TWO ECONOMIC ERRORS IN THE AT&T/TIME WARNER DECISION

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1. INTRODUCTION

On June 12, 2018 the U.S. District Court for the District of Columbia issued a decision[1] rejecting the motion of the United States Department of Justice ("DOJ") to block the proposed merger between AT&T and Time Warner, on the grounds that the DOJ had not proven that the transaction would substantially lessen competition. The purpose of this short note is to describe two economic errors that the Court made in its decision.

The DOJ's primary theory of harm was that the transaction would increase the merged firm's bargaining leverage in licensing negotiations with rival Multichannel Video Programming Distributors ("MVPDs"), allowing it to raise the license fees that it charges these MVPDs for Time Warner's programming. These increases in license fees would in turn be passed through to pay-TV subscribers in the form of higher subscription fees.

This theory of harm rested on the following two key economic assumptions.

> Assumption #1: Changes in costs and benefits affect negotiated fees.
> For purposes of modeling the merged firm's behavior, a widely accepted economic theory of bargaining called Nash bargaining theory can be used to predict how changes in a programmer's net cost or benefit of providing programming to an MVPD will affect the negotiated license fee for the programming
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> Assumption #2: Firms seek to maximize profits as whole, not divisional profits.
> For purposes of modeling the merged firm's behavior, it can be assumed that individual divisions of the merged firm will take actions to attempt the maximize the joint profit of the entire firm, instead of attempting to maximize divisional profits, if there is a conflict between these two goals.

The Court's rejection of both of these assumptions was the basis for its decision that the DOJ had not proven its case.

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[1] See United States of America vs. AT&T, Inc. *et. al.,* No. 17-225611(RJL), *Memorandum Opinion*, June 12, 2018 ("AT&T/Time Warner Decision").

The DOJ has filed an appeal of the decision, arguing that the Court erred in rejecting the DOJ's two economic assumptions.[2] It appears that the basic thrust of the DOJ's argument will be that, in rejecting the above two assumptions, the Court rejected widely accepted economic principles without sufficient justification. There is a good argument to be made along these lines. But evaluating whether the Court paid sufficient deference to certain economic principles may be a relatively complex issue to resolve. The purpose of this note is to argue that the Court made two even more basic and fundamental errors in rejecting these two assumptions.

The paper is organized as follows. Section 2 describes the DOJ's primary theory of harm in a little more detail and explains why it depends on the two key assumptions described above. Section 3 describes the argument that the Court used to reject the first assumption (related to Nash bargaining) and explains the error in its argument. Section 4 describes the argument that the Court used to reject the second assumption (related to profit maximization) and explains the error in this argument. Section 5 draws a brief conclusion.

2. THE THEORY OF HARM

The primary theory of harm advanced by the DOJ was that the vertical merger of AT&T's distribution assets with Time Warner's programming assets would increase the bargaining leverage of the merged firm in license fee negotiations with rival distributors and thereby result in license fee increases that would in turn be passed through to pay-TV subscribers in the form of higher subscription prices. More specifically, the DOJ argued that the merger would increase the

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[2] See United States of America vs. A&T Inc. *et. al.*, Civil Case No. 18-5214, *Motion of the United States to Expedite Consideration of the Appeal*, July 18, 2018, ("AT&T/TW Appeal").

opportunity cost to the merged firm of providing programming to rival distributors. The reason is that, after the merger, the merged firm would take into account the fact that, if it withheld programming from a rival distributor, some of the customers of the rival distributor would leave the rival and switch to the merged firm's own pay-TV service. Thus, after the merger, a new opportunity cost of providing programming to rivals would be these foregone profits from subscribers that would switch to the merged firm if programming was withheld from rival distributors. A simple economic formula can be used to calculate the increase in the opportunity cost of providing programming caused by the merger. And a simple widely accepted economic theory of bargaining called Nash bargaining theory predicts that, if a buyer and seller negotiate the price of a good, the price will split the gains to trade between the two of them evenly (if there is equal bargaining strength on both sides). The result is that when the cost of providing the good increases, the negotiated price will increase by about half this amount.[3] DOJ used this theory to justify its prediction that license fees would increase by about half the amount of the cost increase it calculated would be caused by the merger.

This theory of harm is not completely new. This bargaining theory framework for analyzing the competitive effects of vertical mergers was first suggested by Rogerson (2003a, b) when the FCC considered the vertical merger between News Corp. and DirecTV in 2004. At that time, perhaps because the theory was relatively novel, it did not play a major role in shaping the

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[3]The even split – with half of the increase in cost being passed through – reflects the assumption that bargaining power is equally split between the two firms. DOJ argued that this was a reasonable assumption to make. However, a similar formula would still have applied and produced similar results if bargaining power had been split differently between the parties. The fundamental point is that, when the cost of providing a good goes up, some of that increased cost is reflected is price.

FCC's analysis (FCC 2004). However, when Rogerson (2010a, b, c) and Murphy (2010a, b) suggested this framework to the FCC again when it considered the Comcast-NBCU merger in 2011, the bargaining theory framework played a central role in shaping the FCC's analysis (FCC 2011). See Baker (2011) and Rogerson (2011) for more detailed descriptions of the theory and the role it played in the FCC analysis of the Comcast/NBCU transaction.

Since this theory of harm uses Nash bargaining theory to predict how an increase in cost created by the merger would be passed through to affect license fees, it clearly assumes that Nash bargaining theory can be used to model post-merger industry behavior. The reason why DOJ's theory of harm depends on the assumption that divisions of the merged firm would attempt to make decisions to maximize the profit of the entire firm can be explained as follows. The new cost to the programming division of providing programming to rival distributors is that the profits of the distribution division will decrease. The programming division will view lost profits at the distribution level as a cost only if it is attempting to maximize the profits of the merged firm as a whole; if it were to act in disregard of the welfare of the firm as a whole, it might ignore the effect of its decisions on the profits of other divisions.

3. THE COURT'S ERROR IN REJECTING ASSUMPTION #1

In the case of the first assumption (that the Nash bargaining model can be used to predict behavior of the merged firm), the Court's primary basis for rejecting the assumption was that no real world evidence had been presented to show that changes in a programmer's net cost or benefit of providing programming actually causes negotiated license fees to change in the manner predicted by the Nash bargaining model and that various industry experts including executives of the defendants had testified that they did not believe that this type of behavior ever occurred in their industry.

There was one particular issue with the prediction of Nash bargaining theory that most troubled the Court and the executives of the defendants who testified at the trial. Namely, the Nash bargaining model predicts that increases in the seller's cost will cause the negotiated price to increase even if trade would still be profitable (even extremely profitable) for the seller at the old price. But economists do not view this feature of the model as unusual or troubling. Their theory is that the negotiated price depends on the "threat points" of the seller and buyer and that a change in one of the threat points will therefore cause a change in the negotiated price regardless of whether or not trade at the original price would still be profitable or even extremely profitable for the seller. This greatly troubled the Court nonetheless. Furthermore executives of the defendants testified that they found the prediction implausible. Translated back into the concrete example of a programmer selling license rights for its programming to an MVPD, both the Court and executives of the defendants basically observed that even if a programmer's costs went up by a modest amount, licensing the programming to the MVPD at the old price would still be highly profitable for the programmer. Therefore they found it hard to believe that the negotiated price would change given that the programmer would risk losing all of its profit by pushing harder for a price increase.

In the following passage from the decision, the Court describes this feature of the Nash bargaining model that it finds so troubling and states that while it finds the logic of the theory troubling, that its main objection is that no real-world evidence had been presented to show that behavior in the real world was consistent with the prediction of the theory. It then goes on to cite the testimony of various executives of the defendants explaining why they also found the prediction of the Nash bargaining model to be counter-intuitive and did not believe that it described real-world behavior in their industry and notes that it finds this testimony to be "particularly persuasive."

> ". . . [T]he lynchpin of Professor Shapiro's testimony (and accordingly the Government's increased leverage theory) is the *assumption* that a post-merger Turner would gain increased leverage by wielding a blackout threat that will only be somewhat less incredible. That does not make sense as a matter of logic, and more importantly, that has not been supported by sufficient real-world evidence.[36] [the following is text from footnote 36] The Court finds Time Warner CEO Jeff Bewkes' response to a question regarding the increased-leverage theory to be particularly persuasive: 'And the way I - I think it's best to understand it, is if we have a risk that a thousand pound weight might fall on us - we hope it doesn't, but if that's always there, then if you said to me, well don't worry; it might be a 950 pound weight instead of a thousand pounds, are you going to think about it differently? Are you going to take more risk that any of that might happen to you? Absolutely not.' Tr. 3120:23-3121:7(Bewkes(Time Warner)). Although not controlling, the Court notes the some of Turner's lead negotiators credibly testified to similar effect."[4]

While I respectfully disagree with the Court's conclusion that the reasoning underlying

[4]AT&T/Time Warner Decision at 117.

the Nash bargaining model is somehow illogical or nonsensical, my point in this paper is not to attempt to defend the underlying economic logic of the Nash bargaining model. Rather, I wish to focus on the fact that the Court's reasoning is self-contradictory. Elsewhere, the Court endorses and accepts a description of how changes in advertising revenue affect negotiated license fees that is a perfect real-world example of license fees being affected by marginal changes in a programmer's net cost or benefit of providing programming to MVPDs as predicted by Nash bargaining theory.

In its background description of the underlying economics of this industry, the Court noted that programmers earn revenue not only from license fees but from advertising. Therefore a marginal benefit to a programmer of having an additional subscriber is the marginal advertising revenue that the programmer would earn from having an additional subscriber. The Court noted that advertising revenues were falling due to pressure from digital advertising. In particular, it cited and endorsed testimony by Time Warner CEO Jeff Bewkes that this reduction in the net benefit of providing programming to MVPDs would have the "predictable result" that negotiated license fees would increase.

> "In light of the dual-revenue-stream business model of programmers, witnesses testified that declines in television advertising revenue will produce a predictable result: it will place more pressure on affiliate fees, meaning that programmers will increase the fees charged for their content. *See, e.g.,* TR. 3088:16-21 (Bewkes(Time Warner)). For that reason, Jeff Bewkes, CEO of Time Warner, explained the explosion of digital advertising is 'actually bad for' video distribution consumers, 'because it means that the financial

support for all this programming on all these different channels gets pushed over toward subscription prices.' *Id.* At 3089:6-11."

Of course the "predictable result" that the Court describes and endorses is precisely the prediction of Nash bargaining theory that the Court found to be illogical when considered in the abstract. A reduction in advertising revenue of x dollars per month per subscriber, is completely equivalent to an increase in the cost of providing programming of x dollars per month per subscriber. Thus by accepting Jeff Bewkes' explanation of how changes in marginal advertising revenue produce the "predictable result" that negotiated license fees will increase, the Court actually accepted a description of industry behavior that is consistent the prediction of the Nash bargaining model. Nowhere in its opinion did the Court distinguish between the situations to explain why the Nash bargaining model is an accurate predictor in one but inaccurate in the other. The simple fact is that, in each situation, increased costs (whether from lost advertising or lost subscribers) translate into increased prices.

Furthermore, although some industry experts have stated that they find the abstract logic of the Nash bargaining model implausible, at least some of these same experts apparently believe that at least in one significant set of real circumstances, that the Nash bargaining model correctly predicts industry behavior.[5] I would argue that it is more appropriate to rely on industry experts to describe actual behavior in their industry rather than to rely on them for critiques of the

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[5]As the astute reader may have already noticed, the executive who provides the convincing real-world example of negotiated prices in this industry behaving in the manner described by Nash bargaining theory, Jeff Bewkes, is the same executive who provided the theoretical criticism of the abstract underlying logic of the Nash bargaining model that the Court found to be so persuasive.

abstract logic of economic theory.

4. THE COURT'S ERROR IN REJECTING ASSUMPTION #2

In the case of the second assumption (that individual divisions of the merged firm will attempt to maximize firm-wide profit), the nature of the Court's error is even more transparent. Both the DOJ and the defendants agreed that the merger would create efficiencies as described by a theory usually referred to as elimination of double marginalization ("EDM"). The basic idea of this theory is that, after the merger, the downstream distribution division of the merged firm will have a greater incentive to lower prices and increase sales because it will take into account the profit that the upstream programming division earns on license fees. The Court accepted the conclusion that the transaction would generate this efficiency and repeatedly cited the fact that this efficiency would occur to support its conclusion that the net competitive effect of the merger would likely be positive or at least not negative.

However there is a serious problem with the Court's conclusion that this efficiency will occur. Namely, as a matter of simple and non-controversial economic logic, a necessary assumption for EDM to occur is that the individual divisions of the merged firm have the goal of maximizing the profit of the entire firm.[6] However, this is precisely the assumption that the Court rejected! It is completely contradictory for the Court to reject the DOJ theory of harm based on the grounds that it rejects the assumption that individual divisions of the merged firm

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[6]This is because the new benefit to the distribution division of increasing distribution is the extra profit earned by the upstream division. Profits at the upstream level will only motivate the downstream division to lower prices and increase output if it takes the profits of the upstream division into account.

would act to maximize the profit of the entire firm, but to simultaneously accept the conclusion that the transaction would create significant efficiencies due to EDM.

5. CONCLUSION

The Court rejected the DOJ's primary theory of harm for the AT&T/Time Warner transaction by rejecting two key economic assumptions that the theory of harm relies on. In its appeal the DOJ appears to be arguing that the Court erred in rejecting these two assumptions because it rejected well-accepted economic principles without sufficient justification. While I believe there is merit in this argument, this is necessarily a complex issue to evaluate. I have shown in this paper that the Court made simpler and more basic errors in rejecting both assumptions – simple errors that throw the Court's conclusion into doubt whether or not one believes that the Court rejected well-accepted economic principles without sufficient justification.

For assumption #1 (that Nash bargaining theory can be used to predict post-merger behavior) the Court rejected the applicability of the Nash bargaining model because it claimed that there was no evidence that real-world industry behavior was consistent with the prediction of the theory, and because industry executives had testified that they found the logic of the Nash bargaining model to be implausible and did not believe that the model would predict industry behavior. However, in another part of the decision providing background on the industry, the Court endorses and accepts industry expert testimony describing how changes in advertising revenue affect negotiated license fees – a perfect example of industry behavior consistent with the predictions of the Nash bargaining model. Thus the Court has concluded in its own decision that there are examples of industry behavior that are consistent with the Nash bargaining model. It nowhere explained why Nash bargaining theory would predict outcomes in one situation but not another. Furthermore, although some industry experts may testify that they find the abstract logic of the Nash bargaining model implausible, these same experts apparently believe that, at least in one significant set of real circumstances, the Nash bargaining model does correctly predict industry behavior.

For assumption #2 (that individual divisions of the merged firm will attempt to maximize profits of the entire firm), the Court rejects the DOJ's primary theory of harm by rejecting this assumption. But it simultaneously concludes that the merger will generate significant efficiencies due to EDM, and uses this conclusion to support its conclusion that the net competitive effects are the merger are likely to be positive or at least non-negative, even though EDM also requires assumption #2 to be true.

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