing and the collaborative economy' (Public Consultation) 2015, 5.

⁶³ Commission, 'Public consultation on the regulatory environment for platforms, online intermediaries and the collaborative economy' (Synopsis Report) 2016, 1.

businesses with which it is concerned.⁶⁴ For analytical purposes, it is helpful to examine the ‘platform’ and the ‘online’ part in isolation.

As the constitutive elements of *platforms* have been debated for over a decade without clear answer, it may be reasonable to conclude that a ‘one-size-fits-all’ definition is simply not feasible. Still, the different proposals, which can be grouped in three schools of thought, are instructive with regard to the characteristics of platforms. Rochet and Tirole, the pioneers of multi-sided market theory, focus on the asymmetrical *price structure* of platforms.⁶⁵ In their opinion, a business qualifies as a platform when it ‘can affect the volume of transactions by charging more to one side of the market and reducing the price paid by the other side by an equal amount; in other words, the price structure matters, and platforms must design it so as to bring both sides on board’.⁶⁶

Evans and Schmalensee offer another popular definition that stresses the function of platforms, ie *solving a coordination problem*. According to them, a platform (which they call a ‘catalyst’) ‘has (a) two or more groups of customers; (b) who need each other in some way; (c) but who cannot capture the value from their mutual attraction on their own; and (d) rely on the catalyst to facilitate value-creating interactions between them.’⁶⁷ A final group of authors (including Caillaud and Jullien, Armstrong, and Rysman) simply characterizes platforms as intermediaries operating in the presence of *indirect network effects*.⁶⁸

While the economics of multi-sided markets were only systematized in the 2000s, the platform business model is almost as old as trade itself, when village marketplaces started connecting sellers and buyers.⁶⁹ Recently, however, modern technology has turbocharged this ancient business model.⁷⁰ Digital innovations including the internet, the World Wide Web, mobile broadband, personal computers and smartphones moved platforms *online*, which is when they started catching the eye of economists and competition authorities alike.

⁶⁴ House of Lords Select Committee on European Union, ‘Online platforms and the Digital Single Market’ (Report of Session) 2016, 22.

⁶⁵ Jean-Charles Rochet and Jean Tirole, ‘Platform competition in two-sided markets’ (2003) 1 Journal of the European Economic Association 990; Jean-Charles Rochet and Jean Tirole, ‘Two-sided markets: a progress report’ (2006) 37 RAND Journal of Economics 645.

⁶⁶ Jean-Charles Rochet and Jean Tirole, ‘Two-sided markets: a progress report’ (2006) 37 RAND Journal of Economics 645, 665.

⁶⁷ David Evans and Richard Schmalensee, ‘The antitrust analysis of multi-sided platform businesses’ (2012) Coase-Sandor Institute for Law and Economics Working Paper, 7 <chicagounbound.uchicago.edu/law_and_economics/483>.

⁶⁸ Bernard Caillaud and Bruno Jullien, ‘Chicken & egg: competition among intermediation service providers’ (2003) 34 RAND Journal of Economics 309, 309-10; Mark Armstrong, ‘Competition in two-sided markets’ (2006) 37 RAND Journal of Economics 668, 668; Marc Rysman, ‘The economics of two-sided markets’ (2009) 23 Journal of Economic Perspectives 125, 125-27.

⁶⁹ For a more extensive description of the village market as a platform, see Bertin Martens, ‘An Economic Policy Perspective on Online Platforms’ (2016) Institute for Prospective Technological Studies Digital Economy Working Paper 2016/05, 10 <<https://ec.europa.eu/jrc/sites/jrcsh/files/JRC101501.pdf>>.

⁷⁰ David Evans and Richard Schmalensee, *Matchmakers: the new economics of multi-sided platforms* (Harvard Business Review Press 2016), 19-20 and 40-5.

Unconstrained by physical capacity, the online platforms started growing into the behemoths they are today.⁷¹ Their core function consists in offering a digital infrastructure for anything from commerce to social interaction. In doing so, most—if not all—online platforms solve a coordination problem, balance different user groups by maintaining a skewed price structure, while taking advantage of the network effects across those user groups. This puts the above discussion between competing definitions in perspective.⁷²

As platforms grow, they enter new markets that are connected to the platform by amplifying their market power at the level of the platform.⁷³ The result is that they end up competing with the undertakings that use their platform. In this process, the platform service can be considered the upstream input, and platforms vertically integrate when they start producing the downstream product, which differs from platform to platform.⁷⁴ An app store integrates vertically when it starts producing its own apps, while a search engine integrates vertically when it starts producing its own output, ie the different web services that it helps people find. An e-commerce platform does the same when it produces its own goods and then distributes these through its platform. This process of vertical integration is detailed further in the case studies below.

III.ii. Market power of online platforms

At first sight, online platforms do not resemble telecom providers. While telecom providers need large physical networks, online platforms mainly need servers. Disruptive innovation in online platforms makes any kind of market power transient,⁷⁵ while telecom providers are regarded as unavoidably entrenched incumbents. Closer inspection, however, shows a surprising number of similarities. First of all, a large number of online platforms are displacing telecom providers exactly because they provide the same communication services.⁷⁶

⁷¹ For a survey, see Peter Evans and Anabelle Gawer, ‘The Rise of the Platform Enterprise: A Global Survey’ (2016) The Center for Global Enterprise Paper <<http://thecge.net/archived-papers/the-rise-of-the-platform-enterprise-a-global-survey/>>.

⁷² In the same sense, it has been noted that ‘[e]conomists have proposed several definitions of a multi-sided platform; they will generally agree in specific cases’: David Evans and Richard Schmalensee, ‘The antitrust analysis of multi-sided platform businesses’ (2012) Coase-Sandor Institute for Law and Economics Working Paper, 6 <https://chicagounbound.uchicago.edu/law_and_economics/483/>; others held that ‘the different definitions proposed appear consistent enough to allow the practical identification of two-sided markets’: Lapo Filistrucchi, Damien Geradin and Eric van Damme, ‘Identifying two-sided markets’ (2013) 36 World Competition 33, 43.

⁷³ Howard Shelanski, ‘Information, innovation, and competition policy for the Internet’ (2013) 161 University of Pennsylvania Law Review 163, 1676-7; Massimiliano Kadar, ‘European Union competition law in the digital era’ (2015), 5 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2703062>; Orly Lobel and Kenneth Bamberger, ‘Platform Market Power’ (2018) 32 Berkeley Technology Law Journal (forthcoming) 1, 37-9.

⁷⁴ Hagiu and Wright have explored a number of factors which determine the choice of a platform to vertically integrate, see Andrei Hagiu and Julian Wright, ‘Multi-sided platforms’ (2015) 43 International Journal of Industrial Organization 162, 164-70.

⁷⁵ The Commission has also considered this, noting that ‘the consumer communications sector [...] is characterised by frequent market entry and short innovation cycles in which large market shares may turn out to be ephemeral’: *Facebook/WhatsApp* (Case M.7217) Commission Decision, para 99; see also *Microsoft/Skype* (Case COMP/M.6281) Commission Decision, para 78 and Case T-79/12 *Cisco v Commission* EU:T:2013:635, paras 65-74.

⁷⁶ Think, for example, of apps like Facebook’s WhatsApp and Messenger, Apple’s iMessage, Microsoft’s Skype, or Twitter. The messages sent through one of those apps alone has exceeded the amount of texts sent (Data

But the parallel runs deeper. In fact, the allegedly transient market power of online platforms is primarily explained by the same factors as the market power of telecom providers, namely network effects and economies of scale.

*Network effects*⁷⁷ mean that the value of a service increases with the number of its users.⁷⁸ Just like a telephone network grows more useful as more people own a telephone, Facebook becomes more attractive as more of your friends join the social network (direct network effects). Additionally, many platforms services also benefit from a larger number of users on ‘the other side’ of the platform. Buyers on Amazon Marketplace, for example, will be better served when there are more sellers—and the other way around (indirect network effects). As a growing number of users makes the platform more valuable, which in turn attracts more users, platforms can profit from a ‘positive feedback loop’, which fosters market concentration.⁷⁹

Both telecom providers and online platforms enjoy considerable *economies of scale*.⁸⁰ given their significant fixed costs⁸¹ but low variable costs, increased output leads to a sizeable cost advantage. Once a telephone network is in place, the cost of providing an extra person with a telephone service is relatively low. Similarly, once an online platform has been developed, the cost of accepting an extra user is marginal.⁸² Given these scale advantages, a new platform ‘can only be successful if a specific sales volume is achieved within a short period of time (“minimum scale of entry”).’⁸³ Additionally, scale enables online platforms to

team, ‘Messaging apps: What’s up?’ (The Economist, 25 May 2015)

<<https://www.economist.com/blogs/graphicdetail/2015/03/messaging-apps>>); online platforms are also starting to provide other services traditionally supplied by telecom providers such as Internet access, see Klint Finley, ‘How Amazon, Google, and Facebook will bring down telcos’ (Wired, 30 December 2016) <<https://www.wired.com/2016/12/the-end-of-telcos/>>.

⁷⁷ As in much of the literature, ‘network effects’ is understood here to mean ‘*positive* network effects’.

⁷⁸ For a classic work, see Michael Katz and Carl Shapiro, ‘Network externalities, Competition, and Compatibility’ (1985) 75 *The American Economic Review* 424; on its role in (online) platforms, see David Evans and Richard Schmalensee, ‘The Industrial Organization of Markets with Two-Sided Platforms’ (2007) 3 *Competition Policy International* 151, 164; Justus Haucap and Ulrich Heimeshoff, ‘Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization?’ (2014) 11 *International Economics and Economic Policy* 49 and Bundeskartellamt, ‘The market power of platforms and networks’ (Working Paper, English summary) 2016, 12-3; for an application, see *Google/DoubleClick* (Case COMP/M.4731) Commission Decision, para 304.

⁷⁹ German Monopolies Commission, ‘Competition policy: the challenge of digital markets’ (Special Report) 2015, 23-4 and 88 for an application to marketplaces; Commission, ‘Online Platforms’ (Staff Working Document) SWD(2016)172, 4-5 and 24 for an application to mobile ecosystems.

⁸⁰ On its role in (online) platforms, see David Evans and Richard Schmalensee, ‘The Industrial Organization of Markets with Two-Sided Platforms’ (2007) 3 *Competition Policy International* 151, 165; Justus Haucap and Ulrich Heimeshoff, ‘Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization?’ (2014) 11 *International Economics and Economic Policy* 49 and Bundeskartellamt, ‘The market power of platforms and networks’ (Working Paper, English summary) 2016, 14.

⁸¹ See eg with regard to search engines *Google Search (Shopping)* (Case AT.39740) Commission Decision, para 286 (‘the establishment of a fully-fledged general search engine requires significant investments in terms of time and resources’).

⁸² In that case, the main variable cost may consist in server space. However, the platform may incur significant costs actually attracting users on both sides of the platform (the ‘chicken and egg’ problem, see Bernard Caillaud and Bruno Jullien, ‘Chicken & egg: competition among intermediation service providers’ (2003) 34 *RAND Journal of Economics* 309).

⁸³ Bundeskartellamt, ‘The market power of platforms and networks’ (Working Paper, English summary) 2016, 14.

benefit from learning effects.⁸⁴ Google, for example, can build on its wealth of search data to further improve its algorithm, while entrants—which do not yet process as many search queries—cannot refine their algorithm to the same extent.⁸⁵ Taken together, economies of scales are another factor favouring the concentration of online platforms.

These characteristics, whose importance differs from platform to platform, are receiving plenty of policy attention. Germany offers an extreme example: holding that network effects and economies of scale ‘foster market concentration and the formation of monopolies’, the legislature has updated German competition law to take greater account of these forces in the context of online platforms.⁸⁶ The European Commission is currently dealing with a number of cases involving online platforms, and could see more in the future, which is the subject of the next section.

IV. ON-GOING AND POTENTIAL CASES

Equipped with a clearer understanding of margin squeeze theory, and an idea about the business model of online platforms and the factors determining their market power, let us return to the example from the introduction. Afterwards, we take a shorter look at the Google Search case and at Amazon’s practices.

IV.i. Apple Music: in tune with competition law?

We examined how Apple and Google’s duopoly in the OS market translates into two app stores, namely the App Store and the Play Store. The Commission is currently investigating Google’s alleged tying of its Play Store to its Chrome mobile browser and Google Search, thereby abusively excluding other browsers and search engines from the market.⁸⁷ Ezrachi and Stucke have discussed another scenario, namely Google’s possibility to exclude Uber from its app store once Google starts offering its competing ride-hailing service.⁸⁸ Given the Google’s broad range of services, there are plenty of possibilities for exclusionary conduct.

However, for our purposes, the case study introduced earlier is most instructive. We described how Apple is active in the upstream market for apps by providing the necessary infrastructure for their distribution, namely the App Store. Apple also operates in the downstream market for apps, where its Apple Music competes with several other music streaming apps, including Spotify. However, given the 30% cut Spotify owes Apple on every

⁸⁴ *ibid.*

⁸⁵ *Google Search (Shopping)* (Case AT.39740) Commission Decision, para 287-90 (‘because a general search service uses search data to refine the relevance of its general search results pages, it needs to receive a certain volume of queries in order to compete viably’); see also Justus Haucap and Ulrich Heimeshoff, ‘Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization?’ (2014) 11 *International Economics and Economic Policy* 49, 60.

⁸⁶ Section 18(3a) of the German Competition Act; for the proposed changes (and the cited phrase), see German Federal Economic Ministry, ‘Digital platforms’ (White Paper) 2017, 58; on their implementation, see Carsten Koenig, ‘Digital Economy, Antitrust Damages, and More: The 9th Amendment to the German Competition Act’ (2017) 1 *European Competition and Regulatory Law Review* 261, 262.

⁸⁷ Commission, ‘Commission sends Statement of Objections to Google on Android operating system and applications’ (press release, 20 April 2016) IP/16/1492.

⁸⁸ Ariel Ezrachi and Maurice Stucke, *Virtual competition: the promise and perils of the algorithm-driven economy* (Harvard University Press 2016), 151-4.

subscription it sells through the App Store, it is forced to offer its service at €13 per month—a competitive disadvantage vis-à-vis Apple’s €10 service.

Does this constellation of facts fit the EU margin squeeze theory outlined earlier? Given the lack of investigative powers of the kind vested in competition authorities, we inevitably lack some information. However, based on publicly available material, some conclusions can—cautiously—be drawn. Under consideration are the essential constituents of margin squeeze theory, ie (i) dominance in the upstream market; (ii) the as-efficient-competitor test; and (iii) the requirement of anti-competitive effect.

i. Dominance in the upstream market

Is Apple’s App Store dominant in the upstream market? And which market is that exactly? To answer these questions, the Google Android investigation provides helpful guidance.⁸⁹ In its Statement of Objections, the Commission recognizes the close connection between the OS (Android), the app store (Play Store) and the apps themselves (such as Google Chrome); accordingly, it defines several markets. First, it makes a clear division between licensable mobile OS (which any phone manufacturer can use) and exclusive mobile OS (which only the vertically integrated phone manufacturer can use).⁹⁰ While Google’s Android belongs to the first category (where it enjoys a market share of 90% and above in most Member States), Apple’s iOS belongs to the second. Then, the Commission turns to app stores. Based on the close connection between the OS and the app store, it limits the market to ‘app stores for the Android mobile OS’. It notes that ‘[t]he Play Store accounts for more than 90% of apps downloaded on Android devices in the EEA’,⁹¹ and that switching costs are significant as switching would entail purchasing a new device (with a different OS).⁹²

Following the same line of reasoning, Apple’s App Store belongs to the market of ‘app stores for iOS’. Just like with Android,⁹³ there are ways to download apps outside of Apple’s official App Store, but they are dangerous and illegal.⁹⁴ Thus, similarly to the Play Store, it can be assumed that the App Store accounts for more than 90% of apps downloaded

⁸⁹ Commission, ‘Commission sends Statement of Objections to Google on Android operating system and applications’ (press release, 20 April 2016) IP/16/1492; Commission, ‘Commission sends Statement of Objections to Google on Android operating system and applications’ (fact sheet, 20 April 2016) MEMO/16/1484.

⁹⁰ Commission, ‘Commission sends Statement of Objections to Google on Android operating system and applications’ (fact sheet, 20 April 2016) MEMO/16/1484.

⁹¹ It gets slightly fuzzy here. In the market for ‘app stores for the Android mobile OS’, Google could be considered to enjoy a 100% market share, since its Play Store is the only app store allowed on Android (modified versions, so-called Android ‘forks’, are not allowed access to Google Play). But perhaps ‘app stores *for* the Android mobile OS’ rather means ‘apps accessible from the Android mobile OS’, in which case there are some other options. The Commission then uses the number of downloaded apps as a useful proxy.

Alternatively, the Commission may be including app stores running on Android ‘forks’ in its market definition.

⁹² Commission, ‘Commission sends Statement of Objections to Google on Android operating system and applications’ (press release, 20 April 2016) IP/16/1492.

⁹³ Lily Hay Newman, ‘Never ever (ever) download Android apps outside of Google Play’ (Wired, 12 April 2016) <<https://www.wired.com/2016/12/never-ever-ever-download-android-apps-outside-google-play/>>.

⁹⁴ Sam Costello, ‘Can I Get Apps Not In the App Store?’ (Lifewire, 28 March 2017) <<https://www.lifewire.com/get-apps-not-in-app-store-1999916>>; ‘App store malware: The latest in bad downloads’ (Trend Micro, 9 November 2016) <<http://blog.trendmicro.com/app-store-malware-latest-bad-downloads/>>.

on iOS devices in the EEA. Given that the switching costs are also equal, a dominant position can be suspected.

ii. As-efficient-competitor test

The pivotal question is whether Spotify is an ‘as efficient competitor’—as efficient as Apple Music, that is. To answer this question, according to margin squeeze theory, it must be tested whether the vertically integrated dominant undertaking could offer its retail services to end-users profitably if it had to pay its own wholesale prices.⁹⁵ In other words, would Apple Music’s €10 subscription model be profitable if it had to hand over 30% of that sum?

Answering this question would require a look at Apple’s internal accounting. But the real problem is that the as-efficient-competitor test expects undertakings to be profitable to begin with. Spotify is not profitable,⁹⁶ despite having over 70 million paid subscribers.⁹⁷ It can be assumed that Apple Music is not either, given its lower subscriber count⁹⁸ (and corresponding diseconomies of scale), and the fact that it pays musicians significantly more than Spotify does (ie higher variable costs).⁹⁹ Thus, testing whether Apple would turn a profit after a 30% cut does not provide meaningful results. Applying the as-efficient-competitor test to an unprofitable undertaking invariably points towards a margin squeeze, even when its competitors are not profitable either.

Unable to rely only on the costs and prices of the dominant undertaking, the two competitors would actually have to be compared. This would mean checking whether a downstream competitor of a vertically integrated undertaking is as efficient as the downstream operation of that undertaking. In an unprofitable business, this could involve comparing the losses. For example, the business with the smallest per subscriber loss may be regarded more efficient. Despite the difficulty of unprofitability (which is not uncommon, but also far from the rule in platform businesses), the margin squeeze test could be applied. Given Apple’s higher variable costs (royalties), a lower user count to spread the fixed costs, and equal price (€10 before 30% cut), Spotify can probably be deemed an as-efficient-competitor.

iii. Anti-competitive effect

Since margin squeeze is not judged to be restrictive ‘by object’, its effects on competition have to be examined. As discussed earlier, a *potential* anti-competitive effect suffices. In

⁹⁵ Case C-280/08 P *Deutsche Telekom v Commission* EU:C:2010:603 [2010] ECR I-9555, para 201; Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 194; *Slovak Telekom* (Case AT.39523) Commission Decision, paras 828 and 843.

⁹⁶ Ed Christman, ‘Spotify’s Losses More Than Double To \$581M, Revenues Rise to \$3B’ (Billboard, 15 June 2017) <<https://www.billboard.com/articles/business/7833686/spotify-2016-losses-financial-results-revenue>>.

⁹⁷ Lizzie Plaugic, ‘Spotify now has 70 million subscribers’ (The Verge, 4 January 2018) <<https://www.theverge.com/2018/1/4/16850742/spotify-subscriber-count-70-million-users>>.

⁹⁸ Apple Music was last reported to have 36 million subscribers, but is gaining ground on Spotify: Eric Skelton, ‘Apple Music Is on Pace to Overtake Spotify in U.S. Subscribers by Summer’ (Pigeons & Planes, 5 February 2018) <<http://pigeonsandplanes.com/news/2018/02/apple-music-on-pace-overtake-spotify-us-subscribers>>.

⁹⁹ Apple pays between \$12 and \$15 per 1,000 streams, whereas Spotify pays around \$7 per 1,000 streams according to the Recording Industry Association of America: Chance Miller, ‘RIAA: Highest artist rates come from Apple Music as music industry slowly rebounds’ (9To5Mac, 30 March 2017) <<https://9to5mac.com/2017/03/30/music-streaming-artist-payout-rates/>>.

particular, such effect can consist in a competitor's 'delayed prospect of becoming profitable',¹⁰⁰ a measure that seems appropriate here. Spotify states that 'the majority of new users signing up for Spotify are mobile'¹⁰¹. And while it is possible to subscribe to Spotify on their website rather than in the iOS app (thus avoiding the 30% cut), the App Store rules prevent Spotify from communicating this option to its app users. Apple also imposes a number of other restrictions on Spotify with regard to the marketing of its app, including the prohibition of offering a free trial or a family plan.¹⁰² Taken together, these measures seem to have at least the potential to restrict competition by Spotify and other music streaming apps in a similar situation.

Recently, Wen and Zhu have empirically studied the phenomenon of entry by the OS into app markets, finding numerous instances of Apple and Google entering in direct competition with app developers.¹⁰³ They find that, both in anticipation of and in reaction to the platform entering their product space, 'app developers [...] reduce their innovation efforts on the affected apps and increase these apps' prices.'¹⁰⁴ At the same time, 'entry threats and actual entry encourage affected developers to introduce more apps in unrelated markets'.¹⁰⁵ Although this research has no direct bearing on our music streaming case study, it illustrates the potentially negative effects of competition between app developers and integrated app stores.

iv. Conclusion

The last word has not been spoken on the conflict between Spotify and Apple Music. In the summer of 2016, the general counsel of the respective companies exchanged letters heavy on accusations.¹⁰⁶ In May 2017 and again in December 2017, Spotify and another music streaming company (Deezer) petitioned the Commission with their complaints on app store practices, which the Commission is reportedly considering.¹⁰⁷ However, 'protecting' the

¹⁰⁰ Case T-336/07 *Telefónica v Commission* EU:T:2012:172, para 279; *Slovak Telekom* (Case AT.39523) Commission Decision, para 823.

¹⁰¹ Mark Sweney, 'Spotify UK revenues surge to almost £190m as mobile subscriptions take off' (The Guardian, 14 October 2016) <<https://www.theguardian.com/media/2016/oct/14/spotify-uk-revenues-surge-to-almost-190m-as-mobile-subscriptions-take-off>>.

¹⁰² Micah Singleton, 'FTC investigation into Apple heats up, music streaming services hit with subpoenas' (The Verge, 21 July 2015) <<https://www.theverge.com/2015/7/21/9009881/apple-ftc-investigation-music-streaming-30-percent-tax>>.

¹⁰³ Wen Wen and Feng Zhu, 'Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market' (2017) Harvard Business School Working Paper 18-036 <<https://www.hbs.edu/faculty/Pages/item.aspx?num=53422>>.

¹⁰⁴ *ibid.*, 2, 9-10.

¹⁰⁵ *ibid.*

¹⁰⁶ Spotify's (quoted and paraphrased) letter: Peter Kafka, 'Spotify says Apple won't approve a new version of its app because it doesn't want competition for Apple Music' (Recode, 30 June 2016) <<https://www.recode.net/2016/6/30/12067578/spotify-apple-app-store-rejection>>; Apple's (complete) letter: Dawn Chmielewski, 'Apple says Spotify's app already violates App Store rules' (Recode, 1 July 2016) <<https://www.recode.net/2016/7/1/12082556/apples-lawyer-letter-spotify>>.

¹⁰⁷ Duncan Robinson and Madhumita Murgia, 'European tech lobbies for action against Apple and Google' (Financial Times, 5 May 2017) <<https://www.ft.com/content/e5a5e2a4-30d8-11e7-9555-23ef563ecf9a>>; Ben Popper, 'Spotify and Deezer ask EU regulators to stop Apple from abusing its dominance' (The Verge, 13 December 2017) <<https://www.theverge.com/2017/12/13/16773806/spotify-deezer-eu-regulators-apple>>.

Swedish Spotify from its US competitor may give ammo to parties who perceive EU antitrust enforcement as biased against US companies.

In any case, this contemporary example of a margin squeeze assessment leads to one important conclusion: margin squeeze theory, stripped down to its legal core, can be applied to online platforms. While the example relates to app stores, an important share of the platform economy,¹⁰⁸ its lessons are more widely applicable. How to apply the margin squeeze test to an unprofitable business is a practical detail rather than a conceptual question.¹⁰⁹ Freed from its association with utility sectors, the question is rather how far the potential of margin squeeze assessments reaches. To test this potential, what better candidate is there than the Google Search case?

IV.ii. Google Search: browsing for a fitting theory of abuse

When, quickly after its inception in 1989, the World Wide Web became too expansive to be personally navigated, search engines made it their business. Google, founded in 1998 by Sergey Brin and Larry Page, quickly outperformed its competitors to become the world's most used search engine.¹¹⁰ Its self-declared mission is 'to organize the world's information and make it universally accessible and useful'.¹¹¹ Google finances this mission by operating as a platform, charging advertisers for access to the users of its search engine.

Google now handles over five billion searches every day,¹¹² which makes it a gateway to the Web. Google is also vertically integrated, as it offers the more specialized services people look for through its search engine (so-called 'vertical search'). These services include video (Youtube), maps (Google Maps), flight comparison (Google Flights), local search, and e-mail (Gmail). In 2002, Google introduced 'Froogle' (currently called 'Google Shopping'), a comparison shopping service.

As they say in Silicon Valley, you have not made until competition authorities start investigating you. Google made it in 2010, when Commissioner Almunia started investigating its practices in online search.¹¹³ Two Statements of Objections were issued containing the same allegation: Google has abused its dominant position in the market for general online search by systematically favouring its own comparison shopping service in its search results.¹¹⁴

¹⁰⁸ Peter Evans and Anabelle Gawer, 'The Rise of the Platform Enterprise: A Global Survey' (2016) The Center for Global Enterprise Paper <<http://thecge.net/archived-papers/the-rise-of-the-platform-enterprise-a-global-survey/>>, where you can find them under the headings 'innovation' and 'integrated' platforms.

¹⁰⁹ Moreover, it would not have to be systematically dealt with, as most online platforms are in fact profitable.

¹¹⁰ One research firm puts Google's global market share on mobile devices at 93,07% and on desktops/laptops at 74,52%: Netmarketshare, 'Search engine market share' <www.netmarketshare.com/search-engine-market-share.aspx?qprid=4&qpcustommd=1>.

¹¹¹ Google, 'About Us' <<https://www.google.com/about/our-company/>>.

¹¹² Danny Sullivan, 'Google now handles at least 2 trillion searches per year' (Search Engine Land, 24 May 2016) <<http://searchengineland.com/google-now-handles-2-999-trillion-searches-per-year-250247>>.

¹¹³ Commission, 'Commission probes allegations of antitrust violations by Google' (press release, 30 November 2010) IP/10/1624; for a useful timeline of what followed, see Foundem, 'Google Antitrust: A Timeline of Significant Events' <www.foundem.co.uk/Foundem_Google_Timeline.pdf>.

¹¹⁴ Commission, 'Commission sends Statement of Objections to Google on comparison shopping service' (press release, 15 April 2015) IP/15/4780; Commission, 'Commission takes further steps in investigations alleging

While detailing how this is harmful to consumers and businesses, however, the Commission did not fit Google's conduct into one of the traditional theories of abuse. Scholars sought to fill that gap, proposing or discarding (amongst others) discrimination,¹¹⁵ tying¹¹⁶ and refusal to supply¹¹⁷ theories.¹¹⁸

When the suitability of margin squeeze as a theory of abuse surfaced in discussions of the Google Search case, it was concluded swiftly that 'there is neither an upstream nor a downstream price, so there can be no margin squeeze.'¹¹⁹ This is not entirely correct. As long as the comparison shopping service does not pay Google for preferential placement, there is no *upstream price*. However, merchants do have to pay comparison shopping services: a *downstream price* which may consist in a flat fee for inclusion in the service and/or a fee owed each time a user clicks through to the merchant's website. Google Shopping demands a fee for being listed, and ranks results based on both their relevance and the amount paid by the merchant.¹²⁰ The second group of downstream customers, the consumers browsing the web for a product, do get to enjoy a free service.

In any case, one may question this fixation with price in an economy where free services are ubiquitous. After all, 'free' only means that you're paying in non-monetary terms (with data) or that someone else is paying (the other side of the platform, paid users of a 'freemium' service). Newman has argued that 'heavy methodological dependence on positive prices has led antitrust courts and enforcement agencies to overlook potentially massive welfare harms.'¹²¹ Other authors have also advocated a shift to less price-centred antitrust assessments,¹²² and authorities are following suit. Since *Microsoft/Skype*, the Commission has

Google's comparison shopping and advertising-related practices breach EU rules' (press release, 14 July 2016) IP/16/2532.

¹¹⁵ *Contra*: Anca Chirita, 'Google's Anti-Competitive and Unfair Practices in Digital Leisure Markets' (2015) 11 The Competition Law Review 109; Renato Nazzini, 'Google and the (Ever-stretching) Boundaries of Article 102 TFEU' (2015) 6 Journal of European Competition Law & Practice 2015 301.

¹¹⁶ *Pro*: Anca Chirita, 'Google's Anti-Competitive and Unfair Practices in Digital Leisure Markets' (2015) 11 The Competition Law Review 109; Benjamin Edelman, 'Does Google leverage market power through tying and bundling?' (2015) 11 Journal of Competition Law & Economics 365; Yi Sng, 'Tying conduct under article 102 TFEU: can intervention against Google be justified?' (2016) 37 European Competition Law Review 406.

¹¹⁷ *Pro*: Lisa Mays, 'The Consequences of Search Bias: How Application of the Essential Facilities Doctrine Remedies Google's Unrestricted Monopoly on Search in the United States and Europe' (2015) 83 George Washington Law Review 721; David Ndolo, 'EU v the US: an analysis of the laws on refusal to supply essential facilities – the Google case' (2016) 37 European Competition Law Review 413; *Contra*: Anca Chirita, 'Google's Anti-Competitive and Unfair Practices in Digital Leisure Markets' (2015) 11 The Competition Law Review 109; Renato Nazzini, 'Google and the (Ever-stretching) Boundaries of Article 102 TFEU' (2015) 6 Journal of European Competition Law & Practice 2015 301.

¹¹⁸ A final group opines there is no fitting theory of abuse because there simply is no abuse: John Lang, 'Comparing Microsoft and Google: The Concept of Exclusionary Abuse' (2016) 39 World Competition 5; Torsten Körber, 'Common errors regarding search engine regulation – and how to avoid them' (2015) 36 European Competition Law Review 239.

¹¹⁹ Renato Nazzini, 'Google and the (Ever-stretching) Boundaries of Article 102 TFEU' (2015) 6 Journal of European Competition Law & Practice 301.

¹²⁰ Sameer Samat, 'Building a better shopping experience' (Google Commerce Blog, 31 May 2012) <<https://commerce.googleblog.com/2012/05/building-better-shopping-experience.html>>.

¹²¹ John Newman, 'Antitrust in zero-price markets: foundations' (2015) 164 University of Pennsylvania Law Review 149, 149.

¹²² David Evans, 'The antitrust economics of free' (2011) Coase-Sandor Institute for Law and Economics Working Paper <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1813193>; Fabio Polverino, 'Hunting

been defining a market for the free service of consumer communications,¹²³ and it is now doing so for the free service of search engines.¹²⁴ Germany took a more direct approach when it recently clarified in law that free services can constitute a market.¹²⁵

Establishing a market for free services is one thing, applying the as-efficient-competitor test to those services is another. Applying the test would mean asking the following question: could Google offer its comparison shopping to end-users profitably if it had to pay its own wholesale prices? But what is this wholesale price that other comparison shopping websites have to pay to Google? These websites are found through Google for free; there is only a wholesale price if they pay Google to be featured on top of the search results, alongside Google's own comparison shopping service. So perhaps this is the closest we get to a workable test: would Google Shopping be profitable if it had to pay Google Search to be listed in its current position, ie on top of the search results?¹²⁶ Perhaps a *sui generis* abuse fits better after all, despite the legal uncertainty it entails.

A *sui generis* abuse is indeed what the Commission put forward in its June 2017 decision, where it held that Google has abused its market dominance as a search engine by giving an illegal advantage to its comparison shopping service.¹²⁷ It detailed Google's practice of systematically giving prominent placement to its own comparison shopping service while demoting rival comparison shopping services in its search results, without fitting it into an established class of abuse. The decision ordered Google 'to comply with the simple principle of giving equal treatment to rival comparison shopping services and its own service',¹²⁸ leaving it up to Google to decide what this meant exactly.¹²⁹

the wild geese: competition analysis in a world of "free" (2012)

<https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145545>; Michal Gal and Daniel Rubinfeld, 'The Hidden Costs of Free Goods: Implications for Antitrust Enforcement' (2016) 80 Antitrust Law Journal 521.

¹²³ *Microsoft/Skype* (Case COMP/M.6281) Commission Decision, paras 18-63; confirmed on appeal: Case T-79/12 *Cisco v Commission* EU:T:2013:635, paras 65-74; the same market has been defined in subsequent cases: *Microsoft/Nokia* (Case COMP/M.7047) Commission Decision, paras 43-5; *Facebook/WhatsApp* (Case M.7217) Commission Decision, paras 20-34; *Microsoft/LinkedIn* (Case M.8124) Commission Decision, paras 77-83.

¹²⁴ In the past, it left this definition open: *Google/DoubleClick* (Case COMP/M.4791) Commission Decision; *Microsoft/Yahoo! Search Business* (Case COMP/M.5727) Commission Decision, where it states that it is 'appropriate to leave open the question whether internet search constitutes a separate market' (para 86).

¹²⁵ Section 18(2a) of the German Competition Act; see Carsten Koenig, 'Digital Economy, Antitrust Damages, and More: The 9th Amendment to the German Competition Act' (2017) 1 European Competition and Regulatory Law Review 261, 261-2.

¹²⁶ Making this test even harder to apply is the fact that Google reserves the top spots for its own comparison shopping service, not allowing other services to bid for them. This changed (at least in Europe) after the Commission's Google Search decision (*infra*).

¹²⁷ Commission, 'Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service' (press release, 27 June 2017) IP/17/1784; the full decision was published in December 2017: *Google Search (Shopping)* (Case AT.39740) Commission Decision.

¹²⁸ Commission, 'Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service' (press release, 27 June 2017) IP/17/1784 (quotation); *Google Search (Shopping)* (Case AT.39740) Commission Decision, para 699 (the remedy must 'ensure that Google treats competing comparison shopping services no less favourably than its own comparison shopping service within its general search results pages').

¹²⁹ A fact sheet accompanying the press release gave some clues on what it does *not* mean: Commission, 'Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service' (fact sheet, 27 June 2017) MEMO/17/1785 (there is no objection 'to the design of Google's generic search algorithms or to demotions as such, nor to the way that Google displays or

In September 2017, Google announced it would create a stand-alone unit for Google Shopping.¹³⁰ Where the coveted top spots on a general Google Search page (the so-called ‘buy box’) were previously reserved exclusively for Google Shopping, it would now have to bid for those spots in competition with other comparison shopping services.¹³¹ According to a spokesperson, this means that ‘Google Shopping will compete on equal terms [...], participating in the auction in the same way as everyone else’.¹³² Interestingly, this (behavioral) vertical separation means that—at least in theory—other comparison shopping services should be able to compete with Google on its own platform when they are as efficient as its independent comparison shopping unit.¹³³ In this sense, the outcome would have been similar after a margin squeeze infringement.

However, Google’s proposed remedy has not escaped criticism.¹³⁴ In February 2018, 19 vertical search engines addressed a letter to Commissioner Vestager alleging that Google’s remedy is non-compliant with the Commission’s decision and ‘has terrible consequences for consumers’.¹³⁵ Amongst others, they argue that ‘without full ownership unbundling (structural separation), Google Shopping’s participation in the auction is essentially meaningless’.¹³⁶ The following reasons may underlie such criticism: First, having competing services bid against each other—and Google—raises the cost of being featured on top of the search results. Secondly, whomever is featured, Google cannot lose out: either Google Comparison Shopping wins the auction and is paid by the company it is promoting, or rival comparison shopping services win the auction—with the proceeds flowing to Google Search. Along these lines, the CEO of a rival price comparison website has described Google’s remedy as ‘great for Google and rubbish for everyone else’.¹³⁷ Critics of the auction system consider their case strengthened by Searchmetric’s research, which finds that competing comparison shopping services are barely featured in the buy box (0,4% of the time in the UK, 2% of the time in

organises its search results pages (eg the display of a box with comparison shopping results displayed prominently in a rich, attractive format’).

¹³⁰ At time of writing, no official Commission documents (such as market tests) on the remedy have been published.

¹³¹ Olivier Heckmann, ‘Changes to Google Shopping in Europe’ (Google Inside AdWords blog, 27 September 2017) <<https://adwords.googleblog.com/2017/09/changes-to-google-shopping-in-europe.html>>; for a visual explanation, see Ginny Marvin, ‘In response to EU antitrust ruling, Google Shopping now shows ads from competing shopping engines’ (Search Engine Land, 26 February 2018) <<https://searchengineland.com/response-eu-antitrust-ruling-google-shopping-now-showing-ads-competing-cses-293059>>.

¹³² James Kanter, ‘Google Offers Concessions to Europe After Record Antitrust Fine’ (New York Times, 27 September 2017) <<https://www.nytimes.com/2017/09/27/business/google-eu-antitrust.html>>.

¹³³ At least when Google does not cross-subsidize its comparison shopping service in any way.

¹³⁴ In defence of the auction-based remedy, see Bo Vesterdorf and Kyriokos Fountoukakos, ‘An Appraisal of the Remedy in the Commission’s *Google Search (Shopping)* Decision and a Guide to its Interpretation in Light of an Analytical Reading of the Case Law’ (2018) 9 *Journal of European Competition Law & Practice* 3.

¹³⁵ The letter is available on the website of Foundem, one of the primary complainants in the Google case: <http://www.foundem.co.uk/Open_Letter_Commissioner_Vestager_Feb_2018.pdf>.

¹³⁶ *ibid.*

¹³⁷ Nicholas Hirst, ‘Vestager kicks off new chapter in Google Shopping probe’ (Politico, 16 February 2018) <<https://www.politico.eu/article/commission-probes-google-shoppings-antitrust-remedy-document/>>.

Germany).¹³⁸ The Commission has sent out questionnaires to comparison shopping sites to evaluate Google's remedy.¹³⁹

IV.iii. Amazon Marketplace: a prime example?

Jeff Bezos established Amazon as an online book retailer in 1994 and then started expanding its product range. Amazon turned into a platform with the launch of Amazon Marketplace, which allows third-party sellers to offer their goods to shoppers. Amazon manages the platform and handles the payment in return for a subscription fee and a referral fee of (usually) 15%.¹⁴⁰ Moreover, if sellers choose the 'Fulfillment by Amazon' option, Amazon also takes care of shipping and customer service.¹⁴¹ The price of this service depends on a number of factors; for a €20 T-shirt, for example, it would amount to around 10%.¹⁴²

As Amazon is both a platform operator and a retailer, it is thoroughly vertically integrated. However, Amazon does not leave this process up to chance; empirical research suggests that it uses its vast amount of sales data to guide its further vertical integration.¹⁴³ Hagiu and Wright find that Amazon chooses to vertically integrate in short-tail products (with a high sales volume), leaving the long-tail products to the retailers on its platform.¹⁴⁴ Zhu and Li confirm that Amazon vertical integration targets products with greater demand, and add that higher prices and lower shipping costs also guide the process.¹⁴⁵ The Commission has noted that the practice of vertically integrated marketplaces to use competing suppliers' transaction data 'to boost the retail activities of the marketplace operators' can raise competition concerns.¹⁴⁶

¹³⁸ Searchmetrics, 'Google Shopping: Is the Revamped Comparison Service Fairer to Competitors?' (SEO & Content Marketing Blog, 29 January 2018) <<https://blog.searchmetrics.com/us/2018/01/29/google-shopping-revamped-fairer-to-competitors/>> (throughout December 2017).

¹³⁹ Nicholas Hirst, 'Vestager kicks off new chapter in Google Shopping probe' (Politico, 16 February 2018) <<https://www.politico.eu/article/commission-probes-google-shoppings-antitrust-remedy-document/>> (the questionnaire contains such questions as: 'If you believe or have any information to suggest that [Google Shopping] may have any advantages over you ... please explain').

¹⁴⁰ Sellers can choose to avoid the subscription fee by paying a per-item fee and media items are also subject to a closing fee: 'Amazon selling fees – how much does it cost to sell on Amazon?' (SellerEngine, 6 January 2016) <<https://sellerengine.com/how-much-does-it-cost-to-sell-on-amazon/>>.

¹⁴¹ Amazon, 'Fulfillment by Amazon – benefits' <<https://services.amazon.co.uk/services/fulfilment-by-amazon/features-benefits.html>>.

¹⁴² Amazon 'Fulfillment by Amazon – pricing' <<https://services.amazon.co.uk/services/fulfilment-by-amazon/pricing.html>>. For example, for the national shipment of a T-shirt, Fulfillment by Amazon will cost more than 2 EUR in most EU countries (the UK webpages are given as an example). For a €20 T-shirt, this would mean over 10%.

¹⁴³ Andrei Hagiu and Julian Wright, 'Marketplace or reseller?' (2015) 61 *Management Science* 184, 196-7; Feng Zhu and Qihong Liu, 'Competing with complementors: an empirical look at Amazon.com' (2016) Harvard Business School Working Paper 15-044 <<https://www.hbs.edu/faculty/Pages/item.aspx?num=48334>>; see also Spencer Soper, 'Got a Hot Seller on Amazon? Prepare for E-Tailer to Make One Too' (Bloomberg, 20 April 2016) <<https://www.bloomberg.com/news/articles/2016-04-20/got-a-hot-seller-on-amazon-prepare-for-e-tailer-to-make-one-too>>.

¹⁴⁴ Andrei Hagiu and Julian Wright, 'Marketplace or reseller?' (2015) 61 *Management Science* 184, 196.

¹⁴⁵ Feng Zhu and Qihong Liu, 'Competing with complementors: an empirical look at Amazon.com' (2016) Harvard Business School Working Paper 15-044, 15 <<https://www.hbs.edu/faculty/Pages/item.aspx?num=48334>>.

¹⁴⁶ EC, 'Final report on the E-commerce Sector Inquiry' (Staff Working Document) COM(2017)229, 186.

One of the keys to Amazon's success is its paid loyalty program Amazon Prime, which offers consumers unlimited two-day shipping on Amazon products, together with a growing number of other benefits (including video streaming, audio streaming and e-books).¹⁴⁷ Even without a subscription to its Prime service, orders of Amazon products are delivered for free once they reach a certain price.¹⁴⁸ Thus, when Amazon starts offering a product its shipping fee generally becomes zero, while third-party sellers' shipping fees are, on average, significantly higher.¹⁴⁹ Empirical research suggests that this shipping advantage results in increased sales of Amazon's products, but also discourages third-party sellers from continuing to offer their competing products.¹⁵⁰ Other research shows that Amazon significantly favours its own products in its search results, even when they do not constitute the best deal.¹⁵¹ The only option for retailers to place their products on equal footing with Amazon's is to pay for the 'Fulfilment by Amazon' service, in which case they will benefit from both free shipping and can compete on equal footing for that coveted top spot in the ranking.¹⁵²

Plenty of authors refer to Amazon as 'squeezing its suppliers',¹⁵³ but is it actually engaging in a margin squeeze? Making abstraction of the dominance question, the question is: would Amazon be able to offer its products to end-users profitably if it had first been obliged to pay its own wholesale prices? For example, could Amazon profitably sell a €20 T-shirt after paying a 15% referral fee and a 10% fulfilment fee? Perhaps it could, maybe it could not, but it is a question worth asking.

V. THE CASE FOR APPLYING MARGIN SQUEEZE TO PLATFORMS—AND THE REGULATORY ALTERNATIVES

The main argument for applying margin squeeze as a theory of abuse is its clear analytical framework, which provides a helpful tool to competition authorities on the one hand and legal certainty to undertakings on the other. Competition authorities simply have to test whether the vertically integrated dominant undertaking would have been able to offer its retail services to end-users profitably if it had first been obliged to pay its own wholesale prices.

¹⁴⁷ The benefits and prices vary per country: Neil Ungerleider, 'What Amazon Prime is like around the world' (Fast Company, 5 January 2016) <<https://www.fastcompany.com/3054295/what-amazon-prime-is-like-around-the-world>>.

¹⁴⁸ In Germany, for example, that amount is 29 EUR: Amazon, 'General Delivery Information' <https://www.amazon.de/gp/help/customer/display.html/ref=hp_dndlpn_iden/?nodeId=201708680>.

¹⁴⁹ Feng Zhu and Qihong Liu, 'Competing with complementors: an empirical look at Amazon.com' (2016) Harvard Business School Working Paper 15-044, 16 <<https://www.hbs.edu/faculty/Pages/item.aspx?num=48334>>.

¹⁵⁰ *ibid.*, 15-9.

¹⁵¹ Julia Angwin and Surya Mattu, 'Amazon Says It Puts Customers First. But Its Pricing Algorithm Doesn't' (ProPublica, 20 September 2016) <<https://www.propublica.org/article/amazon-says-it-puts-customers-first-but-its-pricing-algorithm-doesnt>>.

¹⁵² *ibid.*

¹⁵³ From a legal perspective: Lina Khan, 'Amazon's Antitrust Paradox' (2017) 126 Yale Law Journal 710, 743 for the exact words, but it is a common theme throughout the article; from an economic perspective: Feng Zhu and Qihong Liu, 'Competing with complementors: an empirical look at Amazon.com' (2016) Harvard Business School Working Paper 15-044, 23-6 <<https://www.hbs.edu/faculty/Pages/item.aspx?num=48334>>; from a journalistic perspective: Franklin Foer, 'Amazon Must Be Stopped' (New Republic, 10 October 2014) <<https://newrepublic.com/article/119769/amazons-monopoly-must-be-broken-radical-plan-tech-giant>>.

For dominant undertakings, this as-efficient-competitor test offers legal certainty: as it only refers to prices and costs that should be known by these undertakings, they can self-assess the lawfulness of their conduct. Moreover, as margin squeeze is an established form of abuse, its application cannot be called ‘unprecedented’—a criticism that novel applications of the general theory of exclusionary abuse (such as in the Google Search case) are particularly subject to.¹⁵⁴ Finally, the case studies examined above show that margin squeeze theory can be applied to online platforms. The theory appears better suited when there is a clearly identifiable upstream price (eg the commission rates of app stores and online marketplaces) as opposed to when the upstream price is more difficult to observe and possibly absent (eg search engines). The fact that the online platform is unprofitable complicates the test, but does not make it unworkable. On balance, margin squeeze’s clear assessment framework and the legal certainty that comes with it make a good case for applying the theory when an undertaking leverages its platform market power into a downstream product market.

Applying margin squeeze theory to online platforms means regulating them, and this article thus puts forward a regulatory proposal in the broad sense. On the one hand, the proposal is not radical: as margin squeeze is part of current EU competition law, extending its application to online platforms is simply a matter of policy. On the other hand, it could be perceived as far-reaching: the theory of abuse underlying margin squeeze can be viewed as an obligation of neutrality, which is implicitly connected with the characterization of the upstream operator as a utility provider. However, this neutrality would only be imposed *ex post*, ie after the anti-competitive effect of the conduct has been established. In contrast, regulatory initiatives imposing neutrality *ex ante* are now gaining steam in the European Union. These obligations, which traditionally concerned telecom networks, have already been extended to internet service providers through the policy of network neutrality. Taking this evolution one step further, neutrality obligations could be made applicable to online platforms. In fact, regulatory initiatives going in that direction are now on the table both at EU and Member State level. To clarify the important difference between *ex ante* and *ex post* approaches, the remainder of this section traces the expansion of neutrality obligations from telecom operators to internet service providers and perhaps even to online platforms.¹⁵⁵

The European liberalization of the telecom sector was carried out not only by obliging incumbents to grant competitors access to their network for a fee, but additionally by imposing a certain neutrality on them. One of the primary instruments guiding the process

¹⁵⁴ See eg Alfonso Lamadrid, ‘Google Shopping Decision – First Urgent Comments’ (Chillin’ Competition, 27 June 2017) <<https://chillingcompetition.com/2017/06/27/google-shopping-decision-first-urgent-comments/>> (‘From a legal standpoint, this case is *unprecedented*; there has never been a case like this, in Europe or anywhere else’), and Bo Vesterdorf and Kyriokos Fountoukakos, ‘An Appraisal of the Remedy in the Commission’s *Google Search (Shopping)* Decision and a Guide to its Interpretation in Light of an Analytical Reading of the Case Law’ (2018) 9 Journal of European Competition Law & Practice 3, 3 (‘Many aspects of the Commission’s case have been the subject of intense debate, not least the Commission’s novel and *unprecedented* theory of harm of “favouring”’) (emphasis added twice).

¹⁵⁵ The ideas presented here were already teased in a duo of blogposts: Friso Bostoen, ‘Platform Neutrality: Hipster Antitrust or Logical Next Step? (Part I)’ (CiTiP Blog, 12 December 2017) <<https://www.law.kuleuven.be/citip/blog/platform-neutrality-hipster-antitrust-or-logical-next-step-part-i/>> and ‘Platform Neutrality: Hipster Antitrust or Logical Next Step? (Part II)’ (CiTiP Blog, 14 December 2017) <<https://www.law.kuleuven.be/citip/blog/platform-neutrality-hipster-antitrust-or-logical-next-step-part-ii/>>.

states: 'Member States, shall ensure that vertically integrated public undertakings which provide electronic communications networks and which are in a dominant position *do not discriminate* in favour of their own activities.'¹⁵⁶ This *ex ante* regulatory framework was complemented by *ex post* margin squeeze investigations, but their mutual independence was confirmed when the ECJ conceived margin squeeze as an autonomous abuse (*supra*).

The EU also resorted to *ex ante* regulation to guarantee neutrality on the internet. Net neutrality, a term coined by Tim Wu in 2003, implies that internet providers must treat data equally, ie cannot block or slow down specific applications or services.¹⁵⁷ In April 2016, the EU Regulation on net neutrality came into force, aiming 'to safeguard *equal and non-discriminatory* treatment of traffic in the provision of internet access services'.¹⁵⁸ The Regulation is motivated in part by worries concerning vertical integration, the idea being that internet providers could give their downstream services preferential treatment over those of their competitors. They could, for example, slow down Youtube and Netflix to make their video service more attractive,¹⁵⁹ make Spotify's traffic shaky to draw users to its own alternative,¹⁶⁰ or mess with the speed of online communication services to make their own apps more popular. Such conduct is prohibited by Article 3 of the Regulation, which states:

*Providers of internet access services shall treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.*¹⁶¹

Thus, the EU mandates neutrality in providing *access to* the telecom network (margin squeeze), and in treating services *on* the internet (net neutrality).¹⁶² The internet is in fact a network on which others can build their networks (or platforms), which explains its title as the 'network for networks'. These neutrality obligations are at least implicitly related to the notion of utility, which encompasses telecom infrastructure, but—given its essential role—

¹⁵⁶ Commission Directive 2002/77/EC on competition in the markets for electronic communications, networks and services [2002] OJ L249/21, art 3 (emphasis added).

¹⁵⁷ Tim Wu, 'Network Neutrality, Broadband Discrimination' (2003) 2 Journal on Telecommunications and High Technology Law 141.

¹⁵⁸ Regulation (EU) 2015/2120 of the European Parliament and of the Council laying down measures concerning open internet access [2015] OJ L310/1, consideration 1 (emphasis added).

¹⁵⁹ The Dutch competition authority has already warned Internet providers not to alter video traffic: ACM, 'ACM warns telecom companies about net neutrality' (press release, 12 July 2016).

¹⁶⁰ The US Internet service provider Sprint, for example, has a 33% stake in the music streaming service Tidal, a competitor of Spotify: Flint Kinley, 'Sprint takes Tidal stake to ward off threats from all sides' (Wired, 23 January 2017) <<https://www.wired.com/2017/01/sprint-takes-tidal-stake-ward-off-threats-sides/>>.

¹⁶¹ Regulation (EU) 2015/2120 of the European Parliament and of the Council laying down measures concerning open internet access [2015] OJ L310/1, art 3.3; there are, however, exceptions, most notably for 'zero-rating' (art 3.2), 'reasonable traffic management' (art 3.3) and 'optimised services' (art 3.5); for a more extensive discussion, see Peter Alexiadis, 'Net Neutrality policy and the mobile sector: The need for competition law standards' (2016) <https://antitrustlair.files.wordpress.com/2016/05/net-neutrality-article_12-may-2016_final.pdf>.

¹⁶² In the US, net neutrality rules have recently been repealed: Federal Communications Commission, FCC 17-166, Restoring Internet Freedom Order, 14 December 2017. There is, however, strong political and legal opposition to this move, see eg John Hendel, 'Democrats introduce resolution to reverse FCC net neutrality repeal' (Politico, 27 February 2018) <<https://www.politico.com/story/2018/02/27/democrats-fcc-reverse-net-neutrality-426641>>.

also the internet. This qualification may justify interfering with a company's freedom to conduct a business by imposing neutrality obligations.

Are online platforms developing into utilities? Should they be the next target of neutrality obligations similar to the ones described above?¹⁶³ The European Parliament tended towards a positive answer when adopting its 'Google Resolution'. Voicing its concern with the potential development of search engines into gatekeepers, it called on the Commission 'to consider proposals aimed at unbundling search engines from other commercial services', a far-reaching interference that implies a *structural* separation (as sought by critics of the current Google remedy).¹⁶⁴ In its Google Search decision, the Commission obliged Google to treat its own comparison shopping service and those of rivals in the same way (which Google implemented by *behaviourally* separating its services). The Commission decision thus sensitively tones down the Parliament's proposal, but nevertheless mandates neutrality.

The Google Android investigation will go some way towards clarifying the EU antitrust approach to the digital infrastructure provided by mobile ecosystems and their app stores. With regard to e-commerce, a recent *Economist* article¹⁶⁵ noted that 'Amazon could become a new kind of utility: one that provides the infrastructure of commerce, from computing power to payments to logistics.' It added that '[i]f Amazon does become a utility for commerce, the calls will grow for it to be regulated as one.' Some tech entrepreneurs have been happy to confirm the impression by calling their own platforms utilities.¹⁶⁶ The idea is now catching on with lawmakers. US Senator Al Franken, for example, has stated: 'As tech giants become a new kind of internet gatekeeper, I believe the same basic principles of net neutrality should apply here'.¹⁶⁷

While political and media statements give us an idea of the evolving perceptions of online platforms, what matters is policy—and the regulation it leads to. At EU level, the Commission is monitoring online platforms closely in the framework of its Digital Single Market (DSM) strategy. It carried out a public consultation, to which nine out of ten respondents replied that they are dissatisfied with the relations between platforms and

¹⁶³ For a thought experiment on how the regulation of online platforms like utilities would work, see 'What if large tech firms were regulated like sewage companies?' (*Economist*, 23 September 2017) <<https://www.economist.com/news/business/21729455-being-treated-utilities-big-techs-biggest-long-term-threat-what-if-large-tech-firms-were>>.

¹⁶⁴ European Parliament, 'Supporting consumer rights in the digital single market' (Resolution) 2014/2973(RSP), point 15.

¹⁶⁵ 'Amazon, the world's most remarkable firm, is just getting started' (*The Economist*, 25 March 2017) <<https://www.economist.com/news/leaders/21719487-amazon-has-potential-meet-expectations-investors-success-will-bring-big>>.

¹⁶⁶ Asked what the social network Twitter and the mobile payment system Square have in common, Jack Dorsey (co-founder of both) answered: 'They're both utilities' ('Jack Dorsey on How Square and Twitter are Similar' (*Techonomy*, 27 August 2012) <<https://techonomy.com/2012/08/video-jack-dorsey-on-how-square-and-twitter-are-similar/>>); Facebook stated it is a 'social utility' and not a 'social networking site' (Arnold Zafra, 'A Friendly Reminder: Facebook is a Social Utility not a Social Networking Site' (*Adweek*, 15 September 2008) <www.adweek.com/digital/a-friendly-reminder-facebook-is-a-social-utility-not-a-social-networking-site/>).

¹⁶⁷ For a transcript of the speech, see Al Franken, 'We must not let big tech threaten our security, freedoms and democracy' (*The Guardian*, 8 November 2017) <<https://www.theguardian.com/commentisfree/2017/nov/08/big-tech-security-freedoms-democracy-al-franken>> (specifying that 'Facebook, Google, and Amazon – like ISPs – should be "neutral" in their treatment of the flow of lawful information and commerce on their platforms').

suppliers.¹⁶⁸ In particular, businesses criticized platforms' application of unbalanced terms and conditions, and promotion of own products to the disadvantage of products provided by suppliers.¹⁶⁹ The Commission followed up on the consultation with a fact-finding exercise on platform-to-business trading practices, which found widespread concern that platform favour their own products or services.¹⁷⁰ In the May 2017 mid-term review of its DSM strategy, the Commission subsequently designated 'promoting online platforms as responsible players of a fair internet ecosystem' as one of its top priorities.¹⁷¹ Observing that online platforms 'have become key gatekeepers of the internet, intermediating access to information, content and online trading', the Commission has pledged to use its competition enforcement powers wherever relevant, and is preparing actions which 'could [...] take the form of a legislative instrument'.¹⁷² Most recently, the Commission set out the regulatory options it is considering in an inception impact assessment on 'fairness in platform-to-business relations'.¹⁷³ The options range from 'EU soft law action to spur industry-led intervention' to 'EU legislative instrument providing detailed principles', but are short on specifics.

Member States are not awaiting action at EU level. In France, the government ordered the National Digital Council to draft a report on the neutrality of platforms (*neutralité des plateformes*). In its report, the Council compares telecom networks and online platforms, but notes an important difference, namely that the latter do not originate from state monopolies.¹⁷⁴ It discusses the difficult relationship between suppliers and online platforms, especially when they start competing against each other (after vertical integration of the platform).¹⁷⁵ The Council launched a number ideas to counter the issues that may arise, including a prohibition of every form of discrimination of suppliers *that is not justified by the quality of the service or legitimate economic reasons*.¹⁷⁶ The wording of this proposal immediately shows the difficult balance to be struck between the interests of suppliers and those of the platform. After a number of similar reports,¹⁷⁷ the French Parliament adopted a law imposing an obligation of 'platform fairness' (*loyauté des plateformes*). The law requires platform operators to be transparent on why certain products are given prominence in spite of others, but does not prohibit discrimination as such.¹⁷⁸

¹⁶⁸ Commission, 'Public consultation on the regulatory environment for platforms, online intermediaries and the collaborative economy' (Synopsis Report) 2016, 9.

¹⁶⁹ *ibid*, 1.

¹⁷⁰ Commission, 'Mid-Term Review on the implementation of the Digital Single Market Strategy' (Communication) SWD(2017)155, 8.

¹⁷¹ *ibid*, 7-8.

¹⁷² *ibid*, 9 (emphasis added).

¹⁷³ Commission, 'Fairness in platform-to-business relations' (Inception impact assessment) Ref. Ares(2017)5222469.

¹⁷⁴ Conseil National du Numérique, 'Neutralité des plateformes: Réunir les conditions d'un environnement numérique ouvert et soutenable' (Opinion) 2014, 8.

¹⁷⁵ *ibid*, 8-9.

¹⁷⁶ *ibid*, 28.

¹⁷⁷ Most importantly: Conseil d'Etat, 'Le numérique et les droits fondamentaux' (Report) 2014; Conseil National du Numérique, 'Ambition numérique: Pour une politique française et européenne de la transition numérique' (Report) 2015; Commission de réflexion et de propositions sur le droit et les libertés à l'âge numérique, 'Numérique et libertés: Un nouvel âge démocratique' (Report) 2015.

¹⁷⁸ Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique, art 49, which revises art L. 111-7 of the French Consumer Code; on the decrees further specifying these obligations, see Gaëlle Marraud Des

VI. CONCLUSION

Could there be such a thing as a ‘platform squeeze’? We have found that certain conduct by online platforms can be assessed under the margin squeeze framework. In particular, margin squeeze offers an appropriate lens to scrutinize exclusionary conduct by app stores, but appears less well suited to the practices of search engines; it is too early to tell whether margin squeeze could play a role in the supervision of e-commerce platforms. However, as online platforms will be crowding the antitrust atmosphere for some time to come, its tools better adapt. Given the clear analytical framework it provides competition authorities and the legal certainty it offers undertakings, margin squeeze is a good place to start.

An underlying question is whether platforms should be the next subject of neutrality obligations, as telecom networks and the internet were before them. This idea is gaining traction with both the public and policymakers. The remedies imposed in the Google Search case show that platform neutrality (or more specifically: search neutrality) can be imposed *ex post* through competition law. However, the key is its implementation. Google opted for an auction-based system, which is being evaluated by the Commission, but alternative models are certainly available (and may be preferable). *Ex ante* regulation, by contrast, should only be considered when competition law proves inadequate to safeguard competition in online markets, but it is too early to tell whether this is actually the case. Crucially, however, the answer to the question whether competition law is inadequate depends on its interpretation and application. This article has offered one way, not so much to reinterpret competition law, but rather to extend its application from telecommunications to platform markets. Applying the margin squeeze framework in online markets may thus offer an alternative to (calls for) more heavy-handed regulation.