KABUKI DANCES OR RUBE GOLDBERG MACHINES? VERTICAL ANALYSES OF MEDIA MERGERS

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I. THE VERDICT

"[A] historic defeat for the Justice department" is how the Wall Street Journal described the June 2018 dismissal by Judge Leon of the U.S. Department of Justice's ("DOJ's") attempt to prevent AT&T and Time Warner's proposed "blockbuster" vertical merger. The verdict had been eagerly awaited not just because of the unusual circumstance of a vertical merger being challenged at trial – but also because much of the substantive disagreement during the trial was (equally unusually) centered on the bargaining model that is now the routine go-to tool in both the U.S. and Europe to assess vertical mergers, especially in media markets. As proclaimed in a GCR headline during the proceedings, "Bargaining theory hangs over AT&T/Time Warner."

The outcome was not surprising for anyone who had closely followed the trial but was nonetheless disappointing for its treatment of bargaining analysis – something that economists broadly agree is the right way to think about these deals. In both trial comments and his published opinion, Judge Leon described negotiations between programmers and distributors as a "Kabuki Dance" in which the two sides threaten blackouts even though both know that neither wants that (at least not permanently). Referring to the complexity of the government expert's model of such negotiations as a "Rube Goldberg [machine]," he concluded that "in fairness to Mr. Goldberg, at least his contraptions would normally move a pea from one side of the room to the other."

Judge Leon states (twice) in the judgment that "antitrust theory and speculation cannot trump facts." This is undoubtedly true, but did he *have* all of the facts? While the trial was lengthy, and traversed reams of evidence, some important facts seem to have been missing from the mix that might have mattered to the final view: the potential for the merged entity to foreclose rival over-the-top ("OTT") operators like Netflix and Amazon, questions around the legitimacy of the parties' claimed efficiency benefits, and empirical evidence on the extent to which vertically-integrated firms internalize the impact of their decisions on their sister division's profits. Now that the judgment has been appealed, perhaps some of these facts will find their way into the record.

Most importantly, while it is perhaps reasonable to conclude that bargaining models were not reliable and credible as applied in *AT&T/Time Warner*, in our view they were unfairly convicted in general. *Thus possibly a Kabuki Dance, but never a Rube Goldberg machine*. Such models should be "released on appeal" as a useful framework for analysis in vertical media mergers.

II. A COMPARATIVE VIEW: RECENT VERTICAL MEDIA MERGERS IN THE U.S. AND EU

We start with a quick summary of key considerations in recent vertical media mergers in the U.S. and the EU.[2] We then focus in the subsequent section on multiple notable puzzles of the *AT&T/Time Warner* case: which arguments were run and – surprisingly – *not* run, which arguments gained traction and which did not, and where the judgment appears to leave us for now (at least until the appeal is heard).

Vertical mergers are known to allow important efficiencies to be realized. While several can be proposed, including investment, contracting, and bargaining efficiencies, the one most consistently claimed as quantifiable is the "elimination of double marginalization" ("EDM"). This captures the idea that in many media markets, particularly in the U.S., contracts between programmers and distributors consist of a per-subscriber fee for access to that programming (e.g., in 2016 pay-TV distributors in the U.S. were expected to pay ESPN an average of $7.21 per subscriber per month to include it in one of their bundles). A typical claim in these mergers is that merging allows the combined entity to pass programming at its true marginal cost (essentially zero), eliminating one of the two (profit) margins in the vertical supply chain and resulting in lower prices to consumers.

Competition concerns tend to arise in these deals due to the joint ownership of significant programming assets (rights to valuable programs and/or channels) and significant distribution assets (a pay-TV and/or broadband platform). Two distinct forms of (full or partial) foreclosure concerns can be raised. *Input foreclosure* occurs when the merged entity refuses or worsens the terms of supply of its programming to rival distributors (e.g., an integrated *AT&T/Time Warner* increases the affiliate fees it demands for TNT from Charter). *Customer foreclosure* occurs when rival programmers are denied, or discriminated against in the granting of, access to the integrated distributor's pay-TV and/or broadband platform (e.g., an integrated *Comcast/NBCU* refuses to carry Bloomberg TV, or carries it but places it in an unattractive channel position).

2 As background, pay-TV distributors – or, in the U.S., multi-channel video program distributors ("MVPDs") – deliver programming to end-consumers via cable, fiber-optic, direct-to-home ("DTH") satellite or terrestrial (airwave) platforms, as well as IPTV, in which programming is streamed over Internet Protocol ("IP") networks by the customer's Internet service provider ("ISP"). The last 10 years have seen a dramatic growth of OTT video providers (e.g., Netflix, Amazon) – also referred to in the U.S. as online video distributors ("OVDs") – whose services are streamed over the open Internet to any consumer via their broadband connection. The OTT operator requires access to the customer's broadband connection but is not the ISP; often, the ISP may also provide pay-TV services.

Analysis of vertical media mergers in the U.S. and EU has focused on four key considerations: (1) input foreclosure (full or partial) of integrated programming to rival distributors (both traditional pay-TV distributors and OTT operators); (2) customer foreclosure of rival channels to the integrated operator's pay-TV platform; (3) customer foreclosure of OTT providers' access to the integrated operator's broadband platform (i.e., in the latter's role as an ISP); and (4) efficiencies due to EDM. Before turning to the recent *AT&T/Time Warner* judgment, we briefly sketch how these issues played out in three previous media mergers: *Comcast/NBCU* in 2011 (U.S.), *Liberty Global/Ziggo* in 2014/2018 (Netherlands), and *Liberty Global/De Vijver Media* ("DVM") in 2015 (Belgium).

A. Comcast/NBC Universal (US 2011)

The attempt to bring together Comcast, the largest cable distributor in the U.S., and NBC Universal ("NBCU"), a major U.S. programming provider, was reviewed by both the DOJ and the Federal Communications Commission ("FCC") and cleared subject to conditions.

The regulators raised full and partial input foreclosure concerns over the supply of NBC's programming to both traditional and OTT rivals. As well as carrying out a vertical analysis of the profitability of fully withholding programming from rival distributors, the FCC examined partial foreclosure concerns using a model of carriage negotiations based on Nash bargaining – the same model as later used in *AT&T/Time Warner* – to predict increases in licensing fees for NBCU programming.

The estimated price increases were considered not to be offset by any vertical efficiencies from EDM, which were dismissed by the FCC. The parties put forward empirical estimates of price effects from previous instances of vertical integration and disintegration, but this evidence was rejected by the FCC as unreliable. Meanwhile the DOJ dismissed vertical efficiencies by concluding that the industry largely solved the double marginalization problem by using more sophisticated, non-linear pricing schemes than the per-subscriber fees underpinning simple models of EDM.

Customer foreclosure of rival programming from Comcast's cable platforms was also a concern. In particular, rival channels might be placed in package tiers having fewer subscribers or excluded from "local neighborhoods" of channels sharing a common focus, thus shifting viewing and advertising revenues from the rival channels to those of NBCU. Finally, there were concerns that Comcast would discriminate against OTT providers in its role as ISP.

Conditions were imposed including a "baseball-style" arbitration procedure to protect rival MVPDs and OTT providers from input foreclosure.[3] "Net neutrality" requirements were also imposed to ensure that, in its role as an ISP, Comcast would provide non-discriminatory treatment to all OTT providers comparable to its own OTT service, Fancast Xfinity.

B. Liberty Global/Ziggo (EU 2014, 2018)

This merger of two, non-overlapping cable operators in the Netherlands, Liberty Global's UPC and Ziggo, had vertical aspects due to the parties' programming interests, particularly UPC's pay-TV channels Film1 and Sport1. The European Commission's ("EC's") vertical concerns included full and partial input foreclosure of Film1 to competing pay TV distributors. It also raised concerns that the merged entity would restrict OTT operators' access to third-party content by using the increased bargaining power of its combined cable operations to impose terms in carriage contracts with programmers restricting those providers from supplying their content via OTT.

The EC assessed input foreclosure using a vertical analysis of upstream and downstream margins and also considered a model supplied by the parties evaluating the merged entities' incentives to raise rivals' costs. Concerns were resolved by Liberty's commitment to divest Film1 to a third party (the channel was subsequently sold to Sony) and to terminate clauses restricting OTT supply in existing contracts (and not include such clauses in the future).

While the parties claimed the transaction would eliminate double marginalization between Film1 and Ziggo, the EC was dismissive of this. Pointing to minimum quantity mechanisms in carriage contracts which can align the interests of the upstream and downstream firms, the EC concluded it was "unlikely that any further vertical contracting efficiency can be realized post-merger" (Decision ¶240).

3 In baseball-style arbitration the parties submit final offers and the arbiter chooses one of the two, selecting the one that "best reflects the fair market value of the programming at issue" (FCC, *Comcast Corporation and NBC Universal, MB Docket 10-56*, January 2011).

The EC also raised customer foreclosure concerns about OTT operators' access to the parties' broadband platform. Highlighting the parties' role as ISPs providing Internet access to 43 percent of Dutch broadband customers, it pointed to various technical means by which delivery of OTT services to these customers could be inhibited. This was remedied with an undertaking to maintain sufficient interconnection capacity.

C. Liberty Global/De Vijver Media (EU 2015)

This was a purely vertical transaction bringing together Belgian cable operator Telenet, owned by Liberty Global, and media company De Vijver Media ("DVM"), provider of two popular Dutch-language FTA channels in Flanders, Vier and Vijf. The EC considered the channels to be important inputs for TV distributors, and Telenet to have a dominant position in TV retailing.

Concerns were raised over both full and partial input foreclosure. Comparing critical switching rates with survey results on the likely degree of subscriber switching, the EC concluded that there would be a strong incentive to withhold Vier and Vijf from rival distributors. Using a Nash bargaining model similar to that employed in *Comcast/NBCU*, it also found that there would be a strong incentive for partial input foreclosure (also referred to as "raising rivals' costs"). There was no discussion of offsetting efficiency gains from EDM as "the Notifying Parties [had] not made any claims that the Transaction would lead to vertical efficiencies" (Decision ¶499). The EC further determined that input foreclosure of OTT providers was also likely. To overcome concerns the parties reached agreement on licensing terms with several distributors during the investigation and gave formal undertakings to license Vier and Vijf to competing distributors on FRAND terms.

The EC also considered a full customer foreclosure strategy of channels targeting similar audiences to Vier and Vijf but concluded that it would not be profitable. Focusing instead on partial customer foreclosure, especially via electronic program guide ("EPG") positioning, the EC found that this could confer part of the benefit of full foreclosure with limited costs. It therefore required the parties to amend carriage agreements with potential target channels to prevent unilateral reductions in license fees and changes in the channels' EPG positions.

D. AT&T/Time Warner (U.S. 2018)

The combination of Time Warner's video programming and AT&T's distribution assets, specifically its U-verse IPTV service and the DirecTV DTH satellite platform, was challenged by the DOJ and proceeded to trial at the District Court in Washington, D.C.

The government's case focused almost entirely on the risk of partial input foreclosure of Time Warner's programming from rival distributors (both MVPDs and OTT operators, though no discussion of the latter appeared in the judge's opinion). In support of its claim that the merger would represent a significant lessening of competition, the government's economic expert Carl Shapiro presented a bargaining model similar to that developed by the FCC in *Comcast/NBCU*.

In his published opinion, Judge Leon rejected not only the inputs into the bargaining model, but also two key principles underlying such an approach. First, he considered that payoffs from a permanent "blackout" of programming (a key ingredient of the assessment of negotiated outcomes) were irrelevant as such events were "a vanishingly rare occurrence."[4] Second, he rejected the notion ("the economist's assumption," as he put it at trial) that a vertically-integrated firm would consider its *entire* profit when negotiating carriage decisions with rival distributors, rather than that of each of its business units separately, in favor of testimony from executives claiming that ownership of a distributor plays no role in affiliate fee negotiations. Nonetheless, he accepted the parties' claim of consumer price reductions from EDM (also accepted by the government's economic expert), although this involves consideration of the firm's profit as a whole. Judge Leon also accepted empirical estimates of (the absence of) price responses to historical integration/disintegration events presented by the parties' economic expert, Dennis Carlton.

Breaking tradition with past practice, no customer foreclosure concerns were brought forward by the DOJ, whether for channels rival to Time Warner's or for OTT providers concerned about obtaining access to the merged entity's broadband platform. Thus, having rejected the government's position that the price impact of partial input foreclosure would outweigh efficiencies from EDM, Judge Leon denied the request to block the merger.

4 A permanent "blackout" is the permanent failure to reach agreement between the integrated programmer and a rival distributor.

E. At a Glance

The issues addressed by regulators in the four vertical media mergers are set out at a glance in Figure 1 below. As is apparent, *AT&T/Time Warner* is distinct from the other recent mergers not only in the scope of the foreclosure concerns pursued by the DOJ but in the ultimate decisions on their relevance taken by the court. We discuss what we consider to be the most important of these differences in the rest of this note.

Figure 1: Concerns raised by regulators in recent vertical media mergers in the U.S. and EU

	Input foreclosure of programming to MVPDs/OTTs	Customer foreclosure of channels' access to MVPDs	Customer foreclosure of OTTs' access to ISPs	Elimination of double marginalization
Comcast/NBCU (US 2011)	✓	✓	✓	Rejected by DOJ
LG/Ziggo (EU 2014, 2018)	✓	✓	✓	Rejected by EC
LG/DVM (EU 2015)	✓	✓	✗	Not claimed
AT&T/TW (US 2018)	✓	✗	✗	Accepted

III. "ONE OF THESE THINGS IS NOT LIKE THE OTHERS"

The assessment of *AT&T/Time Warner* deviates from previous analyses of vertical media mergers in the U.S. and EU in at least three important ways. First, puzzlingly, the U.S. government chose not to push as a major concern customer foreclosure of OTT providers' access to ISP networks. Second, and again puzzling, the government readily granted the parties' claims of efficiencies from EDM. Finally, Judge Leon's evisceration of the use of bargaining models in vertical merger analysis is something that needs to be reflected on.

A. No Concern about Foreclosure of OTT Providers' Access to ISP Networks

One of the biggest surprises in *AT&T/Time Warner* was the government's decision not to address potential foreclosure concerns related to actions the integrated firm could take to disadvantage OTT providers in its role as ISP provider. As shown in Figure 1 above, such concerns were addressed in both the *Comcast/NBCU* and *Liberty Global/Ziggo* mergers.

This is particularly surprising given the lack of competition in U.S. broadband markets. According to the FCC, as of the end of 2016, 74 percent of households had access to two or fewer providers of services at the superfast broadband speeds required for high-quality and reliable video services (25 Mbps).[5] This simply confirms what everybody already knows: that the vast majority of U.S. households wanting high-speed broadband access can go to one of two places, their local cable or telecoms incumbent. By contrast, regulated access to broadband lines promoted by the EC ensures that in most EU countries there are multiple providers of superfast broadband services available to most households. For example, in the UK it is reported that around 95 percent of premises have access to superfast broadband (>24Mbps), with BT reaching almost 90 percent of premises.[6] Since BT's network is used by two large competitors, and a number of smaller ones, in addition to BT itself, it seems likely that close to 90 percent of UK premises have access to at least three providers of superfast broadband and, when Virgin Media's cable broadband network is also taken into account, that around half are served by at least four superfast providers.

5 FCC, Internet Access Services: Status as of December 31, 2016 (released 02/18), Figure 4. *Available at* https://www.fcc.gov/internet-access-services-reports.

6 Department for Digital, Culture, Media and Sport, "Future telecoms Infrastructure Review: Call for Evidence," December 19, 2017; https://labs.thinkbroadband.com/local/ (as of August 2018).

Similar concerns arise with mobile Internet. According to the FCC, AT&T is one of the two leading U.S. wireless telecommunications providers, with a 2016 market share of 32.4 percent. Together with Verizon, the other leading national wireless provider, AT&T is leading investments in next-generation 5G mobile internet technology, suggesting that such concerns will only grow with time.

In such settings, it is reasonable to be concerned that the merged entity may disadvantage OTT providers by, *inter alia*, charging higher interconnection fees, degrading transmission of OTT content, introducing data caps or usage-based pricing that make it more expensive for consumers to access OTT content, negotiating exclusive deals with third-party programmers, and/or making their own programming less available to OTT providers. As described in Rogerson (2018), each of these issues was analyzed in depth in the 2014 proposed *Comcast/Time Warner Cable* merger, which was determined by both the FCC and DOJ to pose significant competitive harms (and was subsequently withdrawn by Comcast).[7] Similarly, in *Comcast/NBCU* the FCC imposed conditions ensuring equal treatment to that of the integrated operator's OTT offerings to mitigate such concerns. In *Liberty/Ziggo*, too, the EC considered similar concerns and imposed conditions to ensure adequate interconnection capacity.

Yet, for *AT&T/Time Warner, potential foreclosure of OTT video providers' access to the integrated entity's ISP service didn't even make it into the case.* As noted by Nilay Patel in *The Verge*, "Judge Leon says Netflix and Hulu … are major competitors to AT&T and Time Warner, but both the government and the judge fail to note that all of them depend heavily on open access to AT&T's network to reach consumers." We can only ask, "Why not?"

B. Efficiency Gains were Readily Granted

Another significant departure of *AT&T/Time Warner* from past precedent was its ready granting of efficiency gains from EDM. In such cases efficiency gains – even the more quantifiable kinds like EDM – tend to be resisted by regulators.

In its concluding statements in *Comcast/NBCU* in 2011, the DOJ wrote that the merged entity,

> is unlikely to achieve substantial savings from the elimination of double marginalization. Documents, data, and testimony obtained from Defendants and third parties demonstrate that much, if not all, of any potential double marginalization is reduced, if not completely eliminated, through the course of contract negotiations between programmers and distributors over quantity and penetration discounts, tiering requirements, and other explicit and verifiable conditions.

In the same case, the FCC concluded that efficiency gains from EDM arise only when the additional customers attracted to the integrated firm by lower prices could not also obtain its content from a rival distributor, as the payment of per-subscriber fees by such distributors introduces an opportunity cost equivalent to the per-subscriber fee paid by the integrated firm prior to the merger. The EC similarly dismissed efficiency gains from EDM in *Liberty/Ziggo* on grounds that contracts had minimum quantity requirements which already eliminated double marginalization pre-merger.

In his opinion, Judge Leon wrote that he was persuaded by evidence presented at trial by the parties' economic expert, Dennis Carlton, purportedly finding that previous episodes of vertical integration in the industry had not been associated with higher prices for integrated content to rival distributors. Interestingly, the FCC reached the opposite conclusion when it analyzed the data underlying similar evidence presented by the parties in *Comcast/NBCU*. In any case, interpretation of this evidence is questionable: it would have been surprising if evidence of price increases *had* been found. With long-term contracts in place, price increases would be delayed and might not yet show up in the data. Moreover, the conditions placed on parties in previous mergers specifically forbade price increases to rivals (at least for the duration of the undertakings, a period that overlapped with some of the data being analyzed).

What is particularly surprising about the DOJ's challenge of this empirical evidence, however, is its failure to mention "the dog that *didn't* bark." Dennis Carlton in his trial testimony claimed that efficiency savings from EDM would be expected to be realized at once, immediately lowering prices charged by the integrating firm. If such an effect occurs, *shouldn't that also have been evident in the data from previous vertical mergers and divestments?* And if that evidence were not present, should that not have cast doubt on one of the parties' key benefits claimed from the merger?

7 Rogerson, William P. (2018). "Economic Theories of Harm Raised by the Proposed Comcast/TWC Transaction (2015)," in The Antitrust Revolution, 7th edition, edited by John E. Kwoka, Jr. and Lawrence J. White, Oxford University Press, New York.

IV. BARGAINING MODELS: KABUKI DANCES OR RUBE GOLDBERG MACHINES?

The most striking departure of the *AT&T/Time Warner* judgment from previous cases is the wholesale dismissal of bargaining theory as a useful framework for quantifying the consequences of partial input foreclosure (i.e., raising rivals' costs), both in general and in this specific case.

Judge Leon objected to two key maintained assumptions in the government's case. First, he rejected the idea that the merged entity would internalize the impact of its programming division's negotiations with rival distributors on the profits of its distribution division – in other words, that the merged entity would act in a "joined-up way" with the two divisions able to work out the licensing strategy that maximized group profit (the "profit internalization" issue). Second, he dismissed the notion that a reasonable threat point in a bargaining framework is that of a permanent blackout, even though this may not often occur in practice, if at all.

A. On Profit Internalization

In the context of bargaining, the judgment entirely dismissed the notion that programming and distribution divisions within a single firm operate in a "joined-up way" to maximize firm profit. This view was based almost exclusively on testimony by executives to the effect that "this is not how things work" and that each division fends for itself. We find the acceptance of this position surprising. As noted by the government's expert, Carl Shapiro, not only is joint profit maximization a maintained assumption throughout economics and finance, *it is also the assumption that you are making if you are willing to grant efficiency gains due to the elimination of double marginalization.* Put another way, if one accepts that there is an efficiency in the vertical chain arising from programming becoming available to the distribution division *at cost,* it is inconsistent to argue that the integrated firm's programming division will be oblivious to benefits to other parts of the group and will maximize only its divisional profit when negotiating distribution agreements with rivals.

It is also surprising that the government did not introduce to trial direct empirical evidence on this point contained in an academic paper recently published by one of us with three academic co-authors.[8] To address the core question in a vertical merger – is it likely to be welfare-enhancing or welfare-reducing? – the paper builds a comprehensive model of the U.S. pay-TV industry, incorporating a souped-up version of the bargaining model used in *Comcast/NBCU, Liberty/DVM*, and *AT&T/Time Warner*. Focusing on the carriage of U.S. Regional Sports Networks ("RSNs") between 2000 and 2010, the paper finds that *if* there are indeed efficiency gains via EDM, then vertical integration of the networks studied increases consumer welfare by approximately 15 percent on average. But, hidden in this average: when full foreclosure and/or significant instances of raising rivals' costs occur, welfare losses from unavailable or more expensive access to channels can wipe out these efficiency gains (and would be welfare-reducing in the absence of efficiency gains).[9]

Most salient for *AT&T/Time Warner*, the paper also *estimates directly the strength of internalization by integrated firms*, finding that an integrated distributor internalizes 79 cents of each dollar of profit realized by its affiliated programmer when making pricing, carriage, and internal-to-the-firm bargaining decisions. Similarly, it finds that the integrated firm's programming division fully (indeed perhaps more than fully) takes into account the benefits to its distribution division when a rival is denied access to its programming. In other words, the paper finds empirical support for the idea that integrated firms internalize the profits of their constituent divisions. It is very surprising that this evidence was not presented at trial.

B. On the Appropriate Threat Point in Bargaining Models Applied to Vertical Media Mergers

Judge Leon also dismissed the idea that a channel's total blackout is an important element in a carriage negotiation with a distributor. But this begs the question: does that mean one should throw out bargaining models altogether, or just apply them in a better way? The judge did the former; we would argue for the latter.

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8 Gregory S. Crawford, Robin S. Lee, Michael D. Whinston & Ali Yurukoglu (2018), "The Welfare Effects of Vertical Integration in Multichannel Television Markets," *Econometrica*, volume 86, Issue 3 (May, 2018), pp. 891-954.

9 The paper's results also highlight the importance of effective Program Access Rules: in their absence full foreclosure would occur for 4 out of 26 RSNs and prices in the other 22 cases would be 18 percent higher on average. It furthermore provides guidance for competition regulators about conditions when adverse welfare effects are likely: when the integrated distributor has a large footprint, when it has higher profit margins than rivals, when there is a smaller market expansion effect from serving the rival (e.g., lower ad rates and fewer complete non-subscribers), and when there is higher substitutability between the integrated and rival distributors.

The essence of bargaining models underlying the analysis of partial input foreclosure is simple: if A and B are negotiating over the price of a transaction and A's outcome in the case of no agreement gets better (what's called their "no agreement profit" or "threat point"), would we not expect A to get a better outcome in that agreement? Allowing for profit internalization between divisions of an integrated firm, a vertical merger increases the integrated programmer's threat point because failure to reach an agreement with a rival distributor induces some customers of that distributor's customers unhappy with the lack of access to the negotiated programming may switch to the integrated firm's distribution division. This means the integrated programming division is better off in such a negotiation. Simple.

But what is the right threat point to use? In the academic work summarized above, the authors – like the DOJ – used threat points based on permanent blackouts when considering integrated firms' incentives to foreclose. Judge Leon in *AT&T/Time Warner* declared this to be not right, as in practice permanent blackouts had not occurred for Time Warner content. While we are not convinced – there have been permanent blackouts for high-value sports networks in both Philadelphia and San Diego, which were used as evidence in the academic work cited above – if Judge Leon's point is accepted, this raises the question of what should be used instead.

Short-term losses from temporary blackouts might be considered a more reasonable threat point. While this may have been more convincing to Judge Leon, it is likely that such a model would have suggested a smaller increase in negotiated prices, as fewer subscribers switch in response to a temporary blackout than a permanent one, making it less likely that this detriment would outweigh the claimed efficiencies from EDM. Another possibility is threat points that worsen with the time since disagreement, which might give rise to a larger merger detriment.[10] While these are open issues for both academics and practitioners, they are not so insurmountable as to throw out the baby with the bath water.

V. RETOOLING THE BOX

Vertical merger analysis is a mainstay of media mergers around the world. Yet a major vertical deal had not been tried in front of a judge in the U.S. for over 40 years – and the judgment in *AT&T/Time Warner* is puzzling. It is surprising that the likely real issue in the case, potential customer foreclosure of OTT providers from the merged entity's broadband network, was completely unaddressed by both sides. It is surprising that efficiencies were so readily accepted, and by the DOJ as well as Judge Leon: there are both theoretical and empirical reasons why reduced double marginalization may not take place in vertical media mergers. It is surprising that bargaining models – however poorly argued and clunkily applied to the case – were so comprehensively jettisoned even as a general economic framework. The analogy with a Kabuki Dance may be fair, but *never* a Rube Goldberg machine.

It is therefore *un*surprising that the DOJ appealed the decision, focusing particularly on this point.[11] The toolbox for the enforcement of vertical mergers needs to be revamped and validated. But bargaining models should be "released on appeal" as a useful framework for analysis in these cases.

10 Our thanks to Mike Whinston and Robin Lee for this suggestion.

11 Johnson (2018), "Justice Department gives glimpse of appeal argument in AT&T-Time Warner Case," *Variety*, July 18, 2018 quotes the DOJ filing, claiming that their case "based on well-accepted and non-controversial economic principles of bargaining, but the district court effectively discarded those principles and their logical implication that the merged firm will raise prices to rivals."