

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)
A National Broadband Plan for Our Future) GN Docket No. 09-51

REPLY COMMENTS OF THE AMERICAN CONSUMER INSTITUTE

The American Consumer Institute (“Institute”) hereby submits its reply to comments responding to the Federal Communications Commission (“FCC”) Notice of Inquiry (“NOI”) in the above-captioned proceeding.

I. INTRODUCTION

In our initial comments we emphasized our support for the Commission’s recognition of the key role of consumer welfare created by firms’ conduct and performance in its definition and execution of a National Broadband Plan (NBP). We urged the Commission wherever possible to assess, and require others to assess, costs and benefits of alternative policies and courses of action under the NBP and to use the welfare of consumers as the benchmark of merit. We emphasized that the goal of universal broadband access cannot be achieved without substantial private sector capital expenditures to underwrite the enormous fixed costs of broadband networks. We attempted to provide some insights into how government action impacts private sector

investment incentives. We called attention to the extraordinary tax burdens imposed by state and local governments on broadband networks and services; to their pernicious impacts on the willingness and ability of firms to invest in broadband networks; and, to their inconsistency with any reasonable construction of a national policy to promote universal or widespread access to broadband networks.

We encouraged and suggested guidance for Commission efforts to balance the imperfections of markets and the infirmities of regulatory interventions, by fully and realistically assessing the comparative (dis)advantages of each, while spurning simplistic and rhetorical substitutes for substantive analyses of costs and benefits. We emphasized the limiting role of demand in our broadband performance rankings and encouraged government wide focus on users through assorted demand enabling initiatives.

We recognized the key and expanding role of wireless as an alternative broadband path and recommended several steps to recognize that role, including providing more spectrum and addressing a variety of regulatory barriers at the state and local level that slow the ability of operators to respond to consumer needs.

Our comments concluded by addressing the thorny issue of rate differentiation (discrimination) and set forth a consumer welfare based case for allowing operators to tailor service offerings and rate structures to reflect the diversity of consumer wants and accurately to address detailed consumer preferences. Our comments emphasized the widespread and indispensable role of price and rate discrimination in the general

economy and among Internet applications providers. They called attention to the costs of regulatory intervention to impose “one size fits all” constraints on operator business plans and service offerings. We found that reasonable price discrimination has a long history in regulated industries; that it has been actively promoted by the Commission; that it is an indicator of rivalry, not monopoly; that its application can increase consumer welfare; and that poorly designed, if well intended, regulatory efforts to suppress price differentiation will diminish network investment and impose immeasurable costs on consumers.

II. OVERVIEW OF THE AMERICAN CONSUMER INSTITUTE REPLY

Responses of commentors in the initial round reflected both the depth and breadth of the Commission’s Notice. It is impossible to summarize or even characterize in more than the most general way the voluminous comments filed. Our review and analysis of these comments, as well as our reply below mirror the limits and focus of our original comments. Accordingly, we shall focus on a) calls for reregulation and their basis; b) the role of international rankings; c) the consensus on the importance of investment to assuring universal broadband access; d) policy relevance of market structure and seller concentration in particular; e) the absence of any clear definition or guidance respecting regulation of “price discrimination;” e) the negative impact of taxes on investment and pursuit of the goal of universal access; and f) the role of markets and government in the wireless sector.

III. CASE FOR COMMON CARRIER REGULATION OF INTERNET ACCESS SERVICES

A recurring controversy in the comments focused on the adequacy of markets and relatedly the need for government regulation as means for achieving our national broadband goals. In fact, that issue fairly divides the comments into two camps, which may be thought of as the “Reregulators” and the “Market Defenders.”

The Reregulators put forth a case for imposition of common carrier regulation on Internet access provision. The core of the case for common carrier regulation was put forth for the most part in six sets of comments (CFA/CU, Free Press, Google, Media Access Project/NAF, NASUCA, and Public Knowledge). Taken together the comments summed to several hundred pages and the best we can do here is to try to characterize them fairly. All of these commentators support greater government regulation of the terms and conditions related to services offered in the Internet access market. While the term “common carrier” regulation is not generally used, it is fair to characterize the recommendations as recommending application of that status to broadband network providers. That is in fact the practical effect of the common recommendation that the Commission reclassify Internet access services as a telecommunications service rather than as an information service and thereby subject provision of Internet access services to Title II regulation.

The main complaint of the Reregulators is that both markets and government have failed in recent years. They cite indicators of failure and assert a variety of causes.

Two general indicators of market failure are relied on by the Reregulators: a) our relative rank vis-à-vis other countries according to some studies and b) concentration of sellers (duopoly). From time to time they make more explicit charges including direct or oblique references to bad economic performance including a) lack of investment, b) rising rates, c) low service quality, d) lack of innovation, d) profiteering, e) collusion, and f) anticompetitive conduct.

Critics and Reregulators cite several causes of failure including most notably: a) lack of competitors (“duopoly”); b) failure of existing competition (“cozy duopoly”); and c) lack of oversight and regulation by the FCC. They credit the concentrated market structure as the main source of market failure, but refer from time to time to assorted elements of conduct—most particularly efforts by carriers to manage or otherwise impact the character of network traffic. Finally, they argue that the FCC has wrongly and without good cause reduced its role in controlling the conduct of incumbent carriers on matters related to pricing, investment (level and location), service quality, and with respect to network management.¹

IV. LIMITED POLICY RELEVANCE OF INTERNATIONAL RANKINGS

Several respondents took the occasion to call attention yet again to the results of various attempts to compare and rank US broadband performance vis-à-vis other

¹ Free Press states: “We find that the Commission over the past decade has been on a reckless deregulatory path, eager to toss aside successful policy frameworks, consumer protections, pro-competition rules, and Congressional directives...The blame for the failure to bring the benefits of the Internet to all Americans falls squarely on the shoulders of the Federal Communications Commission.” Comments Of Free Press, In the Matter of a National Broadband Plan for Our Future, GN Docket No. 09-51 June 8, 2009, at p. 3. http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219926.

countries. A fair minded analyst reading competing claims about whether we are ahead or behind, of whom, how far, why, and, indeed, what is the correct metric would be forgiven for simply ignoring the entire debate on grounds that it is in the end completely indeterminate. That same analyst could make the argument for both sides. The core problem has been widely debated in the context of comparing “apples and oranges.” One can certainly do so and may find that they are similar or different depending on the characteristics chosen to depict them and the tastes or values of the evaluator. And, without regard to these similarities or differences, many of us find one superior to the other, but not necessarily in the same rank order. So it is with international comparisons of broadband performance.²

It is very likely that the US is behind according to some metrics and but ahead using others. That said we find no value in spelling out the relationship between different metrics and different ranks, since our international rank should not be the driving force behind the call for a national broadband policy or for any particular element of that policy or strategy. The need for one, or not, does not depend on our rank, but rather is based on the impact of having one or not having one on our overall economic performance. Put differently, the impact of our economic development path should be the main driver and that is independent of whether we are ranked first, fifth or twenty-fifth in the world by one or another individual or cluster of metrics. The rationale for adopting or not adopting

² Perhaps the most egregious uncorrected error in most international ranking comparisons is the enormous impact of population density on average cost and rates, which in turn impact the rate at which networks are expanded and the rate at which households subscribe. Density impacts average loop lengths which in turn drive average fixed costs and rates. That fact alone renders almost meaningless comparisons of the US -- with population density of 31 persons per square kilometer in 2006 -- with Korea, Japan and Western Europe with densities of 485, 338 and 169, respectively. *Demographic Yearbook*, Department of Economic and Social Affairs, United Nations, 2006 edition, August 2008, Table 3.

a national broadband strategy and the elements of that strategy are both independent of our rank.

The discussion of our rank is driven largely by those critical of US communications policy in the past two or three decades. Ranks are used to indict policies that some advocates do not condone – indeed, disapprove of quite shrilly. Thus, reports of inferior rank are used to justify abandoning recent policy trends and embracing new ones, notwithstanding the lack of clear connection between past policies and current rank. Inferring causation from coincidence events is a well known logical fallacy. Notable in this regard as well is the absence from most critical discussions of our relative rank of any relationship between policies in countries ahead of us and their rank.³

Despite persistent efforts to link them, there is absolutely no connection between any measure of our international rank and assorted policy proposals advanced and justified by reference to our poor international performance. Thus, net neutrality, open networks, reregulation, nondiscrimination requirements, separate subsidiaries, reinstatement of common carrier regulation and other proposals must be evaluated by the Commission on their own merits measured in terms of the costs and benefits expressed in terms of consumer welfare. These proposals should not be accepted or rejected on the basis of how someone at the OECD or another institution chooses to measure broadband performance. Too much of the argument takes the form of “We are behind several

³ One exception we know of in this sense is the Information Technology & Innovation Foundation (ITIF) study of policies in other countries and their potential role in the rankings. While far and away the best of limited efforts in this regard, the ITIF study is only a beginning. See, Robert D. Atkinson, Daniel K. Correa and Julie A. Hedlund, *Explaining International Broadband Leadership*, Information Technology & Innovation Foundation, May 01, 2008, online at <http://www.itif.org/index.php?id=142>.

countries (you pick the study and rank), therefore we should change our policy approach (you pick the policy to insert here).” The Commission must insist on more in the way of data and analytical support for policy proposals. And, as we have consistently urged, the focus of that should be on consumer welfare.

This is not to deny a useful role for international benchmarking. It is intended to suggest commonsense bounds on their use. Our examination of the policies being pursued in other countries suggest some that might well be imported – tax incentives, assorted regulatory incentive schemes and others. But, we repeat the Commission should evaluate these on their own merits and not make a decision based on the relative rank of those countries who have adopted them.

At the end of the day, the relevant benchmark is where we could and should be if we adopt optimal policies, not where we stand relative to other countries. The focus on the NBP should reflect careful analysis of the relationship at the margin between policy goals and policy means.

V. CRITICAL ROLE OF INVESTMENT AND INCENTIVES IN THE NBP

Private sector investment should be a primary objective of the national broadband policy. In our initial comments we emphasized the frequently neglected but obvious truism that high levels of investment will be required to satisfy any reasonable goal of universal availability of broadband services to American households; and, that pursuit of other goals through regulatory means would have an impact on the ability and willingness of firms to

invest. Financial market investors and capital budgeting managers within firms are sensitive to risk, expected growth, rates of return and real market options associated with any given commitment of scarce capital. Elements of the National Broadband Policy, the level of taxation and the amount and form of regulation in particular, will impact each of these either as a constraint or incentive to invest in broadband networks.

Investment is not the only goal of any broadband plan, but it is necessary and deserving of primacy. Without capital expenditures to increase the number of networks or to extend and deepen existing ones, there can be no substantial improvement in citizen access – universal, open, neutral, fairly priced, or otherwise. Explicit or implied in the Commission’s NOI are dozens of goals, objectives, or purposes, some major and some less so. Nevertheless, private investment in broadband networks should be regarded by the Commission as a primary objective of any National Broadband Plan. Plan elements and policy proposals advanced and justified on other grounds should be evaluated by the Commission in the context of their impact on incentives, willingness and opportunities for investors and managers to use scarce capital – capital with innumerable alternative uses – to construct or improve broadband networks.

Respondents disagreed sharply on many matters, but there was near unanimity on the importance of investment. Free Press opens its comments with the observation that: “...In the Notice of Inquiry for the National Broadband Plan for Our Future the Commission rightly recognized the importance of thinking about broadband and Internet

policy in terms of *infrastructure* policy.”⁴ Google implored the Commission to focus on three critical dimensions of broadband networks as platforms for providing consumers with “optimal” access to the Internet. The first two of these clearly reflect concern for investment: “...the availability of broadband infrastructure on a ubiquitous basis...”[and]...the robustness of broadband capacity sufficient to support Internet access...”⁵ While less expansive and explicit, Public Knowledge, et al. also recognized the need for investment. Thus, they urge the Commission to review past policies in part on grounds that doing so will assure that “...efficient investment in broadband infrastructure is encouraged.”⁶ In the context of spelling out some limits on competition, Free Press notes “...the need for massive investment in networks...”⁷ CFA and CU implicitly, but unambiguously, embrace the goal of high rates of investment by declaring at the very beginning of their comments that the Federal Communications Commission (FCC) should: “...focus its national broadband plan on the achievement of the central goal of the Communications Act – universal service.”⁸

There may be others, but our sense is that only NASUCA opposes private sector investment as a principal broadband policy driver.⁹ It argues: “It is the nature of profit-

⁴ Free Press Comments at p. 2.

⁵ Google Comments at p. 4.

⁶ Public Knowledge Comments at p. 29.

⁷ Public Knowledge Comments at p.21. We hasten to make clear that PK does not emphasize or necessarily assign a high priority to the need for investment it is filing, but the limited mention provides no basis for concluding that PK stands apart from the broad consensus on the need for high levels of investment.

⁸ Full disclosure requires noting here that despite its support for the goal of universal service, which logically demands, increased and continued high levels of investment, the CFA/CU comments do not emphasize either investment or analyze the ways in which its policy recommendations might encourage or discourage investment or the pace and character of realization of “universal service.”

⁹ “A national broadband network with open access and universal availability can serve as a foundation for economic activity, political participation and communication, much as the Nation’s highway, rail, freight or postal systems have. NASUCA does not believe that the broadband network, as a transport platform, in and

seeking private investment that limits the growth of broadband.” On that basis they do not address the impact of regulation on private sector capital formation. Having eliminated private investment and the profit motive from consideration, the NASUCA comments are consistent in not addressing the impact that adoption of their recommendations for more regulation would have on capital formation.¹⁰

In contrast to the agreement on high rates of capital formation as a goal of the National Broadband Policy, there is less agreement on the means for achieving that goal. We emphasized in our comments, and continue to believe, that current high levels of taxation of broadband networks at the state and local level, combined with the universal service surcharge on interstate services strips away enormous amounts of cash from firms that might otherwise provide funding for broadband investment and while also reducing expected returns from investing in network related assets. Broadband taxes impact both the costs of providing broadband services and the revenue derived from broadband networks.¹¹ Cost reduction tax strategies would include a) accelerated depreciation which allows expensing and short term tax reduction while permitting more rapid recovery of network investment and b) investment tax credits which would increase the expected return and investment and willingness of firms to invest. Both of these

of itself is the best target for private sector investment. Instead, the access and availability necessary to maximize production suggest that the network platform be operated as a public good, and not restricted or embargoed for private profit.” NASUCA Comments at p. 80.

¹⁰ One basis for the NASUCA position -- “...ILECs’ investment in infrastructure has fallen sharply” – is not consistent with the facts, nor does NASUCA cite any factual basis for the claim at p. 80.

¹¹ Several respondents called attention to the stifling effects on broadband investment. See VZ at pp. 127-132. AT&T Comments at pp. 94-97 and at

http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520220047

Cisco at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520219971.

“The Plan should propose the elimination of tax and accounting requirements that penalize investment or undermine incentives to manufacture information technology products.”

approaches are especially attractive in the current economic environment in which the pace and direction of economic recovery will be substantially influenced by private sector investment.¹² We call attention again to the destructive impact of current levels of state and local taxes on service provided by broadband networks. These exceed twice the level of other consumer goods and services, while being extraordinarily regressive. We pointed out as well that wireless services are taxed at rates well above the average for all services. The (regulated monopoly) basis for the extraordinary and excessive levels of taxation on broadband network providers was long ago rendered obsolete by technological and economic change.

Clearly the level and form of taxation matter to the level and composition of broadband investment, but so too does the extent and form of regulation. Unlike investment in voice networks by regulated and protected monopoly carriers of an earlier generation, or by cable companies free of intermodal competition, the commitment of capital to broadband networks is subject to enormous uncertainty about the prospect of positive returns – their timing, their level and indeed if they will in fact materialize at all. Investors are and will be sensitive to the extent to which the Commission incorporates as part of its National Plan and recommendations to Congress restrictions and obligations on network infrastructure providers that will have a material impact on the ability of firms to

¹² See speech by Christina D. Romer, Growth without Bubbles, before the Council on Foreign Relations May 12, 2009, wherein the head of the Obama Administration's Council of Economic advisors argued that the pace and shape of the economic recovery and US long run growth will depend on the non-housing domestic investment. Online at: http://www.cfr.org/publication/19402/growth_without_bubbles_session_three_in_the_stephen_c_feidheim_symposium_on_global_economics_on_financial_turbulence_and_us_power.html. Note as well the consensus, shared and cited by the FCC, that of all forms of domestic investment that which is funneled toward broadband networks is among the more highly leveraged in creating jobs, increasing productivity throughout the economy and otherwise contributes to high levels of growth of economic output.

grow, to pursue reasonable network management and pricing practices, to be free of regulatory uncertainty and delays borne of traditional regulatory processes.

Comments of those critical of the current performance of the industry and recommending reversal of the gradual withdrawal of regulation and a return of common carrier regulation are without exception offered without any consideration of the effect of doing so on risk, return, and growth prospects as viewed by investors who must supply the scarce capital needed for achievement of high rates of capital formation and timely achievement of the universal service goal. Notable in this respect are recommendations related to restrictions on the ability of firms to differentiate rate and service packages (as opposed to “one size fits all” offerings); requirements that infrastructure providers subsidize, through below cost wholesale rates, potential competitors in the retail market; that firms be required to build out networks without regard to the relationship between expected costs, revenues and cash flows; structural separation of network ownership and provision of network services; reclassification of broadband, Internet access as a “communications service” subject to full Title II regulatory schemes; imposition of vaguely defined nondiscrimination requirements on access rates; restrictions on the ability of operators to manage networks in ways that are privately beneficial without being publicly detrimental; and imposition of regulation on the basis of market structure alone (alleged cozy duopoly) and without regard to conduct or performance.

There seems to be a presumption in some quarters that it is a simple matter of “Build it, and they will come!” as a description of the relation between investment and

likely take up rates by users. This, notwithstanding the evidence that many potential household users are not likely under current circumstances to subscribe and without regard to the price and quality of service offered by broadband providers.¹³

VI. CLAIMS OF DUOPOLY OR MARKET STRUCTURE ARE INSUFFICIENT BASIS FOR IMPOSING REGULATION.

As discussed earlier, proponents of regulation offer a variety of rationales. Evidence of market failure offered as justification for greater reliance on government controls of market behavior is varied, for the most part quite limited and often inaccurate.

While other rationales for regulation are offered, the principle rationale focuses on market structure and, quite specifically, on the limited number of competitors. The comments of “Reregulators” typically misperceive or misstate the relationship among the number of suppliers, investment and consumer welfare. The first and foremost mistake is to equate the number of suppliers with the quality of competition and to assume, without further inquiry or analysis, that increasing the number of competitors, without regard to means, will increase investment and consumer well-being. The following comments are illustrative:

- The FCC has allowed a cozy duopoly of telephone and cable companies to dominate the broadband access market...The reliance on this cozy duopoly has been disastrous for the United States...Consumers pay too much for too little.”¹⁴
- “The broadband problem in the U.S. flows from a simple policy mistake – a decision to rely upon a duopoly of telephone and cable companies to decide

¹³ See Pew Research Center, Home Broadband Adoption 2009, June 9, 2009, at: <http://pewresearch.org/pubs/1254/home-broadband-adoption-2009?src=prc-latest&proj=peoplepress>.

¹⁴ Comments of The Consumer Federation of America, Consumers Union And Free Press, In The Matter of Broadband Industry Practices, WC Docket No. 07-52, at p. 4.

where and when to deploy this vital infrastructure with no overarching social responsibilities whatsoever. They have slow-rolled deployment, kept prices far above those in other nations, and emphasized bundles of services targeted to upper-income Americans built around “franchise” services...”¹⁵

- “...when a market has fewer than the equivalent of six equal-sized competitors, the market just doesn’t function properly. The FCC has ignored the mountains of evidence that our broadband markets are concentrated, anti-competitive, and fundamentally broken.”¹⁶
- It is also a fair question whether the further development of future competition, which in itself is not a given, would prove sufficient to deter such conduct. Importantly, the problem to be solved is inherent in the concentrated nature of the broadband market itself, rather than in a roster of actual and potential “bad acts.” In other words, the flaw is structural, not behavioral.”¹⁷
- “The FCC has allowed a cozy duopoly of telephone and cable companies to dominate the broadband access market... [T]he cozy duopoly dribbles out bandwidth at prices that are 10 to 20 times as high as in other nations... The reliance on this cozy duopoly has been disastrous for the United States... [W]e have fallen from third in the world in broadband penetration and now are behind at least a dozen nations (15th) and, by some counts almost two dozen. Consumers pay too much for too little and the economy suffers as other nations with consumer and competition-friendly policies become the focal point of innovation.”¹⁸

The relationship between market structure and market conduct has been explored in a variety of different types of studies: a) theoretical analyses, b) empirical research, and c) experimental research. None support the proposition that duopoly, per se and not

¹⁵ Free Press Comments, at p.130.

¹⁶ Ibid.

¹⁷ Comments of Google Inc., In the Matter of Broadband Industry Practices, FCC WC Docket No. 07-52 June 15, 2007, at p. 10.

¹⁸ Testimony Of Dr. Mark N. Cooper, On Federal Trade Commission Reauthorization Before The Interstate Commerce, Trade, And Tourism Subcommittee of The Senate Committee On Commerce, Science, and Transportation, September 12, 2007, at pp. 7-9 at http://www.consumerfed.org/pdfs/FTC_Testimony_by_Mark_Cooper_COMMERCE_9-12-07.pdf.

otherwise specified, is tantamount to market failure and sufficient grounds for remedial government actions.¹⁹

Theoretical Research. The economics literature addressing the relationship between market structure, conduct and performance is equally voluminous. It is generally inconclusive and lamentably bereft of guidance for policy makers faced with decisions about what, if any, elements of market conduct should be constrained by the power of the state. The economic theory of market conduct and performance under concentrated market structures is subsumed in a larger literature focused on the economics of “few sellers” or oligopoly. The problem is not a paucity of theory or modeling efforts. To the contrary, there are literally thousands of theoretical models of oligopoly/duopoly behavior. The problem is the lack of a model that predicts firm behavior in particular contexts and does so with sufficient accuracy and reliability to warrant its being used as the basis for policy decisions about whether, how, and under what circumstances the state ought to intervene and impose economic regulation. The author of one well known textbook concluded his review as follows: “Economists have developed literally dozens of oligopoly pricing theories – some simple, some marvels of mathematical complexity. This proliferation of theories is mirrored by an equally rich

¹⁹ Indeed this conclusion was reached almost a decade ago by a reviewer of the different concepts of competition. “Another specious test [suggested by several economists] proposes in effect that competition be considered workable if there are available to traders an adequate number of genuine alternatives. In itself this criterion merely rephrases the original question. Stephen Sosnick, “A Critique of Concepts of Workable Competition,” *Quarterly Journal of Economics*, 72(3), 1958, at p.388.

array of behavioral patterns actually observed under oligopoly. Casual observation suggests that virtually anything can happen....”²⁰

“Before embarking on the analysis, it is best to provide the reader with a word of warning...there is no single theory of oligopoly... I do not expect oligopoly theory... to give tight interindustry predictions regarding the extent of competition or collusion.”²¹

Over forty years, and thousands of articles in journals of law or economics, ago, Nobel Laureate George Stigler wrote: “No one has the right, few the ability, to lure economists into reading another article on oligopoly theory without some advance indication of its alleged contribution.”²² The admonition applies *a fortiori* today.

In summarizing his review of the literature and long litany of the assumptions and outcomes of dozens of oligopoly models, Shapiro calls attention to the forgoing caveat and then concludes: “What we are most in need of now are further tests of the empirical validity of these various theories of strategic behavior.”²³

Empirical Research. If the theory is borderline *bankrupt* as a guide to policy, so too is the body of empirical research linking duopoly structure with anticompetitive conduct and performance. Two other chapters in the Handbook of Industrial Organization expressly consider empirical studies of the relationship among market

²⁰ F. M. Scherer, Industrial Market Structure and Economic Performance, Rand McNally, Chicago, Ill., 1970 at p. 131.

²¹ Carl Shapiro, Theories of Oligopoly Behavior, Handbook of Industrial Organization, at p. 333.

²² George Stigler, “A Theory of Oligopoly,” *Journal of Political Economy*, 72:1964 at 44 and cited in Shapiro, Theories of Oligopoly in IO Handbook, Schmalansee and Willig eds .at p.331.

²³ Shapiro, at p. 409.

structure, market conduct, market performance and consumer welfare, but one is hard pressed to come away with any categorical or even roughly generally applicable conclusions that might be used to inform policy in the broadband communications context.²⁴

Efforts to link market structure with market conduct and performance in matters related to prices and price setting process have not been notably successful. Thus, the authors of one popular industrial organization textbook conclude a lengthy review of empirical efforts to establish these linkages: "...the relationship between industrial structure and price setting over times remains very unclear...it is difficult to avoid concluding that, if any such links do exist, they are far from obvious and unlikely to be powerful...Industrial structure may have an important influence on price procedures....but it does not seem to play a central role in the pattern of price changes that develops through time."²⁵

Similarly, there has been notable lack of success in establishing a relationship between market structure and profits. Early studies of structure and performance relationships identified links between concentration and profitability. The main thrust of subsequent analysis and results has been to call into question the validity of the early studies and in the process insist that concentration is only one of several variables (growth rates, diversification, buyer concentration, technological change, conditions of entry, degree of regulation, cost conditions, capital intensity, and numerous others)

²⁴ Ibid.

²⁵ Donald A. Hay and Derek J. Morris, Industrial Economics and Organization: Theory and Evidence, Oxford University Press, 1991, at p. 200.

influencing profits and that there is no reliable one to one link between concentration and profit. A major analytical problem is that the causal relationships between structure and profits and other variables are not clearly established either in theory or by observation. Thus, any correlation between structure and profit does not imply causation.²⁶

Empirically validated relationships between market structure and innovation are even more tenuous than for pricing practices and profits. The literature provides no support for believing in general market that concentration is a barrier to innovation.²⁷ Indeed, the contrary is frequently suggested. There is much support for the Schumpeterian hypotheses that market power is needed to assure the optimal rate of technical progress. The literature is vast, complex and not given to easy summary, but it is fair to say that both market concentration and market rivalry are key innovation drivers.

There seems to be consensus around what might be characterized as “competitive oligopoly” wherein the competitive part provides the spur and oligopoly part provides the reward necessary to compensate for and to incent risk taking. Thus,

²⁶Ibid, Chapter 8, esp. at pp. 204-261. Consideration of the complexities involved undermines “...the direct causal chain from structure to performance.” Thus, from a policy perspective, “...emphasis would switch from structure to conduct as a basis for [regulatory] intervention.” At p. 60.

²⁷ Three literature reviews are particularly incisive on this point. See, Jennifer F. Reinganum, *The Timing of Innovation: Research, Development, and Diffusion*, Handbook of Industrial Organization, Volume 1 850-908; W.M. Cohen and R.C. Levin, *Innovation and Market Structure*, Handbook of Industrial Organization 1060-1107; Morton Kamien and Nancy L. Schwartz, Market Structure and Innovation, Cambridge University Press, 1982, especially Chapter 3, *Empirical Studies of the Schumpeterian Hypotheses*, pp. 49-105. Kamien and Schwartz state: “The standard hypothesis tested is that the R&D activity [a predicate to innovation] increases with monopoly power. Little support for his hypothesis has been found. Instead, a new hypothesis has emerged that a market structure intermediate between monopoly and perfect competition would promote the highest rate of inventive activity.” At p. 104.

“The comparative performance benefits of oligopoly over monopoly for technological innovation also has empirical support. It is well established in the economic and competition policy literature that the link between market structure and innovation is much less predictable.... But there is reasonably good evidence that neither monopoly nor perfect competition is particularly beneficial for investment in research and development or deployment of new technology.”²⁸

Finally, there are indications that concentration is the result of the competitive processes, as Nobel Laureate Harold Demsetz stated:

"My own studies ... indicate that the more *concentrated* the industry, the lower are the costs of large firms relative to the costs of medium and small firms in those industries; the difference in costs is substantial. The cost advantage diminishes to insignificance for very *unconcentrated* industries. I believe that is why one set of industries is and remains concentrated and the other does not. This suggests that where concentration is found, it is largely a consequence of the competitive process, and that such industry structures are derived from those techniques yielding low-cost production. Competition would have altered concentrated structures if there were no associated efficiencies; in fact, many industries remain unconcentrated or have become unconcentrated because no special efficiencies or entrepreneurial successes have called forth and maintained concentrated structures.”²⁹

Experimental Research. The behavior of oligopolists in general and duopolists in particular has been the subject of considerable interest and analysis by experimental economists who undertake to simulate market behavior with economically motivated and constrained lab participants.³⁰ A recent survey article identified more than 150 published

²⁸ Howard A. Shelanski, “Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy,” 24 (1), *Yale Journal on Regulation*, at pp. 92 and 93.

²⁹ Harold Demsetz, *The Trust Behind Antitrust*, The International Institute for Health Research, 1978.

³⁰ Christoph Engel, How Much Collusion? A Meta-Analysis on Oligopoly Experiments, Max Planck Society, December, 2006 Max Planck Institute for Research on Collective Goods, at http://www.coll.mpg.de/pdf_dat/2006_27online.pdf. Oligopoly has been among the first topics in experimental economics, starting as early as 1959. Since then, there have been about a dozen survey articles. The study reported here is a summary of these studies that was motivated by the author’s intention to characterize what is known from the experimental literature about the relations between structure,

papers in recent years dealing with one or more different experiments designed to test the market behavior (mainly price and quantity of output) of oligopolists – almost always duopolists – under a large and very diverse array of circumstances. This review of the literature found experiments covering more than 500 different parameter constellations.³¹

It is difficult in a short space to do justice to such a detailed review of such a comprehensive and diverse literature, but surprisingly the main results are easy to state.

- Duopoly behavior is highly circumstantial;
- Performance varies along a continuum bounded by perfect competition and perfect monopoly, but not in predictable ways;
- Many of the experiments had indeterminate outcomes;
- Many of the results were weak and not significant statistically; and, finally
- A surprising number of the outcomes were inconsistent with received theory and, indeed, with economic intuition.

Thus, to the point of these reply comments, there is absolutely no support for concluding that the broadband “duopoly” characterized by critics has the character identified in experimental research as a “market failure” warranting government intervention. To the contrary, conditions experimenters found conducive to competitive, non collusive behavior are frequently found in real world markets, including broadband markets here under discussion. The larger the market, the smaller is the degree of collusion. If sellers compete in price, if products are reasonable substitutes, and if marginal cost is constant, the mere presence of a second seller suffices to force the competitive equilibrium on the sellers.

duopoly in particular, and performance and then to test those findings against the expectations derived from traditional theory and intuition.

³¹ Ibid.

Evidence from other sectors served by two dominant firms. Duopoly (top two firms with 80% or more share of the relevant market) is quite common in the general economy. In the smallest markets, local businesses are often near monopolies with competition limited by spatial considerations. Monopoly and duopoly are quite common in small to medium sized communities and in rural areas in particular. Service provision is often limited to one or two suppliers – doctors, lawyers, specialized retail establishments, schools, post offices, gasoline stations, etc. These markets illustrate the relationship between market size and limits on the number of sustainable competitors.

But, small number of sellers, duopoly in particular, is common in larger, regional or national markets as well. We have identified about 30 duopolies and are examining the effectiveness of rivalry in them and more particularly any evidence of market failures sufficient to warrant substantial government involvement in constraining or obligating market behavior. These include the following dozen well known dominant “duopolists” operating in a broad cross section of markets:

- Moodys and S&P in markets for credit rating services;
- Federal Express and United Parcel Service in package delivery markets;
- Pepsi and Coca Cola in soft drink markets;
- Macys/Bloomingdale, Gimbels (historically); Nordstroms, Lord and Taylor in shopping malls;
- Home Depot and Lowes for home improvement products or services;
- Kodak and Fuji Film;
- MCI and AT&T in the early days;
- Lexis/Nexis and WestLaw;
- Dish Network and Direct TV;
- Air Canada and Westjet in the Canadian air transport market;
- Gillette and Wilkinson Sword in the market for razor blades; and
- AirBus and Boeing in the market for jumbo aircraft.

The list is by no means exhaustive. There are numerous other markets dominated by two sellers. Our initial review of each of these reveals numerous market imperfections, but no systematic market failures that might arguably be the basis for aggressive government action of an antitrust or regulatory variety for the purpose of policing market conduct or encouraging better performance. Profits appear to be roughly normal, while market rivalry rises to the level of “workable” or “effective” competition without either predation or collusion. There are no indications to suggest a lack of innovation or product diversity, quality or change. In short, these markets lend no support to a theory that duopoly or tight oligopoly per se is sufficient reason to warrant government interference.

Are these markets perfect and without flaws? Are they replicas of the alleged broadband duopoly?³² Of course not. But a fair assessment of the usual indices of market conduct (behavior toward rivals and consumers) and performance (profits, progress, innovation, etc.), there is no support for the proposition that duopoly requires government intervention. There may be such evidence, but many duopolists compete.

Some evidence of performance of broadband providers. There is a substantial amount of empirical evidence available describing the actual performance of broadband providers. The Commission has already done so for much of the data in its Section 706

³² While there are claims that there are only two broadband providers in each market, it is worth noting that most markets have several broadband providers (both incumbents and competitors) that use various means to connect consumers to the Internet with high-speed services, including coaxial cable, copper, fiber, WiMax, cellular, powerline and satellite technologies, among others. By the end of 1997, high-speed services were available to nearly 100% of U.S. Zip Codes; 95% had three or more providers. See, High-Speed Service for Internet Access: Status as of December 31, 2007, FCC, January, 2009.

reports to Congress. We are sure that “market defenders” will exhaustively cite the relevant data and call attention to the lack of support for many of the charges about performance leveled by Reregulators. However, we call attention to data in the Table 1

Table 1
Selected Comparative Broadband Performance Indicators

	Profit Margin (1 and 5 yrs. %)	Ret. on Invested Cap. (1 and 5 yrs. %)	CapEx/Op.Cash (% --2008)	Revenue/Emp. (\$ K--2008)
S & P 500	7.8 (11.4)	9.6 (11.1)	NA	971
AT&T	10.1 (10.7)	5.4 (5.0)	.58	409
Verizon	6.4 (7.1)	4.5 (5.4)	.65	447
Comcast	7.4 (7.0)	2.5 (1.8)	.62	347
Time Warner Cable	-42.5 (-5.7)	-16.0 (NA)	.66	385
Google	19.6 (22.9)	15.4 (19.7)	.41	1,000

Source: MSN, <http://moneycentral.msn.com/investor> (accessed June 11, 2009)

Notwithstanding claims to the contrary there are not excessive profits being reaped by broadband access providers. Table 1 makes clear that the margins of broadband suppliers are in line with the S&P 500 firms for 2008 and on average for the past five years. Nor are there excessive returns to shareholders. Returns on invested capital for broadband suppliers are well below the S&P average for 2008 and on average for the last five years. Reregulators often claim that broadband providers ration or suppress investment as means of holding up profits, yet these data make clear that broadband providers are ploughing back over 60% of cash flow from operations into capital expenditures. That is well above the average from our sample of S&P 500 companies. The two largest broadband network builders and investors in 2008 (VZ and T) combined for about five times the amount provided to NTIA and RUS in the broadband stimulus package.

Creating and saving jobs? The data in the table also indicate the role of broadband network providers' investment in creating and saving jobs. Both use substantially more labor for dollar of output than the S&P average. Thus, a shift of revenue to the broadband provider sector from others will create more jobs, which of course is an important objective of the Congressional economic and broadband stimulus package. But, we have not been able to find economic evidence of conduct or performance measures that suggest market failure or signal what kinds of regulations might improve broadband performance.

We conclude by soundly declaring that the foregoing provides no basis that the current market structure is an indicator of market failure nor does it support a return to common carrier regulation of the broadband network supply. The FCC Notice of Inquiry In the Matter of Broadband Industry practices characterized the broadband market as showing "ever increasing intermodal competition among broadband providers." We have found nothing of consequence to support a case for common carrier regulation based on market structure, nor on international comparisons, nor on two or three instances of market conduct. Commonsense suggests that it must be based on a thorough consumer welfare oriented cost-benefit analysis of the conduct and performance of markets and of the well known infirmities of government efforts to manage competitive processes.

It is important for the Commission to take due notice of, and to factor into its construction of a national broadband policy, the fact that policies that maximize the number of competitors are not necessarily congruent with policies that will lead to greater willingness and ability, or otherwise incent firms, to investment. The reasons are well

known and related to the relationships between the burden of fixed costs, optimal scale, size of the market, and the number of competitors sustainable in the long run. Where there are substantial economies of scale (that is where minimum efficient firm size is large relative to the size of the market), where fixed costs are a substantial part of total cost: and, where marginal cost are low and below average cost, government can have very little impact on the number of competitors. Its role is limited to permitting as many as feasible and being a watchdog but it cannot force long term existence of more competitors than dictated by the relationship between the size of the market and the structure of cost. With respect to the number and concentration of sellers, markets trump regulation. While consumers are in general made better off with more choice, it does not follow that government attempts to force increases in the number of options may increase welfare in instances where the economics of cost and demand warrant otherwise.

In summary, increasing investment and stimulating competition by increasing the number of rival providers in the marketplace are worthy policy goals -- but they can be conflicting goals. Because fixed and sunk costs needed to offer broadband access are substantial, public policies aimed at increasing the number of providers of retail broadband network services will not drive broadband speeds up or drive prices down in markets. Therefore, notwithstanding wishful thinking and claims to the contrary, merely increasing the number of rivals and choices available to consumers will not bring about improved broadband performance.

VII. FAILURE OF ADVOCATES TO DEFINE AN ENFORCEABLE DEFINITION OF DISCRIMINATION

In our initial comments, we emphasized and documented fully that price discrimination is ubiquitous in the economy and among other firms in the Internet value cluster (providers of applications, software, providers, equipment suppliers); that it is a common element of competitive market conduct; that it has been encouraged historically by the FCC in its pursuit of universal voice service; and, with some limited exceptions, a practice that invariably increases consumer welfare.³³

Based on a) our perceptions of the lack of clarity and inapplicability of the Commission's past efforts to enforce the requirements of Section 201 and 202 of the Communications Act and b) our doubt that the advocates of nondiscrimination would be able to devise a workable definition, we made clear the consumer welfare basis for our preference that the Commission not undertake to regulate rates on the basis of whether they are or are not discriminatory. We urged the Commission to insist that proponents provide a clear, readily enforceable definition that separated acceptable from unacceptable market behavior. Doing so is absolutely critical to prevent regulatory delay, uncertainty, and the burden of other unanticipated costs from discouraging efficient resource allocation, positive investment signals and rapid movement toward the goal of universal access.

³³ The American Consumer Institute Comments, particularly at pp. 44-50.

Several respondents reiterated their insistence on previous occasions that the Commission impose rate regulations on access providers and in particular evaluate all rates according to a standard of nondiscrimination. Some advocates did not even attempt a definition. None came close to recommending a clear cut standard that would assure minimization of regulatory uncertainty and unanticipated regulatory costs. And, some were downright confusing and merely highlighted the difficulty of meeting the standard set forth by Commissioner Copps: “a specific principle of enforceable non-discrimination, one that allows for reasonable network management but makes clear that broadband network providers will not be allowed to shackle the promise of the Internet in its adolescence.”³⁴ Such a standard is necessary to provide clear regulatory signals to suppliers and users alike as means of avoiding regulatory delay, uncertainty, risk and the suppression of investment incentives necessary to achieve the universal broadband access goal.

The Commission must insist on definitions that clearly divide acceptable from unacceptable conduct and that are enforceable. Failure to do so is assured to create enormous uncertainty in financial markets, delay investment decisions and suppress network growth. Moreover, aside from the economic effects, failure to define terms that are instrumental in the enforcement of rules governing market conduct and the use of private property renders any Commission decisions on key broadband policy matters vulnerable to reversal on grounds that they are “arbitrary and capricious.” To illustrate,

³⁴ Statement of Commissioner Copps in Adelpia Proceeding.

cite the vague directions in the Google filing and others.³⁵ Likewise, the Free Press definition is neither clear, adequate as to what is or is not permitted, nor defensible as a basis for dramatic reversals in public policy.³⁶

The danger here is that the Commission will adopt as a major driver or element or characterization of its overall policy (objective) some vague notion that is not clearly defined, then rationalize regulatory constraints and obligations on that basis. An analogy might be the enforcement of a rule that permits only honest and beautiful women and handsome men to vote in the absence of any further specification of what those terms mean.

VIII. WIRELESS MARKET PERFORMANCE REFLECTS EFFECTIVE COMPETITION

In addition to the universal support for more investment, respondents to the Commission's Notice also agree generally on the value of measures that will lead to more

³⁵ Openness as a Public Policy Virtue: Internet access that is unimpeded by the underlying network provider maximizes the end users' potential to produce inspired applications, content, and technologies. Connectivity rooted in open and accessible broadband networks is most likely to breed innovation and ideas, create spillover effects, and generate positive externalities. The single best example of an open platform, the Internet, has generated enormous tangible benefits for the U.S. in the form of true economic growth and enhanced human potential. Openness is especially needed in the last-mile connectivity to foster users' competitive choices and discipline incentives for discrimination on pricing, access, and reliability for third party applications, content and service providers. For these reasons, the 2009 Recovery Act, the Obama Administration, and the FCC have all embraced the policy virtue of open broadband "last mile" networks. Google Comments at pp. 25-26.

³⁶ The Free Press definition follows: "At its heart, nondiscrimination in the Internet context means that no piece of data is preferred over another piece of data based on *anything* other than which user that data it is from or specific preferences users have affirmatively requests (including requests based on user-driven QoS standards). This means that an ISP may not alter how it treats a piece of data based on where on the Internet it is being sent, what type of protocol it uses, what type of data it contains unless the consumer has affirmatively requested it, and in that case, that data's treatment may only be altered with respect to that user's other data." Others may find the basis here for a defensible and clear cut rule against discrimination. Free Press Comments at p. 7.

consumer choice and market rivalry. No single prospect for enhanced broadband competition is more likely or important than increased investment that would enable and expedite the emergence of advanced wireless networks. Such networks would provide a third broadband facilities based path to most U.S. households and for some hard to serve and unserved areas the first and only path.

Wireless networks are quite capital intensive, but substantially less so than wireline networks. Building them out to accommodate demand growth and upgrading them to provide more bandwidth to users will require favorable access to both capital markets and to public spectrum. As with wireline networks more generally it is imperative that the National Broadband Policy reflect a keen awareness and sensitivity to the negative impact of well intended government regulations on the ability of firms to invest and the willingness of capital markets to provide the wherewithal. Comments of several parties who advocate a diverse array of regulations under the broad umbrella of “wireless network neutrality,” “openness,” “open networks,” “wireless Carterfone,” or some other abstract basis notably exclude such concerns and considerations.

Notwithstanding the broad consensus that the U.S. leads the rest of the world (across the board using a variety of metrics) with respect to wireless performance and that the level of competition in the wireless sector is a model for the rest of the world, the Reregulators, stripped of the “We are behind the rest of the World” rationale for regulation, nevertheless urge draconian measures to “foster greater competition among

service providers.”³⁷ And, this without regard or reference to either the current level of performance documented by publicly available data and of competent analysis. All reasonable indications from these indicate laudable performance in the sector, as measured by the rate of handset and network innovation, the rate of investment, the downward trend in rates, penetration, usage growth, service quality and other common indicia of consumer welfare.³⁸ The plea for more regulation appears to be largely a matter of “regulation for regulations sake.”

If the standard for comparison is the textbook model of perfect competition or a close facsimile thereof, economists and informed policy analysts generally agree that market failure is the universal rule. Comments of the following sort are strewn plentifully through the literature on regulation and economic welfare:

A fundamental problem with the concept of market failure, as economists occasionally recognize, is that it describes a situation that exists everywhere...an analyst in search of externalities and market

³⁷ Exemplary in this regard is the following: “To further foster competition between service providers, the Commission must address the anti-competitive issues that arise due to handset exclusivity between handset phone companies and the wireless service providers. Ideally, and in keeping with the principle of openness discussed in Part I, the Commission would impose the same rule on wireless networks that it imposes on wireline networks – the so-called “Carterfone” rule requiring that network operators create a standard that permits anyone to attach a any device to the network and run any application over the network that does not harm the network. Even absent adoption of a “wireless Carterfone” rule, the Commission should still ban exclusive contracts for hand-held devices as a simple matter of competition policy.” Comments of Public Knowledge, Media Access Project, New America Foundation, and U.S. PIRG, at p. 35 and http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520220265. While the boldness of such a recommendation and its sharp departure from the status quo requires some supporting analysis, there is none here. Online at: http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520220265.

³⁸ See ConsumerGram from The American Consumer Institute, American Consumers Pay 10 Cents per Minute Less and Use over 600 Minutes More than Their International Counterparts“ which concludes: “Based on this analysis, our earlier study, OECD data and an FCC’s report, the U.S. wireless market has the highest output, most competition and greatest benefits for consumers; American are paying 10 cents less per minute and saving almost \$1,000 per year over what they would have paid at overseas’ rates – a \$270 billion savings for all Americans.” See also, Joseph P. Fuhr and Stephen Pociask, “Comparison of Structure, Conduct and Performance: U.S. versus Europe’s Wireless Markets,” published in A Collection of Essays on Infrastructure versus Service-Based Competition: The Case of Mobile Telecommunications, Professors. Laurent Benzoni and Patrice Geoffron (eds), Quantifica, Paris, France, 2008.

failure can find them anywhere, [and thereby provide] a universal justification for any sort of government intervention that he or she might want to promote.”³⁹ Thus, “Market failure simply means the failure of real world markets to achieve the standards of imaginary markets.”⁴⁰

Some markets do of course fail and all are imperfect, but the required proof of failure and the companion assertion of the desirability of government intervention are not satisfied by mere citation of such truisms. What is required is, as emphasized in our initial comments, and above, are data and analysis of consumer welfare impacts showing that the costs of regulation do not exceed the benefits asserted.

The original, and what appears still to be the principal, basis for the notion of applying Carterfone interconnection principles to wireless providers is a paper by Law

³⁹ Richard O. Zerbe, Jr., Economic Efficiency in Law and Economics, Richard Elgar, Northampton, MA, 2001, pp. 168-170. See also Richard Nelson, “Roles of Government in a Mixed Economy”, *Journal of Policy Analysis and Management*, 6, Summer 1987, at p.541-557.

⁴⁰ William C. Mitchell and Randy T. Simmons, Beyond Politics: Markets, Welfare, and the Failure of Bureaucracy, Westview Press, San Francisco, 1994, at p. 6. Market and government processes/institutions have been both idealized and savaged. Fair enough, as long as the standard for comparison is consistent. However, the tendency is to compare imaginary, stylized and perfect configurations with real world, warts and all, configurations. To ensure a fair comparison of government institutions/processes and market institutions/processes it is necessary to judge them by the same metric – how they actually create economic value or otherwise meet the needs of consumers and business. Former Council of Economic Advisors Chairman and Nobel Prize winner Joseph E. Stiglitz has made that point eloquently for several years. He has cautioned that there are political failures arising as barriers to perfect government, just as there are a variety of market failures that might thwart the operation of perfect exchange schemes. Both are attributable to information asymmetries. He notes as well that while market failure may create opportunities for beneficial government policy activism, institutional failures from a variety of sources may effectively prevent such policies to materialize and be successfully implemented. Joseph E. Stiglitz, Whither Socialism, MIT Press, Cambridge, MA, 1994, at p. 45; Joseph E. Stiglitz, et al., The Economic Role of the State, Oxford, UK, Blackwell at p. 32. See also, Avinash K. Dixit, The Making of Economic Policy: A Transaction-Cost Politics Perspective; MIT Press, Cambridge, Mass., 1996, especially Chapter 1 Economic Policymaking as a Political Process, at p. 9. It has been long established that perfect markets and perfect government are capable of achieving economic efficiency and that real world constraints frequently prevent either state of perfection to be realized. (Dixit at p. 4) However, for the most part the literature on regulation recognizes only market failures, while presuming that “perfect” government offsets are not only possible, but sure to be forthcoming.

Professor Timothy Wu.⁴¹ The proposal would apply a regulatory regime fashioned specifically for a regulated monopolist, protected from competition by regulatory barriers to entry, and using circuit switched wireline technology to provide largely dial up voices services. None of those facts apply to current wireless networks and each is material to assessing the costs and benefits of regulation. None of the differences are even acknowledged, much less evaluated as to their impact, by advocates of applying the scheme to wireless providers. The Wu proposal has been soundly rebutted on the basis of fact, economic principles, applied engineering and common sense.⁴²

The case for imposing the full network interconnection regime associated with Carterfone and common carrier style regulation of wireless networks is based largely on uncritical assumptions that imposition of administrative constraints on imperfect market

⁴¹ Tim Wu, *Wireless Carterfone*, *International Journal of Communication*, 1, 2007 at p. 389 and at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=962027#.

⁴² One study concluded: “We document that the U.S. mobile wireless industry (a) is *not* highly concentrated, relative to industries typically subject to access regulation, and to the European mobile wireless industry, (b) displays competitive behavior, and (c) is continuing to deliver performance that compares favorably both over time, and with Europe. The industry, therefore, presumptively is *not* a candidate for intrusive access regulation. Professor Wu’s alleged examples of “restrictive” practices do not alter this presumption. Some of the allegations are factually wrong, and others describe practices of individual carriers that have not been adopted industry wide; moreover, the alleged practices plausibly serve beneficial purposes. Finally, *Carterfone* regulation succeeded largely because the technology of the public switched telephone network was relatively simple and stable, whereas mobile wireless technology is much more complex and rapidly changing. Thus, access regulation of this industry is unwarranted as a matter of economics: the costs are likely to be substantial, and the threshold case that “competition is not working” has not been made.” Marius Schwartz and Federico Mini, *Hanging up on Carterfone: The Economic Case Against Access Regulation in Mobile Wireless*, May 2, 2007. “The market structure of the U.S. wireless industry is simply not conducive to engaging in anticompetitive strategies aimed at weakening upstream equipment or applications providers.” Robert W. Hahn, Robert E. Litan, and Hal Singer, “The Economics of Wireless Net Neutrality,” AEI Brookings Joint Center Related Publication 07-10, at p. 7, April 2007). “Handsets are part of the wireless network, and the performance of handsets has substantial static and dynamic efficiency implications for the operation of the network as a whole.” Charles L. Jackson, “Wireless Handsets Are Part of the Network,” April 27, 2007, at p. 35 and at http://files.ctia.org/pdf/Comments_CTIA_SkypeOpposition_AppendixC_43007.pdf. “Unlike the case in wired telephony, in modern wireless telephony the features and quality of the handsets used on the network have a substantial impact on the cost and quality of the wireless service, not only for the individual subscriber but for all consumers. *Ibid*, p. 2.

processes is costless, or practically so, and that market performance is not significantly diminished thereby. Just stating, explicitly that implicit assumption should serve to highlight its folly. A fair evaluation of the need for regulation requires comparison of the performance of markets with and without certain government actions – in particular economic regulations imposed by FCC and state bodies. This in turn requires assessment of the performance of government actions that constrain – compel or prevent – private market conduct.

Government intervention is not justified by simply calling attention to market imperfections, especially when the companion interventions themselves occasion significant costs as they do here. There is no such thing as a free regulation—one whose benefits are not accompanied by cost imposed in other terms, on other economic actors, either currently and/or in the future. The public interest standard can stand for many things, be variously defined and be interpreted in numerous ways. However, the standard is surely not satisfied by government actions taken on the basis of conjectural at best and largely undefined benefits without regard to costs.

IX. CONCLUSION

In our initial comments we emphasized the importance of evidence, analysis and a consumer welfare perspective in the Commission's National Broadband Plan.

Much of the foregoing has addressed comments of parties who share a common goal of reversing more than a decade of precedents and decisions that have rebalanced

reliance on markets and government regulation. Our review of the positions, claims of market failure and scant data offered by these parties concludes with the Scotch Verdict: “Case not Proven!”

The Commission should place a heavy burden on those who argue for a return to regulatory regimes that have been incrementally on the basis of strong evidentiary records open to all points of view and not, as implicated by some critics, haphazardly and carelessly by rogue Commissions. FCC decisions leading to less regulation and greater reliance on markets – the phasing out of common carrier restrictions – have spanned different political administrations; have frequently been adopted by unanimous votes of a succession of Commissions; have had broad bipartisan support in Congress; and, last but by no means least important, have passed judicial review for consistency with governing statutes and the intent of Congress. It is notable in this context that there is a substantial amount of evidence and political support for the opposite criticism; namely, that the Commission has not moved quickly or far enough in the direction of greater reliance on markets and less on regulatory fiat.

Our view about the inadequacy of the case put forth or reregulating information networks does not reflect across the board hostility to regulation in general. We emphasize again our recognition of affirmative roles for government in advancing consumer welfare and support for well conceived and execute consumer protection initiatives related to privacy protection, assurance that consumers are fully and accurately informed about rates and other conditions attached to the services from which they

choose. We have also opposed on numerous occasions efforts by vertically integrated firms to leverage strengths in some markets to favor competitive services they do or might provide in others. Thus, where there are clear and measurable welfare benefits of regulation in excess of related costs, we do and will support government intervention. Simply put, that is not the case here.

The brief of the Reregulators appears to agree that a necessary element of a National Broadband Policy is universal access and, by logical inference, high levels of investment in broadband network facilities. We cannot confidently estimate the total amount of new capital formation required to migrate existing network facilities from where we are to a reasonable notion of universal access. There is no disagreement though, that hundreds of billions will be required to address “most” households with “fast” Internet connections. Some suggest that government should build the networks, but current fiscal realities offer no reasonable prospect for that in the near term.

Nowhere in the case for regulation is there any link between the policies recommended and the impact on new capital formation. Reregulation will almost certainly reduce business opportunities and options of operators; increase their capital and operating costs; increase their uncertainty about future business prospects; increase delay in their ability to respond to technological and economic dynamism of broadband markets; chill capital market views of the merits of providing risk capital; and, cause capital budgeting managers of broadband providers to consider other options. That much is known and a part of the record, but not addressed in the brief for reregulation. The

burden is on Reregulators to show how their proposals for more government controls will lead to faster rates of capital formation. In that respect we note the absence of a scintilla of evidence, or even discussion, of how such things as net neutrality, open networks, end-to-end networks or any of the other euphemisms for reregulation would lead to superior progress toward the goal of universal access to broadband networks and higher rates of capital formation.

It is worth noting here that during the old common carrier regulatory regime, firms were induced to invest by protection from competition by regulatory barriers to entry and by cost plus, rate of return regulation that virtually assured investor returns commensurate with associated risk. Government cannot force firms to invest in broadband facilities. Government must provide incentives for them to do so. The Reregulatory brief moves in the opposite direction.