COMPLEX ANTITRUST HARM IN PLATFORM MARKETS

BY JOHN M. NEWMAN[1]

Two years ago, we accelerated the consolidation of the online real estate media category by acquiring our closest competitor, trulia….

—Spencer Rascoff, CEO, Zillow Group[2]

I. INTRODUCTION

Markets evolve. Constant innovation is both a fact of life and a do-or-die mandate for modern firms. And antitrust law — with its own mandate of safeguarding competition — tries to keep up. At the turn of the millennium, the antitrust enterprise underwent an intense bout of soul-searching, prompted in large part by the high-profile *Microsoft* litigation. Was antitrust doctrine — much of it developed in a bygone era of smokestack industries — appropriately designed for use in software markets?[3] Writing in 2000, Richard Posner provided what has become the consensus answer: "antitrust doctrine is supple enough . . . to take in stride the competitive issues presented by the new economy."[4]

More than a decade later, antitrust doctrine finds itself again confronting a "new economy." Computers fit into pockets and can be worn as eyeglasses. Software applications — and, indeed, computing itself — are increasingly delivered as a service, rather than installed as a product.[5] The concerns about desktop-computer operating systems that motivated *Microsoft* appear ever more quaint in the Twenty-first Century. Is antitrust doctrine "supple enough" to address manipulation of search results?[6] Algorithm-based collusion?[7] Markets involving "free" digital products?[8]

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2 Zillow Group, Q4 Prepared Remarks (Feb. 7, 2017), available at: http://investors.zillowgroup.com/financials.cfm#results.

3 E.g. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

4 Richard A. Posner, *Antitrust in the New Economy*, 68 Antitrust L.J. 925 (2000).

5 Damon C. Andrews & John M. Newman, *Personal Jurisdiction and Choice of Law in the Cloud*, 73 Md. L. Rev. 313, 325 (2013).

6 See, e.g. James D. Ratliff & Daniel L. Rubinfeld, *Is There a Market for Organic Search Engine Results and Can Their Manipulation Give Rise to Antitrust Liability?*, 10 J. Comp. L. & Econ. 517 (2014).

7 Salil K. Mehra, *Antitrust and the Robo-Seller: Competition in the Time of Algorithms*, 100 Minn. L. Rev. 1323 (2016); Maurice E. Stucke & Ariel Ezrachi, *Artificial Intelligence and Collusion: When Computers Inhibit Competition* (Univ. of Tenn. College of Law, Research Paper #267).

8 See, e.g. John M. Newman, *Antitrust in Zero-Price Markets: Foundations*, 164 U. Pa. L. Rev. 149 (2015); Salil Mehra, *Competition Law for a Post-Scarcity*

As markets become more complex, competitive harm can also become more complex. Of course, not every market evolution facilitates new types of harm. The advent of pricing algorithms, for example, paved the way for a novel *means* of horizontal collusion. Advances in artificial intelligence may further increase the likelihood of such collusion.[9] But the resulting anticompetitive *effects* — higher prices and lower output — have long been familiar to antitrust.

Some evolutions do, however, create less familiar avenues for harm. In many markets, the number of sellers and variety of consumer products have reached dizzying heights. Accordingly, *reputation* has become a primary facet of competition. In an age of information abundance and overload, reputation offers a necessary means for consumers to distinguish signals from noise. Platforms that compile, curate and display reputational information have emerged as focal points in the "new" new economy.

Platform markets exhibiting substantial algorithm-driven reputation competition can facilitate a unique type of competitive harm. This article briefly summarizes the marketplace evolutions that have fiercely intensified such competition. It then describes this novel second-order, out-of-market competitive harm that can arise as a result of certain conduct in such markets. The consummated acquisition of online real-estate listing service Trulia by Zillow, its primary rival, illustrates how such harm might occur in practice. Post-deal statements from the combined firm's executives suggest the Zillow–Trulia acquisition may have harmed — indeed, may be harming — consumers. The FTC's antitrust review, which cleared the acquisition without condition, may have missed the mark. If Posner's observation is to continue to hold true, antitrust doctrine must evolve to meet the new challenges posed by such conduct.

II. REPUTATION AND POWER

The major innovations that characterize the early Twenty-first Century center on information: its production, organization, dissemination and consumption. The result has been a stark increase in the quantity and variety of information that is available. One might reasonably have expected these developments to cure the informational problems that often create suboptimal outcomes.[10] Indeed, many predicted as much.[11] Yet in some ways, the opposite happened. Information abundance became information overload. Information-centric competition proved to be less-than-perfect. From this tumult, reputation emerged as a powerful filtering tool. As such, it can be used as a shield by consumers — but also wielded as a sword by powerful platforms.

A. Information Abundance

The convergence of digital computing and networking was perhaps the single most important event in the evolution of IT. By drastically lowering the marginal costs of information reproduction and distribution, the Internet serves as a "giant copying machine." Throughout much of history, information was scarce, a precious and carefully guarded resource. Today, information is relatively abundant. It is often offered at costs so low that many analysts and courts have, albeit mistakenly,[12] called it "free."

But the rising tide of information has quickly become a flood. Given their scarce time and cognitive load, consumers do not always react to abundant information as a neoclassical model might predict. More information creates more choices, but — counterintuitively — the availability of more choices does not always produce better outcomes. For example, advances in IT made it (theoretically) possible for a prospective home-buyer to access information about every available real-estate listing, past sales price and tax information for each property listed, every real-estate agent currently offering services, etc. Actually attempting to make choices based on all of this information, however, would be like trying to drink from a fire hose.

Antitrust doctrine generally treats "consumer choice" as a positive. Courts have recognized "greater consumer choice" as a valid procompetitive justification.[13] Yet the antitrust enterprise has not fully grappled with the "paradox of choice": a larger assortment of choic-

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World (Temple Univ. Legal Studies, Research Paper No. 2016-13).

9 See, e.g. Maurice E. Stucke & Ariel Ezrachi, *How Pricing Bots Could Form Cartels and Make Things More Expensive*, Harv. Bus. Rev. (Oct. 27, 2017), https://hbr.org/2016/10/how-pricing-bots-could-form-cartels-and-make-things-more-expensive.

10 Mark R. Patterson, Antitrust Law in the New Economy: Google, Yelp, LIBOR, and the Control of Information 1 (2017).

11 See John M. Newman, *The Myth of Free*, 87 Geo. Wash. L. Rev. (forthcoming 2017) (manuscript at 24).

12 Id. (manuscript at 1–2).

13 See, e.g. *NCAA v. Bd. of Regents of Oklahoma*, 468 U.S. 85 (1984) ("[The NCAA's] actions widen consumer choice . . . and hence can be viewed as procompetitive."); *Wisconsin Music Network, Inc. v. Muzak Ltd. Partnership*, 5 F.3d 218, 223 (7th Cir. 1993) (crediting a type of blanket-licensing

es can cause consumers to make less optimal decisions.[14] Additional information regarding choices "can confuse consumers, increasing the probability of delaying their choice or not choosing at all."[15]

The downsides of information abundance — which can be experienced instead as information overload — prompted the rise of services that compile and refine information into a more useful "finished" product. In the past, collection and production were often the most valuable roles played by information providers. In an age of information abundance, it is the curation and refining — or, put another way, the "filtering" — of information that have become most valuable. Information providers have taken on more of a gatekeeper role in modern markets.[16]

B. Information Competition

Many prominent new products constitute information itself. Providers of online search do not provide information in order to sell products — search itself is the product.[17] One particularly prevalent business model that emerged was the platform: an online application that would connect sellers and buyers via a matching system. Such platforms do not sell the product buyers ultimately seek; instead, the platform's content itself is a product, the demand for which is derived from demand for the related product users ultimately seek.

Uber, for example, does not sell "private driver services." Uber "sells" its mobile application, which displays information to drivers and riders seeking to connect with each other. Zillow Group does not sell homes, or even real-estate agent services — it "sells" its search platform to users, and its users' attention to advertisers. Even Amazon, which initially adopted a more familiar top-down distribution system, subsequently launched "Marketplace," which functions as an intermediary platform that provides information to facilitate transactions between consumers and third-party sellers.

Upon first glance, such platforms may appear likely to drastically increase the number of sellers in the immediately related product market. Uber (and its primary rival, Lyft), for example, drastically increased the number of competing providers of private-driver services. All else being equal, then, such platforms might seem to mitigate, rather than facilitate, the exercise of market power.

Yet that is not always the case. As others have argued, the economics of information may favor large incumbents. Fixed costs that are high relative to marginal costs,[18] network effects[19] and path dependency all, to varying degrees, may cause information-centric markets themselves to tend toward concentration rather than competition. In other words, while Uber may allow more drivers to compete to provide private-driver services, that possibility alone would not prevent Uber itself from exercising market power in the taxi-platform market. Moreover, as this article suggests, neither would that possibility necessarily prevent the build-up of market power in the underlying market for private-driver services.

C. The Power of Reputation

Reputation has emerged as one of the most vital facets of competition in many modern markets.[20] Uber, Yelp, Google Maps, Amazon — all of these platforms either incorporate or (in the case of Yelp) essentially comprise a reputational mechanism. Buyers faced with myriad

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arrangement for reducing transaction costs, thereby "increas[ing] consumer choice"). Some scholars have argued that "consumer choice" should become the new antitrust paradigm. See Neil W. Averitt & Robert H. Lande, *Using the "Consumer Choice" Approach to Antitrust Law*, 74 Antitrust L.J. 175 (2007).

14 E.g. Alexander Chernov, *When More Is Less and Less Is More: The Role of Ideal Point Availability and Assortment in Consumer Choice*, 30 J. Consumer Res. 170 (2003).

15 Id.

16 Patterson, supra note 10, at 37.

17 Id. at 35. This is, of course, not universally true. A "general search" provider might conceivably provide search results that feature prominently its own vertically integrated products in order to "sell" those products to users.

18 Id. at 42–43.

19 Cedric Argenton & Jens Prüfer, *Search Engine Competition with Network Externalities*, 8 J. Comp. L. & Econ. 73 (2012).

20 Rachel Botsman, TED Talk: The Currency of the New Economy Is Trust (June 2012), available at: https://www.ted.com/talks/rachel_botsman_the_currency_of_the_new_economy_is_trust.

sellers avoid "drinking from a fire hose" at least in part by focusing on reputation. One prevalent mechanism is a star system that allows customers to rate suppliers by assigning a number (usually between one and five) of stars. Many platforms appear to assign substantial competitive significance to their reputational mechanisms. Both Uber and Lyft have been known to "de-activate" drivers whose rating drops below a set cutoff point.[21]

Reputational mechanisms are so vital to these platforms because of their filtering function. A consumer seeking to purchase common home goods from Amazon's Marketplace, for example, might confront dozens, hundreds, or even thousands of similar sellers offering similar products. Amazon's star system offers a way to cut through this thicket.

These mechanisms function via underlying algorithms. Amazon's product-search results appear to be ordered, at least in part, by seller reputation. Amazon also offers consumers the capability of explicitly filtering out products from sellers whose star ratings are not satisfactory. Many other platforms offer similar algorithmically delivered search results and filtering capabilities. Reputational mechanisms are one way modern platforms refine information into valuable finished products.

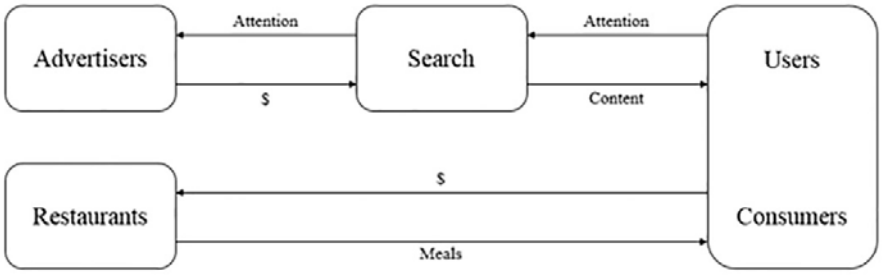
D. Complex Harm: Theory

The antitrust enterprise may be overlooking complex harm in platform markets wherein reputation plays a vital competitive role. As an initial matter, antitrust analysts have only recently started grappling in earnest with the unique attributes of multi-sided platforms. Adding further complexity, in online markets, many products are seemingly offered to consumers for "free." This phenomenon has misled courts and enforcers into giving suppliers of "free" products a "free pass" from antitrust liability. Beyond all of this, as the recent Zillow–Trulia acquisition suggests, the rise of reputation-driven platform markets may open up a novel avenue for competitive harm.

Many online platforms bring together advertisers and consumers, with the latter often being lured in by the offer of a discretely valuable product.[22] *BuzzFeed*, for example, attracts reader–consumers with its content; it also sells its readers' attention to advertisers. While antitrust doctrine certainly has considerable room to develop in this area, it is at least relatively comfortable with these online platforms. The types of harm that might be imposed by a dominant platform are fairly straightforward: the platform might increase prices to advertisers, increase attention costs to readers, etc.[23]

Other platforms are more complex. For example, general-search platforms play a similar role as to advertisers and users — but general search also functions to bring together sellers and buyers of real-world products. A user might search for "local restaurants" in order to facilitate a distinct, real-world transaction: the purchase of a meal. Figure 1 depicts this additional relationship.

Fig. 1



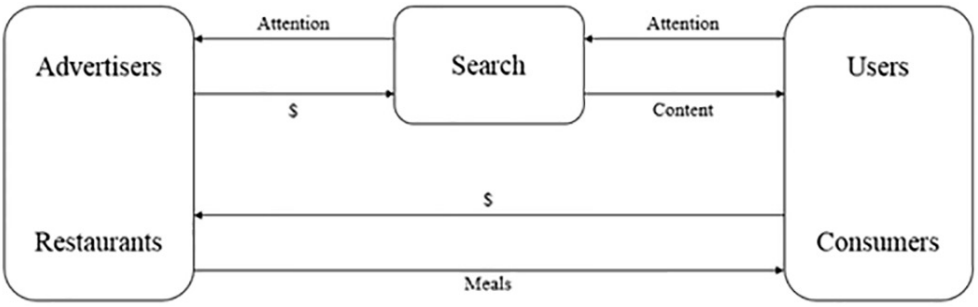
The novel risk of competitive harm arises when the real-world transactional counterparty to consumers also becomes a counterparty to the relevant platform. Using the above example, this could occur where restaurants become advertisers on the search platform. Figure 2 depicts this dualistic role.

21 Tom Slee, What's Yours Is Mine: Against the Sharing Economy 98 (2015).

22 See generally, e.g. PATTERSON, supra note 10, at 45 ("[P]roviders like television networks and Internet search engines operate in markets with two sets of customers, the viewers or users whom they attract by providing information for free and the advertisers that pay to reach those viewers and users.").

23 John M. Newman, *Antitrust in Zero-Price Markets: Applications*, 94 Wash. U. L. Rev. 49, 67 (2016).

Fig. 2



In the presence of information overload, users often look to platforms to serve as filters. Here, reputation (via algorithmically ordered ranking) often plays a central role. The danger is that a platform may have the power to tilt the real-world playing field in favor of its own favored counterparties. Where this is so, a platform could be incentivized to alter its reputational system in order to deliver consumers to its favored partners. The ultimate effect is foreclosure of non-favored sellers from the real-world market. The resulting rents from the real-world market would allow the favored partners to compensate the platform for its exclusion of the non-favored sellers.

III. CASE STUDY: *ZILLOW–TRULIA*

On July 28, 2014, Zillow and Trulia announced plans to combine into Zillow Group ("ZG"). At the time, the two firms were the largest and second-largest online real-estate portals, respectively. After an intensive six-month review that included a second request for additional productions, the FTC unanimously voted to clear the deal without condition. The FTC concluded that the "balance of the evidence" did not support defining the relevant market as "real estate portals," and that the evidence was "inconclusive" as to whether the deal would harm competition.[24]

During an agency investigation, enforcers have access to documents, data and witness statements not available to the general public. Thus, while this article uses the *Zillow–Trulia* acquisition as a case study of how complex harm *might* arise in certain markets, the case study is illustrative only. In other words, this article does not set out to demonstrate that the deal actually harmed competition, only that it may have. To do so, it draws on publicly available statements made by ZG executives after the deal was consummated.

A. Market Power

Whether the relevant market was "online real-estate portals" as to advertisers or users (or both), Zillow and Trulia likely had market shares large enough to warrant a presumption that the combined firm would possess market power. The FTC investigation "uncovered some qualitative evidence consistent with" that definition, "including . . . documentary evidence demonstrat[ing] that the parties closely tracked one another in terms of consumer traffic, site features, and pricing."[25]

Post-acquisition statements by ZG are also consistent with that definition. During an earnings call in 2016, for example, ZG's Chief Executive Officer, Spencer Rascoff, observed that "Zillow Group represented greater than 67 percent of the total online real estate category in June and 78 percent of the category on mobile only."[26] Those market shares would likely be enough to warrant a presumption, under U.S. antitrust law, that ZG possesses monopoly power.[27] The likely presence of network effects, which can be treated as a barrier to entry,[28] would buttress that conclusion.

24 Statement of Comm'r Ohlhausen, Comm'r Wright, and Comm'r McSweeney Concerning Zillow, Inc./Trulia, Inc., at 1 (Feb. 19, 2015), https://www.ftc.gov/system/files/documents/public_statements/625671/150219zillowmko-jdw-tmstmt.pdf.

25 Id. at 1.

26 Zillow Group, Q2 Prepared Remarks (Aug. 4, 2016), available at: http://investors.zillowgroup.com/financials.cfm#results; *see also* Rory Van Loo, *Rise of the Digital Regulator*, 66 Duke L.J. 1267, 1293–94 (2017).

27 Cf., e.g. *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181 (3d Cir. 2005) ("Dentsply has long dominated the industry . . . and enjoys a 75–80% market share on a revenue basis, [and] 67% on a unit basis . . . .").

28 C.f., e.g. *United States v. Microsoft Corp.*, 253 F.3d 34, 55 (D.C. Cir. 2001) (referring to a "'chicken-and-egg' situation" *vis-à-vis* software developers and consumers).

B. Anticompetitive Effects

Mergers between rivals who compete in reputation-centric platform markets can cause a variety of competitive effects, some beneficial and others harmful. The latter may be either "simple" (i.e. relatively familiar) or "complex." The *Zillow–Trulia* acquisition may have caused simple harm; it may also have caused — indeed, may still be causing — complex harm.

1. Simple Harm

Mergers like *Zillow–Trulia* create the possibility of relatively familiar anticompetitive harms. First, the reduction of head-to-head competition could allow the merged firm to raise prices to advertisers. Second, the merged firm could face lowered incentives to compete for users. The FTC's investigation considered both of these possibilities. As to harm to advertisers (specifically, real-estate agents), the FTC found the evidence of harm was "inconclusive."[29] As to users, the FTC found that ZG would "continue to have strong incentives" to innovate.[30]

But post-acquisition statements by ZG executives anecdotally suggest that the deal may in fact have lessened head-to-head competition. During a 2015 Earnings Call, for example, ZG's CEO observed that the Trulia acquisition "consolidate[ed] and rationaliz[ed] the category."[31] In a complaint challenging another recent merger — this one between US Airways and American Airlines — the U.S. Department of Justice quoted nearly identical language as evidence of likely harmful effects.[32] More directly, ZG's CEO stated that, after the acquisition, ZG "sunsetted promotional discount pricing on Trulia, which has resulted in lower advertiser net adds."[33] This statement could reasonably be interpreted as describing a price increase and corresponding output reduction in the market for online real-estate portals to advertisers.

These harmful effects, if they in fact occurred, are relatively familiar to antitrust analysts. The FTC conducted a rigorous investigation of their likelihood before deciding to allow the deal, though that decision may have constituted a false negative. But it is also possible that the acquisition caused more complex anticompetitive effects — effects that enforcers may have overlooked altogether.

2. Complex Harm: Practice

ZG competes in a complex environment, structurally similar to the one depicted in Figure 2 above. ZG operates a platform business model — "online real-estate portals." On one side of the platform, ZG markets an information-based product to users. In large part, its value stems from the portals' filtering function: they allow users to access a winnowed-down set of real-estate listings that fit given criteria. Instead of seeing, for example, "all listings in New York," users can filter by price, ZIP Code, number of bedrooms, etc. ZG exchanges its real-estate portal to users for their attention, which ZG then sells to advertisers on the other side of the platform.

ZG also facilitates real-world transactions. The content delivered to users via ZG's platform includes lists of relevant real-estate agents offering services to prospective real-estate buyers. Figure 3 displays these relationships.

29 Statement, supra note 25.

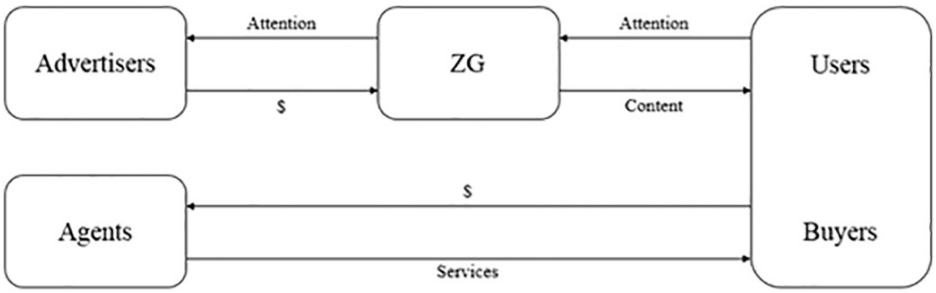
30 Id.

31 Zillow Group, Q3 Prepared Remarks (Nov. 3, 2015), available at: http://investors.zillowgroup.com/financials.cfm#results.

32 *United States v. US Airways Grp., Inc.*, No. 1:13-cv-01236, at 6 (D.D.C. Aug. 13, 2013) ("As its CEO candidly stated earlier this year, US Airways views this merger as 'the last major piece needed to fully rationalize the industry.'"). To the extent it is relevant, the author very briefly represented the United States in this matter. This article represents solely the views of the author and does not reveal any confidential information.

33 Zillow Group, Q2 Prepared Remarks (2015), available at: http://investors.zillowgroup.com/financials.cfm#results.

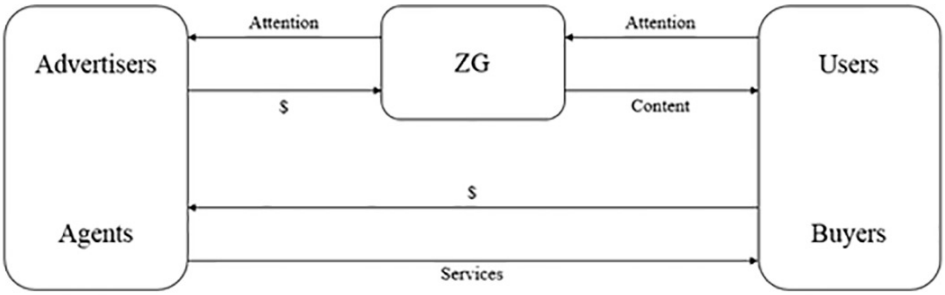
Fig. 3



These algorithmically curated agent lists contain — indeed, appear to users to be driven by — agent reputation. ZG displays the familiar star-system rating (one to five stars) and information on the number of "recent sales" next to each agent whose information and photo appear in the curated agent lists. ZG also may identify listed agents as "Premier Agents."

Given the importance of reputation as a filter for information-overloaded user–buyers, appearing in ZG's lists may be of no small competitive significance for local real-estate agents. One might be forgiven for assuming "Premier Agents" are those whom users rate highly. But "Premier Agent" in fact appears to describe an agent who pays a premium to ZG to appear prominently in its agent lists. Figure 4 illustrates the dualistic role agents play in these markets.

Fig. 4



Post-deal statements from ZG executives suggest a shift in strategy to favor these "Premier" agent–advertisers, and to disfavor other agents. ZG's CEO stated in 2015, for example, "[W]e will continue to encourage lower performing agents to leave."[34] This strategy was designed to help Premier Agents "grow their market share in their respective cities."[35] More specifically, as ZG's CEO put it, the strategy had the effect of "accelerating the larger trend across the real estate agent population of higher producing agents *gaining market share* from those who are less competitive."[36]

The *Zillow–Trulia* acquisition thus illustrates how conduct in reputation-driven platform markets may cause complex anticompetitive effects. In the context of platforms, antitrust analysts generally define relevant markets around the platform's immediate customers.[37] But by "steering"[38] real-world buyers to certain favored suppliers, a platform may also increase power in a separate — though related — market. So long as there is a means for the favored suppliers to split the resulting rents with the platform, the platform is incentivized to engage in such steering. In the case of ZG, the platform may steer prospective home-buyers to favored agents, consolidating local agent markets and increasing favored agents' market power. Rent-splitting may then occur via the favored agent–suppliers' payments to ZG in exchange for "Premier Agent" status.

34 Zillow Group, supra note 32.

35 Id.

36 Zillow Group, supra note 27 (emphasis added).

37 E.g. Memorandum to Fed. Trade Comm'n, Subject: Google, Inc. 64, 69 (Aug. 8, 2012) (proposing relevant markets for "horizontal search" and "search advertising").

38 Enforcement agencies have, of late, shown increasing interest in steering-related behavior. See *United States v. Am. Express Co.*, 838 F.3d 179 (2d Cir. 2016) (addressing credit-card companies' use of "anti-steering rules" in their merchant contracts); Press Release, Dep't of Justice, Justice Department and North Carolina Sue Carolinas Healthcare System to Eliminate Unlawful Steering Restrictions (June 9, 2016).

The profitability of such a strategy will increase along with the dominance of the platform in its immediately adjacent markets. A dominant platform signifies fewer meaningful alternative routes for those users who wish to avoid being "steered." The lack (or elimination by, e.g. acquisition) of rivals available to deal with non-favored parties would also facilitate the strategy. Using the ZG example, these "non-favored parties" would be the "lower performing agents" who, after the acquisition went through, were "encourage[d] . . . to leave." To the extent either Trulia or Zillow, pre-acquisition, was willing to deal with such agents, that firm acted as a competitive constraint on its rival's ability to increase agents' power in their local markets.

The effectiveness — and harmful effects — of such steering may also be magnified by certain platforms' unique competitive role. Consumers tend to view platforms like ZG, Google, etc., as providers of information *per se*.[39] Unlike advertisers, who clearly provide information in order to sell other products, modern platforms sometimes appear to have no such ulterior motive for providing their curated content. Where a counterparty has "no obvious interest in the subject of the information, we are not so likely to approach it with our guards up."[40] But the ability to split rents with favored counterparties may create an ulterior motive. Where consumers are unaware of this dynamic, they will continue to treat the platform as an "objective" third party. Such consumers are particularly likely — if unwitting — targets for steering.

IV. CONCLUSION

Not every innovation increases market complexity, although some do. And not every innovation facilitates novel types of anticompetitive harm. But some do. Platforms may use the power of reputation to steer users to favored suppliers, thereby foreclosing non-favored suppliers and harming competition in a related — though distinct — relevant market. Where the favored suppliers are able to split the resulting rents with the platform, such a strategy may be rational. Antitrust enforcers and courts should take the possibility of such harms into consideration when analyzing marketplace conduct. If antitrust is to remain "supple" enough to oversee technology-driven markets, it must proceed with a full awareness of the complex competitive strategies available in such markets.

39 PATTERSON, supra note 10, at 10 ("[C]onsumers of information may view information provided by firms like Google and Yelp differently, and less skeptically, than they view advertising from the seller of a product.").

40 Id. at 11.