LESSONS FROM *AT&T/TIME WARNER*

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 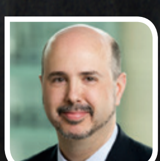 

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I. INTRODUCTION

The *AT&T/Time* Warner merger trial represented the U.S. Department of Justice's ("DOJ") first vertical merger challenge in decades, and the parties' arguments and courts' findings are being closely scrutinized.[2] The authors were retained by AT&T and Time Warner, initially to provide economic analyses of the antitrust issues raised by the merger to the Antitrust Division of the Department of Justice, and ultimately to assist with and testify in the litigation brought by the DOJ to block the deal.[3] In our opinion, there are three key lessons from the litigation for future antitrust practice: (1) history matters; (2) be careful of predictive vertical models; and (3) efficiencies matter. We provide some high-level thoughts on each in this article.

II. HISTORY MATTERS

The first key lesson from the *AT&T/Time Warner* trial is that history matters. While there are always differences between transactions, that does not make every transaction *sui generis*. Rather, as in so many fields of study, experiences from the past are often our best guide to predicting the future; outcomes of previous mergers, analyzed through the lens of economic theory and quantitative methods, provide critical evidence in predicting the effects of proposed mergers. Indeed, the Horizontal Merger Guidelines stress the importance of analyzing past mergers and associated natural experiments as part of merger review.[4]

In the *AT&T/Time Warner* litigation, there were several prior vertical integration and disintegration events available to help assess whether it was true, as the DOJ claimed, that vertical integration would harm compe-

2 On June 12, 2018, following almost two years of regulatory proceedings and a six-week trial, Judge Richard J. Leon ruled in favor of AT&T and Time Warner, permitting the firms' planned merger to proceed without conditions. On February 26, 2019, the U.S. Court of Appeals rejected the Department of Justice's appeal of the US District Court's opinion allowing the merger of AT&T and Time Warner to proceed without conditions. The Department of Justice announced soon thereafter that it would not seek additional review of this decision. Memorandum Opinion, Judge Leon, *United States of America v. AT&T Inc., DirecTV Group Holdings, LLC, and Time Warner Inc.*, 1:17-cv-02511-RJL, June 12, 2018 ("Judge Leon Opinion"). Opinion by Judge Rogers, *United States of America, Appellant v. AT&T, Inc., et al., Appellees*, 1:17-cv-02511, USCA Case 18-5214, February 26, 2019 ("Appellate Opinion"). Diane Bartz & David Shepardson, "U.S. Justice Department will not appeal AT&T, Time Warner merger after court loss," Reuters Business news, February 26, 2019, https://www.reuters.com/article/us-timewarner-m-a-at-t/us-justice-department-will-not-appeal-att-time-warner-merger-after-court-loss-idUSKCN1QF1XB.

3 Dr. Carlton testified at trial on behalf of AT&T and his testimony was cited repeatedly by both Judge Leon and Judge Rogers. Dr. Israel was the primary economic expert during the almost two-year investigation by the Department of Justice leading up to the trial. Dr. Shampine was the overall chief of staff for the Compass Lexecon engagement.

4 U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, August 19, 2010, § 2.1.2. To be clear, the relevant goal in a retrospective is not whether prices changed — in the video industry, prices have been going up for decades whether firms merged or not. Rather, the goal is to isolate the effect of the merger.

tition.[5] We paid particular attention to the vertical merger between Comcast and NBCU, which had many of the same features as the *AT&T/Time Warner* transaction. Our econometric study of that transaction showed that the harmful effects that the DOJ claimed should have happened were not there.[6] The courts relied heavily on that evidence.[7]

In addition, recent marketplace events illustrated the importance of efficiencies generated by vertically integrated firms in the video industry. In particular, the growth of vertically integrated firms with innovative ways of creating, marketing, and monetizing content has been perhaps the single most important development in the industry over the past several years. For example, Netflix is vertically integrated, as both a content creator and a distributor. And its success rests heavily on its use of data on who is watching its shows and what they are watching to facilitate the creation and marketing of popular content. Prior to the merger, AT&T had such data but was not creating content, and Time Warner was creating content but did not have such data. Hence, the Netflix experience demonstrated that AT&T and Time Warner had complementary assets (direct relationships with and information about consumers at AT&T, and content at Time Warner) that were being underutilized pre-merger, largely because AT&T and Time Warner had trouble figuring out how to coordinate pre-merger and did not do so optimally. The merger was driven in part by the desire to adopt the structure that firms like Netflix have demonstrated is successful in making use of data to improve content creation. Again, the courts recognized the importance of this evidence.[8]

III. BE WARY OF PREDICTIVE VERTICAL MODELS

The second key lesson from the *AT&T/Time Warner* litigation is that predictive models of vertical industrial structure based on Nash-in-Nash bargaining models can be complicated and fragile, in the sense that changes in some theoretical assumptions can matter a lot and the predictions of some models can change substantially given reasonable changes to input parameter estimates, even if one accepts the core economic premises and logic of the model being used. As a result, such models, if feasible, should be tested to see whether they would have predicted the outcomes of historical events, such as past mergers, before relying on them.

In the testimony in the *AT&T/Time Warner* litigation, we highlighted three particular flaws in the government's model, which the court credited. First, core economic assumptions made in the model were inconsistent with the facts of the case. Second, the predictions of the model were not robust — reasonable changes in the empirical inputs of the model (e.g. margins) flipped the sign of the prediction from net harm to net benefit. Third, the predictions of the model were contradicted by actual historical experience.

5 While parts of the record are not public, redacted copies of the trial transcripts are publicly available. The direct testimony of the government's economic expert Dr. Shapiro was on April 11th, 2018 and Dr. Carlton's was on April 12th, 2018. See also the DOJ website with redacted copies of court filings and DOJ expert reports. https://www.justice.gov/atr/case/us-v-att-inc-directv-group-holdings-llc-and-time-warner-inc.

6 The DOJ referenced a non-public FCC analysis that claimed to find some price increases as a result of the DIRECTV/Fox integration. The full details of that analysis are not publicly available (and were not available to the parties in the litigation), but the general methodology was described by the FCC based on SNL Kagan data and a limited time period. Those data have since been updated by SNL Kagan. We studied the event using SNL Kagan's updated data for the same time period and found no evidence of a price increase. Our analysis was not disputed by the DOJ.

7 See, e.g. Judge Leon Opinion, §III.B.4 — "Real-World Evidence Indicating That Prior Vertical Integration of Programmers and Distributors Has Not Affected Affiliate Fee Negotiations Undermines the Government's Increased-Leverage Theory of Harm," and §III.B.4.a — "Professor Carlton's Econometric Analyses of Prior Vertical Transactions Found No Statistically Significant Effects on Content Pricing"; and Appellate Opinion, p. 21 ("The district court's statements identified by the government, then, do not indicate that the district court misunderstood or misapplied the Nash bargaining theory but rather, upon considering whether in the context of a dynamic market where a similar merger had not resulted in a 'statistically significant increase in content costs,' the district court concluded that the theory inaccurately predicted the post-merger increase in content costs during affiliate negotiations.")

8 The Comcast/NBCU analysis just discussed was thus conservative in light of subsequent entry that increased competition and increasingly important efficiencies from vertical integration. Judge Leon Opinion, pp. 2-3 ("Watching vertically integrated, data-informed entities thrive as television subscriptions and advertising revenues declined, AT&T and Time Warner concluded that each had a problem that the other could solve: Time Warner could provide AT&T with the ability to experiment with and develop innovative video content and advertising offerings for AT&T's many video and wireless customers, and AT&T could afford Time Warner access to customer relationships and valuable data about its programming.").

With respect to the core economic assumptions, the government used a vertical model that had two stages. The first (upstream) stage modeled the determination of input (i.e. content) prices using a Nash bargaining (Nash-in-Nash) model. The second (downstream) stage modeled the determination of prices to final consumers (i.e. viewers of content) — making use of the input prices to each firm established in the prior stage — using a horizontal merger simulation model. The overall model required a number of strong assumptions. We focus on one particular assumption here.[9]

In the government's Nash bargaining model in the upstream market the ultimate terms of the bargain depend on the outcome that would occur if there were no agreement. For example, the terms of the agreement pre-merger between Time Warner and Comcast would depend on what Time Warner and Comcast would do — and thus what their respective profits would be — if those parties failed to reach an agreement and there was a blackout of Time Warner on Comcast. In order to predict the effects of the merger, one asks how, post-merger, the no-agreement points change and thus how the outcome of the bargaining process is predicted to change. Hence, in such models, getting the no-agreement point right is critical for accurate predictions of merger effects. But in this case, the government's expert economist got this critical point wrong: The expert ignored that AT&T had agreed not to black out any Time Warner content in its negotiations with rivals such as Comcast, and instead had agreed to continue to supply Time Warner content at either a mutually agreed upon price or at a price that a neutral arbitrator could set. As such, contrary to the government's expert's assumption, the no-agreement point was definitely not a permanent blackout. The courts agreed with our criticism that this error by itself invalidated the government's model.[10]

Regarding the model's lack of robustness with respect to reasonable changes in inputs, in this case, the entire exercise depended on accounting for the desirable effects from efficiencies and the undesirable effects from raising rivals' costs to determine the net effect of the merger on prices. And the net effect was predicted to be quite small even under the government's expert's parameter estimates, meaning that small changes in the parameter estimates not only changed the magnitude of the predicted price effect, but actually flipped the sign of the effect, changing a predicted net harm into a predicted net benefit.

More precisely, the government's model, like most vertical models, automatically generated an efficiency effect (the elimination of double marginalization), which causes the merging party, in this case DIRECTV, to lower its prices to final consumers. This efficiency effect increases competition and causes DIRECTV's rivals such as Comcast to lower their prices in response. But the model also predicted another effect in which the merging party, DIRECTV, has an incentive to raise the prices of Time Warner content for rivals such as Comcast, causing the rivals to raise their prices to final consumers, thereby enabling the merging party (i.e. DIRECTV) to raise its prices to final consumers. Because of these offsetting effects, the predictions of the government's model, and often of vertical models generally, on the welfare of all consumers depended heavily on the estimates used for, among other things, profit margins and the intensity of competition for final consumers.

In assessing the merger's ultimate effect on prices, the analyst needs to confirm that the results are not sensitive to reasonable choices for the underlying model inputs — even if one assumes that all the model's underlying assumptions on how bargaining occurs are correct. In the *AT&T/Time Warner* litigation, we were able to show that the small harmful effects that the government's expert predicted became procompetitive effects when one used more reasonable and up-to-date data. The court concluded that in light of that sensitivity, the government had failed to meet its burden of proof.[11]

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9 Many other assumptions were also clearly inconsistent with the facts of the industry. For example, the model assumed that each negotiation between a content provider and a distributor is completely independent of every other negotiation. Given the common usage of most favored nations clauses in licenses, that assumption is clearly incorrect. However, there is currently no generally accepted way to incorporate interdependent negotiations into Nash-in-Nash models like the one the government's expert used. Similarly, the government's expert's model did not account for the many long-term contracts in place.

10 See, e.g. Appellate Opinion, p. 23 ("The post-merger arbitration agreements would prevent the blackout of Turner Broadcasting content while arbitration is pending. … Consequently, the government's challenges to the district court's treatment of its economic theories becomes largely irrelevant, at least during the seven-year period [of the arbitration commitment].").

11 See, e.g. Judge Leon Opinion, §III.C.2 — The Evidence Is Insufficient to Support the Inputs and Assumptions Incorporated into Professor Shapiro's Bargaining Model, and p. 149 ("Accordingly, neither Professor Shapiro's model, nor his testimony based on it, provides me with an adequate basis to conclude that the challenged merger will lead to *any* raised costs on the part of distributors *or* consumers – much less consumer harms that outweigh the conceded $350 million in annual cost savings to AT&T's customers.").

Finally, given that the government's vertical model depended on a number of strong assumptions and its predictions were not robust to reasonable changes in the underlying parameter estimates, a fact finder might understandably be skeptical of the model unless it can be shown to have some track record of making accurate predictions in the industry. Similar models to the government's predicted higher prices (net harm) in prior cases, and the government did not dispute that its model would have done so as well, but we demonstrated that such higher prices did not, in fact, occur.[12] Thus, the government model's predictions were contradicted by prior experience in the industry, and the courts noted that fact.[13]

IV. EFFICIENCIES MATTER

The third key lesson, which may have a profound effect on antitrust litigation going forward, is that efficiencies (e.g. cost savings generated by the merger) matter. It may seem obvious that efficiencies should matter, but government agencies and courts may dismiss efficiencies as not "cognizable" for various reasons, and some economists have questioned the role efficiencies should play in a merger analysis.[14] In the *AT&T/Time Warner* litigation, as we noted, efficiencies were (appropriately) inherent to the government's model, and the government's expert's approach was focused on determining the net effect on prices. The courts did not take issue with the government's basic approach, and Judge Leon noted specifically that while the government had failed to meet its burden of proof in establishing there were *any* likely harms, all parties agreed that there would be efficiencies that would benefit consumers.[15] The fact that the courts credited efficiencies as credible, cognizable and relevant to the analysis of net harm is likely to be very important for the analysis of future mergers.

While the *AT&T/Time Warner* litigation concerned a vertical transaction, the principle of crediting efficiencies as central to merger analysis is not, or at least should not be, limited to vertical mergers. The elimination of double marginalization efficiencies that all parties agreed existed and were relevant are effectively cost savings that offset price increases. And all parties agreed that one should weigh the efficiencies' effects against any incentive to raise prices in order to evaluate the net effect on consumers.[16] There is no economic or logical reason why this approach should be unique to vertical transactions. To the contrary, as a matter of economics, the same logic applies to horizontal mergers.

In conclusion, analysis of vertical mergers can be complicated and difficult. In any merger inquiry, the examination of past mergers can be useful in identifying the important economic forces at work in the industry. Existing models of vertical mergers are still being developed. These models should be carefully evaluated in light of industry history and tested for robustness to reasonable alternative theoretical assumptions and input values based on the facts of the case. Furthermore, analyses should not be limited just to potential harms. Efficiencies are also important and should be accounted for in merger analyses, whether vertical or horizontal.

12 Notice that this is a different test than asking whether past vertical integration has been harmful. It is a direct test of the specific model. However, it is not always practical to implement such tests. For example, available data may not be sufficient to determine with any precision whether a predicted effect actually occurred or not. In particular, if a practice has always been in place, it will likely be difficult to empirically quantify its effects since there would be no contrasting example of pricing in the absence of that practice.

13 See, e.g. Appellate Opinion, p. 21 ("The district court's statements identified by the government, then, do not indicate that the district court misunderstood or misapplied the Nash bargaining theory but rather, upon considering whether in the context of a dynamic market where a similar merger had not resulted in a 'statistically significant increase in content costs,' the district court concluded that the theory inaccurately predicted the post-merger increase in content costs during affiliate negotiations.").

14 The Horizontal Merger Guidelines, for example, argue that "Efficiencies are difficult to verify and quantify." U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, August 19, 2010, § 10. See also Jonathan Baker, Nancy Rose, Steven Salop & Fiona Scott Morton, "Five Principles for Vertical Merger Enforcement Policy," Georgetown University Law Center, 2019, available at https://scholarship.law.georgetown.edu/facpub/2148, noting that there is a wide range of views on the treatment of vertical mergers and efficiencies and arguing that not only should there be no presumption of efficiencies from vertical mergers but there should be no "safe harbor" unless both firms compete in unconcentrated markets.

15 Judge Leon Opinion, p. 149 ("Accordingly, neither Professor Shapiro's model, nor his testimony based on it, provides me with an adequate basis to conclude that the challenged merger will lead to *any* raised costs on the part of distributors *or* consumers – much less consumer harms that outweigh the conceded $350 million in annual cost savings to AT&T's customers."). Appellate Opinion, p. 29 ("The district court found, and the government agreed, that the merger would result in cost savings as a result of EDM.").

16 The government did claim that the District Court erred in misunderstanding Nash bargaining and claiming that firms did not maximize profits. However, as described above, the government's claims of error were irrelevant to the main flaws in the government's case and, as the appellate court found, those claims of error were themselves incorrect.

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