Testing for Multisided Platform Effects in Antitrust Market Definition

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INTRODUCTION

Given myriad business practices and conditions, establishing certain antitrust harms requires context. This context often comes from framing the effects of the challenged conduct against the backdrop of some relevant market. In particular, a challenged practice's anticompetitive impact may be outsized in a smaller market but insignificant in a larger one. For instance, the impact of a merger of two firms might be major if their combination captures 80 percent of a smaller market but relatively minor if that same combination represents only 10 percent of a larger market. In the latter, the combination is a drop in the bucket, while in the former it is a tidal wave. Plaintiffs thus have incentives to plead narrower relevant markets while defendants prefer broader ones. Yet this process of defining the relevant market can be highly technical, thrusting on judges the task of reining in increasingly complex economic and statistical analyses.

Challenging as this may be, the Supreme Court may face a taller task this term in *Ohio v American Express Co*.[1] In particular, recent recognition of business methods known as "multisided platforms" further muddies the water by introducing additional complexity during market definition.[2] These business methods connect two or more distinct groups of consumers that would benefit from interacting but face barriers to doing so. For example, payment-card platforms connect cardholders and merchants by issuing cards on one side of the platform and providing

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1 2017 WL 2444673 (US). For the decision below, see *United States v American Express*, 838 F3d 179, 188–89 (2d Cir 2016) ("Amex").

2 See text accompanying note 83 (defining a platform as a business method that enables interactions between distinct groups, each of which cares about the extent of the other group's participation).

card-processing services on the other.[3] Video game platforms connect gamers with developers by selling game consoles on one side of the platform and development kits and licenses on the other.[4] Newspapers similarly connect subscribers and marketers by selling news content on one side of the platform and advertising space on the other.[5] In this manner, selling more to one group influences demand by the other group.[6] Often, the way platforms attract suitable participation is by offering discounts to the harder-to-attract group at the expense of the more ready-and-willing group. For instance, payment-card users frequently receive rewards—a sort of negative price—to ensure their participation.[7] These are funded through fees assessed to merchants that desire cardholder business.[8]

To the technical process of market definition, multisided platforms thus add the challenge of determining whether the relevant market should incorporate all, some, or none of these interconnected groups. Because certain forms of antitrust analysis allow courts to trade off pro- and anticompetitive effects within the relevant market, defining that market serves to establish the space of permissible trade-offs.[9] Notably, defining the relevant market to include all sides of the platform creates a broader space of allowable trade-offs than when the definition encompasses fewer sides. This is one reason that winning at market definition often means winning the case. Thus, it matters crucially whether and how courts incorporate "multisidedness" during market definition. This Comment suggests an approach to that inquiry.

Part I explores the challenges inherent in market definition. It situates this definitional process within the framework of the major antitrust enforcement laws to clarify the judicial requirements for defining a relevant market. It then frames market definition as both central and contested, pausing to chronicle Supreme Court jurisprudence designed to structure the inquiry

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3 See text accompanying notes 85–89.

4 See Marc Rysman, *The Economics of Two-Sided Markets*, 23 J Econ Persp 125, 125, 129–31 (Summer 2009) (asserting that both video game systems and payment cards are examples of multisided platforms).

5 See E. Glen Weyl, *A Price Theory of Multi-sided Platforms*, 100 Am Econ Rev 1642, 1642–43 (2010) (describing credit cards and newspapers as canonical examples of multisided platforms).

6 See notes 97–98 and accompanying text.

7 See Rysman, 23 J Econ Persp at 129 (cited in note 4).

8 See notes 136–37 and accompanying text.

9 See notes 109–10 and accompanying text.

and mitigate likely pitfalls. Part II explores the added challenge of whether the relevant market should incorporate all, some, or no sides of the platform. It describes the economic concept of a multisided platform and details the different ways that lower courts have addressed this challenge. Because plaintiffs and defendants often have opposing incentives concerning the number of sides that should be incorporated, knowing when to disregard or accept arguments concerning multisidedness is important. In this context, the courts could benefit from a test that seeks to determine when the relevant market should incorporate all sides of the platform. Hence, Part III proposes a two-stage test for multisidedness.

In the first stage, a court would ask (1) whether the business method can explicitly charge different prices to the distinct groups to which it provides goods or services; (2) whether each group's benefit depends on the extent of participation by the other groups provisioned by the same business method and whether that participation varies based on market conditions; and (3) whether the platform is capable of, and generally does, set uniform prices in the markets in which each group participates. All three factors must hold, or multisidedness should be excluded from market definition.

Assuming all three stage one factors are satisfied, the court moves on to the second stage and asks whether the challenged conduct is designed principally to ensure the continued availability of the platform's differentiated products. If so, the relevant market should encompass the market segments in which all sides of the platform operate.

I. ANTITRUST MARKET DEFINITION

A market is a medium for the exchange of goods or services.[10] For antitrust purposes, a relevant market is simply a market in which "a firm can raise prices above the competitive level without losing so many sales that the price increase would be unprofitable."[11] The judicial process of determining relevance is called "market definition." It is important because antitrust plaintiffs must "prove harm . . . to the competitive process,"[12] which often

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[10] See *Black's Law Dictionary* 1113 (Thomson Reuters 10th ed 2014) (defining a market as a "place of commercial activity in which goods or services are bought and sold").

[11] Id at 1115 (defining a relevant market as simply "a market that is capable of being monopolized").

[12] *NYNEX Corp v Discon, Inc*, 525 US 128, 135 (1998).

entails "a fact-intensive analysis of the challenged conduct . . . *and its context*."[13] Defining the extent of the relevant market provides that context.

For example, consider the Government's monopolization claim in *United States v E.I. du Pont de Nemours & Co*[14] ("Cellophane"). At the time of the claim, du Pont's raw output amounted to roughly 75 percent of the US market for cellophane.[15] That same raw output, however, amounted to only 17.9 percent of the broader market for flexible packaging materials.[16] The central issue, then, was whether the relevant product market was that for cellophane specifically or that for all flexible packaging materials. The Court held that the relevant market included all flexible packaging materials, and it considered du Pont's 17.9 percent share of that larger market insufficient for a finding of monopolization.[17] Apart from demonstrating that market definition is often outcome determinative, *Cellophane* also illustrates the concept of comparative harm. In particular, the anticompetitive impact of a challenged practice—here, du Pont's cellophane share—may be outsized in a narrower market and insignificant in a broader one.

This Part explores the challenges inherent in market definition. Part I.A situates market definition within the statutory and judicial framework of the major antitrust enforcement laws. It clarifies the legal requirements for market definition and answers the question, "Why define the market?" Part I.B frames market definition as a contentious problem that is central to the outcome of an antitrust case. It also chronicles Supreme Court jurisprudence designed to guide and structure lower courts' definition processes. Part I.C portrays market definition as problematic because of its economic and statistical complexity.

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13 Directorate for Financial and Enterprise Affairs Competition Committee, *Market Definition* *321 (Organization for Economic Cooperation and Development, Oct 11, 2012), archived at http://perma.cc/5QVX-AJ8Y (emphasis added).

14 351 US 377 (1956).

15 Id at 379.

16 Id at 399.

17 See id at 400, 403–04. See also text accompanying notes 76–77 (exploring problems with the *Cellophane* Court's approach).

A. Background and Judicial Requirements for Market Definition

The Antitrust Division of the Department of Justice (DOJ), the Federal Trade Commission (FTC), state governments, and appropriately injured private plaintiffs may bring antitrust enforcement actions in federal court.[18] The three core federal antitrust enforcement laws are the Sherman Act,[19] the Clayton Act,[20] and the Federal Trade Commission Act[21] (FTC Act). Of these, §§ 1–2 of the Sherman Act and § 7 of the Clayton Act make up over 90 percent of the investigative workload of the DOJ's Antitrust Division.[22] As discussed in this Section, the requirement for market definition stems from judicial interpretation of these statutes.

Defining the relevant market typically involves establishing both the product market and the geographic market.[23] The product market is the "part of a relevant market that applies to a firm's particular product."[24] It is defined by "identifying all reasonable substitutes for the product and by determining whether these substitutes limit the firm's ability to affect prices."[25] The geographic market is the "part of a relevant market that identifies

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[18] See 15 USC § 15a (creating standing for the United States); 15 USC § 15c (creating standing for the states); 15 USC § 15 (creating private standing). See also *Brunswick Corp v Pueblo Bowl-o-Mat, Inc*, 429 US 477, 489 (1977) (explaining that a private plaintiff's standing requires "prov[ing] *antitrust* injury, which is to say injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful").

[19] 26 Stat 209 (1890), codified as amended at 15 USC § 1 et seq.

[20] 38 Stat 730 (1914), codified as amended at 15 USC § 12 et seq.

[21] 38 Stat 717 (1914), codified as amended at 15 USC § 45 et seq.

[22] See *Antitrust Division Workload Statistics FY 2006–2015* *1 (DOJ, July 8, 2016), archived at http://perma.cc/UDU2-XF2X. During fiscal years 2006 to 2015, the DOJ's Antitrust Division initiated 511 Sherman Act § 1 restraint-of-trade investigations, 19 Sherman Act § 2 monopoly investigations, and 789 Clayton Act § 7 merger investigations. In the same time period, it brought only 81 investigations under other statutes. Id. The FTC investigates Sherman and Clayton Act claims by way of the FTC Act § 5. See *Times-Picayune Publishing Co v United States*, 345 US 594, 609 (1953) (stating that an "arrangement transgresse[d] § 5 of the Federal Trade Commission Act, since minimally that section registers violations of the Clayton and Sherman Acts").

[23] See *Brown Shoe Co v United States*, 370 US 294, 324 (1962) (explaining that the "'area of effective competition' must be determined by reference to a product market . . . and a geographic market").

[24] *Black's Law Dictionary* at 1114 (cited in note 10).

[25] Id. For example, if a creamery's decision to raise butter prices would prompt consumer substitution to margarine, the firm's ability to raise prices is constrained, and the product market might include both butter and margarine.

the regions in which a firm might compete."[26] Together, the product and geographic markets provide the backdrop against which courts evaluate the impact of the challenged conduct.

The requirement for market definition in § 1 of the Sherman Act is judicial rather than statutory. The Act's sweeping language simply bars "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States."[27] Subsequent jurisprudence narrowed the Act's broad language by holding that "Congress intended to outlaw only *unreasonable* restraints."[28] As such, an antitrust plaintiff must show (1) the existence of an agreement (2) that unreasonably restrains trade or commerce and (3) that implicates interstate or foreign commerce.[29] Market definition is part of the second element—evaluating reasonableness typically requires the context of relevant product and geographic markets.[30]

In § 1 cases, courts evaluate unreasonable restraints using the aptly named "rule of reason"—a judicial doctrine based on the "totality of economic circumstances."[31] Circuit courts have established their own procedures for rule-of-reason analysis. For example, the Second Circuit uses a burden-shifting framework. Under this approach, a plaintiff bears the initial burden of "showing that the challenged action has had an actual adverse effect on competition as a whole in the relevant market."[32] Notably, this includes the requirement to sufficiently plead a relevant market.[33] If the plaintiff meets its burden, responsibility shifts to the defendants

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[26] Id ("If a firm can raise prices or cut production without causing a quick influx of supply to the area from outside sources, that firm is operating in a distinct geographic market.").

[27] Sherman Act § 1, 26 Stat at 209, 15 USC § 1.

[28] *State Oil Co v Khan*, 522 US 3, 10 (1997) (emphasis added).

[29] See, for example, *Bhan v NME Hospitals, Inc*, 929 F2d 1404, 1410 (9th Cir 1991).

[30] See id at 1410, 1413 ("To determine whether a practice unreasonably restrains trade, . . . [t]he focus is on . . . competition in a relevant market."). Part I.B discusses a class of restraints for which market definition is not necessary. Such restraints are presumed anticompetitive, and defendants do not receive the contextual benefit of framing the alleged harm in a favorably scoped relevant market. See text accompanying notes 47–50.

[31] *Black's Law Dictionary* at 1532 (cited in note 10). See also *Continental TV, Inc v GTE Sylvania, Inc*, 433 US 36, 49 (1977) (stating that, under the rule of reason, courts weigh "all of the circumstances of a case in deciding whether a restrictive practice should be prohibited as imposing an unreasonable restraint on competition").

[32] *Capital Imaging Associates, PC v Mohawk Valley Medical Associates, Inc*, 996 F2d 537, 543 (2d Cir 1993) (emphasis omitted).

[33] See *Concord Associates, LP v Entertainment Properties Trust*, 817 F3d 46, 54 (2d Cir 2016).

to establish the "redeeming virtues" of their arrangement.[34] Defendants often frame this evidence by defining a different version of the relevant market.[35] The burden then shifts back to the plaintiff to show that these benefits could have been achieved through less restrictive alternatives.[36]

The requirement for market definition in § 2 of the Sherman Act is likewise judicial. Its statutory language simply targets monopolies. Specifically, § 2 criminalizes the conduct of those who would "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States."[37] As the Supreme Court explained in *United States v Grinnell Corp*:[38]

> The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.[39]

The notion of the relevant market thus appears directly in the first element as the reference against which courts measure § 2 monopoly power.

The requirement for market definition in § 7 of the Clayton Act is also judicial. Congress enacted the statute in 1914 "because [it] concluded that the Sherman Act's prohibition against mergers was not adequate."[40] The Clayton Act thus differs from the Sherman Act in proscribing "certain combinations of competitors" before they are able to produce "any actual injury, either to competitors or to competition."[41] The Supreme Court has reasoned

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34 *Capital Imaging*, 996 F2d at 543.

35 See, for example, *United States v Visa U.S.A., Inc*, 344 F3d 229, 238–39 (2d Cir 2003) (adopting the plaintiff's assertion that the product market consisted of general-purpose payment cards and rejecting a broader market proposed by the defendants consisting of cash, checks, debit cards, and credit cards).

36 *Capital Imaging*, 996 F2d at 543.

37 Sherman Act § 2, 26 Stat at 209, 15 USC § 2.

38 384 US 563 (1966).

39 Id at 570–71.

40 *Cargill, Inc v Monfort of Colorado, Inc*, 479 US 104, 124 (1986) (Stevens dissenting). See also *Unlawful Restraints and Monopolies*, S Rep No 63-698, 63d Cong, 2d Sess 1 (1914) (stating that the Clayton Act sought "to prohibit and make unlawful certain trade practices which . . . are not covered by [the Sherman Act], or other existing antitrust acts").

41 *Cargill*, 479 US at 124 (Stevens dissenting) (maintaining that "[t]he legislative history teaches us that [the Act's] delphic language was designed 'to cope with monopolistic tendencies in their incipiency and well before they have attained such effects as would

that "Section 7 is designed to . . . arrest in their incipiency restraints or monopolies in a relevant market which, as a reasonable probability, appear at the time of suit likely to result from the acquisition by one corporation of all or any part of the stock of any other corporation."[42] In merger claims, then, market definition again provides context for the proposed combination's likely impact.

B. Market Definition as a Problem of Context

Few question that market definition is central to antitrust law.[43] Delineating the relevant market is among the first steps accomplished in any competition analysis and has been described as "one of the most important analytical tools for competition authorities."[44] Further, winning at market definition often means winning the case. As discussed above, comparing du Pont's cellophane output to the market for all flexible packaging materials resulted in a 17.9 percent share, while comparing it to the market for cellophane revealed a 75 percent share.[45] Because the Court looked to market share to inform the degree of anticompetitive impact,[46] determining the basis for this comparison was largely outcome determinative.

Anything that determines the outcome is predictably contentious, so the Court's market-definition jurisprudence reduces the scope of the definitional problem for the lower courts through two mechanisms. First, courts selectively apply the rule of reason discussed in Part I.A. Second, in rule-of-reason cases, courts apply rules that structure and focus the process of market definition.

As to the first, certain practices are "so plainly anticompetitive that no elaborate study of the industry is needed to establish their illegality."[47] Behaviors on this short, judge-made list per se violate § 1 of the Sherman Act. For instance, fixing prices across

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justify a Sherman Act proceeding'"). See also Clayton Act § 7, 38 Stat at 731–32, 15 USC § 18 (barring transactions in which "the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly").

42 *United States v E.I. du Pont de Nemours & Co*, 353 US 586, 589 (1957).

43 Part I.C briefly considers whether market definition *should* be central to antitrust.

44 See *Market Definition* at *21 (cited in note 13).

45 See text accompanying notes 14–17 (explaining that the anticompetitive impact of a challenged practice—here, du Pont's market share—may be large in a narrower market and insignificant in a broader one).

46 *Cellophane*, 351 US at 399.

47 *Texaco Inc v Dagher*, 547 US 1, 5 (2006), quoting *National Society of Professional Engineers v United States*, 435 US 679, 692 (1978).

competitors within an industry is per se illegal.[48] Colluding to rig bids for contract awards is another example.[49] These behaviors invoke a bright-line rule that makes the context supplied by a relative market unnecessary: harm to competition "is presumed from the nature of the conduct."[50]

Importantly, this means that the Court can control the scope of the definitional problem for Sherman Act § 1 offenses by deciding which conduct should require market definition in the first place. Challenges to behaviors classified as per se illegal avoid market definition while the Court subjects the remainder to market definition via the standard-like rule of reason.[51] Additionally, its behavior-by-behavior approach allows the Court to adjust the per se list to account for changes in industry conditions or developments in analytical tools that permit a more finely tailored analysis.[52]

Second, the Court's jurisprudence structures and focuses the definitional process for rule-of-reason cases under § 1 of the Sherman Act, as well as for Sherman Act § 2 and Clayton Act cases.[53] The modern definition of the relevant product market hinges on substitutable—or functionally interchangeable—products. This stems from the *Cellophane* Court's holding that "[d]etermination of the competitive market for commodities depends on how different from one another are the offered commodities in character or use, how far buyers will go to substitute one commodity for another."[54] The Court went on to explain:

> The ultimate consideration . . . is whether the defendants control the price and competition in the market . . . they are

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48 See *Catalano, Inc v Target Sales, Inc*, 446 US 643, 647 (1980) ("A horizontal agreement to fix prices is the archetypal example of such a practice.").

49 See *Swift & Co v United States*, 196 US 375, 400 (1905).

50 *Market Definition* at *321 (cited in note 13).

51 See notes 31–36 and accompanying text.

52 See note 75 and accompanying text. For example, the Court had previously supported the notion of per se illegality for agreements between manufacturers and their distributors to set minimum resale prices. See *Dr. Miles Medical Co v John D. Park & Sons*, 220 US 373, 408–09 (1911). The Court later changed course to hold that these agreements were not per se illegal and should instead be evaluated in context. See *Leegin Creative Leather Products, Inc v PSKS, Inc*, 551 US 877, 907 (2007) ("[T]he Court's decision in [*Dr. Miles*] is now overruled. Vertical price restraints are to be judged according to the rule of reason.").

53 While the rule of reason applies to Sherman Act § 1 reasonableness inquiries, some courts have pursued a similar line of analysis under § 2. See *United States v Microsoft Corp*, 253 F3d 34, 58–59 (DC Cir 2001) (discussing a "general rule" for evaluating exclusionary conduct).

54 *Cellophane*, 351 US at 393.

> charged with monopolizing. . . . [C]ontrol in the above sense of the relevant market depends upon the availability of alternative commodities for buyers: *i.e.*, whether there is a cross-elasticity of demand between cellophane and the other wrappings. This interchangeability is largely gauged by the purchase of competing products for similar uses considering the price, characteristics and adaptability of the competing commodities.[55]

The Court found that price decreases for cellophane caused "a considerable number of customers of other flexible wrappings to switch" and thus broadly defined the relevant market to include all flexible packaging materials.[56] In so doing, the Court enshrined cross-elasticity of demand as a definitional tool.

A few years after *Cellophane*, the Court reinforced its interchangeability approach when the Government, concerned about potentially anticompetitive effects,[57] brought an action under the Clayton Act to enjoin the merger of two shoe retailers in *Brown Shoe Co v United States*.[58] The Court expanded *Cellophane*'s approach, at the risk of creating further confusion, by explaining that within a "broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes."[59] Instead of providing a bright-line rule to determine whether one is in a broad market or a submarket, the Court provided a nonexhaustive list of factors to consider: (1) industry or public recognition of the submarket as a separate economic entity, (2) the product's peculiar characteristics and uses, (3) unique production facilities, (4) distinct customers, (5) distinct prices, (6) sensitivity to price changes, and (7) specialized vendors.[60] By this light, it found the relevant lines of commerce were "men's, women's, and children's shoes," declining to recognize the appellant's narrower "price/quality" distinctions.[61]

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55 Id at 380–81. Cross-elasticity of demand is a measure of how functionally interchangeable competing commodities are from the consumer's perspective. For example, if an increase in the price of cellophane prompts significant substitution to other flexible packaging materials, the cross-elasticity of demand is high. For measurement techniques, see note 75.

56 *Cellophane*, 351 US at 400.

57 For a further discussion of anticompetitive effects, see Part II.B.

58 370 US 294 (1962).

59 Id at 325.

60 See id.

61 Id at 326.

Shortly after *Brown Shoe*, the Court endorsed the consideration of relevant submarkets. In *Grinnell*, a seller of monitored burglary, fire, and flood alarm services argued against § 2 Sherman Act allegations by maintaining that the relevant market should be defined broadly to include any product that set off an audible alarm at the homeowner's residence, even if that alarm was not centrally monitored in the way Grinnell's was.[62] The Court held that there is "no barrier to combining in a single market a number of different products or services where that combination reflects commercial realities."[63] That said, the Court considered substitutability, finding that Grinnell's suggested combination of centrally and noncentrally monitored systems was too broad to reflect the commercial reality that some portions of the consumer population could not easily substitute between the two types of systems.[64] The Court then affirmed the district court's definition of the relevant market as that submarket of the alarm industry consisting of accredited central station services.[65] *Grinnell* thus stands for the proposition that courts may fix the relevant market at the level of one or more submarkets, so long as the definition reflects commercial realities.

Several decades later, in *Eastman Kodak Co v Image Technical Services, Inc*,[66] the Court issued an oft-cited holding that "[t]he proper market definition . . . can be determined only after a factual inquiry into the 'commercial realities' faced by consumers."[67] A group of independent equipment servicing firms brought an action under §§ 1–2 of the Sherman Act, alleging that Kodak's policy of tying the sale of replacement parts to its sale of repair service undermined competing independent repair services. The Court considered the actual set of choices facing Kodak equipment owners—namely, from whom service and parts were available—in its assessment of commercial realities.[68] *Kodak*, like

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62 *Grinnell*, 384 US at 571–74.

63 Id at 572.

64 Id at 572–74 ("Though some customers may be willing to accept higher insurance rates in favor of cheaper forms of protection, others will not be willing or able to risk serious interruption to their businesses, even though covered by insurance, and will thus be unwilling to consider anything but central station protection.").

65 Id at 571, 575.

66 504 US 451 (1992).

67 Id at 482.

68 Id at 481–82.

Grinnell, stands for the proposition that a court may fix the relevant market at the level of one or more submarkets, so long as the definition reflects commercial realities.

Thus, the Court's market-definition jurisprudence accomplishes two major things. First, it reduces the scope of the definitional problem by actively managing a list of per se illegal behaviors that do not require reference to a relevant market. Second, for behaviors not on this list, the Court structures and focuses the process of market definition by endorsing a cross-elasticity-of-demand approach premised on substitutability, by recognizing the possibility that relevant submarkets may exist, and by leaving the appropriate delineation to judicial factual inquiry into the commercial realities faced by consumers.

C. Market Definition as a Problem of Complexity

Despite the Court's scope-limiting definitional jurisprudence, lower courts conducting "factual inquir[ies] into [ ] 'commercial realities'"[69] still must contend with the sheer complexity of defining a relevant market. Given their duty to oversee the definitional process, this pushes many judges outside their comfort zones. Two factors aggravate the problem. First, antitrust litigation depends heavily on complicated definitional tools and experts. Second, even seemingly straightforward concepts often have counterintuitive implications.

As to the first, because the relevant market is simultaneously complex, central to the outcome, and determined adversarially, it is unsurprising that reliance on experts has increased significantly in recent decades.[70] Commentators attribute this dependence both to successes in the law-and-economics movement that have made case-by-case analysis more feasible and to advances in industrial organization—the economic field concerned with antitrust—that have rendered it "more mathematically rigorous and

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69 Id at 482.

70 See Michael J. Mandel, *Going for the Gold: Economists as Expert Witnesses*, 13 J Econ Persp 113, 114 (Spring 1999) (describing "explosive growth in the economic consulting business in general, and the expert testimony and economic litigation support business in particular").

technically demanding."[71] Experts, in turn, rely on complex economic and statistical analyses to the point that they are now "standard fare in modern antitrust litigation."[72]

While these developments permit a more tailored approach to evaluating the challenged conduct, they come at a cost. Judge Richard Posner observed that "[e]conometrics is such a difficult subject that it is unrealistic to expect the average judge or juror to be able to understand all the criticisms of an econometric study, no matter how skillful the econometrician is in explaining a study to a lay audience."[73] Further, perhaps the one thing more confounding than complexity is a *variety* of complexity. In summarizing the legislative history of the 1950 amendments to § 7 of the Clayton Act, the *Brown Shoe* Court concluded that Congress "provid[ed] no definite quantitative or qualitative tests by which enforcement agencies could gauge the effects of a given merger," permitting instead a variety of methods.[74] Market definition thus implicates a number of technical tools to implement *Cellophane*'s interchangeability approach.[75]

Second, as if variety of complexity were not enough, even seemingly straightforward concepts often have counterintuitive implications. Among these, the *Cellophane* fallacy is infamous. Recall that du Pont's cellophane output amounted to roughly 75 percent of the US cellophane market but less than 18 percent of the flexible packaging materials market, and that the Court held

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71 Michael R. Baye and Joshua D. Wright, *Is Antitrust Too Complicated for Generalist Judges? The Impact of Economic Complexity and Judicial Training on Appeals*, 54 J L & Econ 1, 2 (2011) (discussing a shift toward rule-of-reason analysis over per se illegality).

72 Id at 3. In a recent survey of 714 antitrust cases in federal district courts, the written opinions collectively included the terms "expert reports" 332 times, "statistics" 290 times, "expert witnesses" 230 times, and "regression" 113 times. See id at 8. The survey reveals a variability in case complexity, evidenced, for example, by one opinion alone mentioning "regression" 46 times. See id.

73 Richard A. Posner, *The Law and Economics of the Economic Expert Witness*, 13 J Econ Persp 91, 96 (Spring 1999). Econometric analysis entails applying mathematical and statistical tools to economic data. For more on econometrics, see generally William H. Green, *Econometric Analysis* (Pearson 8th ed 2017).

74 *Brown Shoe*, 370 US at 321.

75 These include the hypothetical monopolist test, as well as diversion ratios and conditional logit demand analysis. For more background, see Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines* *8–10 (Aug 19, 2010), archived at http://perma.cc/5JCK-DJBB (discussing the hypothetical monopolist test). See also generally Lars Mathiesen, Øivind Anti Nilsen, and Lars Sørgard, *Merger Simulations with Observed Diversion Ratios*, 31 Intl Rev L & Econ 83 (2011) (demonstrating the utility of diversion ratios in merger simulations for antitrust cases); Daniel McFadden, *Conditional Logit Analysis of Qualitative Choice Behavior*, in Paul Zarembka, ed, *Frontiers in Econometrics* 105 (Academic Press 1974) (originating conditional logit demand analysis).

that du Pont had not monopolized the relevant market, which it concluded was all flexible packaging materials.[76] Unfortunately, the argument may be inconclusive. Imagine du Pont *was a monopolist* and had *already* raised prices accordingly. When prices are high, consumers may view some flexible packaging products as substitutes, not because they are functionally interchangeable, but because cellophane is simply too expensive. Including this type of substitution toward other flexible packaging materials could lead to an overbroad definition of the relevant market and the *contradictory* conclusion that du Pont was not a monopolist at all.[77]

This complexity has engendered two types of responses.[78] Some have suggested that the tension between the limitations of generalist judges and their duty to preside over the intricacies of market definition might be neatly resolved by specialized antitrust courts. While such a change appears unlikely, empirical studies demonstrating higher rates of appeals for district-court judges with little antitrust training support this argument.[79] Another approach has been the development of tools that do not rely on market definition.[80] Although the DOJ and the FTC have embraced the approach as a conceptual supplement to market definition,[81] current tools remain ill suited to the task of proceeding absent market definition, and courts have been loath to adopt them.[82]

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76 See text accompanying notes 14–17.

77 See George W. Stocking and Willard F. Mueller, *The Cellophane Case and the New Competition*, 45 Am Econ Rev 29, 53–54 (1955). The key for courts is to scrutinize whether products are actually functional substitutes.

78 For an examination of the relative merits of specialized courts and generalist courts in reviewing antitrust cases, see generally Douglas H. Ginsburg and Joshua D. Wright, *Antitrust Courts: Specialists versus Generalists*, 36 Fordham Intl L J 788 (2013).

79 See Baye and Wright, 54 J L & Econ at 13–19 (cited in note 71). The authors found basic economic training for jurists decreased appeals by over 10 percent for simple cases but did not measurably reduce appeals of more complex cases. See id at 15–16.

80 See generally Joseph Farrell and Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition*, 10 BE J Theoretical Econ 1 (2010).

81 See *Horizontal Merger Guidelines* at *21 (cited in note 75) (including upward pricing pressure among the measurement tools sanctioned by regulators as supplements to market definition).

82 See *City of New York v Group Health, Inc*, 649 F3d 151, 158 (2d Cir 2011) ("While the [plaintiff] explains the Upward Pricing Pressure test's usefulness in assessing the impact of a merger, it does not explain how the test can substitute for a definition of the relevant market in the pleadings."). But see *United States v Birks*, 2009 WL 1702030, *2 n 2 (D NJ) (admitting an expert's testimony involving upward pricing pressure).

* * *

All of this speaks to the idea that market definition is a judicially required, totality-of-the-circumstances process. It is adversarial rather than arbitrary, sophisticated rather than simple, and central rather than superfluous. In short, the outcome of the case often depends on how the lines are drawn—and these lines are battle lines.

While the process itself continues to evolve, so do industry conditions. Faced with new problems, firms have responded by devising new business methods or modifying old ones. But changed circumstances add an additional wrinkle to the definitional process. Increased recognition of the platform-based aspects of certain businesses has generated unanswered questions about whether and how the relevant market inquiry should account for them. This perceived gap forms the basis for Part II.

II. THE CHALLENGE POSED BY MULTISIDED PLATFORMS

A platform is a business method employed by a firm to "enable interactions between [ ] groups of users, each of which cares about the size and attributes of the other group[s] on the same platform."[83] By extension, one can define a multisided platform as encompassing two or more such user groups. Although no two business methods are identical, the class exhibiting multisidedness merits special treatment. In particular, it raises "various novel and challenging empirical and analytical issues" during market definition.[84]

This Part explores the importance of multisidedness to market definition. Part II.A frames multisidedness as a developing concept that attempts to solve two problems—transaction costs and network externalities created by interconnected user

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[83] Mark Armstrong and Julian Wright, *Two-Sided Markets* (Palgrave Macmillan, 2008), archived at http://perma.cc/P44X-X5M9. See also *Black's Law Dictionary* at 240 (cited in note 10) (describing a business method as a "way or an aspect of a way in which a commercial enterprise is operated"). Two-sided platforms are often called "two-sided markets." This Comment adopts the platform terminology to avoid confounding the market-definition question and because sidedness is properly an attribute of the business method rather than the market. See David S. Evans and Richard Schmalensee, *The Antitrust Analysis of Multisided Platform Businesses*, in Roger D. Blair and D. Daniel Sokol, eds, 1 *The Oxford Handbook of International Antitrust Economics* 404, 404 n 1 (Oxford 2015) (stating that "multisidedness is an attribute of an individual business that may not always be shared by all of its competitors" in a market).

[84] Jith Jayaratne and Janusz A. Ordover, *Economics and Competition Policy: A Two-Sided Market?*, 27 Antitrust 78, 80 (Fall 2012).

groups—and Part II.B chronicles divergent judicial opinions on the topic. This state of affairs suggests the value of a test for multisidedness, which Part III develops.

A. Economic Concept of Multisidedness

Payment cards are a canonical example of a multisided platform.[85] In this case, the platform is the payment architecture through which two groups—merchants and consumers—interact.[86] On one side of the platform, rivals like Visa, MasterCard, American Express ("Amex"), and Discover compete to sell network services to merchants.[87] That product involves authorization, settlement, and clearance of transactions.[88] On the other side, Visa, MasterCard, Amex, and Discover compete to issue cards and provide services to card-holding consumers.[89] This Section extends the payment-card example to consider three issues addressed by multisided platforms.

First, multisided platforms may be thought of as solving a problem of transaction costs—a broad term including marketplace bargaining, search, information, and enforcement costs. Before the advent of payment cards, merchants could engage in cash transactions or extend credit to individual consumers.[90] Differences in shopping behavior make "transactions with some customers more profitable for the merchant than transactions with others."[91] Hence, for centuries, merchants have selectively extended open-book credit to consumers with "high time costs, high incomes, and high wealth positions" to foster repeat business.[92]

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85 See generally William F. Baxter, *Bank Interchange of Transactional Paper: Legal and Economic Perspectives*, 26 J L & Econ 541 (1983). See also Weyl, 100 Am Econ Rev at 1642 (cited in note 5).

86 See Baxter, 26 J L & Econ at 544 (cited in note 85) (explaining that "each use of a credit card by a card holder must be matched by precisely one act of acceptance of the card . . . by a merchant").

87 See *United States v Visa U.S.A., Inc*, 344 F3d 229, 239 (2d Cir 2003).

88 Id.

89 See id. This competition plays out through intermediary banks in the case of Visa and MasterCard and directly to consumers in the case of Amex and Discover. See *United States v American Express*, 838 F3d 179, 188–89 (2d Cir 2016) ("Amex"), cert granted, *Ohio v American Express Co*, 2017 WL 2444673 (US) (explaining the difference between open- and closed-loop systems).

90 This example somewhat simplifies the number of options available to merchants.

91 Baxter, 26 J L & Econ at 572 (cited in note 85).

92 Id (stating that a consumer with high time costs tends to "shop when it is convenient for him rather than waiting for . . . sale[s]," tends to "consume less time of sales personnel," and tends to "decide more quickly because he conceives his quest to be locating the items he wants rather than making closely balanced tradeoffs with reference to price").

Additionally, when compared to cash, credit transactions prompt increased consumer willingness to pay, which translates into increased expenditures.[93] Credit is thus desirable to merchants in the sense that its usage increases gross revenues. Consumers likewise benefit by avoiding the risk of carrying cash and the time costs involved with traveler's checks.[94] While mutually beneficial, extending credit on individual terms is costly. Merchants must invest in determining individual creditworthiness, writing terms, billing periodically, managing collection, and—importantly—absorbing the cost of capital.[95] Conversely, consumers face a search problem in identifying merchants willing to extend credit. Payment platforms alleviate these transaction costs by facilitating credit and decreasing search costs.

Second, multisided platforms address the problem of interconnected demand. "Cardholders value credit or debit cards only to the extent that these are accepted by the merchants they patronize; affiliated merchants benefit from a widespread diffusion of cards among consumers."[96] Hence, merchant demand for network services and consumer demand for card issuance are linked by "indirect network effects," which exist when a consumer's willingness to pay depends on "the number of consumers . . . of another product."[97] Because neither side accounts for these effects, one can think of them as externalities.[98] A major role of the multisided platform is to internalize these effects.

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93 See Drazen Prelec and Duncan Simester, *Always Leave Home without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay*, 12 Mktg Let 5, 10–11 (2001).

94 Baxter, 26 J L & Econ at 573 (cited in note 85).

95 Id at 754. The cost of capital is the forgone return associated with extending credit instead of having put the same money in an interest-bearing investment.

96 Jean-Charles Rochet and Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J Eur Econ Assoc 990, 990 (2003).

97 Lapo Filistrucchi, et al, *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J Competition L & Econ 293, 296–97 & n 8 (2014) (distinguishing between direct and indirect network effects). For direct network effects, "willingness to pay for a product depends on the number of other consumers . . . of the same product." Id. For example, a direct network effect might exist for a particular chat application. There would be low demand for it if one's friends and colleagues (that is, the same user group) were not also users. As to indirect network effects, few people would demand a credit card that few merchants (that is, a different user group) will accept.

98 See id at 297. An externality is simply an effect imposed on another without taking it into account. There would be no externality if both products (card issuance and network services) were purchased by the same buyer because that buyer would presumably take both prices into account. See id. The externality here arises because each buyer purchases only one product and considers that product's price alone. Absent the platform, this would result in a suboptimal quantity of interactions.

This internalization entails the cost of getting all necessary sides onboard and keeping sufficient proportions of each group in place.[99] Amex reduced this onboarding cost by leveraging its preexisting customer base in the travel and entertainment industry, and before entering the payment-card market, Visa and MasterCard collaborated to pool merchants.[100] Additionally, pricing strategy is critical to getting and keeping all sides onboard. Because one group may be harder to attract than another, platforms charge different prices to each user group. Difficult-to-attract groups may even receive below-cost pricing.[101] This is the situation in the payment-card industry: some cardholders pay a reduced—or even negative—price by receiving rewards, while merchants pay positive prices.[102] Thus, an essential function of a multisided platform is to manage this interconnected demand via tailored cross-subsidization.

Third, multisided platform analysis is new enough that the economic literature has yet to settle on definitive bounds for the concept. In other words, what precisely is meant by multisidedness is controversial. A recent survey identified over two hundred topical papers in print or working format that appeared between 2007 and 2015.[103] Some commentators have advocated for broad interpretations, noting that "virtually all markets might be two-sided to some extent," while simultaneously recognizing that such sidedness "is not always quantitatively important."[104] Yet this presents a challenge for courts engaged in market definition. Because the anticompetitive impact of a challenged practice may be outsized in a narrower market and insignificant in a broader one, plaintiffs may have incentives to plead narrower relevant markets while defendants prefer broader ones. In the presence of multisidedness, one would expect plaintiffs to contend that certain sides of the platform should be excluded from the definition of the relevant market. This was the case in *United States v Visa U.S.A., Inc*,[105] which involved a § 1 Sherman Act

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99 These starting costs are not to be confused with entry barriers in the sense of § 2 Sherman Act monopolization.

100 *Amex*, 838 F3d at 187.

101 See Rochet and Tirole, 1 J Eur Econ Assoc at 1010–12 (cited in note 96).

102 Id at 1013 ("A higher interchange fee is . . . passed through to consumers in the form of lower card fees and higher card benefits . . . [and] passed through to merchants, who pay a higher merchant discount.").

103 Evans and Schmalensee, *The Antitrust Analysis of Multisided Platform Businesses* at 405 (cited in note 83).

104 Rysman, 23 J Econ Persp at 127 (cited in note 4).

105 344 F3d 229 (2d Cir 2003).

claim. The Government contended that the relevant market should exclude the market in which the card-issuing side of the platform operated, focusing instead on the market in which Visa provided network services to merchants.[106] One might then expect a defendant facing this definition to counter by including both the market for network services and the market for card issuance in its proposed definition.[107] Thus, the problem of market definition is exacerbated when the notion of multisidedness itself is subject to uncertainty. In that case, plaintiffs could not only argue for narrower definitions of the relevant market, but they could also argue for more restrictive interpretations of the concept of multisidedness itself. As Part II.B discusses, these challenges have led to a series of nebulous lower-court opinions.

B. Nebulous Opinions on Multisided Platforms

Judicial treatment of multisidedness during market definition is nascent, and courts have predictably differed in how to navigate the topic. This Section uses Sherman Act § 1 cases as a vehicle for exploring their differences. Specifically, the differences reflect alternate approaches to implementing § 1's rule of reason in the presence of multisidedness.

As discussed in Part I.A, rule-of-reason analysis under § 1 of the Sherman Act implicates market definition.[108] Conditional on a well-defined market, the rule of reason may be thought of as a balancing test: determining whether a restraint is unreasonable is akin to asking "whether its anticompetitive effects outweigh its procompetitive effects."[109] Because courts may trade off pro- and

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[106] Id at 239–40. The court held for the plaintiffs that network services and card issuance were separate markets rather than a single relevant market. See id at 240.

[107] Visa and codefendant MasterCard took another approach and attempted to broaden the market by including other forms of payment. See id at 239 (discussing "cash, checks, debit cards, and proprietary cards" like Sears or Macy's cards). Amex, in subsequent litigation, however, did advocate for a single relevant market encompassing both network services and card issuance. See *United States v American Express Co*, 88 F Supp 3d 143, 172 (EDNY 2015), revd, 838 F3d 179 (2d Cir 2016). While not the focus of this Comment, a defendant may also have strategic reasons for defining the relevant market narrowly, such as favorably framing the balance of pro- and anticompetitive impacts.

[108] See notes 31–36 and accompanying text.

[109] *Atlantic Richfield Co v USA Petroleum Co*, 495 US 328, 342 (1990). When applicable, analysis of pro- and anticompetitive trade-offs occurs in concert with the courts' burden-shifting frameworks. For example, once a plaintiff in the Third Circuit establishes the anticompetitive nature of the challenged conduct and the defendant proffers procompetitive justifications, the plaintiff "may then either rebut those justifications or demonstrate that the anticompetitive harm outweighs the procompetitive benefit." *Mylan Pharmaceuticals Inc v Warner Chilcott Public Ltd*, 838 F3d 421, 438 (3d Cir 2016). See

anticompetitive effects within the relevant market,[110] defining the relevant market is tantamount to establishing the space of allowable trade-offs. In particular, defining the relevant market to include all sides of the platform creates a broader space of allowable pro- and anticompetitive trade-offs: it provides the opportunity to trade procompetitive effects on one side of the platform for anticompetitive effects on the other side.

This environment creates high stakes that run throughout a growing body of case law. By considering cases that address the issue either directly or indirectly, this Section examines the ways in which lower courts have wrestled with whether and how to incorporate the transaction-cost and interconnected-demand features of multisidedness during market definition. The approaches may be grouped into those that have minimized the impact of multisidedness on market definition, those that have hedged on the issue, and those that have considered evidence of multisidedness directly.

1. Some courts have minimized multisidedness's impact on market definition.

Cases that define the relevant market as encompassing fewer than all sides of the platform narrow the space of allowable pro- and anticompetitive trade-offs and effectively eliminate a defendant's arguments that it manages interconnected demand. These may include actions taken to onboard various constituencies as well as the provision of benefits, such as differential pricing, needed to keep them on the platform.[111] The Second Circuit took this approach in *Visa*, which involved a Sherman Act § 1 claim.[112] The Government challenged exclusivity rules put in place by Visa and MasterCard that prohibited their member banks from issuing Amex and Discover cards,[113] meaning that bank customers would have to look elsewhere for these products. In applying

also *McWane, Inc v Federal Trade Commission*, 783 F3d 814, 833 (11th Cir 2015) (extending analysis of pro- and anticompetitive harms to a Sherman Act § 2 monopoly maintenance claim); Daniel C. Fundakowski, *The Rule of Reason: From Balancing to Burden Shifting*, 1 Persp Antitrust 1, 2 (Jan 2013), archived at http://perma.cc/HA4E-9NVD (explaining that almost 90 percent of rule-of-reason cases are dismissed for failure to establish anticompetitive effect prior to reaching the balancing stage).

110 See *Sullivan v National Football League*, 34 F3d 1091, 1111 (1st Cir 1994); *Golden v Kentile Floors, Inc*, 475 F2d 288, 290 (5th Cir 1973).

111 See notes 99–102 and accompanying text.

112 See *Visa*, 344 F3d at 234.

113 Id at 237.

Cellophane's interchangeability test, the court concluded that network services lacked reasonable substitutes, and it likewise determined that cash, checks, debit cards, and proprietary cards did not reasonably substitute for card issuance.[114] Although *Grinnell* said there is "no barrier to combining in a single market a number of different products or services where that combination reflects commercial realities,"[115] the Second Circuit found that the case involved "two interrelated, but separate, product markets."[116] The court then evaluated the challenged conduct's effect on competition in the network services market without reference to procompetitive benefits from the issuance side of the platform.[117]

The Second Circuit likewise restricted the space of allowable pro- and anticompetitive trade-offs in *United States v Apple, Inc*.[118] The case involved price fixing between Apple and e-book publishers in response to Amazon's low Kindle pricing.[119] Although the court held that the organizer of a "price-fixing conspiracy" across competitors may not escape a finding of per se illegality under § 1 of the Sherman Act,[120] it also conducted an abbreviated rule-of-reason analysis in the alternative.[121] While e-book platforms may exhibit multisidedness—with publishers on one side[122] and customers desiring access to a large variety of works on the other—the court did not include both sides of the platform in its eventual definition. Instead, its relevant market included competition only between rivals like Amazon and Apple for publisher contracts.[123] This had the effect of limiting allowable pro- and anticompetitive effects to those on the publisher side of the platform. Accordingly, the court rejected Apple's arguments that its entry "represented an important procompetitive benefit of the horizontal price-fixing conspiracy it orchestrated."[124]

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114 Id at 239.

115 *Grinnell*, 384 US at 572.

116 *Visa*, 344 F3d at 238.

117 See id at 239–40.

118 791 F3d 290 (2d Cir 2015).

119 See id at 326–29.

120 Id at 297.

121 See id at 329–35. See also *California Dental Association v Federal Trade Comission*, 526 US 756, 779–81 (1999) (originating the abbreviated rule-of-reason analysis).

122 The value to publishers of more consumers matters if compensation—which could be structured in a number of ways—is paid per transaction.

123 See *Apple*, 791 F3d at 330–34.

124 Id at 334. In particular, the court rejected the idea that the procompetitive benefit of more competitors in the market, due to Apple's entry, justified its price fixing. See id.

Cases like *Visa* and *Apple*, which define the relevant market as encompassing fewer than all sides of a platform, restrict the space of allowable pro- and anticompetitive trade-offs and render a defendant's management of interconnected demand irrelevant. This is often fatal to the defendant's case. That said, even when multisidedness legitimately exists, excluding it is not necessarily inappropriate. This observation forms the basis for Part III.

2. Some circuits have hedged with respect to interconnected market segments.

Not all courts have treated multisidedness directly. However, knowing whether a court permits trade-offs across related market segments—a more basic inquiry—may be indicative of how it *would* view multisidedness.[125] The Third Circuit, in *King Drug Co of Florence, Inc v SmithKline Beecham Corp*,[126] did not address multisidedness directly and hedged on whether it would allow trade-offs across markets. The case involved an agreement challenged under § 1 of the Sherman Act,[127] in which the defendant—a manufacturer of chewable epilepsy and bipolar disorder pharmaceuticals—agreed to relinquish its right to produce an authorized generic for a certain period of time.[128] In particular, the court allowed that "at the pleading stage plaintiffs have sufficiently alleged that any procompetitive aspects of the chewables arrangement were outweighed by the anticompetitive harm," but then mused that "[i]t may also be (though we do not decide) that 'procompetitive effects in one market cannot justify anticompetitive effects in a separate market.'"[129] The ability to operate across distinct markets characterizes a multisided platform.[130] Therefore, the Third Circuit's reservation of judgment makes it hard to predict whether it will eventually incorporate multisidedness into market definition.

The Ninth Circuit is likewise undecided whether pro- and anticompetitive effects may be traded off across market segments. It

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[125] Multisided platforms manage the interconnected demand of user groups in market segments on different sides of the same platform. See notes 96–102 and accompanying text. Whether a court permits trade-offs across related market segments matters for whether it would consider defining the relevant market to include all sides of the platform.

[126] 791 F3d 388 (3d Cir 2015).

[127] See id at 392–93 (explaining that the plaintiff also brought a Sherman Act § 2 claim).

[128] See id at 396–97.

[129] Id at 410 & n 34.

[130] See notes 99–102 and accompanying text.

wrestled with the issue in *Paladin Associates, Inc v Montana Power Co*.[131] In that case, a private plaintiff brought a § 1 Sherman Act case dealing with the assignment of natural gas transportation rights. While the court had considered a market for pipeline transportation, the defendants' customers testified that the assignments had a procompetitive effect in the natural gas commodity market. Acknowledging the effect, the court stated, "It may be, however, that this procompetitive effect should not be considered in our rule of reason analysis, based on the theory that procompetitive effects in a separate market cannot justify anti-competitive effects in the market . . . under analysis."[132]

3. Other courts have considered evidence of multisidedness.

Some courts have made implicit or explicit usage of multisidedness in arriving at their holdings. If multisided platforms solve a transaction-cost problem between groups that have trouble interacting absent the platform,[133] then a significant challenge managed by payment platforms is facilitating credit extension and payment among the thousands of different banks used by merchants and cardholders. *National Bancard Corp v Visa U.S.A., Inc*[134] ("NaBanco") involved a privately enforced claim under § 1 of the Sherman Act in which NaBanco alleged that Visa addressed this problem anticompetitively.[135]

Understanding the claim requires a bird's-eye view of the platform's mechanism, as shown in Figure 1.

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131 328 F3d 1145 (9th Cir 2003).

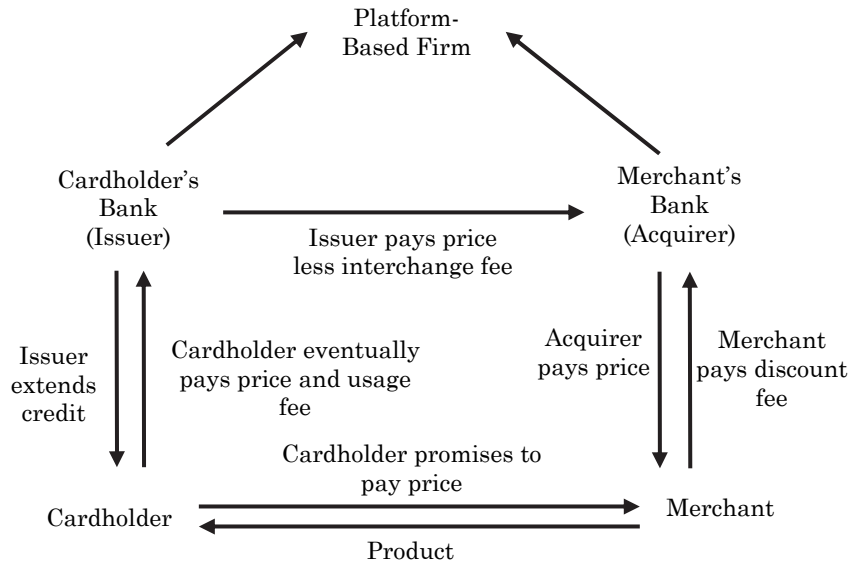
132 Id at 1157 n 11. Further, the Ninth Circuit declined to decide whether language in an earlier Supreme Court opinion that might support the interpretation was valid or was "not controlling because it is a dictum or incomplete or obsolete." Id, citing *United States v Topco Associates, Inc*, 405 US 596, 610 (1972) (stating that competition "cannot be foreclosed with respect to one sector of the economy because certain private citizens or groups believe that such foreclosure might promote greater competition in a more important sector").

133 See notes 90–95 and accompanying text.

134 779 F2d 592 (11th Cir 1986).

135 See id at 593.

FIGURE 1. FIVE-PARTY PAYMENT SYSTEM



When a cardholder makes a credit purchase using Visa or MasterCard, the merchant's bank pays the merchant the full purchase price and collects a discount fee from the merchant for performing the service.[136] Before doing so, the cardholder's bank typically extends credit to the cardholder and arranges to pay the merchant's bank the purchase price less an interchange fee.[137] This system solves the transaction-cost problem that would arise if the merchant's bank had to bilaterally contract with each and every cardholder's bank.[138] A platform like Visa or MasterCard sets the interchange fee directly, which, in turn, helps determine the amount of the merchant's discount fee.

NaBanco claimed that Visa's practice of centrally setting the interchange fee was tantamount to price fixing across competitors within an industry.[139] If supported by the facts, such price fixing would be per se illegal under § 1 of the Sherman Act.[140] The

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[136] See *Amex*, 838 F3d at 188. The discount fee is the price the merchant pays the acquiring bank to process the patron's card and to avoid having to extend credit itself. See note 95 and accompanying text (discussing the cost of capital).

[137] See *Amex*, 838 F3d at 188. The issuing bank pays the interchange fee to the acquiring bank for facilitating the issuer's extension of credit to the patron.

[138] It also solves the transaction-cost problem discussed in Part II.A related to merchants extending credit directly. See notes 90–95 and accompanying text.

[139] See *NaBanco*, 779 F2d at 596.

[140] See text accompanying notes 47–50.

NaBanco decision is unique in that it considers evidence of multisidedness, not just to constrain the space of allowable pro- and anticompetitive trade-offs, but also to establish the need for rule-of-reason analysis (and market definition) over § 1's per se rule. The Eleventh Circuit held that the challenged conduct "was not a naked restraint of competition and therefore not per se price fixing."[141] In arriving at this conclusion, it considered the value of the platform as a "joint enterprise," recognizing its need to manage the problem of getting and keeping both cardholders and merchants onboard.[142] It reasoned that the interchange fee "accompanies 'the coordination of other productive or distributive efforts of the parties' that is 'capable of increasing the integration's efficiency and no broader than required for that purpose.'"[143]

Evidence of multisidedness was also instrumental to the Second Circuit's market definition in *United States v American Express Co*[144] ("Amex"). The case involved a § 1 Sherman Act allegation and a payment-card platform similar to the one at issue in *Visa*.[145] In particular, Amex, Visa, and MasterCard put various provisions—including Amex's nondiscriminatory provisions (NDPs)—into their contracts with card-accepting merchants, prohibiting them from steering cardholders toward other methods of payment.[146] Plaintiffs alleged that absent the NDPs, "merchants would be able to use steering 'at the point of sale to foster competition on price and terms among sellers of network services' by encouraging customers to use less expensive or otherwise preferred cards."[147] Visa and MasterCard settled; Amex went to trial. In contrast to its market definition in *Visa*, the Second Circuit in *Amex* held that the district court had erred in declining to "collaps[e] the issuance and network services markets into a single

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141 *NaBanco*, 779 F2d at 603.

142 See id at 602.

143 Id, quoting Robert H. Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division*, 75 Yale L J 373, 474 (1966).

144 838 F3d 179 (2d Cir 2016), cert granted, *Ohio v American Express Co*, 2017 WL 2444673 (US).

145 See id at 185–86.

146 Id at 191–92. One method of steering involves offering customers discounts or nonmonetary incentives to use another payment method. See id at 184.

147 Id at 192. Amex is known for high cardholder rewards and high merchant discount fees. Absent contractual prohibitions, merchants have incentives to steer Amex customers toward paying with another method in order to avoid the fees while still reaping the benefits of selling to Amex's "marquee" cardholders. See id at 188–90 (explaining that Amex's higher-end customers tend to spend more than other types of cardholders).

platform-wide market for transactions."[148] In applying *Cellophane*'s interchangeability standard and *Grinnell*'s commercial-realities framework,[149] the court distinguished *Visa* by explaining:

> The *Visa* panel thus did not conduct a rule-of-reason analysis to determine whether *vertical* restraints were inhibiting competition on one particular *side* of a two-sided platform. Instead, the *Visa* panel conducted a rule-of-reason analysis to determine whether *horizontal* restraints were inhibiting competition on one particular *level* of competition contained within a two-sided platform.[150]

Conditional on this logic, the relevant product market in *Amex* was the entire multisided platform, which the court established in part by reference to intraplatform feedback effects between merchants and cardholders. In particular, payment-card platforms must price so as to bring and keep both sides onboard.[151]

While the outcome appears correct,[152] were Visa to write similar exclusionary contracts today, the court's horizontal–vertical distinction may be insufficient to produce the same outcome. Understanding why requires understanding horizontal and vertical restraints. A horizontal restraint is one "imposed by agreement between competitors at the same level of distribution. The restraint is horizontal not because it has horizontal effects, but because it is the product of a horizontal agreement."[153] A vertical restraint is one "imposed by agreement between firms at different levels of distribution."[154]

The NDPs in *Amex* are best viewed as vertical restraints with intended effects on horizontal competition. First, Amex operates a three-party system, as shown in Figure 2.

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[148] *Amex*, 838 F3d at 197.

[149] Id at 196–97. See also Part I.B.

[150] *Amex*, 838 F3d at 198.

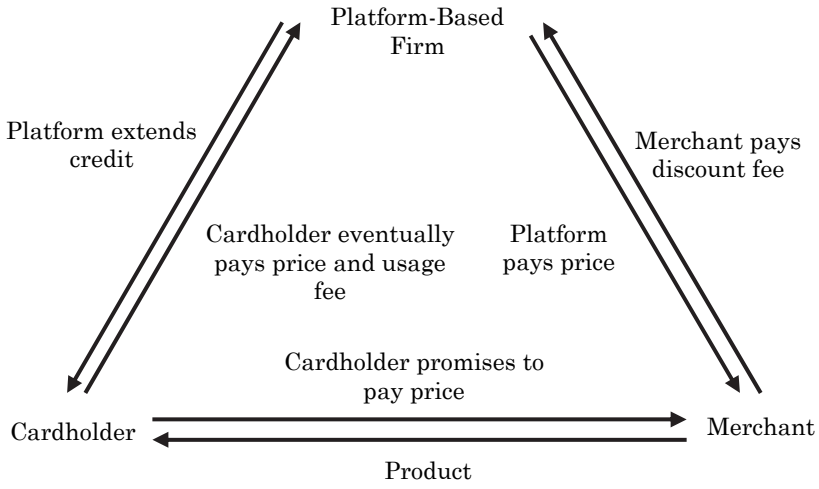
[151] See id at 200 (discussing pricing's impact on onboarding both sides of the platform).

[152] See Part III.B.

[153] *Black's Law Dictionary* at 1508 (cited in note 10).

[154] Id. The Second Circuit itself embraces similar definitions. See *Amex*, 838 F3d at 194 ("Restraints imposed by agreement between competitors have traditionally been denominated as horizontal restraints, and those imposed by agreement between firms at different levels of distribution as vertical restraints."), quoting *Business Electronics Corp v Sharp Electronics Corp*, 485 US 717, 730 (1988).

FIGURE 2. THREE-PARTY PAYMENT SYSTEM



Such a system differs from that of Visa and MasterCard (shown in Figure 1) in that it eliminates the banking layer.[155] Second, the *Amex* NDPs appeared in a contract between Amex and its merchants.[156] Such restraints are vertical.[157] They prevented merchants from steering cardholders on the other side of the platform toward other methods of payment, including those offered by competing platforms.[158] These intended effects are thus horizontal.

On *Visa*'s facts, its exclusionary rules were likely horizontal restraints. This is because Visa and MasterCard were structured as "open, joint venture associations with members (primarily banks) that issue payment cards, acquire merchants who accept payment cards, or both."[159] The district court found that the members competed with each other on "pricing, fees and finance

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155 See *Amex*, 838 F3d at 188–89 (comparing closed- and open-loop systems). See also Filistrucchi, et al, 10 J Competition L & Econ at 304–06 (cited in note 97) (discussing four- and five-party payment systems).

156 See *Amex*, 838 F3d at 190–91.

157 See *Black's Law Dictionary* at 1508 (cited in note 10). The conclusion requires that a vertical chain includes its customer, as the court seems to accept. See *Amex*, 838 F3d at 197–98.

158 See id at 191–92.

159 *United States v Visa U.S.A., Inc*, 163 F Supp 2d 322, 332 (SDNY 2001) (explaining that Visa and MasterCard "do not have stock, or shareholders; just members and membership interests"). See also id at 399, citing *Broadcast Music, Inc v Columbia Broadcasting System, Inc*, 441 US 1, 23–25 (1979) (discussing joint ventures), and *Northwest Wholesale Stationers, Inc v Pacific Stationery & Printing, Co*, 472 US 284, 293–98 (1985) (employing rule-of-reason analysis on allegedly exclusive behavior by a cooperative).

charges, product features and other services for cardholders and merchants."[160] As such, the Second Circuit found that the restrictive provision was "a horizontal restraint adopted by 20,000 competitors."[161] In terms of Figure 1, the court determined that the restraint existed between banks at the issuer–acquirer level and treated the platform as a mere extension of those banks. The *Amex* court then distinguished the cases on this horizontal–vertical logic.[162]

However, MasterCard went public in 2006, and Visa followed suit in 2008.[163] Doing away with the membership-based structure increases the likelihood that similarly situated contracts between Visa and the issuing banks could be characterized as vertical restraints. In part, this is because the absence of shareholders had supported Visa and MasterCard's characterization as joint ventures.[164] In terms of Figure 1, the change in corporate structure may compel future courts to treat the platform as a stand-alone entity and determine that similarly situated contracts exist between the platform firm and an issuing bank, rather than among banks at the same level.[165] Because such contracts would nevertheless impact industry competitors, they would be properly considered vertical agreements intended to have horizontal effects on competition. However, Amex's NDPs were likewise vertical restraints with intended horizontal effect. The structural change thus tends to erode the Second Circuit's horizontal–vertical distinction.

This erosion is consequential in the following ways. First, because *Visa* and *Amex* were distinguishable on the court's

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160 *Visa*, 163 F Supp 2d at 332–33. Because Amex issues cards directly, it also competes with the issuing banks. See note 155 and accompanying text. See also Figures 1–2.

161 *Visa*, 344 F3d at 242.

162 See text accompanying notes 149–51.

163 See Katie Benner, *Visa's $15 Billion IPO: Feast or Famine?* (Fortune, Mar 18, 2008), archived at http://perma.cc/NQX9-N3U2. See also Filistrucchi, et al, 10 J Competition L & Econ at 305 (cited in note 97) ("As a result of regulatory and competition policy interventions, payment-card associations transformed themselves into payment-card companies, giving rise to a fifth system participant. Hence, a distinction is often made between four-party and five-party systems.").

164 See note 159 and accompanying text.

165 Should Visa's and MasterCard's new structures be more form than substance, the court has recourse to a *Copperweld* argument. See *Copperweld Corp v Independence Tube Corp*, 467 US 752, 773 n 21 (1984) (explaining that "substance, not form, should determine whether a[n] . . . entity is capable of conspiring under § 1"). When that is the case, the degree of separation matters. See *American Needle, Inc v National Football League*, 560 US 183, 195 (2010) ("The key is whether the alleged 'contract, combination . . . , or conspiracy' is concerted action—that is, whether it joins together separate decisionmakers.").

horizontal–vertical logic at the time of decision, the test in Part III is not strictly required to reconcile the two cases. However, it serves as an alternative approach to distinguishing the cases *without* recourse to horizontal–vertical logic. In the present environment, such an approach could be useful in cases in which directionality is harder to tease out or fails entirely. Second, advances in economic and statistical methodology have rendered finer-grained analysis more feasible.[166] To the extent that horizontal and vertical labeling stands in as a first-order approximation of the more nuanced fundamentals of competition in the relevant market, and to the extent business methods continue to evolve in complex—and potentially nondirectional or multidirectional ways—improvements in methodology may render such labeling less important. When horizontal and vertical distinctions tell an incomplete tale, the test in Part III permits analysis without recourse to directionality.

III. TESTING FOR MULTISIDEDNESS DURING MARKET DEFINITION

This Comment presents market definition as a contested problem of comparative harm and complexity. Because rule-of-reason analysis allows courts to trade off pro- and anticompetitive effects within the relevant market,[167] defining the relevant market is akin to establishing the space of allowable trade-offs.[168] This is why market definition is frequently outcome determinative. To this, multisidedness adds the challenges of incorporating transaction costs and interconnected demand. Predictably, courts have differed on how to navigate these waters. In particular, defining the relevant market to include all sides of the platform creates a broader space of allowable pro- and anticompetitive trade-offs during rule-of-reason analysis. Because plaintiffs and defendants often have opposing incentives concerning the applicability of multisidedness to market definition,[169] knowing when to disregard or accept arguments concerning multisidedness is crucial. In this context, the courts could benefit from a test that seeks to determine when the relevant market should incorporate all sides of the platform.

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166 See notes 71–72 and accompanying text.

167 See *Capital Imaging Associates, PC v Mohawk Valley Medical Associates, Inc*, 996 F2d 537, 543 (2d Cir 1993).

168 See notes 109–10 and accompanying text.

169 See notes 103–07 and accompanying text.

Part III.A proposes a two-stage test. In the first stage, a court should exclude proffered multisidedness when any of the listed factors do not hold. In the second stage—and conditional on passing the first—a court should, under particular conditions, define the relevant market to include all sides of the platform. Part III.B applies this test to demonstrate an alternate approach to distinguishing the Second Circuit's decisions in *Visa* and *Amex*.

A. Testing for Multisided Effects

Although recent, multisided platform theory is nevertheless well studied.[170] Various parts of the economics literature have proposed guidelines for courts, including lists of factors for the courts to consider when dealing with multisided platforms.[171] This Comment likewise proposes a list; however, its contribution is to compile factors—justified *both* by case law and economic theory—that serve as a test for when courts should and should not incorporate multisidedness in market definition.

There are at least four reasons for developing such a test. First, courts justifiably can and do consider evidence of multisidedness in market definition.[172] Second, market definition will likely persist in the foreseeable future. While academics and practitioners have developed measures of anticompetitive behavior that do not rely on market definition, Supreme Court precedent continues to endorse analysis of the relevant market for many types of claims.[173] Third, avoiding unjustified inclusion of multisided effects in market definition promotes judicial accuracy.

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[170] See note 103 and accompanying text (noting the existence of more than two hundred recent articles on the topic).

[171] See, for example, Filistrucchi, et al, 10 J Competition L & Econ at 302, 322, 332–33 (cited in note 97).

[172] See *Times-Picayune Publishing Co v United States*, 345 US 594, 610 (1953) (recognizing that "every newspaper is a dual trader in separate though interdependent markets," namely those for subscribers and advertisers). While it went on to consider anticompetitive effects under §§ 1 and 2 of the Sherman Act on only the advertising side, the Court did not bar combined analysis and further recognized that "[t]he 'market,' as most concepts in law or economics, cannot be measured by metes and bounds." Id at 611. Some thirteen years later, the *Grinnell* Court, while endorsing *Cellophane*'s interchangeability approach, went on to hold that there is "no barrier to combining in a single market a number of different products or services where that combination reflects commercial realities." *Grinnell*, 384 US at 572. See also text accompanying notes 62–65.

[173] See *Grinnell*, 384 US at 570–71 (explicitly including the notion of a relevant market in the elements of a § 2 Sherman Act claim). See also notes 81–82 and accompanying text. The collection of measures for determining anticompetitive behavior absent market definition may be undertheorized: existing measures like the Gross Upward Pricing

Fourth, clarity serves to decrease meritless and costly market definition. In this sense, an overly inclusive interpretation risks a slippery slope in which antitrust enforcement lacks teeth against broadening relevant markets. Likewise, an excessively restrictive interpretation may benefit parties that are not typically the objects of antitrust law.[174]

The test proceeds in two stages. In the first, a court asks (1) whether the business method can explicitly charge different prices to the distinct groups to which it provides goods or services; (2) whether each group's benefit depends on the extent of participation by the other groups provisioned by the same business method and whether that participation varies based on market conditions; and (3) whether the platform is capable of, and generally does, set uniform prices in the markets in which each group participates. All three factors must hold, or multisidedness should be excluded from market definition.

Assuming all three stage one factors are satisfied, the court moves on to the second stage and asks whether the challenged conduct is designed principally to ensure continued availability of the platform's differentiated products. If so, the relevant market should encompass the market segments in which all sides of the platform operate.[175]

Pressure Index tend to be granular. Even as academics and practitioners refine these approaches, one might expect courts to consider multiple different measures, including traditional market-definition-based arguments.

[174] For example, antitrust harms are comparative, and a narrower relevant market tends to magnify antitrust impact. See notes 14–17 and accompanying text. Because demonstrating antitrust injury is required for private standing, judicial thresholds favoring narrower relevant markets may multiply the number and types of plaintiffs who survive dismissal motions. See notes 18, 32–36 and accompanying text. Adjusting the threshold for all plaintiffs increases the likelihood of successful litigation by competitors within an industry, even though competitors are not typically the focus of antitrust protection. See *Brunswick*, 429 US at 488 ("The antitrust laws [ ] were enacted for 'the protection of *competition*, not *competitors*.'"). The converse is true for judicial thresholds favoring broader relevant markets.

[175] Determining the extent of the relevant market then implicates standard definitional tools like the hypothetical monopolist test. However, "[m]ost standard approaches to market definition . . . do not apply to two-sided markets without modification, occasionally radical in nature." *Two-Sided Markets*, in ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies* 437, 438 (ABA 2012). Fortunately, economists have developed multisided versions of both the critical-loss and demand-estimation methods for determining whether a hypothetical monopolist would likely impose a small but significant and nontransitory increase in price. See, for example, id at 452–59. After a court tests for and concludes that multisidedness merits consideration, the analysis shifts to determining the *extent* of those relevant market segments on each side of the platform.

1. Stage one: exclusion.

The first stage aims to exclude proffered multisidedness that does not satisfy certain conditions. The same task might be accomplished by a clean definition of multisidedness—and in many ways the first stage is a sort of "definition." However, it is important to distinguish between definitions meant to frame multisidedness conceptually and those suited for use in scoping the relevant market. Because conceptual definitions must introduce readers to a potentially unfamiliar topic, they involve some level of curation. For example, consider two popular definitions. Professors Jean-Charles Rochet and Jean Tirole propose a price-centric interpretation of multisidedness[176] while Professors David Evans and Richard Schmalensee propose an interpretation centered on transaction costs and interconnected groups.[177] Although they differ in focus, these definitions are not contradictory. And courts appear to cite them for their conceptual-framing value rather than during market definition itself.[178]

Any operational definition of multisidedness intended to help scope the relevant market must be capable of both fine-grained and flexible application to ex ante fact patterns. This is because the *Kodak* Court mandated a fact-intensive inquiry into consumer-level commercial realities,[179] meaning that rule-of-reason analyses should consider potentially unique business practices, industry structures, and consumer interactions. Further, in *Times-Picayune Publishing Co v United States*[180] and *Grinnell*, the Court endorsed the consideration of interconnected markets and submarkets, both of which are germane to multisidedness.[181]

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176 Jean-Charles Rochet and Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J Econ 645, 664–65 (2006) (explaining that a platform is two sided if it "can affect the volume of transactions by charging more to one side of the [platform] and reducing the price paid by the other side by an equal amount; in other words, the price structure matters, and platforms must design it so as to bring both sides on board").

177 David S. Evans and Richard Schmalensee, *Catalyst Code: The Strategies behind the World's Most Dynamic Companies* 3 (Harvard Business 2007) (explaining that a multisided platform "has (a) two or more groups of customers; (b) who need each other in some way; but (c) who can't capture the value from their mutual attraction on their own; and (d) rely on the [platform] to facilitate value-creating reactions between them").

178 See *Amex*, 838 F3d at 185 n 3 (discussing Rochet and Tirole's definition in the background portion of the opinion); *US Airways Inc v Sabre Holdings Corp*, 2017 WL 1064709, *8 (SDNY) (discussing Rochet and Tirole's definition, as well as Evans and Schmalensee's definition, prior to starting market-definition analysis).

179 See *Kodak*, 504 US at 482. See also text accompanying notes 66–67.

180 345 US 594 (1953).

181 See id at 610; *Grinnell*, 384 US at 572. See also text accompanying notes 62–63.

The factors of an operational definition implicating interconnected markets must be foundational enough to satisfy the fine-grained flexibility mandate of *Kodak*, *Times-Picayune*, and *Grinnell*.

Stage one of the test is just such an operational definition. This Comment argues that the factors best suited to fine-grained and flexible analysis are the primitives from which applied theorists build industrial organization models of multisidedness.[182] In this context, the term "primitives" refers both to the motivating problems a multisided platform must solve and the necessary elements of businesses that try to address those problems. The former pertains to notions of transaction costs and interconnected demand that motivated economists to develop multisided platform theory in the first place.[183] Any test for multisidedness must incorporate these motivating problems or risk answering the wrong question entirely.

These primitives are appropriate for constructing a legally justified test for four reasons. First, antitrust law is inseparable from its economic underpinnings, and the courts have long looked to the industrial organization literature to inform judicial precedent.[184] Second, the fact that these primitives are capable of generating models with distinct predictions about industry behavior suggests they are also elemental enough to satisfy *Kodak*'s flexibility mandate. Third, although it may be appropriate for conceptual definitions of multisidedness to differ in focus, greater commonality may be found in the primitives.[185] Finally, were courts to adopt particular conceptual definitions, they could become

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[182] See generally, for example, Bernard Caillaud and Bruno Jullien, *Competing Cybermediaries*, 45 Eur Econ Rev 797 (2001); Bernard Caillaud and Bruno Jullien, *Chicken & Egg: Competition among Intermediation Service Providers*, 34 RAND J Econ 309 (2003); Rochet and Tirole, 1 J Eur Econ Assoc 990 (cited in note 96); Simon P. Anderson and Stephen Coate, *Market Provision of Broadcasting: A Welfare Analysis*, 72 Rev Econ Stud 947 (2005); Rochet and Tirole, 37 RAND J Econ 645 (cited in note 176); Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J Econ 668 (2006); Weyl, 100 Am Econ Rev 1642 (cited in note 5).

[183] See Part II.A.

[184] See, for example, *Cellophane*, 351 US at 380–81 (citing, without attribution, the economic concept of cross-elasticity of demand); *City of New York v Group Health, Inc*, 649 F3d 151, 157 n 2 (2d Cir 2011) (discussing the economic concepts of diversion ratios and upward pricing pressure).

[185] Compare Rochet and Tirole, 37 RAND J Econ at 665 (cited in note 176), with Evans and Schmalensee, *Catalyst Code* at 3 (cited in note 177). While the former focuses its definition on prices and transaction volume and the latter concentrates on transaction costs, each article recognizes the importance of both transaction costs and prices.

precedential. At best, because any definition necessarily implicates a particular focus, adopting one definition would constrain a court in cases in which separate fact patterns suggest an alternate focus. At worst, such a limitation runs counter to *Kodak*'s rule-of-reason principles. In this vein, this Comment treats these conceptual definitions of multisidedness as helpful signposts in a movement toward the primitives.

a) Factor one: whether the business method can explicitly charge different prices to the distinct groups to which it provides goods or services.[186] A court should consider evidence of whether the proffered platform provisions distinct groups on distinct sides of the platform as well as whether it can charge those groups differentially. This is significant as an exclusionary criterion. First, consider a video game platform that connects gamers with developers by selling game consoles on one side of the platform and development kits and licenses on the other.[187] Gamers and developers constitute distinct groups, and the platform's function is to facilitate their interaction. While both groups purchase products from the platform (consoles and development licenses), the transaction as a whole may also be thought of as having a demand-side component (gamers) and a supply-side component (developers). The sides purchase distinct products and thus may be explicitly

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[186] Apart from the realization that the law's mandate of fine-grained and flexible analysis is well satisfied by the primitives from which applied theorists build industrial organization models of multisidedness, another of this Comment's contributions is to specifically identify those primitives and to translate them into the factors of a permissible legal test. Arriving at this end involved sifting through applied theory papers for the most appropriate and widely accepted primitives. Thus, each factor begins with a note explaining which papers support its inclusion. Because theory papers are not known for being light on mathematical notation, and because much of it is extraneous to the Comment's inquiry, the explanatory parentheticals in these notes should help interested readers navigate to the variables or parameters that support the factor.

As to this particular factor, see Caillaud and Jullien, 34 RAND J Econ at 311–12 (cited in note 182) (assuming two separate groups—which the paper denotes as $i \in \{1,2\}$—whose interaction is facilitated by two matchmakers—$k \in \{I, E\}$—and who pay prices p_1^k and p_2^k); Rochet and Tirole, 1 J Eur Econ Assoc at 995 (cited in note 96) (defining a benchmark with distinct groups of end users B and S, whose transactions are mediated, and who may be charged explicitly different prices p^B and p^S); Rochet and Tirole, 37 RAND J Econ at 652 (cited in note 176) (defining a model with distinct user groups $i \in \{B, S\}$, who interact indirectly, and who pay a membership fee A^i and a usage fee a^i that vary based on group affiliation); Armstrong, 37 RAND J Econ at 671–72 (cited in note 182) (assuming groups 1 and 2, who pay prices p_1 and p_2 through the mechanism). See also Weyl, 100 Am Econ Rev at 1644 (cited in note 5).

[187] See, for example, Rysman, 23 J Econ Persp at 125, 129–31 (cited in note 4); Lapo Filistrucchi, Damien Geradin, and Eric van Damme, *Identifying Two-Sided Markets*, 36 World Competition 33, 37 (2013).

charged different prices. Newspapers similarly connect subscribers and marketers by selling news content on one side of the platform and advertising space on the other.[188] This transaction, too, may be thought of as having a demand side and a supply side (advertisers that desire viewer impressions and readers who tolerate the ads in order to access content). The ability to recharacterize the transaction as one of demand and supply sides, however, is not essential. Consider an online dating platform that seeks to pair women and men.[189] The groups may, though need not be, charged different prices. Second, it helps to see an example of groups that are not distinct. Take the example of a firm that sells a chat application without advertising. Its goal is simply to maximize profits without regard to any particular composition of the usership. While the users may happen to be quite diverse, this is beside the point. The firm's business method does not center on facilitating interactions in which the defining feature is that the users belong to meaningfully separate groups.

b) Factor two: whether each group's benefit depends on the extent of participation by the other groups provisioned by the same business method and whether that participation varies based on market conditions.[190] A court should consider evidence of cross-network effects that increase each group's benefits as participation by the other groups increases.[191] This factor is significant as an exclusionary criterion. First, it rejects multisidedness for a firm in the absence of cross-group network effects. For example, cardholders benefit from widespread acceptance by merchants,

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[188] See, for example, Weyl, 100 Am Econ Rev at 1642–43 (cited in note 5).

[189] Perhaps one might say that each group demands the other and supplies itself.

[190] See Caillaud and Jullien, 34 RAND J Econ at 313 (cited in note 182) (describing one group's utility in terms of the number of participants from the opposite group, and characterizing the number of participants as varying with market prices); Rochet and Tirole, 1 J Eur Econ Assoc at 995 (cited in note 96) (explaining that the surplus for a member of one group is net surplus multiplied by the extent of participation in the other group and that the extent of participation varies based on prices); Rochet and Tirole, 37 RAND J Econ at 653 (cited in note 176) (detailing that the utility for one group depends on the number of participating members on the other side and that the number of participants depends on prices); Armstrong, 37 RAND J Econ at 671–72 (cited in note 182) (same). See also Weyl, 100 Am Econ Rev at 1644 (cited in note 5).

[191] See, for example, Weyl, 100 Am Econ Rev at 1646 (cited in note 5). See also notes 96–98 and accompanying text (explaining that each group cares about the size and attributes of other groups on the same platform).

and merchants value widespread diffusion of cards among consumers.[192] Developers value game consoles that have more gamers, and gamers value consoles with more games.[193] Of note, the presence of within-group network effects alone is insufficient to justify multisidedness absent the presence of cross-group network effects. For example, if users' benefits of participating in a chat application increase uniquely as a function of the number of other users of the same type, then a within-group network effect exists. This factor does not bar the presence of such effects; it merely requires the presence of cross-network effects. As discussed, payment-card platforms display cross-network effects between cardholders and merchants,[194] but if merchants also happened to benefit more when more merchants used the platform, this would be a permissible—but unnecessary—within-group effect.[195] Second, this factor rejects multisidedness when the extent of user participation on both sides does not vary with market conditions. Such invariance is a poor fit for a notion of multisidedness that requires user groups to adjust to price changes and changes in the extent of other groups' participation.[196] Third, this factor rejects multisidedness for a multiproduct firm when the argument for multisidedness is based solely on product complementarity. For example, the buyer of complementary products, such as a phone and a drop-resistant case, internalizes the costs and benefits of each in deciding to purchase both.[197] This does not occur for multisided platforms, in which distinct user groups fail to internalize cross-network externalities absent the platform. Fourth, this factor rejects multisidedness when user groups can reach an efficient outcome through bargaining. In other words, Professor Ronald

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192 See notes 96–98 and accompanying text.

193 See Filistrucchi, Geradin, and van Damme, 36 World Competition at 37 (cited in note 187).

194 See notes 96–98 and accompanying text.

195 When these are the only network effects present, they are better treated by standard, one-sided network models. See, for example, Julian Wright, *One-Sided Logic in Two-Sided Markets*, 3 Rev Network Econ 44, 46 & n 2 (2004).

196 See Weyl, 100 Am Econ Rev at 1644 (cited in note 5) (discussing vertical monopoly). For example, if dialysis machines provide life-sustaining treatment, patients may exhibit highly inelastic demand. Their participation does not derive from the extent of another group's participation, but instead from a medical necessity.

197 See Rochet and Tirole, 1 J Eur Econ Assoc at 991 (cited in note 96).

Coase's theorem[198] must give way as a necessary condition to multisidedness.[199] This simply recognizes the fact that a multisided platform solves a transaction-cost problem or risks answering the wrong question.[200]

c) Factor three: whether the platform is capable of, and generally does, set uniform prices in the markets in which each group participates.[201] A court should consider evidence of whether the platform has market power and reject multisidedness for a firm lacking at least some degree of market power on each side of the platform. Absent this ability to influence prices on each side, the firm is a mere price taker: it lacks the power to adjust and coordinate the interrelated prices needed to get and keep all sides onboard.[202] In this situation, the firm is better modeled as a distributor.[203] Two points are germane. First, this factor focuses on whether the firm possesses the minimal degree of market power needed to coordinate across-group prices. For the court, this is a narrower inquiry than quantifying the anticompetitive implications of the improper acquisition of or abuse of market power, which is a broader purpose of antitrust law.[204] Second, this factor does not require a firm to set perfectly uniform prices on each side of the platform. While models of market power generally assume

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198 In the presence of tradable property rights and the absence of transaction costs, parties can bargain to an efficient outcome regardless of the initial allocation of rights. See generally R.H. Coase, *The Problem of Social Cost*, 3 J L & Econ 1 (1960).

199 See Evans and Schmalensee, *The Antitrust Analysis of Multisided Platform Businesses* at 409 n 9 (cited in note 83) ("[A] necessary condition for a firm to be a multisided platform is that the Coase [ ] Theorem . . . does not apply."). It is not, however, a sufficient condition. See Rochet and Tirole, 37 RAND J Econ at 649–50 (cited in note 176) (exploring a particular sequential bargaining game).

200 See notes 90–95 and accompanying text.

201 See Caillaud and Jullien, 34 RAND J Econ at 313 (cited in note 182) (assuming the matchmakers set prices for each side simultaneously); Rochet and Tirole, 1 J Eur Econ Assoc at 996 (cited in note 96) (assuming the ability to choose uniform prices p^B and p^S on each side of the market); Rochet and Tirole, 37 RAND J Econ at 654 (cited in note 176) (assuming the ability to choose a uniform price structure based on each side of the market); Armstrong, 37 RAND J Econ at 672 (cited in note 182) (same). See also Weyl, 100 Am Econ Rev at 1644 (cited in note 5).

202 See notes 101–02 and accompanying text. For example, a payment-card platform might attract cardholders by offering rewards, which are negative prices, while charging merchants positive prices.

203 Weyl, 100 Am Econ Rev at 1644 (cited in note 5).

204 The court would proceed using its standard toolkit for diagnosing market power; however, it need not further assess anticompetitive impact at this point. See note 75 and accompanying text.

the infeasibility of within-group price discrimination, such a practice need not stand as an absolute bar to the consideration of multisidedness.[205]

2. Stage two: inclusion.

Should any of the stage one factors fail to hold, multisidedness should be excluded from market definition. However, conditional on the presence of all first-stage factors, a court should ask whether the challenged conduct is designed principally to ensure continued availability of the platform's differentiated products.[206] If so, the relevant market should encompass the market segments in which all sides of the platform operate.

This factor serves as an inclusionary criterion to recognize conduct necessary to preserving the benefits of the platform. First, multisidedness is important during market definition when the challenged conduct prevents distinct user groups from free riding—that is, obtaining platform benefits without paying for them. This is often possible when the platform has difficulty monitoring each user group's compliance with its terms, either because doing so is costly or impractical. For example, say a job-matching service provided résumé review services to employers and advocacy services to prospective employees. Benefits from the platform's solution to their matching problem in hand, widespread ability of the user groups to avoid compensating the platform would represent a threat to continued availability of the platform's products.[207] The platform might avoid the problem by

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[205] See Weyl, 100 Am Econ Rev at 1645 (cited in note 5).

[206] See *National Collegiate Athletic Association v Board of Regents of the University of Oklahoma*, 468 US 85, 101 (1984) ("[T]his case involves an industry in which horizontal restraints on competition are essential if the product is to be available at all."); *Broadcast Music, Inc v Columbia Broadcasting System, Inc*, 441 US 1, 23 (1979) ("Joint ventures and other cooperative arrangements are also not usually unlawful, at least not as price-fixing schemes, where the agreement on price is necessary to market the product at all.").

[207] Market definition focuses on protecting "*competition*, not *competitors*." *Brown Shoe*, 370 US at 320. Further, the "test of a competitive market is not only whether small competitors flourish but also whether consumers are well served." *United States v Philadelphia National Bank*, 374 US 321, 367 n 43 (1963). See also *Standard Oil Co v United States*, 221 US 1, 50–51 (1911) (discussing the Sherman Act's protective common-law foundations). While Supreme Court language indicates a consumer protection function, it does little to address interesting normative questions about the distribution of economic surplus. Regardless, consumers are not well served by the elimination of platforms that solve problems of transaction costs and interconnected demand.

charging employers an up-front membership fee calibrated to represent the return it would have earned had it elected to bill firms after successfully delivering matches.

Second, this factor accepts multisidedness when the challenged conduct prevents arbitrage.[208] The ability of any user group to resell the platform's product in a secondary market would undermine the platform's ability to coordinate prices across user groups, threatening its continued existence. For example, if a gaming platform operated a price strategy that sold consoles to gamers for relatively inexpensive prices and those users were able to turn around and resell their discounted consoles at higher prices to developers across the platform (say, if developers also required consoles but had to pay more for them), then this would undermine the platform's ability to coordinate prices. Likewise, if gamers were able to purchase unlicensed imitation games, then developers would have little incentive to participate in the platform.

B. Application of the Multisidedness Test to Distinguish *Visa* and *Amex*

Although *Visa* and *Amex* both involved payment-card systems, the Second Circuit determined that network services and card issuance were "two interrelated, but separate, product markets" in *Visa*[209] but held that the district court erred by failing to "collaps[e] the issuance and network services markets into a single platform-wide market for transactions" in *Amex*.[210] Part II.B.3 made the point that distinguishing cases on horizontal–vertical logic poses certain challenges.[211] This Section explores the two cases through the lens of Part III.A's proposed multisidedness test.

Applying the first stage to *Visa* and *Amex* fails to exclude multisidedness from consideration during market definition in either case. The first factor asks whether the business method can explicitly charge different prices to the distinct groups to which it provides goods or services. The business methods in the two cases

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[208] See *Black's Law Dictionary* at 124 (cited in note 10) (defining arbitrage as "[t]he process of buying something . . . and selling it immediately elsewhere in order to profit from the difference in prices").

[209] *Visa*, 344 F3d at 238. The court went on to define the relevant product market as that for network services only. See id at 239–40.

[210] *Amex*, 838 F3d at 197.

[211] See text accompanying note 166 (observing that directionality is periodically hard to make out and that technological advancements that make case-by-case analysis more feasible may render appeals to directionality less desirable).

targeted both cardholders and merchants, which are distinct user groups. While not strictly required, the payment systems supplied distinct products to each group: merchants required the authorization, settlement, and clearance of transactions inherent in the network services product, while cardholders required issuance. Importantly, merchants paid a positive price in the form of a discount fee while consumers paid a reduced—or even negative—price by receiving rewards. Thus the first factor does not exclude multisidedness.

The second factor asks whether each group's benefit depends on the extent of participation by the other groups provisioned by the same business method and whether that participation varies based on market conditions. Cardholders benefited from increased acceptance by the merchants they patronized, and merchants benefited from increased card diffusion among patrons, which means that cross-group network effects were present.[212] One would expect that participation varied based on prices and other market conditions (for example, the extent of the rewards offered), and the presence of transaction costs precluded side bargains.[213] Thus the second factor does not exclude multisidedness.

The third factor asks whether the platform is capable of, and generally does, set uniform prices in the markets in which each group participates. As evidenced by their ability to set the interchange fee, which had implications for both the merchant discount fee and consumer-card price structure, the firms possessed sufficient market power to set prices for each user group and thus to coordinate prices across both sides. Therefore, the third factor does not exclude multisidedness.

Because all first-stage factors hold, the court would proceed to the second stage and ask whether the challenged conduct was designed principally to ensure continued availability of the platform's differentiated products. Recall that in *Amex*, the challenged conduct involved antisteering provisions put in place by Amex, Visa, and MasterCard, which prevented merchants from steering cardholders toward other methods of payment.[214] Steering is lucrative from the merchant's perspective because it enables the merchant to minimize the merchant discount fees associated with consumer card usage.[215] In particular, the antisteering

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[212] See notes 96–98 and accompanying text.

[213] See notes 90–95 and accompanying text.

[214] See Part II.B.3.

[215] See note 147 and accompanying text.

provisions prohibited merchants from providing Amex's cardholders with point-of-sale incentives to use another method of payment.[216] One can say that widespread steering would have posed a threat to the continued availability of Amex's differentiated products. As explained below, this is because the value of Visa and MasterCard as differentiated products comes primarily from their position as counterpoints to Amex's high-reward, high-merchant-fee products. The following hypothetical illustrates this issue.

Assume a single department store patron owns three payment cards and is contemplating a $100 purchase. Card A charges merchants a 3.5 percent discount fee per transaction, which reduces the merchant's revenue by $3.50 to $96.50.[217] Cards B and C charge merchants 2.5 percent and 2 percent per transaction, respectively. A merchant benefits by accepting all three cards because this increases its ability to attract customers who will, in turn, increase gross revenue. In particular, Card A offers high rewards, and its users enjoy this benefit. If the merchant operates in a competitive market, accepting Card A is an important step toward getting these patrons in the front door.

Now assume merchants can steer patrons in keeping with the merchants' own incentives.[218] When a patron attempts to make the $100 purchase with Card A, the merchant faces a $3.50 fee. If, at the point of sale, it were able to persuade the patron to use Card B instead, the merchant could benefit from Card A's patron base while saving itself the difference between the 3.5 percent and the 2.5 percent fees, namely $1.[219] However, the patron may not be willing to use Card B voluntarily: Card A's high merchant discount fee likely finances superior customer rewards. Say the patron values these rewards at $0.80. With an eye toward maximizing short-run profits, the merchant could propose the following trade: in exchange for the patron using Card B, the merchant would rebate the patron some award valued at between $0.81 and $0.99. In this way, both the patron and the merchant benefit.[220]

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216 See *Amex*, 838 F3d at 191–92.

217 Card A represents Amex, known for its affluent cardholders from its original travel and entertainment business. See id at 187–89.

218 This was the district court's holding in *United States v American Express*, 88 F Supp 3d 143, 151–52 (EDNY 2015), which the Second Circuit reversed in *Amex*.

219 This is a version of the free-rider problem.

220 Amex's antisteering provisions sought to bar this practice specifically. See *Amex*, 838 F3d at 191.

The gains to trade experienced by the merchant and the patron have a clear loser: Card A. In a world in which merchants are allowed to steer at the point of sale, the fraction of consumers using Card A declines.[221] Eventually, Card A faces one of two choices: (1) it could reduce its 3.5 percent fee in order to compete at the point of sale with Card B, or (2) it could discontinue operations. If there are no productive efficiencies to be gained, reducing the 3.5 percent fee must come from reducing rewards to Card A cardholders or charging them a higher fee. If Card A cuts back on rewards to its cardholders, the merchant can simply change the terms of its proffered trade with the patron until Card A either charges a 2.5 percent fee or drops out of the market. However, even if Card A stays in the market, Card C has a 2 percent fee, while Cards A and B now charge 2.5 percent. The problem is iterative, and one might expect all three cards to converge at a similar fee.[222]

The long-run effect of point-of-sale steering, then, is to either decrease the number of competitors in the market or decrease the differentiation among competitors. Decreasing either product differentiation or the quantity of competitors runs counter to the goals of antitrust enforcement.[223] The antisteering provisions might thus be viewed as combating three undesirable situations: (1) all competitors dropping out of the market and a return to the historical transaction-cost problem;[224] (2) all competitors but one dropping out of the market, resulting in a pure monopoly; and (3) some number of competitors remaining in the market, but with scarcely differentiated products. For Cards A and B, then, antisteering provisions would plausibly ensure continued availability of the platforms' differentiated products, thus clearing stage two's hurdle.

The hypothetical helps shed light on why, in *Amex*, Visa and MasterCard may have settled out of court while Amex did not: antisteering provisions in Visa's and MasterCard's hands would

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221 If classical rationality holds, then no Card A transactions occur; however, the hypothetical does not require this assumption.

222 The lower bound for such a fee depends on the level of the interchange fee the merchant's bank must pay the cardholder's bank. In order to recoup the interchange fee, the merchant's bank must charge a discount fee of at least the size of the interchange fee. See Filistrucchi, et al, 10 J Competition L & Econ at 304–05 (cited in note 97).

223 In this case, product differentiation relates to different reward schemes that appeal to various customer bases.

224 See notes 90–95 and accompanying text (discussing the opportunity cost to merchants of extending open-book credit and the time costs associated with traveler's checks).

likely not be platform preserving.[225] This is because, in reality, Visa and MasterCard are similar enough in features and fees to *both* play the role of Card C. As the low-feature, low-price counterpoints to Amex's high-reward, high-merchant-fee product, they would likely have been the beneficiaries of merchants' steering behavior. The hypothetical also helps explain why the Second Circuit was correct in accepting multisidedness as part of market definition in *Amex* and excluding it in *Visa*. As to *Amex*, Card A represents Amex, and it had recourse to the preservation argument discussed above. As to *Visa*, recall that Visa's and MasterCard's platforms include a layer of intermediary banks and that the challenged conduct in *Visa* implicated exclusivity rules prohibiting these banks from issuing Amex and Discover cards.[226] These rules did not seek to preserve product differentiation over time. Merchants had not attempted to free ride on benefits while skirting burdens. No one attempted to arbitrage the platform's market. Visa's and MasterCard's rules merely sought to exclude Amex from competing for certain customers. Turf battles of this sort constitute plain old exclusive behavior.

CONCLUSION

Whether a court should incorporate one or more sides of a multisided platform during antitrust market definition is a thorny matter. Definitions that include all sides of the platform create a broader space of allowable pro- and anticompetitive trade-offs than definitions that include fewer sides. Because the result of this inquiry often dictates the outcome of the case, plaintiffs and defendants have incentives to propose markedly different definitions. Courts, in turn, have varied on whether and how to incorporate evidence of multisidedness in the definitional process. Yet the challenge posed by multisided platforms may be addressed methodologically, and this Comment suggests one approach. Its contribution is the development of a test designed to help courts know when to disregard or accept arguments concerning the applicability of multisidedness to market definition.

Because antitrust operates at the juncture of case law and economics, any would-be test must be faithful to both. This Comment

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[225] Point-of-sale steering would tend to harm above-average reward products rather than low-feature, low-cost products.

[226] See text accompanying notes 113, 136–37.

argues that the test factors best suited to the fine-grained and flexible analysis mandated by *Kodak*, *Times-Picayune*, and *Grinnell* are the primitives from which applied theorists build industrial organization models of multisidedness. This Comment identifies these factors and adapts them for judicial usage. Of note, the test proposed herein provides an alternative to definitional characterizations based on the horizontal or vertical nature of the challenged restraint. When these directional distinctions tell an incomplete tale, the Comment's test permits analysis of multisidedness without recourse to directionality. This is all the more important in an environment in which advances in economic and statistical methodology permit finer-grained analysis and novel business methods challenge traditional notions of industrial organization.