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Antitrust Market Definition: the Hypothetical Monopolist and Brown Shoe

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Aside from naked restraints such as price-fixing, antitrust offenses require proof of the defendant's market power, or ability to profit by raising price above cost. Conventionally we have measured market power "indirectly" by defining a "relevant market" of close substitutes and computing the defendant's percentage share. More econometric methods can estimate power "directly" by reference to a firm's price-cost margins. The hypothetical monopolist test (HMT) merges these direct and indirect methodologies. While it defines markets conventionally, it identifies who is in the market by identifying rivals who are able to hold a firm's prices close to its costs.

The logic of the HMT is simple: if antitrust's purpose is to take down monopoly, then we need a test that actually measures it. When a firm increases its price, substitutes become more attractive to buyers, and entry becomes more attractive. As a result, the "antitrust" market (1) may be broader than indicated merely by observing immediate transactions, but (2) may be narrower if a smaller grouping could also raise prices anticompetitively. The market is the narrowest group of products that could control price if united as a monopoly or cartel.¹ For that, the antitrust tribunal must consider not only which firms are "in the market" at this instant, but what would happen if a feared price increase were to occur. That increase would invite some customers to defect and some potential suppliers to come in. That is, it considers "potential" as well as actual competitors.²

¹ See Gregory J. Werden, The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm (US DOJ 2002), https://www.justice.gov/archives/atr/1982-merger-guidelines-and-ascent-hypothetical-monopolist-paradigm#N_1_; Malcolm B. Coate & Jeffrey H. Fischer, A Practical Guide to the Hypothetical Monopolist Test for Market Definition, 4 J. Competition L. & Econ. 1031 (2008).

² See Herbert Hovenkamp, Potential Competition, Antitrust L.J. (forthcoming, 2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4540413.

This suggests a helpful methodology: Identify a firm’s closest substitutes and assume that they are united as a single firm. Then ask whether that firm could profit by raising prices significantly above the competitive level. If so, those sales are a relevant market. If the price increase invites too many consumer defections or entry by other firms, then the increase will be unprofitable, and the grouping must be broader. The *Epic Games* court noted that if consumers responded to the price change “by making purchases outside the proposed market,” rendering it unprofitable, then the proposed market is too narrow.³ The resulting size of the market depends on the size of this hypothetical price increase; that is, how much protection from monopoly do we want? At least in merger cases, the Government typically uses an increase in the range of 5%.⁴ The important thing in §2 cases is to ensure that the defendant’s prices are not at monopoly levels to begin with, lest observed substitution sends a false signal that the firm lacks power.

Suppose that we observe firm A with closer and more remote rivals *B, C, D...n*. In response to the price increase, firm A lost 100 sales, making this price increase unprofitable. A’s output alone is not a relevant market. Suppose further, however, that 40 of those 100 sales go to firm B, 20 to firm C, and smaller amounts to other rivals. In that case, we might examine a union of firms A & B (by merger or cartel) and consider what would happen if the two together raised their price.⁵ If that were to happen, A would “recapture” those sales that otherwise went to B. The loss of sales might not be so great as to make the price increase unprofitable, and we will have identified A+B as a relevant market. If even the combination of A+B is too small, we might add firm C and repeat the exercise. The economic process for performing these tests is technical, but it has become relatively routine in Agency evaluation of mergers. The most important numbers are the rate of “diversion,” or substitution, that goes to particular firms and also the margins being earned.

Note that this exercise measures the rate of substitution from A to B, and so on, without distinguishing whether it is determined by geographic distance between A and B, or by distance in product space. That is, the methodology itself does not distinguish between a “product market” and a “geographic market,” but the location of the covered customers or firms would do that.

The HMT also addresses product differentiation. As products are more differentiated, the rates of substitution between them are lower. By contrast, conventional market definition is always “wrong” in differentiated markets. For example, if we are considering a merger of two makers of gas kitchen stoves, the

³ *Epic Games, Inc. v. Apple, Inc.*, 67 F.4th 946, 975 (9th Cir. 2023).

⁴ See, e.g., 2023 Merger Guidelines, §4.3.B, <https://www.justice.gov/d9/2023-12/2023%20Merger%20Guidelines.pdf>.

⁵ A merger of A & C might also have that result.

inclusion of electric stoves tends to understate the gas stoves' power because it treats gas and electricity as perfect competitors, which they are not. On the other hand, excluding electric stoves pretends that they do not compete at all, which is also incorrect and exaggerates the gas stove makers' power.⁶

The HMT often results in narrower markets than more casual observations concerning product substitution. This is true because the test requires not simply observed substitution, but also substitution that is effective in holding a particular producer's good close to its cost. A good illustration that has come up frequently is the relationship between a pioneer drug, its bioequivalent (chemically identical) generics, and other drugs that are chemically different but that treat the same symptoms. Applying the HMT, these courts often conclude that the relevant market must be limited to the pioneer drug and its bioequivalents, but excluding drugs based on different compounds.⁷ For example, Ibuprofen and its bioequivalents might be in the same market, but not Tylenol (acetaminophen) or aspirin. While some users might regard these as substitutes, they are not close enough to force Ibuprofen's price to its costs. As another example, in the *Meta Platforms* case, the court decided that there could be a market for "dedicated" fitness apps, rejecting the defendant's approach based on the *Brown Shoe* factors that would have included a broader range of apps.⁸ And in the 2024 complaint challenging the merger of Kroger and Albertsons grocers, the FTC explicitly invoked the HMT test to reduce the number of grocers in the relevant market.⁹ By contrast, the Government's Apple complaint ignored the hypothetical monopolist test, whose use should have been obvious, and instead relied on a miscellany of casual factors that are not well designed to establish a market.¹⁰ It did, however, also cite Apple's high margins.

The FTC's grocery merger complaint reveals an important strategic fact. While Neo-Brandeisians left have railed against the HMT,¹¹ the FTC actually likes to win its cases. So it uses the HMT. The reason for the Neo-Brandeis hostility toward the HMT is not entirely clear. Perhaps they are reactionaries and instinctively

⁶ See Louis Kaplow, *Why (Ever) Define Markets?*, 124 Harv. L. Rev. 437 (2010).

⁷ *FTC v. Abbvie*, 329 F.Supp.3d 98, 130 (E.D.Pa. 2018), rev'd in part on other grounds, 976 F.3d 327 (3d Cir. 2020). Accord *Suboxone Antitrust Litigation*, 2023 WL 5617784 (E.D.Pa. 2023) (HMT indicated that a pioneer drug and its generic equivalents were the relevant market).

⁸ *FTC v. Meta Platforms, Inc.*, ___ F.Supp.3d ___, 2023 WL 8629125 (N.D.Cal. Dec. 13, 2023).

⁹ *In re Kroger & Albertsons* ¶¶28-30 (FTC, complaint, Feb. 6, 2024) ("The price increase would be profitable for the hypothetical monopolist because supermarkets would not lose sufficient sales to non-supermarkets to make the price increase unprofitable").

¹⁰ The complaint can be found at <https://www.justice.gov/opa/pr/justice-department-sues-apple-monopolizing-smartphone-markets>.

¹¹ E.g., Daniel Hanley, *De-Economizing Antitrust Law Starts with Market Definition* (Open Markets Institute, April 28, 2023), <https://www.openmarketsinstitute.org/publications/sling-de-economizing-antitrust-law-starts-with-market-definition>.

opposed to anything that involves economics. Whether or not that is true, the fact is that economic methodologies can often be the plaintiffs’ friend.

One limitation of the HMT methodology is that it is data intensive and depends on observations of how quantities among products change in response to price changes. When such data are not available, then the court must rely on other and usually inferior methodologies. This occurred in the *Illumina/Grail* case, where the products in question were still in research and development. Because they “have yet to reach the consumer marketplace, there are no prices from which to build a data set, and thus no way to run a hypothetical monopolist test....”¹²

The position on the HMT in the 2023 Merger Guidelines is not entirely clear, but it suggests that the HMT will be used when the data supporting it are available.¹³ Otherwise, inferior alternatives will be required. Not every court decision has gotten this message. For example, in the *Sugar* merger litigation, the Justice Department lost a case in which the Third Circuit disregarded the HMT in favor of what it characterized as the “facts on the ground.”¹⁴ The court focused on the fact that the sugar in question was a physically identical product, but disregarded transactional data indicating that firms that both produced and sold sugar had lower costs than those that did not. As a result, a merger limited to these could produce a higher price without concern about the competition among independents. The lesson to be learned is that while the physical characteristics of a product matter, so does the cost of producing it, and may justify placing lower-cost producers in a relevant market. That could also be an issue in the Kroger-Albertsons merger case, where union and non-union labor appear to be physically interchangeable for *Brown Shoe* purposes, but in fact, union labor commands higher wages, suggesting a narrower market under the HMT. That issue awaits discovery.

How does this methodology compare to the various “*Brown Shoe* factors” that the Supreme Court stated in that case, long before the HMT was developed?¹⁵ Several of those factors are just plain wrong. For example, the Court cited “reasonable interchangeability” but with no mention of the margins at which it was occurring. That is a bad way to detect monopoly. As a firm raises its price above its costs, its product becomes more interchangeable. This produces the well-known “*Cellophane* fallacy” of defining a market based on observed interchangeability without considering whether one product (in that case cellophane) was already being sold at monopoly prices.¹⁶ Customers might strongly prefer cellophane if both it and

¹² *Illumina, Inc. v. FTC*, 88 F.4th 1036, 1050 n.8 (5th Cir. 2023).

¹³ Merger Guidelines, *supra* note 4, §4.3.A (2023).

¹⁴ *United States v. United States Sugar Corp.*, 73 F.4th 197, 206 (3d Cir. 2023).

¹⁵ *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

¹⁶ *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956).

wax paper were being sold at prices close to their cost. But if cellophane is a monopoly with a high markup, its owner will price it into a region where the amount of substitution with wax paper is greater. In sum, observed interchangeability without considering margins can play right into the defendant's hands.

Brown Shoe also spoke of "unique production facilities" as a sign of a relevant submarket. That definition is rarely right, and only by happenstance. In most cases it is either too broad or too narrow. For example, sometimes the very same product is produced by many production facilities, whether owned by one or several firms and sometimes with different technologies. That was true in *Brown Shoe* itself, where the defendant's market share was only seven percent. In other cases, a single plant produces numerous noncompeting products. So this particular rationale for defining a market is wrong most of the time. Another *Brown Shoe* factor, "specialized vendors," is also wrong most of the time because vendors typically sell complements more than substitutes. For example, a specialized distributor of medical devices might sell blood pressure monitors, syringes, and catheters, but that does not place them in the same market. The same thing is true of "distinct customers," who often purchase complementary products in their lines of business. For example, hospitals might purchase these same products, and from the same vendor.

Another *Brown Shoe* factor, industry recognition, might be right depending on what the industry is recognizing. If they are looking at their closest price competitors, then this factor might provide a crude metric but certainly not as precise as the HMT. Other factors, such as a product's "peculiar characteristics and uses" are so generic that they do not provide much guidance. I can "use" both my automobile and shoe leather to get to work, but does that mean that shoes and cars are in the same market? *Brown Shoe* did mention one factor that seems correct, and that is "sensitivity to price changes." It said nothing about how such sensitivity should count, but the intuition is a good one. If the demand for one good is very sensitive to the price of another good (and in the same direction), they are more likely to be in the same market. That particular factor, if applied correctly, actually embraces the HMT. Once again, this sensitivity must be occurring when prices are close to cost.¹⁷

In virtually every way, the HMT relevant market test is superior to *Brown Shoe*. Further, the factors that the Supreme Court mentioned are not stated in the statute, and there is no reason to think that it was doing anything more than summarizing fact findings for that particular case.¹⁸

¹⁷ The *Brown Shoe* opinion also encouraged excessive speculation by projecting big changes from very small merger events. See Nicolas Petit & Thibault Schrepel, Complexity-Minded Antitrust, J. Evolutionary Econ (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4050536.

¹⁸ See Herbert Hovenkamp, The 2023 Merger Guidelines: Law, Fact, and Method, __ Rev. Indus. Org. (forthcoming, 2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4684465.

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