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I. INTRODUCTION

The Supreme Court's recent *American Express* ("AmEx") decision has raised a host of interesting issues, including how to deal with two-sided platform businesses that look different from AmEx's credit-card platform and what sort of evidence is necessary or sufficient in markets with platform businesses to establish competitive effects.² The large and growing economics and business strategy literature on two-sided platforms, now almost two decades old,³ will be helpful in sorting out these and other issues, as the extensive citations to that literature by the District Court, Appeals Court, and Supreme Court indicate.⁴

Unfortunately, a considerable amount of the recent debate in the U.S. on how to conduct antitrust analysis of two-sided businesses has involved attempts to trivialize or marginalize the findings of the relevant economics literature. This is surprising because there have been no critical comments on the main papers in this literature, which have appeared in leading economics journals beginning in 2003. A co-author of the seminal paper on two-sided platforms was awarded the 2014 Nobel Prize in Economic Science for a body of work that included this subject.⁵ In the *AmEx* litigation, the District Court and Appeals Court both cited this literature without any criticism.

In what follows we discuss five red herrings — assertions that have been used to marginalize the role of the extensive economics learning on two-sided platforms in antitrust analysis.

² *Ohio v. American Express Co.*, 138 S.Ct. 2274 (2018). Some platforms have more than two sides, and all that we say here also applies to such multisided platforms.

³ That literature began around 2000 with circulation of working paper versions of Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASS'N 4, 990-1029 (2003). Other key contributions include Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J. ECON. 3, 645-667 (2006); Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. ECON. 3, 668-691 (2006); and E. Glen Weyl, *A Price Theory of Multi-Sided Platforms*, 100 AM. ECON. REV. 4, 1642-1672 (2010). There are no articles in serious economics journals, including the ones that published these papers, that argue that the theories described in these foundational pieces are wrong. For nontechnical surveys, see generally Marc Rysman, *The Economics of Two-Sided Markets*, 23 J. ECON. PERSPECTIVES 3, 125-143 (2009) and David S. Evans & Richard Schmalensee, *The Antitrust Analysis of Multisided Platform Businesses*, THE OXFORD HANDBOOK INT'L ANTITRUST ECON., VOL. 1 (Roger D. Blair & D. Daniel Sokol eds., 2014). The online appendix to the latter paper lists over 350 significant economics articles published through December 2012, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2185373. The Harvard Business Review has been publishing articles for managers on two-sided platforms since 2006. See Thomas Eisenmann, Geoffrey Parker & Marshall W. Van Alstyne, *Strategies for Two-Sided Markets*, 84 HARVARD BUS. REV. 92 (2006).

⁴ *Supra* note 2, *U.S. v. American Exp. Co.*, 88 F.Supp.3d 143, 165 (E.D. N.Y. 2015), and *U.S. v. American Exp. Co.*, 838 F.3d 179 (2d Cir. 2015).

⁵ Press Release, The Nobel Prize, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2014 (October 13, 2014), <https://www.nobelprize.org/prizes/economics/2014/press-release/>.

II. RED HERRING 1: IT'S JUST ABOUT COMPLEMENTS, LIKE GASOLINE AND TIRES

The first red herring says that there is really nothing novel about two-sided platforms because the services on the two sides are just complements, and the courts know what to do (and not to do) with complements.⁶

In order to process transactions between merchants and cardholders, American Express must provide services to merchants and different services to cardholders, and the prices to either group will affect that group's participation on the platform and thus the attractiveness of the platform to the other group. In oral argument, Justice Breyer contended that this interdependence in demand is simply what characterizes complements, like nuts and bolts.⁷ In his dissenting opinion, he compared the different services to gasoline and tires.⁸ In an amicus brief, eight economists compared them to tennis balls and tennis racquets.⁹

This argument has no merit. It does not appear anywhere in the serious economics literature on two-sided platforms. None of the economics journals that have published the key theoretical articles have published critical responses that say that the theory of two-sided platforms is retreading well-known concepts about complements. The claim is simply wrong.

Two complements are usually both sold to the same customers; that's the reason why the price charged for one of the products affects the demand for the other. In contrast, American Express provides merchant and consumer services to members of distinct customer groups. The price charged to one side of the AmEx platform affects demand on the other side because of indirect network effects: merchants care about how many consumers use the card, and consumers care about how many merchants accept it.

Two complements can and often are sold by different firms. Many convenience stores sell tennis balls without selling tennis racquets, and companies often specialize in selling gasoline or tires but not both. By contrast, AmEx must serve both merchants and consumers to stay in business and must do so essentially simultaneously.

Finally, two-sided businesses like AmEx always facilitate interactions between customers on both sides of the platform. But you can buy gasoline without having any interaction with anyone who bought a tire.

III. RED HERRING 2: IF ANY BUSINESS IS TWO-SIDED, SO ARE ALMOST ALL BUSINESSES

The expansive variant of this red herring says that all businesses deal with members of more than one group — retailers, for instance, deal with both suppliers and customers — and therefore antitrust defendants will claim their business is two-sided. According to Professor Sagers, one of the signers of the amicus brief by lawyers in support of the Petitioner,

... we can expect every antitrust defendant and their sister to start claiming their business is two-sided, and lower courts will find reason within the theory to give their claims the time of day. After all, even a brick-and-mortar retail store is “two-sided” in the sense that it must balance the demands of suppliers and customers.¹⁰

Katz and Sallet provide a lighter version of this red herring. They claim there is a “lack of consensus regarding the definition of a platform [and] it is much harder to distinguish single-sided businesses from multisided ones than one might initially expect[.]”¹¹ They conclude that,

6 For a related discussion see Lapo Filistrucchi, *Complements vs. Two-Sided Markets*, CPI ANTITRUST CHRONICLE, (Sept. 2018).

7 *Ohio v. American Express Co.*, (No.16-1454) (Oral argument February 26, 2018) at 22-24.

8 *Ohio v. American Express Co.*, 585 U.S. 11-12 (2018) (Breyer J., dissenting).

9 Brief for John M. Connor et al. as Amici Curiae Supporting Petitioners, *Ohio v. American Express Co.*, (No. 16-1454) (hereinafter Economists' Brief) at 4.

10 Chris Sagers, *Ohio v. American Express: Clarence Thomas Sets Sail on a Sea of Doubt, and, Mirabile Dictu, It's Still a Bad Idea*, ProMarket (June 27, 2018), <https://promarket.org/ohio-v-american-express-clarence-thomas-sets-sail-sea-doubt-mirabile-dictu-still-bad-idea/>.

11 Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 THE YALE L REV. 7, 2142-2175 (2018) at 2148.

[g]iven the lack of definitional consensus regarding multisided platforms, coupled with the prospective applicability of existing definitions to a vast range of firms, it would be a mistake for antitrust enforcement to dramatically differ based on the threshold, and easily manipulable, question of whether a defendant is classified as a multisided platform.¹²

This suggests that there is an ongoing debate about the definition of two-sidedness. But there is no such debate. We believe that most, if not all, economists who have worked in this area would consider businesses to be two-sided platforms when there are (a) indirect network effects between members of at least one of the two customer groups and members of the other group; (b) these indirect network effects are strong enough to affect business conduct; and (c) the platform facilitates interactions between members of the two groups.^{13, 14} Moreover, the serious economics literature often identifies the same narrow set of businesses, defined by these characteristics, as two-sided. There are other nuances involving two-sided platforms. People who write articles in this area, including us, often include an abbreviated definition that doesn't go into all of these characteristics, which of course doesn't mean that they aren't recognized.

The definition commonly used by economists is narrow enough to exclude most ordinary, one-sided businesses. Supermarkets deal with both customers and suppliers, for instance. And supermarket customers may care about the variety and quality of goods on offer, but suppliers to supermarkets generally care only about their sales, not the number or characteristics of shoppers. More critically, supermarket customers and supermarket suppliers do not interact. Anchor Steam does not know that one of us has just bought a six-pack of their beer, just that a six-pack has been sold. There may be businesses for which this definition does not yield a clear conclusion, but they seem to be rare, and detailed inquiry into the facts of real businesses will usually resolve the issue.

The vast sea of doubt and uncertainty portrayed by some commentators on the definition of two-sidedness doesn't correspond to the now vast economics literature on this topic. The courts should not get sucked into a "what about" argument that makes a spurious claim that some business is two-sided — for example, "brick-and-mortar stores" — using a definition that isn't employed in the economics literature to avoid serious analysis of businesses that are likely to be two-sided based on a widely accepted definition and analytical methods.¹⁵

Justice Breyer says under the *AmEx* majority's definition, two-sided platforms are "commonplace."¹⁶ While the majority's definition is arguably less narrow than the one advanced above, the economics literature has found that many businesses are in fact two-sided, and it is widely recognized that this model has become more important as a result of the Internet and other related technologies.¹⁷ That is why two-sided platforms have attracted increasing attention among competition authorities around the world.¹⁸

12 *Id.* at 2152.

13 After suggesting that there is an ongoing debate, Katz & Sallet assert that a good approach for antitrust purposes "is to define a firm as a multisided platform when *cross-platform network effects* occur in at least one direction and the firm facilitates interactions between two or more groups of users, can set distinct prices to different user groups, and has market power with respect to these groups." See Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 THE YALE L REV. 7, 2142-2175 (2018) at 2150. With the exception of the market power requirement this definition is, in our experience, consistent with how economists working in this area define two-sided platforms in practice. And Katz & Sallet, note 26, observe "Our inclusion of market power is meant to capture the likely circumstances in which antitrust issues arise, not to suggest that all firms with multisided business models have market power."

14 In his dissent, Justice Breyer notes that Rochet & Tirole (2006, p. 646) also specify that if a business is a two-sided platform, the volume of transactions it manages "depends on the structure and not only the overall level of fees charged." Like Katz & Sallet, we tend not to stress this condition, as it is an implication of indirect network effects in the absence of arbitrage between the two sides that would make it impossible for the platform actually to determine the effective price structure. As Rochet & Tirole (*id.*) put it, the structure of charges "is relevant only if the two sides do not negotiate away the corresponding usage and membership externalities." We are not aware of evidence that platform businesses cannot use the price structure to balance demand because of arbitrage which would in any event be difficult given that platforms can often charge membership as well as transaction fees.

15 Chris Sagers, *Ohio v. American Express: Clarence Thomas Sets Sail on a Sea of Doubt, and, Mirabile Dictu, It's Still a Bad Idea*, ProMarket (June 27, 2018), <https://promarket.org/ohio-v-american-express-clarence-thomas-sets-sail-sea-doubt-mirabile-dictu-still-bad-idea/>.

16 *Ohio v. American Express Co.*, 585 U.S. 17 (2018) (Breyer J., dissenting).

17 David S. Evans & Richard Schmalensee, *Matchmakers: The New Economics of Multisided Platforms* (2016); Geoffrey G. Parker, Marshall W. Van Alstyne & Sangeet Paul Choudary, *Platform Revolution: How Networked Markets Are Transforming the Economy - and How to Make Them Work for You* (2016).

18 OECD, *Rethinking Antitrust Tools for Multi-Sided Platforms* (2018), www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm; Press Release, Federal Trade Commission, *FTC Announces Hearings On Competition and Consumer Protection in the 21st Century* (June 20, 2018), <https://www.ftc.gov/news-events/press-releases/2018/06/ftc-announces-hearings-competition-consumer-protection-21st>.

We agree that some definitions of two-sidedness that have been advanced outside the economics literature are so broad as to imply that almost any business can be described as a two-sided platform. There is some merit to Justice Breyer's criticism that the definition employed by the *AmEx* majority was incomplete.¹⁹ But that's an argument for tightening up definitions in antitrust analysis, not throwing out an uncontroversial body of economics learning, and ignoring substantial cross-side effects when the facts show they are important.

IV. RED HERRING 3: TWO-SIDEDNESS IS IRRELEVANT IN MATURE MARKETS

This two-part red herring applies to mature markets with two-sided platforms, one in which all or almost all potential customers are engaged with one or more platforms. It is first argued that as a market matures, indirect network effects at the market level weaken and ultimately vanish when the market is fully mature. It is then argued that this change implies that indirect network effects at the firm level also weaken with market maturity and vanish in fully mature markets. Thus, even if firms were two-sided platforms before their market matured, once it has matured, it is argued, the links between the demands on their two sides have vanished.

To our knowledge this two-part argument was first made in expert testimony in the *Sabre* case and was accepted by the trial court.²⁰ It was repeated in an amicus brief to the Supreme Court in the *AmEx* case.²¹ In the economics literature it has only appeared as an assertion, without theoretical or empirical support, in a three-sentence paragraph in a single article.²²

The argument that indirect network effects at the industry level generally weaken as a market matures is somewhat plausible, though we know of neither theoretical arguments nor empirical evidence that supports it. But even if it is true, it is not at all plausible that indirect network effects at the *firm level* are absent in mature markets. To see this, suppose there is a fixed number of possible participants on each side of a set of competing platforms and that all will join one or more platforms regardless of price or small changes in the number of participants on the other side of the platform. In this case, membership demand at the *market level* by each group is independent of the other group's demand at the margin, regardless of price, and indirect network effects at the margin are effectively absent at the market level.

Suppose further, to track the *Sabre* case, that one group of customers multi-homes by participating on all platforms (the airlines) and the other group of customers single-homes by participating on only one platform (the travel agents). The price charged by any individual platform to the single-homing group determines the extent to which travel agents join that platform versus competing platforms. That in turn determines how much the multi-homing group would pay for access to that platform. But even with perfectly fixed demand at the market level, if an *individual platform* charged travel agents too much (or subsidized them too little) it could lose all of those customers, and the airlines would have no reason to use that platform. That result is consistent with the effective absence of indirect network effects at the market level because, by assumption, all airlines and all travel agents would still join one of the remaining (competing) platforms. But, in this extreme hypothetical case, there would be one less platform competing in the market.

Thus, even if indirect network effects are weak or absent at the market level because the market has matured, there is no reason to think that they are weak or absent at the level of the individual firm. Making that assumption would be very likely to lead to an erroneous evaluation of individual firm conduct.

19 *Ohio v. American Express Co.*, 585 U.S. 15-18 (2018) (Breyer J., dissenting). Justice Breyer points out that the majority decision did not reference the point, made by Rochet & Tirole, that for a business to be two-sided the price structure must affect the overall volume of output. See Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J. ECON. 3, 645-667 (2006) at 664-665. Rochet & Tirole, being aware of their own definition, refer to credit cards as two-sided platforms in this paper as well as in their seminal 2003 publication. Also, we noted above, this role of the price structure is an implication of indirect network effects in the absence of arbitrage and is therefore a consequence of a business being two-sided rather than a defining characteristic.

20 *U.S. Airways, Inc. v. Sabre Holdings Corp. et al.*, 105 F. Supp. 3d 265 (2015).

21 Economists' Brief, *supra* note 9.

22 Oz Shy, *A Short Survey of Network Economics*, 38 REV IND. ORG. 2, 119-149 (2011) at 136.

V. RED HERRING 4: LACK OF INTERCHANGEABILITY ON TWO SIDES IMPLIES TWO SEPARATE MARKETS

In an amicus brief to the Supreme Court in the *AmEx* case, a group of antitrust law professors presented an absurd market definition for two-sided platforms, proceeded to demolish it, and argued that their demolition proved that single-sided analysis was always appropriate.²³ They began by noting that the two groups served by two-sided platforms consume different services that are often not interchangeable. The services AmEx provides to merchants are clearly not good substitutes for the services it provides to consumers. They went on to argue that it would, accordingly, make no economic sense to include both sets of services in the same market, so that services to each group must be analyzed separately.

This is a very bright red herring. Consider competition among person-to-person money transfer services. It is true that the service provided to a person who sends money is literally different from, and not interchangeable with, the service provided to a person who receives money. Defining separate markets for sending money and receiving money, however, would ignore the core business reality that suppliers compete for transactions between senders and receivers. The transactions between senders and receivers *are* substitutable across competing money transfer platforms. An increase in the price of the transaction by one platform — almost no matter how that price is divided between the sender and receiver sides — would tend to result in an increase in demand for other platforms. Platforms that provide similar jointly consumed services are substitutes for each other, and their products are interchangeable as a matter of business reality.

Market definition should therefore focus on identifying suppliers that provide services that are interchangeable in this sense, which typically accords with business reality and sound economics.²⁴ The objective of market definition is to identify competitive constraints. Since the early 1980s the modern approach to market definition accordingly focuses on the ability of a firm or firms of interest to raise price above competitive levels.²⁵ It is not possible to make that assessment by looking at one side of a service that is consumed jointly by the two sides. The claim that one should exclude the other side of the transaction from the market because it isn't "interchangeable" is a red herring because it focuses on a service that the platform cannot provide separately and ignores the service that the platform provides jointly.

Let's be clear on why this red herring is very dangerous. Through the rhetorical sleight of hand that different sides of the transaction aren't interchangeable, we are led to exclude the other side of the jointly consumed transaction, and the business realities of jointly competing for both sides, from the analysis.²⁶ Luckily, American courts are skeptical of market definitions that do not accord with business realities, as the plaintiffs found in *AmEx*.

23 Brief of 28 Professors of Antitrust Law as Amici Curiae Supporting Petitioners, *Ohio v. American Express Co.*, (No. 16-154) at 17-20. Justice Breyer seems to accept this argument: *Ohio v. American Express Co.*, 585 U.S. 15-17 (2018) (Breyer J., dissenting).

24 Thus in the *AmEx* case, we have supported defining the market as consisting of payment services provided by AmEx and competing platforms. David S. Evans & Richard Schmalensee, *Applying the Rule of Reason to Two-Sided Platform Businesses*, 26 U MIAMI BUS L REV. 1, 1-15 (2018). Economists supporting Petitioners seem at times to agree with us on this point: they assert that "... the relevant competition occurs at the platform level (i.e. competition among the credit card companies)." Economists' Brief, *supra* note 9, p. 15.

25 See generally Gregory J. Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, 71 ANTITRUST L.J. 1, 253-275 (2003); Dennis W. Carlton, *Market Definition: Use and Abuse*, 3 COMPETITION POL'Y INT'L 3 (2007); Carl Shapiro, *The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49, 701-759 (2010).

26 Another approach, which may be superior in some settings not involving the provision of services that are jointly and unseverably consumed, is to define separate markets for the services to each group the platform of interest serves but to take due account of the linkages between them in analysis. The more appropriate approach depends on both the facts of the case and the question at issue. A general rule that would require defining separate markets and ignoring linkages between them, which the antitrust law professors seem to advocate, makes no economic sense.

VI. RED HERRING 5: CONSIDERING TWO-SIDEDNESS EXPLICITLY WILL *DEVASTATE* ANTI-TRUST

The colorful language is from Professor Wu.²⁷ This is as much a red herring, a distraction from substance, as the other assertions we have examined here. There is simply no reason why accounting for the business realities of two-sided platforms and relying on uncontroversial economics learning is going to do anything other than help courts and competition authorities make better decisions. If it does, modern antitrust analysis has a bigger problem than dealing with two-sided platforms. One-sided analyses of two-sided platforms can result in false negative decisions in addition to false positive ones.²⁸

The *American Express* decision necessarily left many issues unresolved, but it has made it clear that future cases will need to take the economics of two-sided platforms seriously. This will improve the quality of antitrust decisions. Around the world there is constructive discussion on how to do that, driven by the growing importance of platform businesses and recognition that they are in fact different from traditional ones in important respects, and that modern economic learning can help competition authorities and courts properly enforce the antitrust laws for them.

²⁷ Tim Wu, *The Supreme Court Devastates Antitrust Law*, The New York Times (June 26, 2018), <https://www.nytimes.com/2018/06/26/opinion/supreme-court-american-express.html>.

²⁸ David S. Evans & Richard Schmalensee, *Ignoring Two-Sided Business Reality can also Hurt Plaintiffs*, CPI ANTITRUST CHRONICLE (Apr. 2018).

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