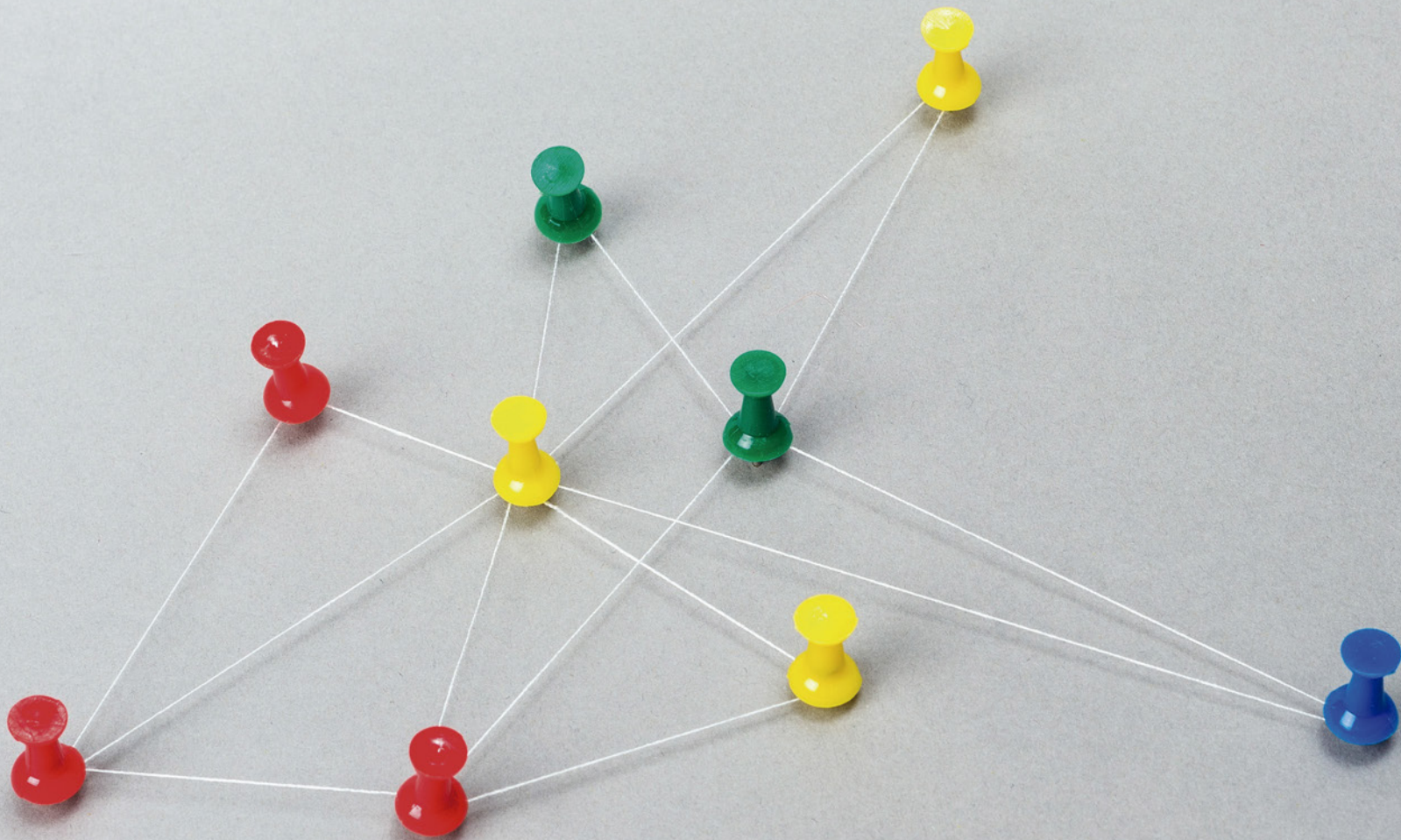


ATTENTION OLIGOPOLY: COMMENTS ON THE PAPER BY PRAT & VALLETTI



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I. INTRODUCTION

In a context of unprecedented public attention on competition in the digital sector, competition policy, law, and enforcement are all being challenged from two sides. Some commentators and academics believe that current competition policy is not fit for purpose to address the concerns arising in these sectors.² Others are of the opinion that the digital sector is very competitive, and that disproportionate competition enforcement in the industry will discourage innovation and, ultimately, harm consumers.³ The technical debate capturing the attention of competition experts and authorities is gaining both political and social momentum.⁴

Competition authorities have developed a strong interest in mergers in online platform markets, and some senior officials have expressed concerns around underenforcement in past merger cases in the sector. This concern has grown most directly around social media platforms, and specifically Facebook's acquisitions of Instagram in 2012 and WhatsApp in 2014. For example, Andrea Coscelli, Chief Executive of the UK's Competition and Markets Authority, has recently claimed that competition authorities failed to anticipate the growth of Instagram when assessing the impact of its merger with Facebook.⁵ Similarly, Tommaso Valletti, Chief Economist of the European Commission's Directorate-General for Competition, has publicly questioned (speaking in a personal capacity) whether the decision to clear these acquisitions unconditionally was correct.^{6,7}

Together with Andrea Prat of Columbia University, Professor Valletti has published a working paper⁸ analyzing the welfare effects of mergers between "attention platforms" (such as social media platforms). The theoretical analysis in the paper is then applied to recent social media platform mergers. Prat & Valletti ("P&V") conclude that, based on the approach set

2 See, for example, M. Warner, "Potential Policy Proposals for Regulation of Social Media and Technology Firms," July 30, 2018, available at <https://graphics.axios.com/pdf/PlatformPolicyPaper.pdf>.

3 See, for example, J. D. Wright, E. Dorsey, J. Rybnicek & J. Klick, "Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust," George Mason Law & Economics Research Paper No. 18-29; Arizona State Law Journal, September 14, 2018, available at <http://dx.doi.org/10.2139/ssrn.3249524>.

4 See for instance the UK's Furman Review on digital markets (<https://www.gov.uk/government/publications/digital-competition-expert-panel-terms-of-reference/digital-competition-expert-panel-terms-of-reference>), and the DG Competition conference "Shaping competition policy in the era of digitisation," January 17, 2019 (<http://ec.europa.eu/competition/scp19/>).

5 A. Coscelli, "Regulation and competition enforcement – a combined approach," Keynote speech to the annual Fordham Competition Law Institute conference, September 7, 2018, available at <https://www.gov.uk/government/speeches/fordham-competition-law-institute-annual-conference-2018-keynote-speech>.

6 <https://twitter.com/tomvalletti/status/1022411303053393920?lang=en-gb>.

7 A. Prat & T. Valletti, "Merger policy in the age of Facebook," VOX CEPR Policy Portal. July 26, 2018, available at <https://voxeu.org/article/merger-policy-age-facebook>.

8 A. Prat & T. Valletti, "Attention Oligopoly," working paper, June 19, 2018, available at <http://dx.doi.org/10.2139/ssrn.3197930>.

out in the paper, acquisitions such as *Facebook/Instagram* have led to a reduction in consumer welfare.

This article comments on the P&V paper and its application to merger policy in online platforms. Section II summarizes the main economic mechanism explored in the paper. Section III focuses on some limitations and implications of the model. In particular, we question whether characterizing attention platforms as restricting access to advertising to preserve upstream product monopolies captures reality. Casual empiricism – for instance, a Google search – suggests that attention platforms instead seek to sell access to their customers to as many upstream providers as possible. Moreover, the focus of the empirical part of the paper on social media platforms alone is surprising. If the mechanism that drives platform market power is about being the only way that an advertiser can reach a particular consumer, it would not be sensible to restrict the focus of the analysis just to social media platforms. One would need to look instead at all routes by which an advertiser can reach a particular customer — both online and offline. Section IV concludes.

II. PRAT AND VALLETTI'S ATTENTION OLIGOPOLY MODEL

In June 2018, P&V published a working paper titled “Attention Oligopoly.” This paper analyzed the situation of online platforms that are an important route to market to access certain consumers. The paper looks at how platforms compete to sell advertising to suppliers wishing to reach those consumers; the paper then draws implications for how competition authorities should analyze mergers between online platforms.

A. Key Economic Mechanism

To understand the latter results, it is worth setting out the key mechanism of the P&V model.

- In the upstream suppliers' market, there is an incumbent producer, who is well known to consumers and makes monopoly profits.
- There are also a number of potential upstream entrants who are not known to consumers, and make zero profit prior to entry.
- Entrant suppliers can become known to consumers only by purchasing adverts from online platforms (so for the purposes of this model, online platforms are the only route for advertisers to reach customers).
- Consumers will only purchase a product if they are aware of the supplier.
- If an entrant supplier successfully purchases an advert from the online platform, the supplier market becomes a duopoly, and both the entrant and the incumbent make duopoly profits.

This set-up models a situation in which online platforms hold consumer attention, and so are a key route to market for suppliers wishing to reach those consumers. Online platforms can use their important role as a conduit for attention to charge suppliers for access to consumers through advertising.⁷

P&V then analyze the incentives for platforms to sell adverts to entrants or incumbents. Platforms are assumed to auction advertising space to both incumbents and entrants using a second price auction.⁹ Platforms are able to target adverts to individual consumers, and so an individual auction takes place for each consumer. Only one advert is assumed to be available for each consumer on any platform.

P&V show that under these assumptions, the entrant is prepared to pay up to its share of total duopoly profits for the advertising space, in order to become known by consumers and consequently enter the market. However, the incumbent has an incentive to outbid the entrant. This is because the profits from monopoly are greater than twice duopoly profits.¹⁰ The incumbent can outbid the entrant and pay the entrant's duopoly profits to the platform in order to win the auction for advertising space. This preserves the incumbent's monopoly and keeps consumers unaware of the entrant's products.

⁹ In a second price auction, the highest bidder wins but pays the price of the second-highest bid.

¹⁰ Strictly speaking, P&V identify that a necessary condition for the incumbent to outbid the entrant is that monopoly profits are greater than twice duopoly profits. However, it is a common result in economics that this is the case: essentially, any competition in a market reduces the total profitability of that market compared to the monopoly situation.

P&V then demonstrate that this result is weakened where there are multiple platforms. In this situation, it becomes more expensive for the incumbent to keep out entrants, as the incumbent needs to pay a part of its monopoly profits to each platform to keep the entrant out across the board. With enough platforms, eventually the incumbent will not have any incentive to keep the entrant out, even in an environment where monopoly profits are substantially larger than duopoly profits. In this situation, the incumbent does not bid for advertising space, upstream entry occurs, and the platform is not able to extract any of the incumbent's monopoly profits.

Seen like this, online platforms can be thought of as a competitive bottleneck. Platforms control access to customers, and can threaten upstream incumbent suppliers with greater competition in their market if they don't pay up to keep the entrant out. The existence of multiple platforms makes it more difficult for any individual platform to operate as a bottleneck in this way: entrants can "divide and conquer" amongst platforms to make it more difficult for incumbents to outbid them on each platform.

B. Application of the Model to Merger Policy

P&V apply the results of this model to merger policy. They conclude that attention platform mergers could lead to reduced consumer welfare if there is overlap in the consumer base between platforms. This is because following a merger, the number of potential routes for entrants to access overlapping consumers is reduced. For instance, an individual consumer could have previously used both Platform A and Platform B, and entrants could have tried to access that consumer through either route. Following a merger between A and B, the only route to that consumer for an entrant is through the merged entity, and so it is easier for the incumbent to outbid the entrant.

This process increases platform profits, as incumbents will be more willing to pay part of their monopoly profit to the platform in order to preserve their monopoly. It also reduces consumer welfare, as it makes it more likely that these consumers will face upstream monopolies.

P&V argue that their model demonstrates that the key issue in assessing platform mergers is the overlap between the customer bases that they serve, and demonstrate that under some specific technical assumptions the post-merger price increase from the platform will be a function of this overlap. P&V then apply this logic to historic social media platform mergers, using data on the level of consumer overlap between those platforms, and argue that mergers such as *Facebook/Instagram* led to a reduction in consumer welfare.

III. COMMENTARY

The P&V paper is an interesting contribution to an important current debate. However, in our view, there are two aspects of the P&V paper which limit its applicability to merger policy.

A. Whether the Mechanism Describes Reality

The picture painted by the P&V paper is that platforms are essentially in a symbiotic relationship with upstream incumbent monopoly suppliers. Platforms extract a proportion of the profit made by those suppliers by threatening to allow entrants to advertise on their platforms, and so generate competition for the monopoly incumbents. An important question for whether the paper's predictions for merger policy are valid is whether the economic behavior explored appears to capture how attention platforms operate in practice. This does not seem to be the case, for at least two reasons.

First, the P&V approach describes the situation of an incumbent monopolist in the upstream product market who makes monopoly profits (and so has an incentive to keep consumers unaware of the entrant's products). However, it is hard to imagine many real-world situations, particularly in consumer-facing products, in which this is a realistic assumption. Where there are multiple upstream incumbents, the profit-extraction mechanism P&V outline is substantially weakened.

- Competition between multiple upstream incumbents will lead to considerably lower upstream profits. Depending on how competitive the upstream market is, there will be a lesser incentive — and perhaps no incentive — for any individual incumbent to try to foreclose an entrant through outbidding it for advertising space.

- There is also a free-rider effect. Any incumbent outbidding an entrant would raise profits for all incumbents, but gain only a share of those profits while incurring all the costs. This positive externality means that multiple incumbents will engage in less foreclosing activity than for a simple monopolist, as each firm would prefer another firm to incur the costs of outbidding the entrant. P&V do recognize this free-rider problem: “*The model can also be extended beyond the assumption that there is one incumbent and one entrant. Presumably, the incumbents’ incentives to keep out entrants weaken with the number of incumbents.*”¹¹

Second, the P&V model is based on the assumption that each platform can sell only one advert per consumer. It seems reasonable that there is a practical limit to the amount of advertising content that can be shown to a consumer on any platform within any particular block of attention.¹² However, it is clearly possible in practice for platforms to sell multiple adverts targeting the same consumer, and this suggests that it would in practice be challenging for an incumbent monopolist — even if one existed — to foreclose an entrant, by outbidding it in every auction for every advert on every attention platform.

As a result, the opportunity to sell multiple adverts substantially (and perhaps fully) undermines the mechanism in the paper as well as the empirical relevance of its conclusions.¹³

These reasons might perhaps explain why the situation explored by P&V — where platforms restrict the amount of advertising they offer to preserve upstream monopoly providers — does not seem to hold in practice. For instance, this does not seem to be the strategy employed by Google, Facebook, or Amazon (to think of only three of the largest attention platforms). In contrast, as any Google search would reveal, these platforms seem to try to sell advertising to as many suppliers as possible.

B. Defining Attention Markets

The theoretical part of the P&V paper looks at attention platforms generically. However, the empirical section and conclusions focus solely on social media platforms. This does not seem naturally to follow.

The mechanism in the paper does not suggest one should restrict attention to social media platforms alone — quite the reverse. Following the logic of P&V, an attention platform will be able to charge higher prices for access to a set of consumers if:

- those consumers use both platforms; *and*
- those consumers do not use any other platforms.

P&V focus on only the first of these conditions. But if consumers receive information about products across a wide variety of online and offline media (e.g. TV, radio, press, outdoor, online search, online display, etc.), then suppliers will be able to access consumers through a variety of different routes, and the ability of social media platforms to act as a competitive bottleneck and allow incumbent suppliers to outbid entrants is substantially weakened. The P&V paper, in fact, likely points to widening advertising markets — perhaps to a broader “attention” market — to take account of all the ways in which consumers give their attention, and so by which suppliers can reach consumers.

An important implication of the paper for merger policy — following this line of logic — would be to look at how the customers of the merging firms behave, outside their behavior on the merging firms’ platforms. If there is overlap between the customer bases of the merging firms, but these overlap customers also give attention to many other platforms, then the potential for any anti-competitive outcomes is substantially reduced. One would also want to consider whether there was any reason why the suppliers would not be able to use these alternative routes to reach their target customer base, for instance, whether there is something qualitatively different about advertising through one platform rather than another that cannot be captured through price adjustments. Given that all advertising is essentially about making additional sales, and from an advertiser’s perspective there will not necessarily be any reason to distinguish one additional sale from another, there may be limited scope for differentiation between platforms from an advertiser perspective.

¹¹ A. Prat & T. Valletti, “Attention Oligopoly,” working paper, June 19, 2018, p. 7, available at <http://dx.doi.org/10.2139/ssrn.3197930>.

¹² An exception might be print media, which can expand their products alongside advertising demand by printing more pages.

¹³ Word of mouth would also undermine any attempt to foreclose. If a customer that has seen an entrant’s advert tells another customer about it, it would be impossible.

IV. CONCLUSION

The P&V paper is a timely contribution to an important debate. It explores an interesting mechanism whereby attention platforms might try to exploit market power by threatening to provide a route to market for entrants and extracting surplus from upstream monopolies. This approach leads to the conclusion that merger authorities should concentrate on exploring overlaps in the customer bases of the merging firms.

By itself, this conclusion seems sensible. However, as set out above, the logic of the paper goes further. Competition authorities should also explore how the customers of the merging parties (particularly the overlapping customers) use other attention platforms, both online and offline. Such an approach would provide a proper understanding of whether the merging parties are the only important route to market for certain customers, or whether there are alternative routes by which advertisers can reach those customers.



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