PERSPECTIVES

PHOENIX CENTER FOR ADVANCED LEGAL & ECONOMIC PUBLIC POLICY STUDIES

You're Not Impaired Because You Are Impaired

George S. Ford, PhD*

10 November 2004

While the Federal Communications Commission over the years has not exactly enjoyed the greatest reputation for analytical consistency (both in relation to various dockets and within a single order or rulemaking), the Commission's current "trigger framework" of counting the number of competitors in a market in order to determine whether or not a rival is "impaired" is a model of analytical inconsistency.[1]

Specifically, the Commission defines "impairment" in terms of entry barriers, but then ignores the very entry barriers it deems important when establishing the triggering scheme. As a consequence of this determination, the Commission argues against itself. Thus, as the Commission prepares to issue its next set of unbundling rules, the Commission should abandon or at least substantially alter its current triggering framework if local competition is to succeed in accordance with the precepts of the Telecommunications Act of 1996.

The Impairment Standard

In order to get access to an unbundled network element, Section 251 of the 1996 Act requires that a requesting carrier must be "impaired in its ability to provide the service it seeks to offer" without access to the element being requested.[2] In response to the D.C. Circuit's remand of its first attempt to define "impairment" in *USTA I*,[3] the Federal Communications Commission in its *Triennial Review Order* ("*TRO*") concluded "that a requesting telecommunications carrier is impaired when lack of access to an incumbent LEC network element poses barriers to entry, including operational and economic barriers that are likely to make entry into a market uneconomic."[4] Significantly, while the D.C. Circuit in *USTA II* expressed concerns over the "open-endedness" of the Commission's impairment standard, the court declined to review the Commission's impairment standard "as a general matter", instead choosing to reverse and remand the Commission's unbundling rules based upon the FCC's implementation of this standard.[5] Thus, as the FCC itself has stated that the impairment standard set forth in the *TRO* will continue to apply in the post-*USTA II* era,[6] an examination of this standard and how it has been and may be applied in the future is appropriate.

> ***"[T]he Commission's current 'trigger framework' of counting the number of competitors in a market in order to determine whether or not a rival is 'impaired' is a model of analytical inconsistency."***

Entry Barriers and the Equilibrium Number of Firms

In relation to entry barriers, the Commission focused primarily on two important entry barriers: sunk costs and economies of scale.[7] By far, the most importance consequence that these particular entry barriers have is to limit the number of firms that can profitably serve a

market.[8] In other words, with scale economies and/or sunk costs, there is an equilibrium and finite number of firms that can profitably serve a market. The larger are scale economies or sunk costs, the fewer firms there are in equilibrium. If these barriers are sufficiently large, then only one firm can serve the market (*i.e.*, a natural monopoly). Generally, regulation and competition policy is directed at markets with very high levels of equilibrium industry concentration (*i.e.*, few firms). The goal of the 1996 Act was to bring competition to the local exchange telecommunications industry, an industry with an equilibrium concentration approaching natural monopoly.

For exposition's sake, let's call this equilibrium number of firms N* ("n-star"). Equilibrium implies the following:

(a) If there more than N* firms in the market, all firms in excess of N* firms will exit the market;

(b) If there are fewer than N* firms, there will be entry until there are N* firms; and

(c) If there are N* firms, then further entry is not sustainable, and exit is not needed.

In the *TRO*, the Commission *at times* appeared to grasp the implications of fixed and sunk costs on entry.[9] For example, the Commission observes:

> Larger fixed and sunk costs imply that fewer firms are able to survive profitably in the industry."[10]

Also, the agency noted:

> If more facilities-based carriers have entered the market than can be supported by market demand [ ] none of the carriers may be profitable. However, [ ] with exit of one or more carriers, the remaining carriers may achieve profitability.[11]

Despite these signs of understanding, the Commission constructs a triggering framework based on the presumption that past entry is a reliable predictor of future entry, thereby ignoring the implications of fixed and sunk costs. This inconsistent application of economics renders an impairment framework that is completely senseless, and actually leads the Commission to conclude that a carrier is not impaired (*i.e.*, it can enter) simply because it is impaired (*i.e.*, it can't enter).

"[T]he Commission constructs a triggering framework based on the presumption that past entry is a reliable predictor of future entry, thereby ignoring the implications of fixed and sunk costs."

The Trigger Framework

In the *TRO*, the Commission concluded that the best evidence that entrants are not impaired is the fact that entry has occurred: "We find that the presence of facilities-based competitors is the best indicator that requesting carriers are not impaired."[12] This idea serves as the very foundation of the impairment triggers, and it is this idea that makes the Commission's impairment analysis fall apart.

Looking back at the concept of an equilibrium number of firms, a concept the Commission acknowledges in its *TRO*, we know that if there already are N* firms, then additional entry is not sustainable – *i.e.*, if N* = 2, then 3 firms cannot survive in the market. Obviously, if N* = 2, then the third and all subsequent entrants are impaired in their ability to provide service (absent a wholesale market served by the first two entrants). *The key point here is that in the presence of scale economies or sunk costs, past entry does not imply that future entry is possible.*[13] *If the equilibrium number of firms is reached, then additional entry is precluded.* In cases where the equilibrium number of firms is expected to be

small, the use of past entry as an indicator of ease of entry for other firms is particularly inane.

The Commission's clumsy implementation of its impairment standard is best illustrated by its treatment of high-capacity loops. For high-capacity loops, the Commission chose a trigger of two competitors.[14] By this reasoning, once two competitors serve a building with a high-capacity loop, the Commission's rules indicate that no other entrant is impaired.[15] Most of the other triggers in the *TRO* were set at three competitors, thus requiring the Commission to justify the lower trigger of two competitors. Its justification is revealing:

> Limiting our high-capacity loop triggers to only one competitor runs the risk of failing to accommodate unusual circumstances unique to that single provider that may not *reflect the ability of other competitors to similarly deploy*. Establishing a higher number, for example three, would likely render our high-capacity loop triggers meaningless for the many customer locations where the potential aggregate customer demand would never support more than two competitive alternatives to the incumbent LEC."[16]

Observe that a one-competitor trigger was rejected because a single entrant may not "reflect the ability of other competitors to similarly deploy." This language clearly reveals the Commission's position that past entry is relevant to impairment *only* when past entry serves as a reliable indicator of the prospects for future entry.[17]

Now, contrast the rejection of a one-competitor trigger with the Commission's justification for rejecting a three-competitor trigger. The agency rejects a three-competitor trigger because "the potential aggregate customer demand would never support more than two competitive alternatives."[18] The Commission rejects a three-competitor trigger because it is highly improbable for three entrants to survive, but embraces a trigger of two firms as evidence that other competitors can "similarly deploy." Oddly, the Commission's decision that two competitors is the right number for the trigger is based on the fact that it is nearly impossible for three firms to enter (that is, "customer demand would never support more than two").[19] The flaw in the logic is apparent. Since impairment exists when demand is not sufficient to justify entry in the presence of sunk costs or scale economics, the Commission concludes, in essence, that *the third and all subsequent entrants are not impaired simply because they are impaired*.

"[T]he Commission's decision that two competitors is the right number for the trigger is based on the fact that it is nearly impossible for three firms to enter."

Moving Forward

To date, the Commission's efforts to develop a cohesive framework for determining "impairment" to date have been both protracted and unsatisfactory to all. While it is impossible to know in advance how the Commission is going to tackle this crucial issue going forward, the plain language of the Section 251 provides some guidance in three important respects. That is, any impairment analysis must recognize that:

(1) Impairment is *carrier specific*;

(2) Impairment is best detected in the *relative output* of the requesting carrier with and without access to the element; and

(3) Impairment includes some notion of *significance* and should be non-transitory.[20]

Thus far, it appears as if the Commission has treated the impairment standard as an afterthought; something to be established once all the important unbundling decisions have been made on the 8th floor of the Commission's Headquarters. As such, given its repeated failure to develop a cohesive impairment standard, the Commission would be well served if it first focused on an analytical framework for impairment that matches up with Section 251(d)(2)(B) of the 1996 Act, and then tried to fit its political objectives into that framework (or, perhaps even more radical, actually let the framework provide guidance on what should and should not be unbundled). Most analytical frameworks are flexible enough to accommodate many different outcomes, particularly when the agency has substantial deference on how to interpret evidence. Most importantly, the Commission's leadership needs to understand that the purpose of an analytical framework is to provide discipline to its thought process, and if there is one thing the current Commission needs is some discipline in its thinking.

"[T]he Commission's leadership needs to understand that the purpose of an analytical framework is to provide discipline to its thought process, and if there is one thing the current Commission needs is some discipline in its thinking."

NOTES

* **George S. Ford** ***is the Chief Economist of the Phoenix Center for Advanced Legal and Economic Public Policy Studies. The views expressed in this*** **PERSPECTIVE** ***do not represent the views of the Phoenix Center, its Adjunct Follows, or any if its individual Editorial Advisory Board Members.***

1 *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers* (CC Docket No. 01-338), *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* (CC Docket No. 96-98), and *Deployment of Wireline Services Offering Advanced Telecommunications Capability* (CC Docket No. 98-147), Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36, ___ FCC Rcd ___ (rel. 21 August 2003). The triggering scheme says that all carriers are not impaired once N carriers have entered, where N is typically 2 or 3 in the *TRO*.

2 47 U.S.C. § 251.

3 *United States Telecom Association v. FCC*, 290 F.3d 415 (D.C. Cir 2002).

4 *TRO* at ¶ 84.

5 *United States Telecom Association v. FCC*, 359 F.3rd 554, 571-72 (D.C. Cir. 2004).

6 *See In re Petition for Forbearance of the Verizon Telephone Companies et al.*, MEMORANDUM OPINION AND ORDER, FCC 04-254, ___ FCC Rcd ___ (rel. 27 October 2004) at ¶ 5.

7 *See, e.g., TRO* at ¶¶ 80, 313, 394, 517.

8 Jerry B. Duvall and George S. Ford, *Changing Industry Structure: The Economics of Entry and Price Competition*, PHOENIX CENTER POLICY PAPER NO. 10 (April 2001) (http://www.phoenix-center.org/pcpp/PCPP10Final.pdf); J. Sutton, SUNK COST AND MARKET STRUCTURE (1995) at Ch. 2; S. Martin, INDUSTRIAL ECONOMICS (1988) at 105.

9 In stark contrast, the D.C. Circuit did not even understand the concept of sunk costs in the first instance. For example, it ignorantly claimed that there "appears to be no suggestion that mass market switches exhibit declining average costs in the relevant markets, or even that switches entail large sunk costs" as a rationale for eviscerating the FCC's unbundling rules, *United States Telecom Association v. FCC*, 359 F.3rd 554, 569 (D.C. Cir. 2004) *when even the Bells concede the obvious point that switching costs are sunk. See* BELLSOUTH, SBC, QWEST AND VERIZON UNE FACT REPORT (April 2002) at B-1.

10 *TRO* at ¶ 80.

11 *TRO* at ¶ 95, n. 320.

12 *TRO* at ¶ 498 (*see also* ¶¶ 94, 165, 308). Oddly, the Commission reaches this decision despite observing that many carriers had attempted to enter and eventually exited (*TRO* at ¶468) and that facilities-based entry experienced an 80% failure rate. *TRO* at ¶ 37.

13 Historical entry that fails can be useful information in assessing the prospects for future entry. Oddly, the Commission rejects bankruptcy as relevant to its impairment analysis. *TRO* at ¶ 415.

14 *TRO* at ¶ 329-30.

15 The triggers measure entrants only, so the total number of firms serving the market will be one (the incumbent) plus the trigger number of firms.

16 *TRO* at ¶ 330.

17 Without question, the relevance of past entry was only relevant in the sense it said something about future entry. The Commission explicitly rejected the relevance of the level retail competition in the impairment analysis: We decline to determine impairment based on a certain level of retail competition because section 251(d)(2) requires us to ask whether requesting carriers are "impaired," not whether certain thresholds of retail competition have been met. *TRO* at ¶ 114.

18 *TRO* at ¶ 330.

NOTES

[19] The Commission observed that impairment would exist despite past competitor entry if there was no additional collocation space available ("if there is no collocations space available for additional competitive LEC equipment, further competitive entry may be impossible"). *TRO* at ¶ 503. Under such conditions, impairment remained. Again, the Commission contradicts itself. There is no conceptual difference in entry being deterred by a lack of collocation space or a lack of demand sufficient to cover fixed/sunk costs.

[20] T. R. Beard, R. B. Ekelund Jr., and G.S. Ford, *Pursuing Competition In Local Telephony: The Law and Economics of Unbundling And Impairment* (November 2002) (available at http://www.telepolicy.com/befimpair.pdf *and forthcoming in the* JOURNAL OF LAW, TECHNOLOGY, AND POLICY (Spring 2004)).

PHOENIX FOR ADVANCED LEGAL & ECONOMIC PUBLIC POLICY STUDIES
www.phoenix-center.org

PHOENIX CENTER FOR ADVANCED LEGAL & ECONOMIC PUBLIC POLICY STUDIES
5335 Wisconsin Avenue, NW, Suite 440
Washington, D.C. 20015
Tel: (+1) (202) 274-0235
Fax: (+1) (202) 244-8257//9342 ● e-Fax: (+1) (202) 318-4909
www.phoenix-center.org