SECRETARIAT SPRING/SUMMER 2025

ECONOMISTS INK

ECONOMIC LESSONS FROM THE NOVANT HEALTH-CHS DRAMA

Quality Considerations in the Economic Analysis of Market Definition

Difference-in-Differences and Choosing the Best Tool for Antitrust Economics Analyses

PMFNs and Competition

Secretariat

Greetings from Secretariat, and welcome to the latest issue of *Economists Ink*. Whether you are an economist, attorney, antitrust enthusiast, or just curious about Secretariat, we are glad you found us.

This publication showcases insights from leading economists about recent developments in law and economics that may significantly impact the field of antitrust. This issue explores recent topics in the economics of antitrust analysis, with implications for merger analysis, market definition, and anticompetitive conduct.

In the first article of this issue, Dr. Pablo Varas covers important economic lessons from the abandoned deal between Novant Health and Community Hospital Systems in North Carolina. This article highlights aspects of the deal that differed from more typical healthcare acquisitions and explores how they may impact proposed mergers going forward.

In the second article, Dr. Kira Stearns reflects on the recent move toward considering quality changes in analyses of anticompetitive harm and market definition. Emphasizing product or service quality in addition to, or instead of, price may change the nature of these analyses, especially in digital markets, where many products and services have prices of zero. This move may also lead to different conclusions when analyzing market definition for multi-featured products.

In the third article, Drs. Stephanie Khoury and Nathan Mather carefully explain how a platform's most-favored nation ("PMFN") agreement may lead to antitrust concerns and identify the considerations that should be analyzed to ultimately determine the direction of their competitive effects. As PMFNs have received increased scrutiny in several ongoing antitrust matters, it is important to understand when and how these agreements may be deemed anticompetitive.

This issue also features reflections from Dr. Jéssica Dutra about recent advancements in econometrics, which have shown that the classic formulation of the difference-in-differences (DiD) design often used in antitrust analysis may yield a miscalculated magnitude of the alleged anticompetitive effect. By choosing the appropriate specification, antitrust experts can ensure that antitrust enforcement remains grounded in sound economic principles and evidence-based reasoning.

We hope you find the articles and news featured in this issue insightful. You can stay up to date on the latest from Secretariat's economists by also following us on LinkedIn.

Best,

ECONOMISTS INK

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Secretariat

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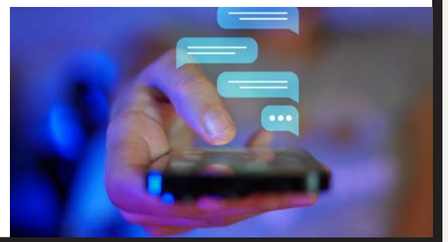
In Landmark *United States v. Google* Decision, Secretariat Experts Support Expert Witness on Behalf of Successful US Plaintiffs

n the August 2024 landmark

UNITED STATES V. GOOGLE DECISION,

Secretariat's Antitrust team, led by Dr. Keith Waehrer, played a vital role in supporting the analysis and work of expert witness Dr. Kinshuk Jerath on behalf of the successful US plaintiffs.

Dr. Jerath's testimony centered on topics related to advertising markets and Google's anticompetitive behavior, particularly in the text advertising market. Judge Amit Mehta's decision made note of Dr. Jerath's testimony, citing that "the marketing funnel is neither 'dead' nor had it become 'obsolete' because of the emergence of digital marketing and new ad technologies," and that industry professionals "... continue to use the funnel to shape marketing strategies, even on digital platforms."



Dr. Jerath is the Arthur F. Burns Professor of Free & Competitive Enterprise & Advisor in Digital Marketing at the Columbia Business School, Media and Technology Program. Secretariat's team included John Gale, Trevor Larner, Josh Higham, and Ty Ehuan.

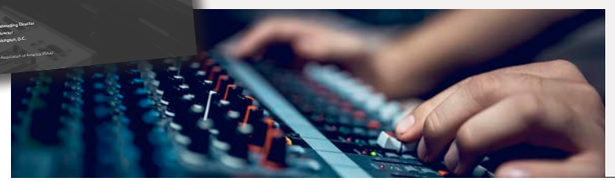
Secretariat Testimony Helps Secure a Legal Victory in $460 Million Trade Secrets Case

Dr. Richard Manning provided trial testimony that contributed to a decisive legal victory for biotech startup Inhibrx in a $460 million trade secrets case brought by I-Mab Biopharma in Delaware federal district court. Dr. Manning was engaged by law firms Potter Anderson and Wilson Sonsini Goodrich & Rosati to provide expert testimony and respond to the damages claims for this case.

On November 1, 2024, a federal jury in the US District Court for the District of Delaware unanimously sided with Inhibrx, rejecting all allegations of misappropriation and awarding the plaintiff $0 in damages, based in part on Dr. Manning's testimony.

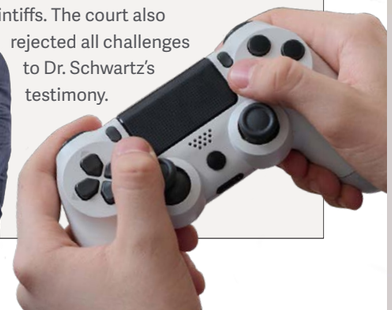
Secretariat Analyzes the Music Industries' Economic Impact Nationwide in RIAA Report

Dr. Robert Stoner and **Dr. Jéssica Dutra** have recently published **The US Music Industries: Jobs & Benefits — 2024 Report for the Recording Industry Association of America** where they measure the music industries' economic impact nationwide, which overall contribute $212 billion to the GDP and account for 2.5 million jobs. Their report also provides detailed state-by-state breakdown, delving into how this economic engine ripples through the broader ecosystem from sources such as music venues, festivals, brick-and-mortar stores, and artists'/songwriters'/music schools' digital platforms. The report has been referenced by Billboard, Digital Music News, RIAA, and Musically.



Game Publishers Win Class Certification in Valve Antitrust Litigation

A US District Court for the Western District of Washington granted class certification to a class of approximately 30,000 PC game publishers ("Plaintiffs") alleging antitrust violations against Valve Corporation, the maker of gaming platform Steam. The court concluded that Plaintiffs presented a cogent market definition, met the predominance burden for antitrust injury, and had shown that damages can bemeasured across the class. Secretariat Managing Director **Dr. Steven Schwartz** submitted three reports arguing in favor of class certification on behalf of Plaintiffs. The court also rejected all challenges to Dr. Schwartz's testimony.



Economic Lessons FROM THE NOVANT HEALTH-CHS DRAMA

BY DR. PABLO VARAS

THE ABANDONED TRANSACTION BETWEEN NOVANT HEALTH (NOVANT) AND COMMUNITY HOSPITAL SYSTEM (CHS) FOR TWO NORTH CAROLINA (NC) HOSPITALS RECEIVED SUBSTANTIAL ATTENTION FROM THE MEDIA, LAWYERS, AND ECONOMISTS. Even though an initial district court ruling rejected FTC's preliminary injunction request, a subsequent court decision pushed the parties to abandon the deal. This case was not a plain-vanilla deal. Some features made the antitrust discussion and the first instance ruling of particular interest, particularly for economic analysis of hospital mergers and considering deal-specific factors.

IN FEBRUARY 2023, NOVANT AGREED TO PURCHASE LAKE NORMAN REGIONAL MEDICAL CENTER (LNR) AND DAVIS REGIONAL PSYCHIATRIC HOSPITAL (DAVIS) FROM CHS. Novant is one of the largest health systems in NC, operating multiple facilities across the state. On the other hand, CHS is a national for-profit health system, and the LNR and Davis facilities represent CHS's most important assets in NC. CHS wanted to sell LNR because the facility needed substantial capital investments, which CHS was not willing to make. Given its poor performance and investment needs, the Davis facility was a former acute care hospital that, due to its poor performance and investment needs, was repurposed as a psychiatric facility. The transaction between Novant and CHS aimed to improve Novant's competitive edge relative to Atrium Health (Atrium), NC's largest health system.

THE FTC DECIDED TO CHALLENGE THE TRANSACTION IN JANUARY 2024, initiating an administrative procedure and subsequently filing a complaint to block the deal in the US District Court for the Western District of NC. The FTC argued that LNR and Novant's nearby hospital are head-to-head competitors and the main hospital options in the Eastern Lake Norman area, the relevant geographic market for the transaction. As such, LNR exerts competitive pressure on Novant, limiting Novant's ability to increase prices.

In June 2024, the district court ruled in favor of CHS and Novant by rejecting FTC's preliminary injunction request. However, the FTC appealed at the US Court of Appeals for the 4th Circuit, which, in a divided decision, reverted the district court's decision and granted the request to enjoin the CHS-Novant deal. Following this setback, the parties abandoned the deal. The appeals court's ruling does not explain why the district court decision had to be reverted, with the dissenting judge explicitly agreeing with the district court that the injunction is not in the best public interest.

THREE FEATURES MAKE THIS CASE OF PARTICULAR INTEREST FOR ANTITRUST ECONOMIC ANALYSIS. First, one of the parties, CHS, had decided to exit the market and stopped actively competing. Second, the transaction seemed to have meaningful potential pro-competitive effects. Third, the buyer, Novant, committed not to increase prices for three years after the transaction.

The economic analysis of a standard hospital merger assumes that if the deal is blocked, the parties will continue operating. Hence, the analysis focuses on the competitive effects of the deal compared to the status quo. However, in this particular transaction, CHS stated its plan to exit the market and stop investing additional capital in LNR. There have been several hospital transactions where the parties have put forward the failing firm argument to support the deal. A recent example is John Muir Health's failed takeover of San Ramon Regional Medical Center in California. The possibility that, in the near future, one of the parties may exit the market changes the but-for-world when evaluating the effect of the merger on consumers. That is, in these situations, the economic analysis must consider a scenario where the likely-exiting hospital is not available to consumers.

A second feature of the CHS-Novant deal was the potential pro-competitive effects of the transaction. LNR had experienced an overall-deteriorating process and CHS has no interest in continuing to invest in this facility. As such, the transaction was likely to enhance LNR's competition pressure and increase Novant's competitive edge against Atrium, the dominant health system in NC. Stronger competition between the state's two largest health systems was a factor to consider in evaluating the antitrust effects of Novant's acquisition of LNR. Even if the transaction would increase concentration in the local geographic market, there is value in the competition effect in the broader market. This factor gained relevance given the alleged declining status of LNR and its lack of ability to effectively compete with Atrium's facilities.

The possibility that in the near future, one of the parties may exit the market, changes the but-for-world when evaluating the effect of the merger on consumers.

Potential price increases are the main concerns regarding any hospital merger. The underlying reasoning is that the combined entity would increase its bargaining leverage when negotiating contract terms with health insurance companies, allowing the merged system to push for higher prices.

A FINAL INTERESTING FEATURE OF THE CHS-NOVANT PROPOSED DEAL IS THE EXPECTED HOSPITAL PRICE INCREASES FOLLOWING THE ACQUISITION. Economic analysis of a hospital merger involving head-to-head competitors is likely to find that prices would increase if the merger took place. Potential price increases are the main concerns regarding any hospital merger. The underlying reasoning is that the combined entity would increase its bargaining leverage when negotiating contract terms with health insurance companies, allowing the merged system to push for higher prices. Novant's management committed to maintaining current LNR prices during the three years after the acquisition, posing a challenge to the consideration of the merger's price effect. In a way, the empirical analysis may conclude that the merged entity would have the incentives and ability to meaningfully increase prices; however, deals' features or market realities, like Novant's management commitment, may assuage one of the critical concerns about any hospital merger. How credible such commitments are is subject to judges' and courts' consideration.

The appeals court ruling unfortunately offers no clues as to the arguments that supported its decision to enjoin the transaction. Notably, the district court and the dissenting appeal judge sided with the parties on the relevance of the failing firm factor, the pro-competitive effects of the transaction, and the no-price increase commitment. Those factors and considerations will likely get more attention in the economic analysis of future proposed hospital transactions.

ASSOCIATE DIRECTOR DR. PABLO VARAS *has conducted numerous hospital merger evaluations. Dr. Varas has also worked on hospital monopolization matters and provider-payor payment disputes. pvaras@secretariat-intl.com*

Quality

Considerations in the Economic Analysis of **Market Definition**

BY DR. KIRA STEARNS

In antitrust analysis in the United States, **the Small but Significant Non-Transitory Increase in Price (SSNIP) test is often a key component of market definition analysis, whether performed quantitatively or qualitatively.** In this analysis, an entity is hypothesized to be a monopolist with respect to a product or set of products that are under consideration to be a relevant market.

The analysis asks whether this hypothetical monopolist could profitably impose and sustain a small, but significant non-transitory increase in price (often defined to be a 5% price increase). If the answer is "yes," the set of products under consideration is a relevant market.[1] If the answer is "no," the set of products under consideration is expanded successively until the SSNIP can be profitably sustained. The SSNIP test captures economic considerations of substitutability and cross-elasticity of demand by considering potential substitution among competing products and may therefore be used to define both the relevant product and geographic dimensions of the relevant market.

While the SSNIP test has dominated antitrust analyses in the United States, other tests of market definition and market power have seen increasing use in the European Union. One example of an alternative to an SSNIP is the Small but Significant Non-Transitory Decrease in Quality ("SSNDQ") test. This test is similar to the SSNIP test in that it considers a hypothetical monopolist of a set of products or services but, instead of imposing a hypothetical increase in *prices* of this product or service, it analyses possible substitution effects following a decrease in the *quality* of these products or services. Like the SSNIP test, the SSNDQ test can be used to draw the boundaries of a relevant antitrust market and understand the potential for market power.[2]

Notably, in zero-price markets, the European Union has recommended the use of an SSNDQ as an alternative to an SSNIP. While pricing power has historically been a hallmark of market power and may be readily observed in traditional industries, with the rise of the digital economy, many of the world's largest firms now operate in the zero-price economy. For example, social media companies like Meta, search engines like Google, and digital apps like Yelp are "free" to users, in that users trade their data to the company and its advertisers to use the product or service for $0. Because of this, defining a market using the traditional SSNIP test, or evaluating market power through a pricing analysis, imposes both empirical and even conceptual challenges. Alternatively, using an SSNDQ test allows the fact finder to maintain the zero-price nature of a basket of potentially competitive goods while still considering how consumers may substitute away from certain products given a change in a product's value—where value contains elements of both pricing and quality.

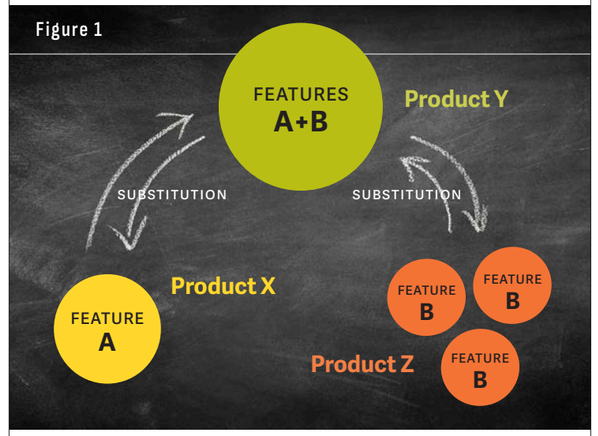
Indeed, there is some evidence that a greater move towards quality considerations in market definition may be on the horizon. For example, in the DOJ's recent case against Google related to its monopolization of general search services, Judge Amit Metha, in his opinion, cited evidence of Google's ability to decrease the quality of its search engine as evidence of its monopoly power in the market for general search services. However, the potential import of an SSNDQ test to the United States would likely bring both additional opportunities and additional considerations for market definition analyses going forward.

In addition to being useful in zero-price markets, the application of an SSNDQ may also be usefully applied to other complex cases of market definition. For example, an SSNDQ test could generate certain insights when analyzing markets that are characterized by differentiated multi-featured products. Consider the example of a product ("Product X") that has a single predominant feature and use (i.e., "Feature A") but competes only with a product ("Product Y") that contains Feature A but also an additional feature ("Feature B"). Assume there are also several other products ("Products Z") that contain only Feature B and therefore also compete with Product Y, but not Product X. Assume all products are sold at one price and one cannot purchase the features in Product Y separately. An illustration of this market and consumer substitute patterns is in Figure 1.[3]

Then consider the factfinder tasked with analyzing the dynamics of this market and in particular, analyzing any harm to consumers that could result in Product X being foreclosed from this market. Analyzing this market under a traditional SSNIP test, one may conclude that even if Product X were to be foreclosed from the market, the producer of Product Y would still be unable to raise its prices by an SSNIP if they face significant competition from companies making Products Z. Such an analysis could support the notion that consumers primarily interested in products with Feature A would not be harmed (from a pricing perspective) in the event of the removal of Product X from the market. That is, even if the producer of Product Y was the sole provider of Feature A (through their multi-featured Product Y), there would be no consumer welfare concerns due to the pricing constraints imposed by Products Z.

However, analyzing the same question under an SSNDQ approach, one may reach a different conclusion. If instead of analyzing the power to raise prices by an SSNIP, the factfinder was to consider the producers of Product Y's ability to decrease in quality of Feature A, a different conclusion emerges. Under this analysis, if Product X were to be foreclosed from the market, consumers primarily interested in products with Feature A could be harmed through this decrease in the quality of Feature A by the producer of Product Y, even if there is no change in Product Y's price. That is, consumers could be harmed from a quality of value perspective—while they may not pay an increased price for Product Y, they may receive less value from that price if they value Feature A. Under this analysis, it is clear that Products Z, while possibly functioning to constrain *price increases* for Product Y, cannot sufficiently constrain *quality decreases* for certain features of Product Y. Such findings could result in a different conclusion regarding the antitrust concerns in the foreclosure of Product X.

Figure 1



Use of the SSNDQ framework in antitrust analysis in the United States may provide additional or alternative insights regarding consumer harm from the perspective of product and/or service quality. This framework may be useful for understanding the market dynamics for zero-price goods. It may also provide insights regarding potential harm to consumers as certain products expand their functionalities. Of course, a quality-emphasizing framework will come with certain challenges, a discussion of which is outside the scope of this article.

ENDNOTES CONTINUED ON PAGE 14

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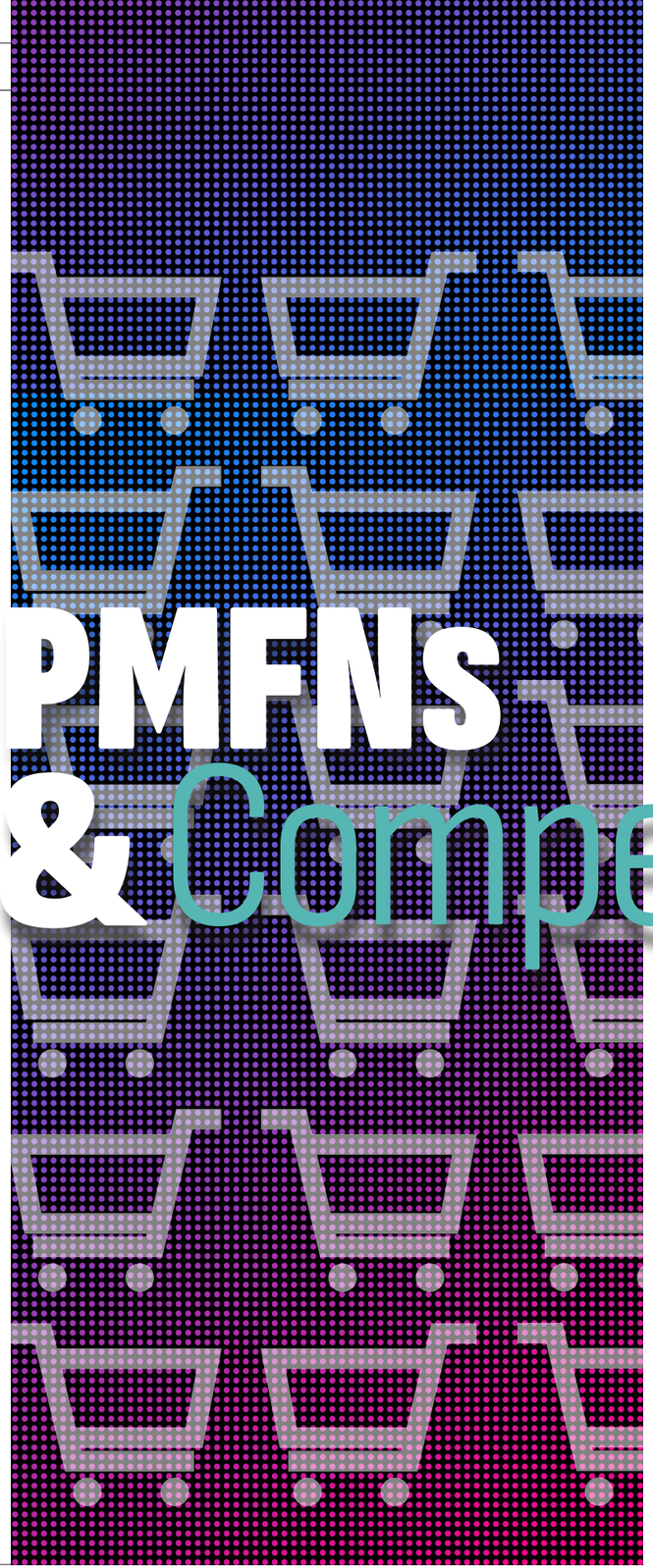

BY DR. STEPHANIE KHOURY & DR. NATHAN MATHER

Most Favored Nation (MFN) clauses are contractual provisions that were historically invoked between countries in treaties and trade agreements, promising, for example, that any lowering of tariffs on any trading partner would apply to *all* the most favored nations bound by the MFN agreement (hence the use of the term "nations").[1]

However, more generally, MFNs can also apply to vertical agreements between suppliers and buyers, where, for example, a seller promises a buyer that the buyer will always be offered the lowest price offered by the seller. [2] While the exact details of these provisions differ by contract, parties, and setting, MFN clauses generally require that one party to the transaction not offer better contractual terms to any other party. [3]

With the rise of technical platforms, that is, entities that facilitate interactions/transactions between one or more groups of users (*e.g.,* consumers and suppliers),[4] MFN clauses have made their way into agreements between platforms and platform participants. These are known as platform MFN (PMFN) clauses. Generally, PMFN clauses are imposed by the platforms on the sellers/suppliers and prohibit sellers/suppliers from offering buyers/consumers products or services more favorably (*e.g.,* lower price, better offering) on any other platform or distribution channel.[5] PMFNs can vary based on the reach of the provision. A "narrow PMFN" prevents a seller/supplier from offering more favorable products or services using its own distribution channel, while a "wide PMFN" extends this prohibition to *all other platforms,* in addition to the seller's/supplier's own distribution channel.[6]

A key difference between classic MFNs and PMFNs is that the platform is not purchasing a service or good from a seller/supplier; rather, the platform is paid a cut from sales that occur on the platform. Thus, rather than a traditional MFN, which restricts the price at which a supplier can sell to a buyer's *competitors,* a PMFN puts a floor on the price the participants on the seller-/supplier-side of the platform can charge to the *consumers* through competing distribution sources.[7] Given the nuances that distinguish PMFNs from MFNs, economists have added to the general MFN literature with research on PMFNs that investigates both the potential procompetitive and potential anticompetitive impacts of those PMFNs.[8]

A concern for antitrust litigators and regulators is the potential for PMFNs to reduce price and/or product competition. A PMFN imposed by one platform may restrict a seller's/supplier's ability to lower the price or offer different product features to buyers/consumers on competing platforms. Without the ability to offer lower prices or different features to consumers, platforms may struggle to differentiate themselves from a dominant platform in such a way as to compete effectively and attract enough consumers to survive and become a successful platform. Reduction in competition could then lead to higher platform fees and consumer prices.[9] A PMFN may further reduce competition by lowering incentives for potential entrants to join the marketplace at all,[10] which may also result in more concentrated markets. [11]

These antitrust concerns have piqued interest in PMFN policies in both litigation and regulation. A notable example is the regulation of PMFNs in the hotel booking space by France, Italy, and Sweden in April 2015, which lead to Booking.com and Expedia (the two largest online travel agency platforms) to restrict "wide" price parity clauses within the E.U. [12] Later, France prohibited all price parity clauses governing hotels in July 2015, and Germany prohibited all price parity clauses—wide and narrow—for Booking.com in December 2015. [13] As a key example of PMFN litigation, in 2021, a class action was brought against Amazon and the "Big Five" book publishers accusing them of colluding to fix the price of ebooks at artificially high rates using MFN clauses. [14] This case closely mirrored a 2011 case against Apple and the Big Five publishers, in which the Big Five settled and Apple lost at trial and was ordered to pay $450 million.[15]

Given past litigation and enforcement related to PMFNs and the general increased scrutiny in the Big Tech space, we expect that PMFNs will continue or increase in being an area of antitrust interest. Further, the existing economic literature relating to the potential impacts of PMFNs highlights the importance of rigorous economic analysis and sound expert economic testimony to provide cases with clear conclusions on which side of the competitive scale the PMFN falls.

ENDNOTES CONTINUED ON PAGE 14

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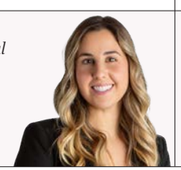

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Understanding Difference-in-Differences and Choosing the Best Tool for Antitrust Economic Analyses

BY DR. JÉSSICA DUTRA

Econometrics, the application of statistical methods to economic data, can be instrumental in the identification of anticompetitive behavior by assisting in analyses including the assessment of market power, the evaluation of competitive effects resulting from alleged anticompetitive conduct, and the quantification of damages.[1]

Difference-in-Differences (DiD) analysis has been a popular method in econometrics for estimating causal effects and is often employed in antitrust litigation. The essence of DiD lies in comparing the changes in outcome variables of interest (*e.g.,* price) over time between a group that is exposed to the alleged anticompetitive conduct and a control group that is not (*e.g.,* comparing different groups of consumers, different firms, or different geographic regions). It gets its name "difference-in-differences" because it essentially combines two types of variation—the first from a before-and-after analysis and the second from comparing an affected and an unaffected group.

The key advantage of DiD is its ability to control for time-invariant unobservable factors that may influence the outcome of interest. By differencing out the common time trends between the groups that are and are not affected by the anticompetitive conduct (*e.g.,* "treatment" and "control" groups), DiD isolates the treatment effect by focusing on the differential changes in outcomes that occur after the introduction of the treatment. The DiD methodology has been implemented in antitrust analyses in various settings.[2] In merger analysis, for example, DiD has often been implemented to estimate retroactively the impact of past consolidations to inform future policy.[3]

Despite its strengths, DiD is not immune to potential biases. Choosing the right quantitative tool, such as DiD, in an antitrust setting involves careful consideration of various factors to ensure the validity of the causal inference. Under the *Daubert Standard,*[4] it is important for an expert to demonstrate the adequacy of a chosen tool, such as regression, and the appropriateness of a chosen research design.[5] Since biases in the canonical DiD may arise from the violation of distinct conditions, there is no single recipe solution, and experts need to carefully analyze the case in question.[6]

There may be situations where a simple *pre-* and *post-* treatment formulation is not enough to capture the dynamics. For example, a company's pricing policy may go into effect in distinct regions at different times, as opposed to being simultaneously launched. There might be a need to study the effect of successive acquisitions by the same company in different markets. A firm may choose to implement a new policy to distinct groups of stakeholders at different times. As in these examples, the resulting bias of the estimates obtained by applying the standard DiD will be particularly problematic when there is heterogeneity in the treatment effect over time. However, there have been a few methodological alternatives proposed in the literature[7], some of which have been used in litigation.[8] One could, for example, use a matching algorithm in each period to pick the best control group (where only those units that are untreated in that period are candidates),[9] and once the control groups are selected, proceed as usual.

DiD also requires the treatment and control groups to have similar trends over time in the absence of the alleged anticompetitive conduct. In practice, this means that, absent a merger, and with everything else held constant, prices in markets where both merging parties are present (treatment group) and markets where at least one of them is not (control group) would have trended in a similar fashion. A violation of this assumption need not be the end of DiD analysis, but it does require one to adjust one's specifications, as the regression will no longer produce consistent estimates merely by incorporating time-independent variables. If this violation of the parallel trends happens due to an observable factor, it is possible to extend the assumption by conditioning on variables that are observable pre-treatment.[10]

Most DiD literature imposes the requirement that potential outcomes of a unit are unaffected by the treatment assignment of other units—in other words, the variable of interest for that unit only depends on whether that unit and that unit only has been exposed to the anticompetitive conduct, which guarantees independence and essentially rules out any spillover effects. In our earlier example, customers can only be affected if the conduct has occurred in their market, but ought to be unaffected otherwise, all else held constant. However, it is possible that, if individuals are connected by a network, there may be spillover effects. A growing literature has already accounted for some extensions of the general framework that account for these network effects,[11] but there will likely be many more developments in this area, which may particularly impact how antitrust litigation views competition when platforms are involved.[12] For example, one might consider how changes in Gen AI policy that are applicable only to European markets start affecting the way companies conduct business in the United States, despite the absence of any such policy change in the United States.

In conclusion, DiD remains a valuable tool for estimating causal effects, offering a quasi-experimental approach to understanding and estimating the economic implications of alleged anticompetitive practices. Recent econometric developments have significantly enhanced the method's applicability, addressing concerns related to control group selection, unobserved heterogeneity, and group trends. By incorporating appropriate adjustments to their DiD specifications, antitrust experts can improve the robustness of their estimates, ensuring that antitrust enforcement remains grounded in sound economic principles and evidence-based reasoning. As econometrics continues to evolve, it is paramount that practitioners stay up to date with state-of-the-art quantitative techniques, allowing DiD analysis to contribute to more accurate and reliable causal inference in antitrust cases.

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DIRECTOR DR. JÉSSICA DUTRA *works with antitrust and competition over a wide range of industries, specializing in the application of economic principles and state of the art quantitative methods in the context of litigation and damage calculation. jdutra@secretariat-intl.com*

ARTICLE ENDNOTES

CONTINUED FROM PAGE 8

Endnotes for ***Quality Considerations in the Economic Analysis of Market Definition***

[1] This general characterization of the SSNIP test is meant to be simplistic and abstracts away from certain important considerations the factfinder must consider before performing this test. For example, one must be wary of applying a SSNIP test in a market in which prices may already reflect the monopoly price. This could lead to a false negative in analyses of market definition, a phenomenon known as the Cellophane Fallacy.

[2] This is not to say that the U.S. has never in the past considered quality in antitrust analyses. For example, the agencies have sometimes used elements of quality to define "submarkets," as in the recent Tapestry/Capri merger. However, using quality to define a submarket, which may include elements of pricing, differs from an analysis of how market power may be used to harm consumers through quality decreases, especially when price increases may not be feasible for a monopolist.

[3] As one concrete example of a group of products that may display such characteristics, consider the Apple AirPods expansion from standard headsets (which may compete with those from companies like Bose) into hearing aids. Traditional hearing aids would fit in Product X, Apple AirPods would be Product Y, and Products Z would comprise standard headsets.

CONTINUED FROM PAGE 10

Endnotes for ***PMFNs and Competition***

[1] Legal Information Institute Website, Most Favored Nation, https://www.law.cornell.edu/wex/most_favored_nation (accessed 1/11/2024). ("*Most favored nation* refers to a status conferred by a clause in which a country promises that it will treat another country as well as it treats any other country that receives preferential treatment. Most favored nation clauses are frequently included in bilateral investment treaties.")

[2] Baker, Jonathan B. and Judith A. Chevalier (2013), "The Competitive Consequences of Most-Favored-Nation Provisions," *Antitrust* 27(2): 20–26, at 20. ("Under an MFN, one party to a transaction promises to give the other party at least as favorable contractual terms as it gives any other counterparty.")

[3] Baker, Jonathan B. and Judith A. Chevalier (2013), "The Competitive Consequences of Most-Favored-Nation Provisions," *Antitrust* 27(2): 20–26, at 20. ("Under an MFN, one party to a transaction promises to give the other party at least as favorable contractual terms as it gives any other counterparty.")

[4] Parker, Geoffrey G., Marshall W. Van Alstyne, and Sangeet Paul Choudary (2016), Platform Revolution, New York, NY: W. W. Norton & Company, at 5. ("A platform is a business based on enabling value-creating interactions between external producers and consumers.")

Hovenkamp, Herbert J. (2020), "Antitrust and Platform Monopoly," *Yale Law Journal* 130: 1952–2273, at 1957.

[5] Baker, Jonathan B. and Fiona Scott Morton (2018), "Antitrust Enforcement Against Platform MFNs," *Yale Law Journal* 127(7): 2176–2202, at 2716, 2178. ("A platform MFN requires that providers refrain from offering their products or services at lower prices on other platforms. The platform is thus guaranteed that no other internet distributor will charge a lower final price, not because the focal platform has worked to ensure that it has the lowest cost, but rather because it has contracted for competitors' prices to be no lower.")

Boik, Andre, and Kenneth S. Corts (2016), "The Effects of Platform Most-Favored-Nation Clauses on Competition and Entry," *The Journal of Law and Economics* 59(1): 105–134, at 105. ("In the context of sellers who sell their products through intermediary platforms, a platform most-favored-nation (PMFN) clause is a contractual restriction requiring that a particular seller will not sell at a lower price through a platform other than the one with which it has the PMFN agreement.")

[6] Baker, Jonathan B. and Fiona Scott Morton (2018), "Antitrust Enforcement Against Platform MFNs," *Yale Law Journal* 127(7): 2176–2202, at 2178. ("Platform MFNs are labeled 'wide' if they constrain the price on all other platforms, including the provider's own website (if any). In contrast, platform MFNs are considered 'narrow' if they prevent the provider from setting a lower price on its own website, while leaving prices on other platforms unrestricted.")

[7] Boik, Andre, and Kenneth S. Corts (2016), "The Effects of Platform Most-Favored-Nation Clauses on Competition and Entry," *The Journal of Law and Economics* 59(1): 105–134, at 105, 108. ("In the context of sellers who sell their products through intermediary platforms, a platform most-favored-nation (PMFN) clause is a contractual restriction requiring that a particular seller will not sell at a lower price through a platform other than the one with which it has the PMFN agreement."; "In a traditional MFN policy, one or more sellers commit to one or more buyers not to sell to other buyers at a lower price. . . . Note that a platform setting is quite different in several ways. Most notably, a PMFN clause is an agreement between a seller and a platform about prices charged by the seller to a third party–the buyer.")

[8] See, for example:

Johnson, Justin P. (2017), "The Agency Model and MFN Clauses," *The Review of Economic Studies,* 84(300): 1151–1185, at 1151.

Boik, Andre and Kenneth S. Corts (2016), "The Effects of Most-Favored-Nation Clauses on Competition and Entry," *The Journal of Law and Economics,* 59(1): 105–134, at 112.

Wang, Chengsi and Julian Wright (2020), "Search Platforms: Showrooming and Price Parity Clauses," RAND Journal of Economics, 51(1): 32–58, at 32.

[9] Boik, Andre and Kenneth S. Corts (2016), "The Effects of Platform Most-Favored-Nation Clauses on Competition and Entry," *Journal of Law and Economics* 59(1): 105–134, at 128. ("We show that PMFN agreements tend to raise fees charged by platforms and prices charged by sellers[.]")

[10] Boik, Andre and Kenneth S. Corts (2016), "The Effects of Platform Most-Favored-Nation Clauses on Competition and Entry," *Journal of Law and Economics* 59(1): 105–134, at 128. ("We also show that the adoption of a PMFN agreement by an incumbent platform can discourage entry by another platform if it is sufficiently downward differentiated[.]")

[11] See, for example:

Rogerson, William P. and Howard Shelanski (2020), "Antitrust Enforcement, Regulation, and Digital Platforms," *University of Pennsylvania Law Review* 168: 1911–1940, at 1938. ("The second type of behavior is the use of most favored nation clauses (MFN) that make it more difficult for potential competitors to challenge the dominant provider. For example, in the case of platforms that help businesses reach customers (such as a travel site that lists hotel accommodations), a MFN by a dominant platform that prohibits businesses from offering better terms on other platforms can limit the ability of potential competitors to challenge the incumbent.")

Ezrachi, Ariel (2015), "The Competitive Effects of Parity Clauses on Online Commerce," *European Competition Journal,* 11(2–3): 488–519, at 501, 519. ("The anticompetitive effects described above have been central to the analysis of wide MFNs worldwide. Indeed, a review of the main decisions by competition agencies reveals a consensus as to the possible harmful effects which wide MFNs combined with an agency model may generate. The most publicised case which involved wide MFNs, and was pursued on both sides of the Atlantic, concerned Apple's use of wide parity in its iBooks Store." Price parity clauses "may lead to a restriction of competition through excessive intermediation and price uniformity and they may also limit low cost entry.")

[12] Ennis, Sean, Marc Ivaldi, and Vincente Lagos (2022), "Price Parity Clauses for Hotel Room Booking: Empirical Evidence from Regulatory Change," *Toulouse School of Economics Working Paper,* available at: https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2020/wp_tse_1106.pdf, at 7–8.

[13] Ennis, Sean, Marc Ivaldi, and Vincente Lagos (2022), "Price Parity Clauses for Hotel Room Booking: Empirical Evidence from Regulatory Change," *Toulouse School of Economics Working Paper,* available at: https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2020/wp_tse_1106.pdf, at 7–8.

[14] The Guardian, "Amazon.com and 'Big Five' Publishers Accused of eBook Price-Fixing," 1/15/2021, https://www.theguardian.com/books/2021/jan/15/amazoncom-and-big-five-publishers-accused-of-ebook-price-fixing.

[15] The Guardian, "Amazon.com and 'Big Five' Publishers Accused of eBook Price-Fixing," 1/15/2021, https://www.theguardian.com/books/2021/jan/15/amazoncom-and-big-five-publishers-accused-of-ebook-price-fixing.

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Endnotes for ***Understanding Difference-in-Differences and Choosing the Best Tool for Antitrust Economic Analyses***

[1] See, for example, U.S. Department of Justice and the Federal Trade Commission (2023). *Merger Guidelines.* §1 and ft. 7 (henceforth "Merger Guidelines").

[2] See, for example, *Messner v. Northshore University HealthSystem*, 669 F.3d 802, United States Court of Appeals, 7th Cir. (2012) concluded that experts can use "difference-in-differenc¬es methodology to estimate [] anti-trust impact"; *In re AMR Corporation*, 625 B.R. 215, United States Bankruptcy Court, S.D.N.Y. (2021); *Mr. Dee's Inc. v. Inmar Inc.*, No. 1:19cv141, United States District Court, M.D. North Carolina (2021); *In re Dealer Management Systems Antitrust Litig.*, 581 F. Supp. 3d 1029, Dist. Court, ND Illinois (2022); *Tevra Brands LLC v. Bayer Healthcare LLC*, No. 19-cv-04312-BLF, N.D. Cal. (2024).

[3] See, for example, Joseph Farrell et al. (2009), "Economics at the FTC: Retrospective Merger Analysis with a Focus on Hospitals." Review of Industrial Organization, 35 (4 - Special Issue: Antitrust and Regulatory Review): 369-385; Graeme Hunter et al. (2008), "Merger Retrospective Studies: A Review," Antitrust, 23(1): 34-41; Dennis Carlton et al. (2019) "Are Legacy Airline Mergers Pro- or Anti-Competitive? Evidence from Recent U.S. Airline Mergers." International Journal of Industrial Organization, 62: 58-95.

[4] The Daubert Standard was established in the U.S. Supreme Court case *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579 (1993), and provides a systematic framework for a trial court judge to assess the reliability and relevance of expert witness testimony before it is presented to a jury.

[5] See, for example, *Mia. Prods. & Chem. Co. v. Olin Corp.*, No. 1:19-CV-00385 EAW, W.D.N.Y. (Dec. 28, 2023), where regression model was classified as "not methodologically sound, for multiple reasons," including endogeneity and misclassifying data; *Reed Constr. Data Inc. v. McGraw-Hill Cos.*, 49 F. Supp. 3d 385, S.D.N.Y. (2014) where Daubert motion to exclude expert's regression analysis was granted due to significant failures, including faulty model design, omitted variable bias, and multicollinearity.

[6] There are some excellent papers that summarize the recent advances in the literature. See, notably, Jonathan Roth et al. (2023) "What's Trending in Difference-In-Differences? A Synthesis of the Recent Econometrics Literature." *Journal of Econometrics*, 235(2): 2218 (henceforth "Roth et al. (2023)").

[7] See, for example, Andrew Goodman-Bacon (2021), "Difference-in-Differences with Variation in Treatment Timing." *Journal of Econometrics*, 225(2): 254; Brantley Callaway & Pedro H.C. Sant'Anna (2021), "Difference-in-Differences with Multiple Time Periods." *Journal of Econometrics*, 225(2): 200 (henceforth "Callaway & Sant'Anna (2021)"); Kirill Borusyak, Xavier Jaravel, & Jann, Spiess (2021), "Revisiting Event Study Designs: Robust and Efficient Estimation," *arXiv*, 27 Aug. 2021, arxiv.org/abs/2108.12419. Accessed 17 Mar. 2025.

[8] See, for example, *Ryan LLC v. Federal Trade Commission*, Docket No. 3:24-cv-00986, N.D. Tex., (Apr 23, 2024), ECF 210.

[9] This has been a gross overview of the methods described in Callaway & Sant'Anna (2021), supra note 7.

[10] There are several ways that the literature has proposed to operationalize the implementa¬tion of conditional parallel trends, such as: i) regression adjustment which essentially entails including additional observable and measurable characteristics (these observable and measurable characteristics from each unit can be called covariates) in the regression model to control for potential confounding factors, and allows for a more nuanced analysis of the variable of interest (inference with this approach can become complicated with a fixed number of matches); ii) inverse probability weighting which will explicitly model the probability that each unit belongs to the treated/control given some covariates (see Alberto Abadie (2005), "Semiparametric Difference-in-Differences Estimators," *The Review of Economic Studies*, 72(1):1 for original derivation); iii) doubly-robust estimators which combines both methods previously mentioned (See Pedro HC Sant'Anna & Jun Zhao (2020), "Doubly Robust Difference-in-Differences Estimators," *Journal of Econometrics*, 219(1): 101).

[11] See, for example, Kyle Butts (2023), "JUE Insight: Difference-in-Differences with Geocoded Microdata," *Journal of Urban Economics*, 133: 103493; Martin Huber and Andreas Steinmayr (2021), "A Framework for Separating Individual-Level Treatment Effects from Spillover Effects," *Journal of Business & Economic Statistics*, 39(2): 422.

[12] There is a growing concern by competition agencies with respect to potential spillover effects and the need to account for these in antitrust investigation. See, for example, Merger Guidelines, supra note 1, §2.9.: "Network effects occur when platform participants contribute to the value of the platform for other participants and the operator. The value for groups of participants on one side may depend on the number of participants either on the same side (direct network effects) or on the other side(s) (indirect network effects)."

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