

FILED/ACCEPTED

November 22, 2010

NOV 22 2010

VIA HAND DELIVERY

Federal Communications Commission
Office of the Secretary

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56

REDACTED – FOR PUBLIC INSPECTION

Dear Ms. Dortch:

The attached memorandum by Drs. Mark Israel and Michael Katz addresses Professor Simon Wilkie's assertions about the proposed transaction's effects on standalone broadband prices.¹ EarthLink's claim that Applicants have not rebutted Prof. Wilkie's analysis² is incorrect. Three months ago, Drs. Israel and Katz demonstrated that Prof. Wilkie's claims are false³ and they provide further evidence of that fact in the attached report.

In particular, Drs. Israel and Katz highlight two fundamental flaws with Prof. Wilkie's analysis. First, Prof. Wilkie fails to take into account the pro-consumer benefits associated with the transaction's significant cost efficiencies, which create incentives for Comcast to *lower* prices for certain services. Second, Prof. Wilkie's model depends entirely on unsupported and unreasonable assumptions about consumer preferences; his results do not hold when plausible changes are made to those assumptions. Given the major weaknesses in Prof. Wilkie's model, the Commission should give it no weight.

¹ See Supplemental Report of Professor Simon J. Wilkie, MB Docket No. 10-56 (Sep. 30, 2010).

² See Letter from Donna N. Lampert, Counsel for EarthLink, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-56, at 2 (Nov. 10, 2010).

³ See Mark Israel and Michael L. Katz, Economic Analysis of the Proposed Comcast-NBCU-GE Transaction, MB Docket No. 10-56, ¶¶ 88-93 (July 21, 2010).

No. of Copies rec'd 0+1
List ABCDE

Marlene H. Dortch
November 22, 2010
Page 2

Pursuant to the Second Protective Order,⁴ Comcast submits two copies of the redacted, public version of the report. The Highly Confidential version is being filed simultaneously under separate cover.

Please do not hesitate to contact me with any questions.

Sincerely yours,

A handwritten signature in black ink that reads "Michael H. Hammer / BEB". The signature is written in a cursive style.

Michael H. Hammer
Counsel for Comcast Corporation

Enclosures

⁴ *Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensee, Second Protective Order, MB Docket No. 10-56, DA 10-371 (MB Mar. 4, 2010).*

Response to “Letter from Dr. Simon J. Wilkie”

Mark Israel and Michael L. Katz

November 22, 2010

FILED/ACCEPTED

NOV 22 2010

Federal Communications Commission
Office of the Secretary

Overview

In a November 16, 2010 letter to the Commission, Professor Simon Wilkie asserts that his September 30, 2010 “Supplemental Report of Professor Simon J. Wilkie” provides unrebutted proof that the proposed Comcast-NBCU-GE transaction “will reduce consumer welfare by raising the price of Comcast’s stand-alone broadband service” (meaning broadband service purchased with no cable television subscription).¹ This assertion is incorrect. In fact, Professor Wilkie’s supplemental report repeats claims that we have earlier rebutted.²

Professor Wilkie has offered no proof of harm. Instead, he has identified theoretical conditions under which certain price effects could arise—conditions that are not satisfied by the markets at issue in this proceeding. In particular, Professor Wilkie’s assertion that the proposed transaction would create incentives for Comcast to increase its stand-alone broadband pricing depends on unsupported and restrictive assumptions about consumer preferences that do not apply to cable television and broadband services.

Moreover, Professor Wilkie’s claims about broadband pricing are predicated on the proposed transaction’s generating significant cost efficiencies, including through the elimination of double marginalization.³ We agree that the transaction will generate such cost efficiencies. But we stress that given such efficiencies, even if Professor Wilkie’s claim that stand-alone broadband prices would rise were correct, it would not imply a reduction in average consumer welfare. One must also account for the consumer benefits from the efficiencies generated by the transaction; Professor Wilkie does not even attempt to account for these benefits.

¹ Letter from Dr. Simon J. Wilkie to Ms. Marlene H. Dortch, November 16, 2010 (hereinafter, *Wilkie Letter*), at 2, citing Simon J. Wilkie, Supplemental Report of Professor Simon J. Wilkie, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, September 30, 2010, Filed on Behalf of Earthlink, Inc. (hereinafter, *Wilkie Supplemental Report*).

A similar—and similarly incorrect—claim is made in a November 10, 2010 ex parte letter on behalf of EarthLink, Inc. (Letter from Donna N. Lampert to Ms Marlene H. Dortch, Ex Parte Presentation of Earthlink, Inc., *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, November 10, 2010 at 2.)

² Mark Israel and Michael L. Katz, Economic Analysis of the Proposed Comcast-NBCU-GE Transaction, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, July 20, 2010 (hereinafter, *Israel/Katz Reply Declaration*), ¶¶ 88-93.

³ *Wilkie Letter* at 3.

Professor Wilkie’s Argument for an Efficiencies Offense

Professor Wilkie’s argument is summarized as follows:⁴

With access to the NBCU content and assets and increased efficiencies, the merger will decrease Comcast’s overall costs of providing cable services. Therefore, as demonstrated by Professor Wilkie’s economic model, the merger will increase Comcast’s incentives to raise the price of stand-alone broadband services in contravention of consumer welfare and the public interest.

That is, Professor Wilkie acknowledges that efficiencies from the transaction will reduce Comcast’s cost of providing cable service, yet claims that these efficiencies will harm consumer welfare by creating incentives for Comcast to increase the cost of stand-alone broadband service.

The basic structure of Professor Wilkie’s argument is not unique to the present transaction. Consider any firm that makes multiple products that are, at least to some degree, economic substitutes for one another. Suppose the marginal cost of producing a subset of those products falls. This cost reduction creates incentives to reduce the price of that subset of products. In some—but not all—cases, the resulting per-unit profitability of selling that subset of products will be higher.⁵ In those cases in which profit margins are higher, there may be an incentive to increase the prices of the firm’s other, substitute products, for which costs have not fallen, in order to encourage consumers to switch to the subset of products that are now more profitable.

The substitute products on which Professor Wilkie focuses are Comcast’s stand-alone broadband service and broadband service that is “bundled” with cable television service. The need to derive equilibrium prices in this “mixed bundling” context complicates the math of the relevant economic model, but it does not change the basic economic logic described above.

Professor Wilkie’s argument of “harm due to efficiencies” could be applied to any merger or other transaction that lowers costs for some, but not all, of a firm’s products that are at least partial substitutes. Yet, we know of no claim (in the *Horizontal Merger Guidelines* or elsewhere) that cost efficiencies on a subset of a firm’s products should not count as pro-consumer or pro-competitive because such cost efficiencies could result in second-order incentives to increase the price of some other products. Instead, efficiencies that reduce the costs of producing some products are naturally viewed as pro-competitive and pro-consumer.

⁴ Wilkie Supplemental Report, ¶ 5.

⁵ For a case in which the per-unit profitability of the products would be *lower* following a cost reduction, consider the commonly used example of a product with a constant elasticity of demand. With constant elasticity, it is easy to see that the price–cost margin *falls* as costs (and prices) fall. In particular, the familiar inverse-elasticity pricing rule says that $p - c = p/\epsilon$ (where p is the price, c is the marginal cost, and ϵ is the price elasticity of demand), which means that $p - c$ is lower for lower values of p (and thus for lower values of c).

We do not deny that there are functional forms and parameter values for which the economic theory predicts that the effects identified by Professor Wilkie would arise. However, in the light of the central role that efficiencies play in bringing merger benefits to consumers, it is very important to demand evidence that such effects would arise in practice. At an absolute minimum, sound policy would require proof that the conditions of the theory are satisfied.⁶ As we next will discuss, no such proof has been offered.

Professor Wilkie’s “Proof” Relies on Unsubstantiated Assumptions

Professor Wilkie has not established that the price for standalone broadband service will increase post-transaction. Rather, his result depends entirely on the unsupported and restrictive assumptions that: (a) consumer valuations of cable and broadband services are independently distributed, and (b) each of these distributions has a “log-concave density function.”⁷ Professor Wilkie provides no support for either assumption, meaning that his claims about the proposed transaction’s effects on stand-alone broadband prices are unsupported.

We consider each of these assumptions in turn.

Although he does not list it as one of the “key assumptions” of his model on page 1 of “Technical Addendum to the Wilkie Report,” Professor Wilkie assumes that a consumer’s valuation on broadband service is independent of her valuation on cable service. Specifically, when discussing the value that consumers put on each product (v_A and v_B), Professor Wilkie assumes that their “density function” $h(v_A, v_B)$ can be written as $f(v_A) \times g(v_B)$, which is equivalent to assuming that consumer valuations of the products are independently distributed.⁸

In words, the independence assumption says that information about a given consumer’s willingness to pay for cable service provides no information about her willingness to pay for broadband service and (vice versa). That is, the assumption implies that the fact that a given consumer is willing to pay more than the average consumer to get cable service implies nothing about that consumer’s willingness to pay for broadband service. As such, the assumption violates both common sense (surely there is correlation between willingness to pay for cable and broadband) and existing economic research. For example, research has established that, at a given price, consumers with higher income are more likely to purchase both cable and broadband

⁶ A prudent policy would seek not only proof that the conditions of a theoretical model are met, but also empirical evidence that the predicted increase in prices would actually come to pass. Professor Wilkie offers no such evidence.

⁷ “Technical Addendum to the Wilkie Report,” attached to *Supplemental Wilkie Report* (hereinafter *Technical Addendum*), at 1-2.

⁸ *Technical Addendum*, at 2.

services.⁹ The fact that consumer valuations on broadband and cable both increase with income implies that these valuations are not independent of one another.

The intuition for how correlation between consumer valuation on cable and broadband service breaks Professor Wilkie's result is straightforward. As noted above, Professor Wilkie's model starts from the premise that the transaction will lower Comcast's cost of providing cable services, which will generally lead to lower prices for bundled cable/broadband service. As the price of the bundled offering falls, some consumers will be drawn from the stand-alone broadband offering to the bundled offering. In particular, among the consumers who had been choosing standalone broadband, those consumers with relatively high valuations of cable services may begin to find the bundled offering preferable. If this occurs, it will leave only those with lower valuation of cable services—and, given positive correlation, generally lower valuation on broadband services—as the set of consumers who may buy the standalone broadband service. These lower valuations on broadband service among the potential buyers of the stand-alone broadband offering will tend to *reduce* the optimal price of broadband service, potentially yielding optimal prices that violate Professor Wilkie's result.

Next, consider Professor Wilkie's assumption of log-concave densities. As he points out, this assumption is satisfied by several distributions that are commonly used in economic models.¹⁰ But the fact that this assumption is often made to simplify calculations in theoretical models does not imply that the assumption is satisfied by consumer demands for cable television and broadband services.

For example, this assumption does not allow for "multi-peaked" distributions. A distribution is multi-peaked (and thus violates the assumption) if there are two or more different valuations around which there are many consumers, with relatively fewer consumers with valuations between those levels. Hence, Professor Wilkie's assumption is violated if there is a cluster of consumers with relatively low valuations of broadband service (*e.g.*, those with no computers at home) and another, separate clustering of consumers with substantially higher valuation on broadband service (*e.g.*, families with teenage children).

In sum, Professor Wilkie provides no basis to conclude that either of these two assumptions applies to consumer valuations of broadband and/or cable service, yet both assumptions are essential to his theoretical model. He has only "proven" that the transaction will raise the price of Comcast's standalone broadband service if one accepts as "proof" unsubstantiated assumptions that violate established results on consumer preferences for broadband and cable.

⁹ Austan Goolsbee and Amil Petrin (2004), "The Consumer Gains from Direct Broadcast Satellites and the Competition with Cable TV," *Econometrica*, 72:2, 351-381, at 365; Austan Goolsbee (2006) "The Value of Broadband and the Deadweight Loss of Taxing New Technology," *Contributions to Economic Analysis & Policy*: Vol. 5 : Iss. 1, Article 8, at 12.

¹⁰ The precise assumption is that the log of the density function characterizing the random variable (here, consumers' valuations on broadband and cable service) is a concave function, which is equivalent to assuming that the ratio of the density function to the cumulative distribution function is decreasing.

A Simple Example Illustrates the Fragility of Professor Wilkie’s Theory

In our July 20, 2010 report, we presented an example that establishes that, contrary to the harms posited by Professor Wilkie, efficiencies in the provision of one service could lead to a *lower* price for the other service.¹¹ Here, we present a slightly modified version of that example to illustrate how Professor Wilkie’s result can fail to apply outside of the narrow circumstances that he has identified.¹² The table below provides a specific set of values for Professor Wilkie’s $h(v_A, v_B)$ function, where v_A is a consumer’s valuation of broadband and v_B is his or her valuation of cable.¹³

Number of Consumers	Value of Broadband, v_A	Value of Cable, v_B
5	6	0
5	6	10
50	8	6
10	6	6
200	0	10

¹¹ *Israel/Katz Reply Declaration*, ¶¶ 90-91.

¹² In his August 19, 2010 report (Reply Report of Professor Simon J. Wilkie, Economic Analysis of the Proposed Comcast-NBCU-GE Transaction, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses*, MB Docket No. 10-56, August 19, 2010), Professor Wilkie made a number of incorrect claims regarding the key assumptions underlying the version of this example from our July 20, 2010 report. We introduce a modified version here to make it easier to explain below the features of the example that drive the result.

¹³ To simplify exposition, we use a discrete distribution for v_A and v_B , meaning that $h(v_A, v_B)$ is a probability mass function rather than a probability density function. One could certainly construct continuous distributions that violate log-concavity and/or independence (including in ways similar to those illustrated by this discrete example) and thus for which Professor Wilkie’s result would not hold.

For simplicity of illustration, assume that the marginal cost of product A (broadband Internet access service) is zero before and after the proposed transaction. Suppose that, absent integration, Comcast faces a marginal cost of cable (product B) equal to 7, but that this cost would fall to 0 as a result of the of the proposed transaction. The specific values for marginal costs are not critical to the conclusion that Professor Wilkie’s results are not robust.

Straightforward numerical calculations show that, in the absence of the transaction, the profit-maximizing prices for stand-alone cable, stand-alone broadband, and combined cable/broadband are $p_A = 8 - \epsilon$, $p_B = 10 - \epsilon$, and $p_{A/B} = 16 - 2\epsilon$, and that, once the transaction is completed, the profit-maximizing prices are $p_A = 6 - \epsilon$, $p_B = 10 - \epsilon$, and $p_{A/B} = 12 - 2\epsilon$.¹⁴ In other words, as a result of the efficiencies associated with the provision of cable service the prices of both stand-alone broadband service and the combined broadband/cable package fall—the opposite of the finding in Professor Wilkie’s theoretical model.

The intuition underlying the fall in the price of the standalone broadband service is straightforward. Without the efficiencies, the cost of providing cable service is sufficiently high that it is unprofitable to sell the service to the 50 consumers for whom $v_A = 8$ and $v_B = 6$. However, as a result of the efficiencies, it becomes profitable to sell the broadband/cable bundle to these consumers (and to the 10 consumers for whom $v_A = 6$ and $v_B = 6$). This leaves *only* those customers with *both* low value on cable (0) *and* relatively low value on broadband (6) to buy the stand-alone broadband offering. Thus, the profit-maximizing price for stand-alone broadband service *falls* to 6.

Of course, we are not asserting that the numbers used in this simplified example represent actual consumer valuations. However, the existence of this example is sufficient to prove that Professor Wilkie’s claims are not fully general. Hence, his claims of likely competitive harm are unfounded unless he establishes that the conditions of his theoretical model are satisfied in practice. To the best of our knowledge, he has made no attempt to do so.

Professor Wilkie Ignores Substantial Relevant Consumer Benefits from Efficiencies

As we noted above, Professor Wilkie’s theory is predicated on a reduction in the cost of stand-alone cable service and cable service bundled with broadband service. This cost efficiency generates incentives to lower prices for each of these products. Professor Wilkie ignores these pro-consumer effects and focuses narrowly on stand-alone broadband prices.

Ignoring the pricing incentives for cable television services is a particularly striking omission given that {{ }} percent of Comcast customers purchase a cable television

¹⁴ Here, ϵ is a small positive number that could be thought of as the finest available price increment. We track ϵ in the equilibrium prices to refute Professor Wilkie’s claim that the example somehow relies on unrealistic tie breaking rules for cases in which a consumer is indifferent between two or more alternatives.

subscription as part of their Comcast subscription.¹⁵ Given Comcast's current base of 22.9 million subscribers, this means that more than 20 million current Comcast subscribers would benefit from the incentive to lower prices for cable television services (not to mention consumers who might add services or switch MVPDs to take advantage of post-transaction savings). In contrast, as EarthLink has acknowledged, fewer than {{ }} consumers currently purchase stand-alone broadband service from Comcast.¹⁶

¹⁵ Dan Goodwin, Vice President, Financial Planning & Analysis (Comcast Cable), interview, October 18, 2010.

¹⁶ Letter from Jennifer P. Bagg to Ms Marlene H. Dortch, "Ex Parte Presentation," *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, November 15, 2010 at 1.