ECONOMICS OF POTENTIAL COMPETITION

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Potential competition is an economic force not yet shaping competition in a given market, but which has the potential to do so in the foreseeable future. It has recently moved up the competition policy enforcement agenda due to the growing interest in innovation-related theories of competitive harm and the rapid development of digital technologies and services. In this article, we briefly review, from an economic perspective, the current theories of harm relating to potential competition, the industries and market situations where such competition is relevant, as well as a few considerations regarding its assessment.

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I. INTRODUCTION

Competition authorities' growing interest in innovation-related theories of harm, together with the rapid development of digital technologies and services, have intensified the attention paid by competition authorities to potential competition. While potential competition complements actual competition in restricting the market power of a dominant incumbent or of two merging companies, its assessment requires a somewhat different legal and economic toolbox than that of actual competition.

In this article, we briefly review what economics has to say about the relevance and assessment of potential competition in various competitive settings. The article is structured as follows: First, we provide a definition of potential competition. Second, we explain the relevant economic theories of harm. Third, we discuss how potential competitors can be identified. Finally, we conclude with some thoughts on how to assess competitive pressure from potential competition.

II. WHAT IS POTENTIAL COMPETITION?

Potential competition is an economic force not yet shaping competition in a given market, but which has the potential to do so in the foreseeable future.[2] Potential entrants that have (i) an established product and the ability to easily enter the market at a sufficient scale and (ii) that could be kept out of the market via traditional anti-competitive exclusionary pricing strategies (such as predatory pricing or conditional rebates) do not qualify, at least for the purpose of this article, as potential competitors.[3,4]

This way, the main separation line between potential and actual competition is that potential competition refers to a competitive force not yet realized in the market. This distinction further means that a competitive assessment related to potential competition cannot be based on structural measures, such as concentration indices, or price analysis. The main reason for this is that the product of the potential competitor and the circumstances of its potential entry may not be perfectly defined at the time of the assessment and that it must, by definition, have a zero per cent market share. This implies that one should look at non-price related channels in the competitive assessment.[5]

The key alternative competitive channel is innovation. A firm involved in innovation related to an existing product, but not providing that particular product yet, could, under certain conditions, be viewed as a potential competitor to the suppliers of the existing products.[6] Furthermore, if many firms are working towards developing a non-existing product for which a demand has been identified, e.g. a drug for a disease, they become each other's potential competitors.

We next turn to the presentation of the main theories of harm linked to potential competition.

III. THEORIES OF HARM

The first step towards the evaluation of potential competition is the identification of theories of harm. Such theories of harm focus either on the elimination of potential competition, which is the case in merger control, or on its substantial weakening through some anti-competitive practices, which is the case in antitrust.[7]

2 This is in line with the definition provided by the OECD's background note on *"The concept of potential competition,"* according to which "Potential competition could be defined as a competitive constraint on a firm's behaviour that might potentially arise but has not yet actually done so." See OECD (2021), *Concept of potential competition*, OECD COMPETITION COMMITTEE DISCUSSION PAPER, http://oe.cd/tcpc.

3 For example, AMD harmed by Intel through the use of conditional rebates (see European Commission (2009), *AT.37990 Intel decision*, https://ec.europa.eu/competition/antitrust/cases/dec_docs/37990/37990_3581_18.pdf), or suppliers of wireless technology products and services that were put at disadvantage through Qualcomm's exclusivity rebates (see European Commission (2018), *AT.40220 Qualcomm (exclusivity payments) decision*, https://ec.europa.eu/competition/antitrust/cases/dec_docs/40220/40220_2702_4.pdf) would not qualify as potential competitors for our discussion.

4 We classify such examples as cases where actual rather than potential competition is targeted by the dominant firm.

5 However, one should remain aware that when facing the threat of potential competition, the incumbent may place a competitive bid to signal its intention to deter entry in future and the finding of such behaviour where a market is deemed uncompetitive by usual indicators (i.e. structural analysis) can be indicative of the existence of potential competition. See Salop, Steven C. (2021), *Potential Competition and Antitrust Analysis: Monopoly Profits Exceed Duopoly Profits*, Note for OECD Roundtable on the Concept of Potential Competition, https://one.oecd.org/document/DAF/COMP/WD(2021)37/en/pdf.

6 To what extent that innovation is observed for all the players in the market is a different question.

7 We do not discuss here the competitive constraints imposed by potential competition, e.g. to counterbalance the impact of a merger between two actual competitors.

A. Mergers

Merger-related theories of harm can further be split into i) horizontal, ii) vertical and iii) conglomerate merger theories of harm.

1. Horizontal Merger Theories of Harm

In a horizontal merger setting, a firm may acquire one of its potential competitors. In this case, the potential competitor does not yet exert a competitive pressure in the relevant market, but there is a sufficiently high probability that it would have entered the market and developed into a strong competitive force in a timely manner in a counterfactual with no merger.

This theory of harm has become increasingly common in the pharmaceutical industry where the target company has a pipeline product, i.e. a product in the development phase that could enter the market, subject to an approval from the medical regulatory bodies. For example, such theories of harm were used in the recent *BMS/Celgene and Abbvie/Allergan* mergers. The European Commission found evidence supporting this theory of harm in *Abbvie/Allergan*, requiring the divestiture of Allergan's IL-23 inhibitor brazikumab pipeline product targeting the treatment of some inflammatory bowel diseases, such as ulcerative colitis and Crohn's disease.[8] In *BMS/Celgene*, the Federal Trade Commission ("FTC") also found evidence supporting this theory of harm and required the divestiture of Celgene's Otezla product for treating moderate-to-severe psoriasis.[9]

The acquiring company may, in such cases, integrate the (potential competitor) target's activity into its own or may stop it altogether. These latter cases have been recently labelled "killer acquisitions" and could be particularly harmful to competition in cases where the acquirer has a dominant market position and the target is the only potential competitor that could credibly challenge the strong market position of the acquiring firm.[10,11]

Again, the pharmaceutical industry provides good examples of such killer acquisitions where the established supplier of a patented drug acquires the developer of a potentially competing, possibly superior drug.[12] Examples can be found in digital markets too where a firm with a strong position in a market due to strong network effects acquires another firm that could have developed into its powerful competitive challenger. Facebook's acquisitions of WhatsApp and Instagram are, by some observers, viewed as killer acquisitions initiated with the intention of closing down WhatsApp's and Instagram's efforts to develop into social media platforms that could challenge Facebook's own social media service.[13,14]

2. Vertical Merger Theories of Harm

Theories of harm linked to potential competition can also be formulated in relation to vertical mergers. In particular, a vertical merger may lead to the foreclosure of an important input for potential rivals of the downstream merging party in the competition to supply or develop a downstream product or service. This includes both cases when (i) the downstream party of the merger is already supplying a downstream product and the merger forecloses potential competitors in that market and when (ii) there is no marketed product on the downstream market and the merger forecloses potential competitors of the transaction's downstream party.[15]

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8 See European Commission (2020), *M. 9461 Abbvie/Allergan*, https://ec.europa.eu/competition/mergers/cases/decisions/m9461_1187_3.pdf).

9 See FTC (2020), *Decision and Order C-4690, in the matter of BMS and Celgene*, https://www.ftc.gov/system/files/documents/cases/191_0061_c4690_bms_celgene_decision_and_order.pdf).

10 See Cunningham, Colleen, Florian Ederer & Song Ma (2021), *Killer Acquisitions*, JOURNAL OF POLITICAL ECONOMY, 129(3), 649–702.

11 Also motivated by examples in digital markets, Caffarra et al. (2020) develop the idea of "reverse" killer acquisition wherein the acquisition of a smaller player in an adjacent market by a large digital platform, potential competition is killed through the large digital platform abandoning its own development of a service to enter the adjacent market from where the target was selected. See Caffarra, Cristina, Gregory S. Crawford & Tommaso Valletti (2020), *How tech rolls": Potential competition and "reverse" killer acquisitions*, CPI ANTITRUST CHRONICLE, 2(2), 13-18.

12 Using data from the pharmaceuticals industry, Cunningham et al. (2021), *supra* note 10, estimate that 6-7 percent of pharmaceutical acquisitions involving overlapping drug projects, i.e. drug projects in the same therapeutic class and using the same mechanism of action, qualify as killer acquisitions, with higher occurrences where acquirer faces limited pre-existing competition due to e.g. distant patent expiration.

13 See for example, Berry, Steven, Martin Gaynor & Fiona Scott Morton (2019), *Do Increasing Markups Matter? Lessons from Empirical Industrial Organization*, JOURNAL OF ECONOMIC PERSPECTIVES, 33(3), 44–68 and the Australian ACCC's *Digital platforms inquiry* (2019), https://www.accc.gov.au/publications/digital-platforms-inquiry-final-report.

14 The UK CMA explores the same theory of harm in relation to Facebook's acquisition of Giphy but focusing on the elimination of a potential competitor in the display advertising market. See UK CMA (2021), *Facebook, inc (now Meta Platforms, inc)/Giphy, inc merger inquiry*, https://www.gov.uk/cma-cases/facebook-inc-giphy-inc-merger-inquiry#final-report.

15 Vertical theories of harm based on customer foreclosure can be formulated in a mirroring way.

The acquisition of Grail, a company involved in the development of multi-cancer early detection ("MCED") tests, by Illumina, a supplier of next generation gene sequencing systems ("NGSs"), a transaction currently under investigation by the European Commission and also assessed by the FTC, is a good example of a potential competition related vertical merger theory of harm. According to this theory of harm, Illumina may have the ability and incentive to foreclose an important input, i.e. NGSs, for Grail's potential rivals in the competition to develop MCED tests.[16]

The vertical theory of harm discussed above is one which eliminates potential competition indirectly through input foreclosure. A theory of harm of a direct elimination of a potential competitor would include a vertical merger between an upstream and a downstream firm where one of them could potentially expand into the market where the other merging party had a strong market position. The FTC formulated such a theory of harm in the proposed (and later abandoned) merger between Barnes & Noble, a book retailer, and Ingram, the largest US book wholesaler at the time, where Barnes & Noble had been considering entry into the upstream wholesale market in which Ingram had a strong market position. The FTC considered that the merger would directly eliminate a potential competitor (Barnes & Noble) to Ingram in the wholesale upstream market.[17]

3. Conglomerate Merger Theories of Harm

The elimination of potential competition may also appear in a conglomerate merger context where the target's future potential expansion in the acquirer's market is considered. For example, Instagram, having operated a free mobile photo sharing app, could have potentially in the future expanded into the market for social media services where Facebook was an important player.[18,19]

B. Antitrust

Competitive harm linked to potential competition in antitrust arises mostly in relation to horizontal agreements.[20] The most prevalent anticompetitive conduct is the delaying of entry (e.g. through slowing down of relevant innovation) or elimination of potential competition through direct payments from a dominant incumbent to the potential entrant. This is a more direct way to keep a potential competitor out of the market than through the foreclosure of customers (or raising the rival's costs).

A widely cited example of such payments delaying entry is the well-known *pay-for-delay* setup in the pharmaceuticals industry. In such cases, the holder of a pharmaceutical patent first sues a potential competitor for patent infringement, after which the suit is settled such that the potential competitor receives a financial compensation for delaying its entry to the market. One of the major cases is the *FTC v. Actavis* case in the U.S. where Actavis accepted payments from Solvay in return for agreeing to delay the marketing of its approved generic drug that would have challenged Solvay's patented drug.[21] Another case is Lundbeck in Europe where the Commission fined Lundbeck for making payments to delay the marketing of cheaper generic drugs that would have challenged its patented antidepressant drug citalopram.[22]

A similar case is the complaint referring to Google making annual payments ranging from $8 to $12 billion to Apple for keeping Google as its default search engine on Safari, Apple's browser also deployed on the iPhone.[23] Such payments may have a negative impact on Apple's incentives to provide or develop alternative search engines and, in turn, divert income from Google.

16 See European Commission (2021), M.10188 *Illumina/Grail*, https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3844 and FTC (2021), *Illumina and Grail*, https://www.ftc.gov/enforcement/cases-proceedings/case-document-search?title=illumina&field_document_description=.

17 See Oldale, Alison, Bilal Sayyed & Andrew Sweeting (2020), *A review of cases involving the loss of potential and nascent competition at the FTC, with particular reference to vertical mergers*, COMPETITION LAW AND POLICY DEBATE, 6(2), p. 60-66. This paper discusses a number of other vertical mergers involving elimination of potential and nascent competition.

18 Some of these digital market acquisitions are also discussed in a conglomerate merger context, see Motta, Massimo & Matin Peitz (2020), *Big Tech Mergers*, Barcelona GSE Working Paper No 1198.

19 Furthermore, the Facebook/Instagram case reminds us that there might be not one single approach to assess a certain transaction. Instead, horizontal and conglomerate considerations may overlap in some cases.

20 As we clarified at the beginning of Section I and in footnote 4, we are not looking, for this article, at exclusionary abuses of dominant position preventing entry of rivals, such as the ones discussed, for example, in Section IV.D. of Salop (2021), *supra* note 5.

21 See *FTC v. Actavis, Inc.*, 570 U.S. 136 (2013), https://supreme.justia.com/cases/federal/us/570/136/.

22 See European Commission (2015), AT.39226 – *Lundbeck*, https://ec.europa.eu/competition/antitrust/cases/dec_docs/39226/39226_8310_11.pdf.

23 See *US and Plaintiff States v. Google LLC* (2020), https://www.justice.gov/atr/case-document/file/1329131/download.

IV. IDENTIFICATION OF POTENTIAL COMPETITORS

The identification of potential competitors tends not to be a straightforward exercise as no history of actual competition is at hand.[24] Furthermore, one should take into account the inherent uncertainty regarding the activity and performance of such firms.[25] Different industries pose different challenges in this regard.

Potential competitors are probably easiest to identify in pharmaceutical markets where such competitors are typically companies working towards a drug targeting a certain disease, and potentially offering a special mode of action or delivery. Due to the lengthy regulatory process of testing and approving the developed drug, these drugs in the making, called sometimes "pipeline drugs," are easily identifiable well before reaching the marketing stage and their suppliers can be identified as potential competitors.[26] For instance, the European Commission resorted into analyzing the pipelines of the merging parties and their closest competitors in its clearance of the recent *BMS/Celgene and Abbvie/Allergan* mergers.[27]

It is slightly more complicated to identify potential competing drugs that come to life not as a result of a genuine innovation process but from the repurposing of an existing drug used to treat a different disease, but that is found to be effective to treat a totally different illness.[28]

The identification of potential competitors is less straightforward in digital markets where (i) start-ups offering new technologies and services spring up almost on a daily basis, (ii) innovation processes are less regulated and (iii) uncertainty regarding future demand is high. This offers a wider scope for the identification of potential competitors than in traditional non-digital industries. For example, potential competition may come not only in the form of agile tech start-ups but possibly also in the form of large players entering from adjacent markets where they have a large user base, through a process called envelopment.[29] This, however, should not mean that every large digital platform with a base in any digital market should be viewed as a real potential competitor because envelopment only works under some circumstances.[30] In fact, while envelopment may work in some cases, it is not yet clear whether it should generally be considered as a relevant source of potential competition.[31]

The above discussion of considerations related to potential competition in pharmaceutical and digital markets suggests that potential competition warrants increased attention in industries where innovation plays an important role in the development and evolution of the market.[32]

However, innovation-intense industries are not the only ones where potential competition is a relevant issue. By looking at U.S. mergers investigated by the FTC between 1995 and 2020 where the FTC challenged the transaction on the grounds of likely reduction of future competition, Oldale et al. (2020) identified potential competition issues in a few mergers in traditional industries such as energy, book sales and consumer shaving products.[33] Furthermore, the OECD (2021) note on potential competition also draws attention to bidding markets, where some companies who have not previously participated in tenders might be expected to do so in the near future.[34]

Finally, potential competition could be identified as being at risk, regardless of the industry, in acquisitions where a dominant acquirer is

24 This makes the identification of the counterfactual market evolution particularly hard.

25 In particular, innovation activities by such firms are, by definition, uncertain and the outcomes are unpredictable.

26 The comprehensive and transparent register of clinical trials in the US (www.clinicaltrials.gov) and in Europe (www.clinicaltrialsregister.eu) provide great help in this regard.

27 For *Abbvie/Allergan* see footnote 9. For *BMS/Celgene* see European Commission (2019), *M.9294 BMS/Celgene*, https://ec.europa.eu/competition/mergers/cases/decisions/m9294_657_3.pdf.

28 Such medicines are called repurposed drugs and they may face a faster regulatory approval track. Note that even such drugs would be registered on the relevant clinical trial websites, but perhaps with a shorter duration.

29 Explain. See Eisenmann, Thomas, Geoffrey Parker & Marshall Van Alstyne (2011), *Platform Envelopment*, , STRATEGIC MANAGEMENT JOURNAL, 32(12): 1270–85.

30 The economic research on envelopment is far from being complete, but we do not see all the big platforms entering freely any chosen market. For example, Google's entry into the social media market by launching Google+ proved to be unsuccessful.

31 It may, however, be considered in certain cases.

32 This remains true even if we acknowledge the fairly different innovation landscape in the two industries.

33 Still, in their sample of 85 identified cases, 48 cases are from the pharmaceutical industry, 15 from the medical devices, equipment and tests industry and 3 from the technology and software industry. See Table 1 in Oldale et al. (2020), *supra* note 17.

34 See OECD (2021), *supra* note 2.

thought to "overpay" for the target, i.e. pay for it more than what the standard valuation tools would indicate for the value of the target company.[35] This is in line with the filtering criteria suggested by Latham *et al*. (2020) that include (i) the purchaser being in a position of significant market power, (ii) the identification of a plausible economic mechanism through which the target could evolve into a threat to the acquirer and (iii) the transaction value containing a significant valuation premium.[36] By taking into account that a smaller company is more likely to experience a high growth than a bigger company, Kühn (2021) further complements this last criterion with the observation that a high deal-value-to-target-revenue ratio is more likely to signal the elimination of a potential competitor when the target's actual revenue is high too, suggesting that the focus of merger control should shift towards the acquisition of larger companies instead of start-ups with small revenues and just a few employees.[37]

V. ASSESSMENT OF COMPETITIVE PRESSURE

As the weakening and elimination of potential competition is most harmful in cases of an incumbent with a strong market position, one needs to pay special attention to the assessment of barriers to entry and expansion, as well as of the likelihood and timeliness of potential competitors to develop into a relevant competitive force in the market.[38] All of these elements need to be assessed in relation to plausible counterfactual scenarios.

The assessment of barriers to entry involves the standard assessment of supply- and demand-side economies of scale, the role of R&D, reputation, and regulation. One needs, however, to also take into account that there might be a variation in the barriers to entry faced by individual potential competitors. This is important especially for mergers, where the acquisition targets one specific potential competitor. If the entry barriers for the target company would be low in a counterfactual with no merger, the elimination of a potential competitor through a merger becomes a real competition concern.

For example, while regulatory requirements would be the same for any player wishing to enter the market, some of them might be at a more advanced stage in complying with the existing regulation. For instance, a pharmaceutical company working on a drug to cure a certain disease may be at a more advanced stage of clinical trials than other pharmaceutical companies working towards the same goal.[39]

Demand-side economies of scope could also be important in some cases, especially when envelopment may be a possible way to enter the incumbent's market. In such cases, firms outside the market may face different barriers to entry, linked to demand-side economies of scale, in a counterfactual with no merger or infringement.

As a next step, the likelihood and time frame of the potential competitor to develop into an effective competitive force in a scenario of no merger or no infringement of competition law needs to be assessed. In pharma markets, this could be used by assessing the progress in the regulatory approval process of the identified potential competitor. In other markets, a review of the innovation process and its future prospects may be helpful.

A special characteristic of the theories of harm linked to the weakening or elimination of a potential competitor is that relevant quantitative evidence is scarce. This is less of a problem in the pharma industry where it is possible to accurately document how the drug development process of a potential entrant progresses due to the detailed regulatory approval process. No such standardized source of evidence is available for digital markets or, more broadly, in other less regulated industries.

Under these conditions, the weight assigned to internal documents of the incumbent with a strong market position increases. In merger control, if that is the case, a careful investigation is required for why the acquirer is willing to pay a premium above the market valuation of the target.

35 This is a reason for why some competition enforcers, such as the German Bundeskartellamt, have both revenue and transaction value-based merger notification thresholds to trigger investigation of low revenue high value investigations.

36 See Latham, Oliver, Isabel Tecu & Nikita Bagaria (2020), *Beyond killer acquisitions: Are there more common potential competition issues in tech deals and how can these be assessed?*, CPI ANTITRUST CHRONICLE, 2(2), 26-37

37 See Kühn, Kai-Uwe (2021), *Screening for potential "killer acquisitions" across industries*, University of East Anglia, Centre for Competition Policy, Perspectives on Competition and Regulation Working Paper 21-03.

38 Remember, price and structural analysis cannot be used in such cases.

39 This example also shows differences in the progress with R&D for various companies.

Another focal question is why the competition has not yet entered the market in cases where the product or service has already successfully entered other comparable (geographic) markets.

Finally, one could consider running a customer survey to a learn the view of the market about the entry probability of the potential competitor under investigation.

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