

The Evolution of Regulation: 20th Century Lessons and 21st Century Opportunities

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“What these rules should be is the principal question in human affairs; but if we except a few of the most obvious cases, it is one of those which least progress has been made in resolving.”

John Stuart Mill
On Liberty, 1860

Introduction and Overview

In the second presidential debate of 2008, then candidate Barack Obama opined with respect to financial markets that, “The problem is we still have an archaic, 20th-century regulatory system for 21st-century ... markets.” While the focus on regulatory reform in financial markets has subsequently been pronounced, an important set of questions remain regarding the applicability of this phrase to other traditionally regulated industries such as telecommunications. In this paper, I explore this issue by focusing on lessons that may be learned from both the evolution of economic analysis and regulatory experiences during the past half-century.

I find, *inter alia*, that while the trend toward deregulatory policies over the past half-century was nominally motivated by a push toward economic efficiency, policymakers were also attracted toward deregulatory policies by deep-seeded ideological desires to protect individual freedoms that were seen to be infringed by regulation.¹ With the emergence of the financial

¹ See, e.g., Richard W. Rahn, *Costs Without Benefits*, Washington Times, June 15, 2010, available at <http://www.washingtontimes.com/news/2010/jun/15/costs-without-benefits/>

crises in the United States, that simple ideology has receded, giving way to another - equally crude -ideology that too simply calls for more government regulation and controls. Such shifts in ideological passions, however, are likely to provide poor guidance for any regulatory system that takes seriously the goal of promoting economic welfare.

Setting aside ideology, the question remains whether there is an alternative foundation for guiding regulatory and deregulatory policies. In that regard, careful reflection of the evolution of regulation since the early 1960s reveals a subtle but potentially substantive and meritorious foundation for regulatory and deregulatory policymaking in the 21st century. In particular, when stripped of its ideological drivers, the most successful dimensions of regulatory and deregulatory policymaking in the past half-century can be seen to be decidedly "results-based." In this paper, I describe and document this set of more subtle regulatory developments and explain how they have provided for the soundest of regulatory decisions over the past fifty years. Drawing on these developments, I then proffer a set of principles that hold the potential to underlie a new results-based regulatory framework. Importantly, results-based regulation (RBR) draws upon the most successful aspects of both regulation and economic analysis over the past fifty years; with the aim of establishing principles that can guide policymakers as they pursue regulatory and deregulatory policies in the twenty-first century.

Both the potential for, and the urgency to establish, a twenty-first century results-based regulatory paradigm is significant. While generally true across a wide swath of industries, it is arguably nowhere more true than in the case of the telecommunications industry. In particular, the twentieth century telecommunications industry regulatory superstructure was designed for a monopoly and while legislative reforms enacted in 1996 turned toward an embrace of

competition the regulatory superstructure has remained fully entrenched.² In contrast, the industry has been evolving very rapidly -- by the confluence of dramatic technological change, the easing of regulatory constraints on entry, and the significant broadening of telecommunications services from voice-only to voice, video and data provision. As a result, it is widely held that *with an appropriate 21-century policy framework in place* the industry has the potential to significantly and substantively enable economic growth and enhance the quality of virtually all Americans' lives.³

This rapid evolution of the industry, together with the infrequent updating of the regulatory superstructure creates the profound risk of a policy incongruity in which economic welfare is harmed by inert regulation. In this case, legislative policy reforms are likely to offer the most promising path forward. In a complex industry such as telecommunications, however, legislation is often years in the making.⁴ Accordingly, in the short run, economic welfare can be enhanced to the extent that regulators adopt rigorous analysis steeped in the principles of RBR. A core element of such a regulatory approach is that regulators address the question of whether proposed or extant regulations affirmatively can be shown to benefit economic welfare relative to the alternative of resource allocation that relies more heavily on market-based transactions.

Importantly, such analysis in RBR is not a call for speculative theorizing about potential dangers or possibilities of alternative regulatory governance structures, but rather is a call for

² See Robert W. Crandall and Jerry A. Hausman, *Competition in U.S. Telecommunications Services: Effects of the 1996 Legislation*, in DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT? (Sam Peltzman and Winston Clifford, eds., 2000), for a critique of the 1996 Act.

³ See National Broadband Plan: Connecting America (2010) available at <http://www.broadband.gov/plan/>. See also, John F. Kerry, *The Future of Telecom is Now*, Politico, February 10, 2011, available at <http://www.politico.com/news/stories/0211/49177.html>

⁴ For example, statutory language that became part of the foundation of the 1996 Telecommunications Act was introduced into bills fully a decade earlier.

serious empirical analysis that examines economic results in the industry and seeks, in counterfactual fashion, to establish how economic metrics of the industry compare with those that would prevail in alternative states of the world. In some instances, such counterfactual benchmarks may be difficult to come by, but in other circumstance, all too often overlooked, benchmarks arise within the industry or over time. Indeed, to highlight both the promise and challenge of the applicability of this approach, the paper closes with a “proof of concept” examination of the implications of RBR in the crucial area of the provision of modern telecommunications services.

Background: The Evolution of Regulation

Today regulatory policy is at an inflection point, complicated by financial market regulation failures and a backlash to the prevailing ideology that has trended the U.S. toward less intrusive regulation of industries such as telecommunications, electricity, rail, airlines and trucking over the past half-century. In the face of these complications, it is an ideal moment to pause and reflect on the basic lessons from the practice of regulation and economic science once ideology is stripped away. I begin, then, by looking at the simple lessons to emerge from a reflection on economic regulation over the past half-century.⁵

The Rise of the Regulation

At the highest level, there is a continuum of alternative governance mechanisms for allocating society’s scarce resources. This governance may be extreme forms of fiat, imposed by

⁵ This brief review is not meant to be comprehensive, but rather is designed to highlight developments in the practice of regulation that have bearing on the establishment of a regulatory framework that may be apt for the twenty-first century. Such reflections are especially important at times in which multiple voices emerge with alternative and conflicting advice. As noted by Judge Benjamin Cardozo, “You will study the wisdom of the past, for in a wilderness of conflicting counsels, a trail has been blazed.” (Taken from the facade of the Boalt School of Law, University of California, Berkeley.)

authoritarian rule; it may rely on free markets; or, it may involve combinations of both market-based and rules-based governance mechanism.

From the outset of the republic, the United States' economy has always been market oriented. This affinity with market-based, rather than governmentally-imposed, decision-making is deeply rooted in both a political philosophy that treasures individual freedom and compelling economic theory dating back to Adam Smith on the *general* superiority of market-based resource allocation.⁶ Against this backdrop, regulation of “public utilities” arose first during the 1800s in the form of municipal regulation and at the state and federal level during the twentieth century.⁷ This rise of a regulatory superstructure at the state and federal levels supplanted a more traditional reliance on private litigation as a means for ensuring and promoting trade between economic entities.

In their analysis of the “rise of the regulatory state,” Glaeser and Schleifer develop a model in which the merits of a deeper reliance on private litigation rather than regulation rely upon the underlying strengths of the legal institutions that are vital to ensuring the integrity of the litigation process.⁸ They demonstrate that, in general, the stronger are legal institutions, the more society may efficiently rely upon litigation rather than regulation as its governance mechanism.

⁶SMITH, ADAM. AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS. ORIGINALLY PUBLISHED 1776. SIMON AND BROWN, 2011. As recently observed by President Obama “For two centuries, America’s free market has not only been the source of dazzling ideas and path-breaking products, it has also been the greatest force for prosperity the world has ever known.” President Barak H. Obama, *Toward a 21st-Century Regulatory System*, WSJ, January 18, 2011, available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>

⁷ Priest, George L. *The Origins of Utility Regulation and the ‘Theories of Regulation’ Debate*, Journal of Law and Economics, Vol. 36, April 1993, pp. 289-323.

⁸ Glaeser, Edward L. and Andrei Shleifer. *The Rise of the Regulatory State*, Journal of Economic Literature, Vol. 41(2), June 2003, pp. 401–425.

Their review of both private litigation and regulation in the United States in the years preceding the onset of the twentieth century “regulatory state” points toward the vulnerability of the legal foundations of litigation as a governance mechanism during this period. Thus, they see the rise of the regulatory state as an efficient response to the state of legal institutions during the late nineteenth century.

An important implication of this interpretation of the rise of regulation is that governance structures that arise efficiently in one period may be overtaken by the efficacy of alternative structures in different periods. For example, as legal institutions and economy-wide competition policy and consumer protection agencies have arisen and matured in the course of the twentieth century, the relative merits of full-blown regulatory superstructures may reasonably be thought to fade relative to private litigation and general consumer and competition protections that are afforded at the economy-wide level.⁹

Stability of the Early Years

Between the 1880s, with its introduction of federal railroad regulation and the beginning of WWII, a number of federal regulatory agencies came into being to regulate industries in the transportation, telecommunications, financial and energy industries. What emerged, especially in the 1930-1960 period was a remarkably stable set of regulatory institutions and industries.

For example, following the creation of the Civil Aeronautical Board in 1938, regulators moved quickly to establish comprehensive regulation of the airline industry. Regulation controlled virtually every economic dimension of air service including the entry of air carriers,

⁹ See Howard Shelanski, *Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy*, 24 Yale J. of Reg, 55-106 (2007), provides supporting discussion of this point, specifically directed toward the telecommunications industry. Of course, this conclusion rests on both the ability and propensity of courts and consumer and competition protection agencies to enforce existing laws, rules and regulations.

the authorization for providing service over specific routes, the ability to withdraw from specific routes, and rates. Once this regulation was in place, considerable inertia took over, with very few changes over a period of roughly four decades.¹⁰

Similarly, in the years following the passage of the Telecommunications Act of 1934, regulation of the telecommunication industry grew into a labyrinth of rules and regulations on the one hand, and a stable monopoly on the other. It was, for instance, during this period that an arcane regulatory system of payments between the various legal entities within AT&T was mandated under what came to be known as Separations and Settlements. Specifically, regulators required the firm to “separate” its costs of providing local exchange and long distance services.¹¹ Under this system, much of the costs associated with creating network access were required to uneconomically be allocated to the long-distance sector.¹² Prices were then established to recover these allocated (rather than economic) costs. The result was the establishment of an artificially high set of long distance prices, the revenues from which were transferred as “Settlements” back to the local exchange operations of AT&T’s Bell operating companies. At both the state level and federal levels, regulators seemed altogether content with a monopoly industry structure and with the employing an industry governance mechanism that regulated both

¹⁰ See Borenstein, Severin and Nancy L. Rose “How Airline Markets Work...Or Do They? Regulatory Reform in the Airline Industry, in N. Rose ed., *ECONOMIC REGULATION AND ITS REFORM: WHAT HAVE WE LEARNED?*, University of Chicago Press, forthcoming.

¹¹ For a more detailed discussion, see David L. Kaserman, John W. Mayo and J.E. Flynn, *Cross Subsidization in Telecommunications: Beyond the Universal Service Fairy Tale*, 2 J. of Reg. Econ. 231-250 (1990).

¹² For economic critiques of cost allocations within regulated firms, see William J. Baumol, Michael F. Koehn and Robert D. Willig. *How Arbitrary is ‘Arbitrary,’? or Toward the Deserved Demise of Full Cost Allocation*, 120(5) Pub. Utilities Fortnightly 16-22 (1987) and Kaserman, David L. and John W. Mayo. *Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing*, Yale Journal on Regulation, Vol. 11(1), January 1994, pp. 119-148.

local exchange companies and long distance services as natural monopolies under rate-of-return regulation.¹³

In sum, between the 1930s and the 1960 there was considerable alignment of academic thought and regulatory practices. Economists proffered the concept that many of the regulated industries were “natural monopoly” in nature and regulators designed regulation accordingly – legal monopolies, with rate-of-return regulation.¹⁴ Speaking of telecommunication regulation during this period, Noam notes that the policy framework in this period was “the traditional monopoly system, state owned, or tightly regulated. Technologically it was based on copper analog networks. Culturally it was shaped by an engineering and state bureaucracy. This arrangement lasted for a century and spawned a regulatory system, which focused on cooperation with the monopolist provider in spreading services across society, while constraining its market power.”¹⁵

Ideological and Intellectual Underpinnings for Deregulation

While the causes of any economic process as broad and complex as the deregulation movement that has occurred over the past fifty year are manifold, a careful reflection reveals two precipitating features of this movement worth highlighting.¹⁶ First, beginning in the 1960s,

¹³ For a discussion of the history of this period, see Gerald W. Brock, *Historic Overview*, in HANDBOOK OF TELECOMMUNICATIONS ECONOMICS, (Martin Cave, Sumit K. Majumdar and Ingo Volegsang, eds, 2002), and GERALD FAULHABER, TELECOMMUNICATIONS IN TURMOIL: TECHNOLOGY AND PUBLIC POLICY (1987)

¹⁴ See JAMES C BONBRIGHT, ALBERT L DANIELSEN, DAVID R KAMERSCHEN, PRINCIPLES OF UTILITY RATES (1998).

¹⁵ Noam, Eli. *Regulation 3.0 for Telecom 3.0*, Telecommunications Policy, Vol. 34, 2010, pp. 4-10.

¹⁶ There are a number of thoughtful pieces that have reflected on other dimensions of the deregulatory process. See, e.g., Sam Peltzman and Clifford Winston, *Deregulation of Network Industries: What's Next?* AEI-Brookings Joint Center for Regulatory Studies (2000); Sam Peltzman, Michael E. Levine and Roger G. Noll, *The Economic Theory of Regulation After a Decade of Deregulation*, Brookings papers on economic activity, Microeconomics, (1989) at

economists began to turn toward the institution of regulation with a skepticism that had previously not existed. The result was, in the most general terms, that regulation was revealed to be an imperfect governance mechanism and one that could not simply be assumed to promote the public interest. A second more subtle but potentially more profound driver came from policymakers themselves who saw deregulation as a means to promote an ideological end; specifically to ease regulatory coercion and promote economic freedoms. I take these up in turn.

Economic analysis of regulation in the twentieth century began with two seemingly innocuous assumptions. First, regulators were assumed to unwaveringly pursue the public interest in the conduct of their affairs. Second, regulatory rules created by regulators were inviolate. Together, these assumptions permitted the development of a number of fundamental insights that lie at the heart of regulatory economics today.¹⁷ Together, these assumptions also created an implication, which came to serve as a readily accepted feature of the practice of regulation; that its economic effects were uniformly to promote economic welfare.

It was against this backdrop that Stigler and Friedland took on a question that economists and policymakers had previously simply overlooked; specifically “what is the economic impact of regulatory governance?”¹⁸ They introduce the subject simply and powerfully:

The literature of public regulation is so vast that it must touch on everything, but it touches seldom and lightly on the most basic question one can ask about regulation: Does it make a difference in the behavior of an industry? This impertinent question will strike anyone connected with a regulated industry as palpably trivial. Are not important prices regulated? Are not the routes of a trucker and an airline prescribed? Is not entry into

1-59; and Roger G. Noll and Bruce M. Owen, *The Political Economy of Deregulation: Interest Groups in the Regulatory Process*, AEI for Public Policy Research (1983).

¹⁷ See, e.g., the seminal contribution of Harvey Averch and Leland Johnson, *Behavior of the Firm under Regulatory Constraint*, *Am. Econ. Rev.* 1052-1069 (1962).

¹⁸ George G. Stigler and Claire Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 *J. of Law and Econ.*, 1-16 (1962).

public utility industries limited? Is not an endless procession of administrative proceedings aging entrepreneurs and enriching lawyers? But the innumerable regulatory actions are conclusive proof, not of effective regulation, but of the desire to regulate.¹⁹

As has subsequently been described in detail, the seminal work of Stigler and Friedland subsequently gave rise to a general economic theory of regulation developed by Stigler, Peltzman, Posner and Becker.²⁰ This economic theory of regulation sought to recast regulation not as a governance structure that invariably acted to promote the public interest but rather as a good that was subject to the standard forces of supply and demand.²¹ The result was, in its crudest form, that “as a rule, regulation is acquired by industry and is designed and operated primarily for its benefit.”²² As the principal architects of the economic theory of regulation hailed from the University of Chicago, it was quickly associated with what came to be known as “the Chicago School.”

This view of regulation has provided a powerful general model for understanding regulatory outcomes and has led to a fundamental shift in the research agenda directed toward regulation. Specifically, in the decades that have followed the emergence of the economic theory of regulation, research has increasingly focused on the important role of the interest group

¹⁹ *Id.* 1.

²⁰ For a discussion of the evolution of the economic theory of regulation, see Sam Peltzman, *The Economic Theory of Regulation After a Decade of Deregulation*, Brookings Papers on Economic Activity, Microeconomics, 1989, at 1-60. For a subsequent enunciation of this theory in graphical format, see Randolph T. Beard, David L. Kaserman and John W. Mayo, *A Graphical Exposition of the Economic Theory of Regulation*, 41(4) *Economic Inquiry* (2003).

²¹ For a detailed discussion, see DAVID L. KASERMAN AND JOHN W. MAYO, *GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION* (1995).

²² Stigler, George “The Economic Theory of Regulation,” *Bell Journal of Economics*, Vol. 2, Spring 1971, pp. 3-21.

strengths in determining regulatory outcomes.²³ While providing a general theoretical framework for understanding regulatory outcomes, the approach has created byproducts that unfortunately mask an opportunity as we look to the future of regulation. Recall, for instance, that the framework highlights the general conclusion that regulatory outcomes are the result of a competition among political interest groups. This result, while certainly true and amply demonstrated, served to focus attention on the political determinants of regulation rather than on its efficiency consequences.²⁴ Yet quite apart from the political decision making features of regulation, regulatory outcomes have efficiency consequences and as seen in below, evaluation of these consequences may provide influential input to decisionmakers quite apart from the pure interest group pressures highlighted in the economic theory of regulation.²⁵

Additionally, the healthy general skepticism of the Chicago school approach to regulation made it ripe for a “kidnapping” from those who opposed regulation purely on ideological grounds. The resulting confound of legitimate academic scrutiny of the economic merits of an imperfect regulatory mechanism and arguments by those who philosophically opposed *any*

²³ See, e.g., Noll, Roger G. and Bruce M. Owen *The Political Economy of Deregulation: Interest Groups in the Regulatory Process*, American Enterprise Institute for Public Policy Research, Washington DC, 1983. and David L. Kaserman, John W. Mayo and Patricia Pacey, *The Political Economy of Deregulation: The Case of Interstate Long Distance*, 5 J. of Reg. Econ. 49-64 (1993).

²⁴ Apart from the Economic Theory of Regulation, another path of regulatory economics opened during this period and began to focus on regulation within the context of the principal-agent framework. In this context, the focus has been on the development of “optimal” regulatory regimes. See Mark Armstrong and David E.M. Sappington, *Recent Developments in the Theory of Regulation*, in *HANDBOOK OF INDUSTRIAL ORGANIZATION*, vol. 3, (Mark Armstrong and Robert Porter, eds., 2007). Regardless of the theoretical progress, the practical importance of this literature for regulatory policymaking has been limited. See, e.g., the discussion in Macher, Jeffrey, Mayo, John W. and Jackson Nickerson, *Regulator Heterogeneity and Endogenous Efforts to Close the Information Asymmetry Gap: Evidence from FDA Regulation*, *Journal of Law and Economics*, forthcoming.

²⁵ While the economic theory of regulation has provoked a focus on interest group strengths, the founders of the theory have themselves recognized the potentially important role of differences in observed economic efficiencies as a stimulant to changes in regulatory outcomes. For example, in his reflection on the deregulatory process, Peltzman (1989) has observed that deregulation is more likely to occur if regulation itself has generated inefficiencies, so that shedding the inefficiency thorough deregulation provides a potential source of benefits.” Sam Peltzman, *The Economic Theory of Regulation After a Decade of Deregulation*, *Brookings Papers on Economic Activity*, Microeconomics, 1989.

regulation permitted some to too easily point to the “opposition” to regulation by leading scholars as grounds for deregulation. This unfortunate development too often led to shortcuts in the regulatory and deregulatory decisionmaking process, permitting policymakers to support deregulatory policies simply based on the observed imperfections in regulation and the fact that the process for regulatory decisionmaking is -- in part -- determined by the strengths of political interest groups.

While economists have focused the preponderance of their attention on public interest group explanations of the evolution of deregulation, other more general drivers have also been at work in the deregulation process over the past decades. Indeed, a second underlying driver of the deregulation movement stems not from intellectual skepticism of regulation as a governance mechanism but rather from an ideological critique of regulation as a fundamentally coercive institution that serves as an impediment to “freedom.” This critique and its implications for policy are, of course, not new. As noted by John Stuart Mill in his famous treatise *On Liberty*, “the [debate over the] nature and limits of the power which can be legitimately exercised by society over the individual.... is so far from being new, that, in a certain sense, it has divided mankind, almost from the remotest ages.”²⁶ And while the issue of the degree to which society may properly impose governance over freedoms is “A question seldom stated, and hardly ever discussed, ... [it] profoundly influences the practical controversies of the age by its latent presence,”²⁷ Thus, while not a central part of the explicit oratory regarding the desire to move toward a more market-oriented, less regulatory environment, the subtle sway of the ideological

²⁶ John Stewart Mill, *On Liberty*, in Harvard Classics, vol. 25 (1860), at 1.

²⁷ *Id.* 1.

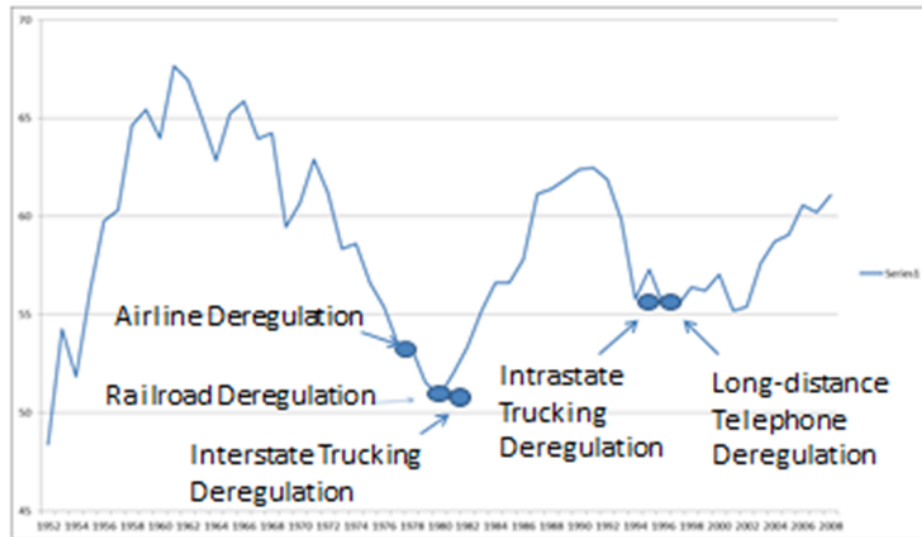
pendulum toward a less governmentally coercive regulation over the past fifty years can be seen, at least with the benefits of hindsight, to have been a powerful driver of the deregulatory process.

To see this, consider the political science research of on swings in public opinion and policy formation. Stimson has created a multi-dimensional index of the “Mood” of the American people toward government.²⁸ Stimson's Mood is an indicator of aggregate U.S. public opinion over time. Specifically, the index is constructed using the results of survey research questions of public opinion over many decades. Over 200 questions gauging the mood of Americans on specific policy areas are administered over numerous time periods to generate the underlying data. Using factor analysis, Stimson has discovered that a prominent underlying dimension to U.S. public opinion exists, which can be described simply as a “more government, less government” dimension. The dimension is scaled between 0 and 100, with higher values indicating a shift in public opinion in favor of greater government involvement in the affairs of private citizens and businesses.

Stimson’s Mood Index of the American people is displayed in Figure 1. Also shown in Figure 1 are major deregulatory events of the past fifty years. As is readily seen, policymakers have typically chosen moments for deregulatory events when the sentiments (Mood) of the American people are more sympathetic to the freedoms of individuals and less sympathetic to an active role for government.

²⁸ JAMES A. STIMSON, PUBLIC OPINION IN AMERICA: MOODS, CYCLES, AND SWINGS (1999); JAMES A. STIMSON, TIDES OF CONSENT: HOW PUBLIC OPINION SHAPES AMERICAN POLITICS (2004).

DRAFT -Figure 1 The Ideological Mood of the American People and the Deregulation Movement



Source: JAMES A. STIMSON, PUBLIC OPINION IN AMERICA: MOODS, CYCLES, AND SWINGS (1999); JAMES A. STIMSON, TIDES OF CONSENT: HOW PUBLIC OPINION SHAPES AMERICAN POLITICS (2004) and author's calculations.

While both the Chicago School critique of regulation and the movements in ideological Mood of the American people have proven to be important drivers of the swings in the deregulation/deregulation process that has unfolded over the past half-century, neither of these provides a reliable foundation for establishing a 21st century regulatory/deregulatory policy framework. Indeed, while each may inform the development of a 21st century regulatory policy framework, uncritical adoption of either creates the profound risk of regulatory policy failures. Consider first the lessons from the Chicago School critique. That critique first observes that

regulation is an imperfect governance institution. Adopted uncritically, this observation has led some to cast dispersions on *any* regulatory governance. The fact is, however, that while regulation is an imperfect governance mechanism, there are levels of market failure that certainly can and do give rise to the merits of regulatory oversight of markets.

Thus, while identifying an important consideration for future regulatory policy development, the Chicago School observation of imperfections in regulation cannot by itself reasonably be thought to provide the foundation for a 21st century regulatory policy. Indeed, to do so would be ironic twist to a standard critique of the public interest theory of regulation. That critique stems from Joskow and Noll who point out that the champions of the public interest theory of regulation often unduly extrapolate what is essentially a normative theory of (optimal) regulation by converting it into a positive theory of regulation.²⁹ Critiques of this “Normative Theory as Positive Analysis” interpretation of the public interest theory have been strident.³⁰ But note that any attempt to employ the essentially positive economic theory of regulation as a normative guide to policy development suffers from the same confounding of normative and positive theories; only in that case the error would be in adopting an essentially positive theory as a guide for normative policymaking.

Next consider the role of role of ideological swings as a guide to regulatory policymaking. While any democracy can point toward the attractiveness of acceding to “the will of the people,” a careful reflection indicates that high-level ideological swings are likely to provide a particularly poor foundation for 21st century regulatory/deregulatory policymaking of

²⁹ Paul L. Joskow and Roger G. Noll, *Regulation in Theory and Practice: An Overview*, in *STUDIES IN PUBLIC REGULATION*, at 1-65 (Gary Fromm, ed., 1981).

³⁰ See Clifford Winston, *Economic Deregulation: Days of Reckoning for Microeconomists*, 31(3) *J. of Econ. Lit.* 1263-89 (1993).

specific industries. Indeed, the perils of this approach to policy development were anticipated over 150 years ago by John Stuart Mill:

There is, in fact, no recognized principle by which the propriety or impropriety of government interference is customarily tested. People decide according to their personal preferences. Some, whenever they see any good to be done, or evil to be remedied, would willingly instigate the government to undertake the business; while others prefer to bear almost any amount of social evil, rather than add one to the departments of human interests amenable to governmental control. And men range themselves on one or the other side in any particular case, according to this general direction of their sentiments; or according to the degree of interest which they feel in the particular thing which it is proposed that the government should do; or according to the belief they entertain that the government would, or would not, do it in the manner they prefer; but very rarely on account of any opinion to which they consistently adhere, as to what things are fit to be done by a government. And it seems to me that, in consequence of this absence of rule or principle, one side is at present as often wrong as the other; the interference of government is, with about equal frequency, improperly invoked and improperly condemned.

Thus, the ideological swings over the past fifty years initially toward less governmental involvement in business affairs and more recently toward more governmental involvement in governmental affairs (See Figure 1), fail to provide a strong foundation for a 21st century regulatory/deregulatory policy framework.

Beyond the fundamental problem identified by Mill, two additional fundamental shortfalls surface with ideologically-led policymaking. First, such high-level swings in ideology fail to discriminate between industries in which market-based resource allocations are generating economic welfare from those that are harming economic welfare. Second, to the extent that the general movement in some industries such as telecommunications toward less regulation over the past decades can be cast as a product solely of a political agenda driven by the ideology of the right, the reaction from the ideological left may be a simple call for reversing the regulatory

changes, independent of a serious examination of the marketplace consequences of those policy changes.³¹

The Inklings and Promise of Results-Based Regulation

To this point, we have seen that two of the principal precipitating drivers of regulatory and deregulatory policies over the past fifty years fail to provide a sound foundation for 21st century regulatory policymaking. A third, subtle, feature of the evolution of regulatory policies over the past fifty years, however, holds significantly more promise as a basis for 21st century regulatory and deregulatory policymaking. In particular, it was during this period that regulators, perhaps motivated by the growing skepticism of regulatory institutions that arose from the Chicago School, began to employ rigorous empirical, counterfactual analysis that examined the results of natural experiments in the market to guide regulatory and deregulatory policies. I refer to this methodology as “Results-Based Regulation” (RBR).

The origins of RBR may be traced to a 1965 article in the *Yale Law Journal* in which Michael Levine undertook a serious critique of regulation in the U.S. airline industry.³² In the face of decades of stable and seemingly uncontroversial regulation of the airline industry, he audaciously concluded, “The performance of the largest air transportation market in the world provides convincing evidence that fares are much lower and service more responsive to public needs where restrictions on entry are absent and control over fares is rarely exercised.”³³ What was remarkable, however, was not his conclusion that regulations in the airline industry should be eased but rather the manner in which he came to this conclusion. Specifically, his conclusion

³¹ See, for example, Timothy Karr, *Speaker Boehner’s Space Odyssey*, Huffington Post, March 1, 2011, available at http://www.huffingtonpost.com/timothy-karr/net-neutrality-under-new-_b_829612.html

³² Levine, Michael *Is Regulation Necessary? California Air Transportation and National Regulation Policy*, Yale Law Journal, 74, July 1965, pp. 1416-1147.

³³ *Id.*

came not from an ideological consideration of the merits of deregulatory policies, but rather from practical considerations drawn from empirical scrutiny of airline markets that offered a natural experiment in which some routes (viz., interstate airline service) were extensively rate-regulated while the largest single city-pair market in the United States (between Los Angeles and San Francisco), was exempt from federal regulatory controls. His empirical analysis led to the conclusion that regulation had the practical consequence of raising rates and harming economic welfare. For instance, he found that the lowest airfare available on the regulated Washington-Boston route was over 215 percent higher than the prices paid by consumers flying in on the deregulated Los Angeles to San Francisco route.³⁴ Subsequent to Levine's analysis, a number of students of the industry began to see the policy move to relax price controls in the industry as meritorious, the ultimate result of which was the federal deregulation of airfares in 1978.³⁵

Another example of the emergence of RBR arose between the mid-1980s and the mid-1990s. Specifically, in 1984 AT&T was divested as a result of an antitrust decree known as the Modification of Final Judgment.³⁶ That divestiture separated the control of long-distance telecommunications, which remained under the control of AT&T, from local exchange telephone service, that was spun off to the Regional Bell Operating companies. With that divestiture, AT&T lost any control over the local exchange facilities that were the course of its pre-divestiture monopoly power.³⁷ Simply by the fact of regulatory inertia, however, AT&T

³⁴ *Id.*

³⁵ For more detailed discussions, see Stephen Breyer, *Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reform*, 92(3) Harvard L. R., January 547-609 (1979) and Paul L. Joskow, *Regulation and Deregulation after 25 years: Lessons Learned for Research in Industrial Organization*, 26(2) Review of Industrial Org. 169-193 (2005).

³⁶ *Id.*

³⁷ *United States v. ATT*, 48 PUR 4th 227, FR. Supp. At 172 (D.D.C. 1982)

remained regulated as a full public utility under rate-of-return regulation at both the state and federal levels. In the years following the divestiture, and with the emergence of numerous competitors in for long-distance services, individual states, beginning with Virginia, began to deregulate the pricing of long distance services. Full regulation of AT&T remained in place at the federal level. The emergence of different regulatory structures at the state level provided a natural opportunity for RBR analysis.³⁸

Mathios and Rogers offered the first study to analyze the effects of cross-state differences in long-distance governance mechanisms.³⁹ Drawing on data from across the states, Mathios and Rogers created an econometric model of the prices of intrastate long distances services. In the model, they included a variety of demand-side and supply-side determinants of prices along with variables representing the presence of relaxed intrastate regulation of pricing. They found that after accounting for other determinants of intra-state long-distance prices, states that granted AT&T pricing flexibility enjoyed significantly lower prices than those states that retained full regulatory controls over pricing. The empirical results found that “the price of a five minute call, on average is 7.2 percent lower in states that allow pricing flexibility.”⁴⁰ Other studies soon followed, with the consistent empirical finding that deregulation of the long-distance industry led

³⁸ The opportunities for insights based on variations in the effects of state policies dates back at least to 1936, when Justice Brandeis noted that “There must be power in the states ...to remould, through experimentation, our economic practices and institutions to meet the changing social and economic needs....It is one of the happy incidents of the federal system that a single courageous state, may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.” *New Ice Co. v. Liebman*, 285 U.S. 262,311 (1936).

³⁹ Mathios, Alan D. and Robert P. Rogers. *The Impact of Alternative forms of state regulation of AT&T on Direct-dial Long-Distance Telephone Rates*, RAND Journal of Economics, Vol. 20(3), Autumn 1989, pp. 437-453.

⁴⁰ *Id.*

to lower prices.⁴¹ These empirical results, together with the general positive results of economic metrics in the long-distance sector ultimately provided comfort for the FCC in its decision to deregulate pricing in the interstate long-distance market.⁴²

Another dimension of RBR to have emerged over the past half-century has been the rigorous use of “before-and-after” methods for assessing the merits of changes in regulatory policies. Prominent among these was the examination of the economic impacts of the deregulation of the interstate and intrastate trucking industries. For instance, Blair, Kaserman and McClave examined the effects of the sudden deregulation of intrastate trucking in the state of Florida on July 1, 1980.⁴³ While theoretical considerations suggested that comprehensive regulation of pricing, entry, and terms of service for intrastate trucking was actually elevating rates relative to a deregulated environment, the ultimate effectiveness of either regulation or deregulation in this market was an empirical question. Consequently, they develop a comprehensive model of the pricing per ton mile for intrastate trucking services. The study examined price and other market conditions both before and after deregulation. The empirical results revealed that in the wake of the deregulation of intrastate trucking prices fell. Moreover, by rigorously accounting for changes in market conditions over the period in question, they were able to isolate the effects of the change in market governance from regulation to deregulation.

⁴¹ See, e.g., Robert Kaestner and Brenda Kahn, *The Effects of Regulation and Competition on the Price of AT&T Intrastate Telephone Service*, 2(4) J. of Reg. Econ. 363-37 (1991), and Simran Kahai, David L. Kaserman and John W. Mayo, *Is the ‘Dominant Firm’ Dominant? An Empirical Analysis of AT&T’s Market Power*, 39(2) J. of Law and Econ. 499-517 (1996). For a complete review of these studies, see Kaserman, David L. and John W. Mayo “Competition in the Long Distance Market,” (with David L. Kaserman) in Handbook of Telecommunications Economics, Martin E. Cave, Sumit K. Majumdar and Ingo Vogelsang, Editors, North Holland Elsevier, 2002.

⁴² See Federal Communications Commission Order, In the Matter of Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier (Adopted: October 12, 1995, Released: October 23, 1995).

⁴³ Roger Blair, David L. Kaserman and James T. McClave, *Motor Carrier Deregulation: The Florida Experiment*, 68 Review of Economic and Statistics 162 (1986).

Specifically, they found that “*ceteris paribus*, the deregulation of intrastate trucking in Florida led to a 14.62% average reduction in motor carrier rates.”⁴⁴

Earlier we saw that simple Chicago School critiques of regulation, or ideologically driven appeals to the deregulation process fail to provide sound footing for guiding regulatory policymaking in the 21st century. In this section, I have described the more subtle emergence of RBR methods that rely upon detailed empirical analysis of counterfactual alternative governance mechanisms as guideposts for regulatory and deregulatory policymaking. Such methods have arguably provided the most successful vehicle to date for discriminating when the policy should move more toward regulatory, or more toward the deregulatory, market governance mechanisms. In the next section, then, I describe a principles-based framework of how adopting RBR analysis provides a foundation for smart 21st century regulatory policymaking.

Results-Based Regulation: A New Framework for 21st Century Policymaking

Both economic analysis and the practice of regulatory policy over the past fifty years reveals that there may be industries in which economic welfare may be improved by altering the level of governmental regulation, either toward a market-oriented or a more government-oriented market governance mechanism. The challenge is discerning which industries and sectors are ripe for moves toward less intrusive set of governmental regulations and which industries and sectors may need more regulatory oversight. As noted by President Obama, a policy goal of the present administration is to “root out regulations that conflict, that are not worth the cost, or are just plain

⁴⁴ *Id.*

dumb.” So the question naturally arises, “How can we tell if a set of regulatory constraints is “just plain dumb?”⁴⁵

Unfortunately, the answer to this question has all too often been framed either by simply ideologies -- “all government regulations are ‘dumb’ as they interfere with freedom of commerce” -- or have been left to be determined by the outcome of the strengths of opposing interest groups that economically gain or lose as a consequence of the existing or proposed regulatory regime. As seen in the last section, however, the unheralded emergence of serious, empirical counterfactual analysis of alternative regulatory governance structures has shown itself to provide a promising policy mechanism for discriminating industries in which market-based governance mechanisms or more intense governmental governance mechanisms are better able to promote economic welfare.

These encouraging developments provide a basis for establishing a new – 21st century regulatory decisionmaking framework. Specifically a results-based regulatory framework would embody a set of governing principles drawn from the lessons of economic analysis and the practice of regulation as they have unfolded over the past fifty years. It is to these principles that I now turn.

Principle 1 – *All market governance mechanisms for resource allocation are, in practice, imperfect.*

While seemingly obvious, the implications of adhering to, or ignoring, this principle are potentially profound for the evolution of regulatory policy in the 21st century. All too often, the standard of perfect competition, or a perfectly competitive market structure, is held as a standard

⁴⁵ President Barak H. Obama, *Toward a 21st-Century Regulatory System*, WSJ, January 18, 2011, available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>

against which to judge the merits of regulatory intervention in markets.⁴⁶ Implicitly, if not explicitly, such a comparison pits the merits of an ideal regulatory construct against an imperfect market-based governance mechanism. In that case, the costs imposed by shortcomings of market-based resource allocation are judged against an unobserved and unrealizable ideal regulatory mechanism.⁴⁷ Alternatively, others too often highlight the real world imperfections associated with the practice of regulation against an idealized market allocations that would occur in a perfect market mechanism.⁴⁸ Again, an ideal construct is unrealistically pitted against the reality of an imperfect governance mechanism. The reality is, however, that in practice neither regulation nor markets will realize their ideal. Thus, policymakers in an RBR world must compare realistic alternatives of how more market-oriented governance functions – in practice – with the alternative of how more governmentally directed governance would work – in practice. This comparison of *actual* governance mechanisms, as they occur in reality, is at the core of an RBR paradigm designed to provide a guidepost for improved regulatory and deregulatory decisionmaking.⁴⁹

⁴⁶ For a description of how this approach sprang from the earlier economic models, see Paul L. Joskow, *Regulation and Deregulation after 25 Years: Lessons Learned for Research in Industrial Organization*, 26(2) Review of Industrial Org. 169-193 (2005).

⁴⁷ The propensity for making the assumption of the costless and perfect imposition of governmental policies on firms in many cases springs from the static nature of analysis. This was anticipated by Adam Smith in his precursor to the *Wealth of Nations*, when he identified the perspective of government planners “...[H]e seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board; he does not consider that the pieces upon the chess-board have no other principle of motion besides that which the hand impresses upon them : but that, in the great chess-board of human society, every piece has a principle of motion of its own, altogether different from that which the legislature might choose to impress upon it.” ADAM SMITH, *THEORY OF MORAL SENTIMENTS* (1759).

⁴⁸ See, e.g. Richard W. Rahn, *Costs without Benefits*, Washington Times, June 15, 2010, available at <http://www.washingtontimes.com/news/2010/jun/15/costs-without-benefits/>

⁴⁹ In the context of competition policy, it is commonly recognized that comparisons among practical alternatives rather than ideal models of competition represent that point of departure for policy analysis. See, e.g., the Ex Parte Submission of the United State Department of Justice, Before the Federal Communications Commission, GN Docket No. 09-51, January 4, 2010, noting that “The operative question in competition policy is whether there are

Principle 2 – *Given the imperfections of alternative governance mechanisms, advances in technology and presence of evolving legal institutions, regulators must be vigilant to the possibility of improved regulatory or deregulatory designs.*

This principle cautions against inertia in the regulatory mechanism. Both industries and institutions evolve. The result is that while one market governance mechanism may be superior at one point in time, its ability to promote economic welfare relative to realistic alternatives may fade in other periods. For example, regulation of both electricity and telecommunications during the middle of the 20th century was predicated on the economic notion that the industries were subject to vast economies of scale, effectively creating natural monopolies. Over time, however, technological changes in various parts of these industries significantly have reduced the advantages of scale. For example, electric power can now be efficiently provided at relatively small scale by combined cycle gas turbines. Other small scale technologies such as solar, wind and geothermal technologies have also emerged with the result that that public-utility regulation of generation technologies is likely to be inferior to more market-oriented governance of electricity supply.⁵⁰ Similarly, in the telecommunications industry, technological changes that gave rise, first, to long-distance transmission via microwave and later by fiber optic cable drastically altered the cost structure for long-distance communications; helping facilitate the

policy levers that can be used to produce superior outcomes, not whether the market resembles the textbook model of perfect competition.”

⁵⁰ For an RBR-oriented analysis of the implications of alternative regulatory mechanisms in the electric utility industry, see Wolfram, Catherine, Kira Fabrizio and Nancy Rose, *Do Markets Reduce Costs? Assessing the Impact of Regulatory Restructuring on US Electric Generation Efficiency*, *American Economic Review*, 2007, Vol. 97 (September): 1250-1277.

emergence of scores of new entrants into the market during the 1980s and 1990s.⁵¹ Again, the technological changes acted to alter the appropriate market governance mechanism.

The evolution of legal institutions may also affect the design of market governance mechanisms. As noted by Glaeser and Shleifer, the rise of regulation in the United States occurred at a time when the nation's legal institutions were less than fully developed.⁵² Both the reach and effectiveness of legal institutions in the 19th century and early 20th century were suspect.⁵³ The result was that broader regulatory institutions, rather than private litigation, were meritorious. Society's institutions have evolved, however, and will continue to evolve. Such evolutions should properly provoke reflections by today's regulators regarding the appropriate market governance mechanism. Indeed, absent such reflections and evolution of regulatory mechanisms for an industry, the growth of rules, regulations and laws may create both direct and indirect costs to society that are substantial. Direct costs may arise from firms' attempts to comply with overlapping, redundant and conflict regulations. These costs have aptly been the target of President Obama's ire.⁵⁴ More subtly, inert regulation is likely to create indirect costs that arise by distortions to price, output, investment and innovation relative to those that would occur in the event that market governance mechanism were designed to comport with the evolution of institutions.

⁵¹ KASERMAN, DAVID L. AND JOHN W. MAYO. "GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION." DRYDEN PRESS, HARCOURT BRACE COLLEGE PUBLISHERS, 1995, p. 604

⁵² See Edward L. Glaeser and Andrei Shleifer, *The Rise of the Regulatory State*, 41(2) J. of Econ. Lit. 401-425 (2003), *supra*, note 8.

⁵³ *Id.*

⁵⁴ President Barak H. Obama, *Toward a 21st-Century Regulatory System*, WSJ, January 18, 2011, available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>

Perhaps most prominent among the institutional changes of the 20th century, have been the growth and maturation of the economy-wide consumer and competition protections now afforded by the Federal Trade Commission and the Antitrust Division of the Department of Justice. The statutes enabling these agencies provide them with wide-ranging charges to halt “unfair methods of competition,” to block “contracts, combinations or conspiracies in restraint of trade” and to halt “monopolization and attempts to monopolize” in the conduct of interstate commerce⁵⁵ Similar intrastate consumer and competition protections agencies have arisen over the 20th century. While debates can, and do, exist about the relative consumer protections afforded from these agencies relative to sector-specific regulation, there can be little doubt that intelligent design of sector-specific regulation should account for the ability of these complementary, and, arguably, substitutable institutions to promote economic welfare.⁵⁶

Principle 3 – *Wherever possible, regulators should engage in empirical counterfactual scrutiny of alternative market governance mechanisms.*

Psychological research has identified the ability to engage in counterfactual thought as a sufficiently high-ordered function that it is not possible in lower-ordered animals. That is, lower-ordered animals simply have no capacity to imagine or envision an alternative state of the world. The consequence is that lower ordered animals optimize within a particular environment over which they feel they have no control. Humans, however, have the ability to envision alternative environments. In the case of the establishment and evolution of regulatory and deregulatory policies, not only can regulators, and policymakers more generally, engage in higher-ordered

⁵⁵ FTC Act § 5, Sherman Act §1, 2.

⁵⁶ See, e.g., Howard Shelanski, *Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy*, 24 Yale J. of Reg. 55-106 (2007).

counterfactual thinking, but such counterfactual thinking provides the potential for improved 21st century policymaking.

Empirical scrutiny of alternative market governance mechanisms creates the prospect of observing – in practice – how these market governance mechanisms work or fail to work. Opportunities for these empirical exercises may be created by the presence of different market governance mechanisms in different governmental jurisdictions. Differences may exist across municipalities or states. Similarly, differences may exist between states’ regulatory structures and federal market governance. Differences in governance mechanisms may also exist across countries. And, the ability to rigorously examine the economic consequences of changes in policy measures over time also provides an opportunity to improve policymaking on a forward-going basis.

While Principle 3 provides a promising tool for 21st century regulatory and deregulatory policymaking, it evokes a critical corollary. Specifically, the empirical review of alternative governance structures must be constructed in the most careful and thorough manner to ensure that comparisons are valid. Indeed, the downsides from glib or inapt comparisons are well-known.⁵⁷

Principle 4 – *In assessing the merits of alternative market governance mechanisms, policymakers should heavily weight granular empirical evidence collected from actual markets.*

⁵⁷ See e.g., Paul L. Joskow, *Regulation and Deregulation after 25 years: Lessons Learned for Research in Industrial Organization*, 26(2) Review of Industrial Org. 169-193 (2005), noting the propensity of World Bank and other international financial organizations to inaptly draw inferences regarding the role of institutions and institutional change in developing and developed countries. Similarly, see Wallsten (2009) who demonstrates that too-simple comparisons of broadband deployment rates across countries creates the profound risk of particularly poor policy extrapolations.

Economic theory can be especially useful in framing the outlines of economic behavior and policymaking, but when imposed at the highest level, the ability of the theory to discriminate between alternative regulatory governance mechanisms becomes attenuated. The result is that reliance on high-level theory alone creates the profound risk that well-intentioned policymakers will draw incorrect inferences regarding superior market governance mechanisms. A case in point is the propensity of by some policymakers to point indiscriminately at measures of industry concentration such as the Herfindahl-Hirschman Index (HHI) and from this high-level observation draw conclusions regarding the need for heightened regulatory policies. While this policymaking proclivity is fraught with a number of economic errors, the one most relevant to RBR is that – under the umbrella of relatively highly concentrated markets, competition may be either intense, distinctly pro-competitive and consumer welfare enhancing or less intense and lead to either coordinated or collusive behaviors that may harm consumer welfare. The point is that absent an empirical analysis of actual behaviors the use of such very high-level tools create the profound risk of infinitely-lived regulatory superstructures for fear that behaviors may not comport with the benchmarks of perfect competition. In sum, a “boots on the ground” effort to scrutinize alternative governance structures will more reliably provide sound guidance to policymakers than higher-level theorizing about the potential consequences of potential policy changes.

Principle 5 – *When considering alternative governance structures for a market, policymakers should focus on tangible, end-state economic metrics*

The best of regulatory and deregulatory policymaking over the past half-century has emanated from policymakers’ emerging proclivities to focus on the practical implications of alternative market governance mechanisms on “retail” economic metrics such as price, output,

investment and innovation.⁵⁸ This external focus on retail economic metrics is in contrast to the historical appeals by regulators to the vaguely, if ever, defined “public interest” standard which creates very difficult “in the eye of the beholder” possibilities that have no tangible link to governance mechanisms that promote economic welfare.⁵⁹ The focus on retail economic metrics also deviates from the historical tendency of regulators to seek to advance regulation by largely focusing on improving internal, incremental regulatory processes.⁶⁰ Thus, according to this principle, 21st century policymakers should focus more intently on comparisons of retail economic metrics than either elusive “public interest” standards or internal regulatory process improvements.⁶¹

While focus on retail economic metrics provides a foundation for improved 21st century policymaking, this focus necessitates considerable care if it is to serve as a foundation for policymaking inferences. For instance, consider the economic focus on price. Lower prices typically improve economic welfare. When making price comparisons, though, inappropriate comparisons may readily arise. For example, consider the task of making price comparisons from the vantage of a regulator in a traditionally regulated market. The regulation of rail rates in the United States prior to the passage of the Staggers Act (which largely deregulated the pricing

⁵⁸ Recall that, consistent with Principle 1 comparisons among retail economic metrics is not between a theoretical ideal and what is observed in practice, but rather between alternatives that are both observed.

⁵⁹ In some cases, the focus by regulators on “the public interest” is dictated by legislation. Under such umbrella language, however, regulators have the liberty to gather practical empirical evidence of the effects of alternative governance mechanism as focal indicia of the public interest rather than more speculative theorizing that has introduces the considerable risk of inapt policymaking.

⁶⁰ Historically, major regulatory effort has been dedicated to the development of largely internal regulatory processes such as better development of accounting cost systems to determine rates; methods to identify the appropriate cost of capital for determining a “fair” rate-or-return for the firm; or attempting to develop sophisticated cost models for identifying firms incremental cost.

⁶¹ For a critique of the difficulties of implementing a “public interest” standard, see Stephen Breyer, *Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reform*, 92(3) Harvard L. R. 566-569 (1979).

of rail services) acted to keep rail rates low and stable. Observing these low rates, however, did not provide a plausible basis for inferring that rail regulation advanced economic welfare relative to deregulation. The reason, in part, was that by squeezing rates down, the profitability of investments by rate-regulated railroads was substantially diminished. The resulting failure of railroads to invest led to a dramatic decline in the quality of the rail infrastructure. The declines were so pronounced that a regulatory category of derailments was created for “standing derailments” in which a rail car – not in motion – simply fell over due to the poor quality of the track and/or the car.⁶² In that instance, the removal of rate regulation created the incentive to invest in new rail infrastructure. In years following the deregulation of rail rates investment in rail infrastructure increased dramatically.⁶³ It also created dramatic incentives for cost reductions that led to rates that were lower than the pre-deregulated rates.⁶⁴ Thus, while Principle 5 calls on a focus on retail economic metrics, that focus must cautiously consider the potential for interrelationships among these metrics under alternative market governance mechanisms.

The potential for abusive use of Principle 5 can also be seen in the history of telephone regulation. For most of the 20th century, regulators priced local exchange telephone service “residually.”⁶⁵ That is, 20th century regulators used the Separations and Settlement system to establish prices for long-distance and access services to generate sufficient firm profits for AT&T that only residual revenues were required to be generated from local exchange telephone

⁶² JOSEPH R. DAUGHEN AND PETER BINZEN, *THE WRECK OF THE PENN CENTRAL* (1971).

⁶³ See Association of American Railroads, *A Short History of U.S. Freight Railroads*, May 2010, at 4.

⁶⁴ See, e.g., Mark L. Burton, *Railroad Deregulation, Carrier Behavior, and Shipper Response: A Disaggregated Analysis*, 5(4) *J. of Reg. Econ.* 417-434 (1993).

⁶⁵ See David L. Kaserman, John W. Mayo and J.E. Flynn, *Cross Subsidization in Telecommunications: Beyond the Universal Service Fairy Tale*, 2 *J. of Reg. Econ.*, 231-250 (1990).

service. The result was the perpetuation of extremely low local exchange telephone rates. These low rates, however, were not proof of the success of the regulatory mechanism. Indeed, many have pointed to these artificially low rates as evidence of regulatory failures.⁶⁶ The point here is not to re-open that debate, but rather simply to point out that while the regulatory focus on retail economic metrics can be a useful principle for 21st century policymaking, it should be exercised cautiously.

Finally, note that the call to focus on retail economic metrics will beg the question of *which* metrics are worthy of focus. While price, output and innovation are sufficiently central to the foundation of economic welfare to evoke little discussion, other economic metrics are likely to prove more debatable. The principle enunciated here purposefully does not answer this question. Indeed, the metrics that will be worthy of focus should be resolved through public debate and are not necessarily static. For example, retail economic metrics that are seen in one light in one period may take on new and heightened importance in other times.

Consider, for instance, the role of investment by regulated firms. For the majority of the conduct of 20th century regulation, investment by regulated firms garnered relatively little attention as most regulation was aimed at controlling regulated firms prices and profits. Indeed, in this environment, to the extent that regulators did focus on investment, their principal concern was that regulated firms were likely to over-invest.⁶⁷ Today, however, many of the industries that

⁶⁶ For critiques of this practice, see Kahn, Alfred E. *The Road to More Intelligent Telephone Pricing*, Yale Journal on Regulation Vol. 1 (1984): 139-157, and Kaserman, David L. and John W. Mayo *Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing*, Yale Journal on Regulation, Vol. 11(1), January 1994, pp. 119-148.

⁶⁷ This concern followed the publication of Averch and Johnson (1962) who demonstrated that under rate-of-return regulation incentives were created for firms to over-intensively invest in capital. Blank and Mayo (2009) demonstrate that this propensity for over-investment continues, albeit in attenuated form, for hybrid regulatory mechanisms adopted in the latter part of the 20th century. Apart from theoretical concerns, 20th century regulators

were intensively regulated in the 20th century face unparalleled investment challenges. For example, it has been estimated that to accommodate the exploding demand for broadband telecommunications services, roughly \$300 billion in new investment will need to occur over the next two decades.⁶⁸ In this context, the impact of alternative market governance mechanisms on the rate of private sector investment is likely to be of central consideration among the retail metrics consider by 21st century RBR regulators.⁶⁹

While investment has risen in importance as a retail economic metric worthy of focus, regulatory practice with a profit metric and profit regulation has withered in the past fifty years. This move away from profit as a worthy economic metric springs from both economic research and regulatory practice. Economic criticism of profit as a metric for regulation has been widespread, ranging from charges that meaningful measures of economic profits are virtually impossible to come by, to charges that profit regulation induces allocative inefficiencies, to charges that profit regulation attenuates incentives for cost reductions.⁷⁰ These charges, together with generally poor economic performance of rate-of-return regulation led regulators in the past twenty years to increasingly abandon profit regulation.

also addressed concerns of investment that they saw as excessive and, therefore, uneconomic. See Thomas P. Lyon and John W. Mayo, *Regulatory Opportunism and Investment Behavior: Evidence from the U.S. Electric Utility Industry*, 36 RAND J. of Econ 628-644 (2005).

⁶⁸David McClure, *The Exabyte Internet*, U.S. Internet Industry Association, 1 May 2007, available at <http://www.usiia.org/pubs/The%20Exabyte%20Internet.pdf>

⁶⁹ For an example of the recent focus on the impacts of alternative market governance mechanisms on investment, see Alberto Allesina, Silvia Ardagna, Giuseppe Nicoletti and Fabio Schiantarelli, *Regulation and Investment*, 3(4) J. of Euro. Econ. Assoc. 791-825(2005). For a description of the investment challenges facing the electric utility industry, see William W. Hogan, *Electricity Market Structure and Infrastructure*, Conference on Acting in Time on Energy Policy, Harvard University, September 18-19, 2008.

⁷⁰ For more detailed discussions, see DAVID L KASERMAN AND JOHN W MAYO, GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION (1995) and Mark Armstrong and David E M Sappington, *Recent developments in the Theory of Regulation*, in HANDBOOK OF INDUSTRIAL ORGANIZATION, vol. 3 (Mark Armstrong and Robert Porter eds., 2007).

Results-Based Regulatory Policy: The Case of Telecommunications

Both the core principles of an RBR approach to market governance and the early successes with the approach are suggestive of a fresh and effective basis for 21st century regulatory and deregulatory policy formation. An attraction of the approach is that it is neither formulaic nor ideologically driven. Rather it is fashioned to provide both structure, through the application of the RBR principles, and flexibility, as RBR policies will inevitably differ as a consequence of policymakers' scrutiny of the varying marketplace results that are the target of RBR.

While an RBR framework for regulatory governance is likely to be applicable in a number of sectors, arguably nowhere are the opportunities for economic welfare gains from RBR greater than in the telecommunications industry. The industry is both large and dynamic with a wide consensus that with an appropriate set of policy instruments in place the industry has the potential to add immeasurably to both consumer welfare and America's economic competitiveness.⁷¹ For an industry as large and complex as telecommunications, a complete RBR assessment of policymaking in this sector is beyond the scope of this paper. Nonetheless, in the spirit of a "proof of concept," two cases drawn from the telecommunications industry provide useful insights into the establishment of market governance policies from an RBR perspective.

Consider first the governance of the wireless telecommunication marketplace.

Regulators initially envisioned that wireless services would be provisioned as a monopoly by

⁷¹ See FCC, *National Broadband Plan: Connecting America* (2010), available at <http://www.broadband.gov/plan/>. See also, John F. Kerry, *The Future of Telecom is Now*, Politico, February 10, 2011, available at <http://www.politico.com/news/stories/0211/49177.html>

incumbent telephone companies.⁷² In the early 1980s, however, the formal introduction of cellular service was structured as a duopoly with one provider being the local exchange company while the other was an unaffiliated provider.⁷³ Two contenders for the governance of this market emerged. One was to simply recognize the concentrated nature of the industry and engage in regulatory policies designed to constrain perceived market power through regulation of prices. The alternative, which was ultimately chosen, was to fashion policy to alleviate governmentally-induced constraints stemming from wireless firm's inability to secure sufficient spectrum for entry and investment in this market.

The FCC's decision was informed by an RBR approach. In particular, in this environment some states (e.g., California and New York) chose to regulate cellular prices while others did not. This policy variation gave rise to the opportunity to engage in a serious, granular empirical inquiry into the effects of state-level regulation of wireless prices. After controlling for a variety of marketplace determinants of cellular prices, it was found that state-level regulation of cellular service led to increases in prices of between 5 and 15 percent.⁷⁴ At the same time, it was pointed out that England had recently expanded its wireless configuration to include digital personal Communications services (PCS) with the effect that prices there had

⁷² See In the Matter of Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Federal Communications Commission 10 FCC Rcd 8844; 1995 FCC LEXIS 5613; 78 Rad. Reg. 2d (P & F) 1322 RELEASE-NUMBER: FCC 95-317, footnote 18. August 18, 1995 Released; Adopted July 28, 1995 ACTION: [**1] FIRST REPORT

⁷³ *Id.*

⁷⁴ See Affidavit of Jerry Hausman before the Federal Communications Commission, Docket 94-105, available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=1354110003>

fallen.⁷⁵ In the end, the FCC denied petitions by the states to retain their authority to regulate wireless prices.

In the years since the price deregulation of the industry, the wireless industry has been in a constant state of flux. Organic growth, mergers and technological changes have profoundly altered marketplace conditions. Today, policy oversight of the wireless industry continues. To be sure, the wireless industry is not atomistically structured and merger among wireless providers has the effect of adding to market concentration. This has created calls for heavier regulation of the industry to reign in perceived market power in the wireless industry that is thought to emanate from that market structure.⁷⁶ Others are quick to reply that the market is that they see the market as robustly competitive and unworthy of regulation.⁷⁷

The RBR principles, informed by an examination of the retail economic metrics of this industry are likely to be a useful guide to policymakers today as they sort through the conflicting claims of whether to move the wireless industry toward a more regulatory governance or to maintain the lighter touch approach that has been the trademark of policy since the mid-1990s. First, Principle 1 reminds us that in practice, no governance mechanisms are perfect. This cautions against regulators pursuing market structure standards that mirrors textbook models of perfect competition in the wireless industry.⁷⁸ Rather the RBR-based question is whether – after

⁷⁵ See Opposition of the Cellular Telecommunication Industry Association, Before the Federal Communications Commission, No. 94-SP3, Received September 19, 1994, *available at* <http://fjallfoss.fcc.gov/ecfs/document/view?id=1354110001>

⁷⁶ See, e.g. Comments of Consumer Federation of America, Consumers Union, Free Press, Media Access Project, New America Foundation, Federal Communications Commission, WT Docket No. 09-66, June 15, 2009.

⁷⁷ Mayo, John W. “It’s No Time to Regulate Wireless Telephony,” *The Economists’ Voice*, Vol. 5 : Iss. 1, pp, 1-4, 2008.

⁷⁸ In its comments on the development of the National Broadband Plan, the Department of Justice offers the similar position that ‘The operative question in competition policy is whether there are policy levers that can be used to

recognizing and accounting for the costs of imposing additional regulation – industry performance will be improved as a consequence of any additional regulation.

In the case of the wireless industry, the most relevant dimension of Principle 2 is that while market concentration and changes in market concentration brought about by mergers can give rise to competitive concerns, the primary industry oversight body, the FCC, can look to the complementary efforts of the antitrust authorities. The DOJ is specifically charged with ensuring compliance with the Sherman Act’s proscription of prevent “contracts combinations or conspiracies in restraint of trade.”⁷⁹ The DOJ also provides active oversight of merger-induced changing market conditions. Principle 2 indicates that in the presence of active antitrust enforcement agencies the merits of sector-specific *ex ante* regulation to control market power is likely to prove inferior to *ex post* controls that govern firms.⁸⁰

Regulatory scrutiny of the wireless industry under Principles 3, 4 and 5 are also likely to provide considerable useful guidance to policymakers as they shape the future of regulatory and deregulatory policymaking in the wireless industry. In the absence of significant cross-state variations in regulatory policies, the most useful approach to examining the industry is likely to be inter-temporal. Specifically, how have retail economic metrics such as pricing, output, innovation and investment evolved over time? In the case at hand, these statistics project a *prima facie* case that the existing, largely deregulatory approach, to policymaking in this industry has been strikingly successful. Prices which in the mid-1990s stood at 55 cents per minute for a

produce superior outcomes, not whether the market resembles the textbook model of perfect competition.” *Ex Parte* Submission of the United States Department of Justice before the Federal Communications Commission, GN Docket No. 09-51, January 4, 2010.

⁷⁹ Sherman Act, Sec. 1 (1890)

⁸⁰ See Shelanski *supra*, note 9.

voice call have now fallen to roughly 5 cents per minute.⁸¹ These lower prices would appear to be creating significant value for American consumers, with the average American spending over 13 hours on his or her cell phone every month.⁸² And the policy environment has led to an explosion of choices of wireless devices. By 2011, American consumers faced over 600 choices of wireless handsets and devices, with new devices arriving on the market regularly.⁸³ Indeed, the value created by wireless services has been so high as to prompt over one-quarter of American households to drop their wireline telephone connections entirely.⁸⁴

Detractor of these inter-temporal observations may logically raise the possibility of a more successful counterfactual scenario that may arise under an alternative set of policies directed at the wireless industry. While such possibilities cannot be ruled out in this thumbnail analysis, what is important is that the policymaking effort under the RBR framework focuses policymakers on relevant results rather than on high-level speculating. In that regard, under an RBR approach the challenges to those who seek to scrap the current, light-handed regulatory framework include a demonstration that an alternative set of policies would demonstrably improve prices, output, innovation and investment in the wireless industry relative to those that result from the current policies.⁸⁵

⁸¹ See CTIA'S WIRELESS INDUSTRY INDICES, Semi-Annual Data Survey Results: A Comprehensive Report From CTIA Analyzing the U.S. Wireless Industry, MID-YEAR 2010 RESULTS *RELEASED NOVEMBER 2010*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Blumberg Stephen J. and Julian V. Luke, Division Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January - June 2010, National Health Interview Statistics, National Center for Health Statistics. Available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201012.htm>*

⁸⁵ Comparisons of the wireless industry structure with textbook models of perfect competition will inevitably prompt some to advocate a more regulatory approach in this sector. But as Principle 4 cautions, where granular empirical evidence regarding performance is available, this information is preferable to depictions of high-level economic theory standing alone.

A second arena within the telecommunication industry that offers an opportunity to consider an RBR approach centers on the provision of high-capacity dedicated access services that are provided by local telephone companies to either large businesses or to wireless communications carriers for “backhaul” of their wireless traffic to landline networks.⁸⁶ Competitive entry by firms offering these dedicated access service has been permitted since the 1980s.⁸⁷ While competition was permitted, the fear of monopolistic pricing or behavior was sufficiently high during the 1980s and 1990s that the FCC maintained stringent regulatory controls over the so-called special access services provided by the incumbent local exchange telephone companies (ILECs) during this period.⁸⁸

Given the cost of deploying access facilities and the concentration of demand for high capacity special access services in large cities, new entrants initially focused their efforts in dense urban areas rather than making investments in less densely populated areas. Given this observed variation in the geographic presence of competitors, the FCC moved in 1999 to establish a tailored, tiered approach to market governance for the provision of special access services. Under the approach, local telephone companies are granted pricing flexibility within particular metropolitan areas upon a specific showing that competitors have made substantial

⁸⁶ For large firms that require dedicated access, access is provided as “transport” services while for wireless carriers that purchase special access the more typical arrangement is for dedicated facilities extend from the wireless carrier’s facilities to terminate at the landline facilities of the local telephone company. This later “backhaul” service is referred to as “channel termination”.

⁸⁷ See *Cox Cable Communications, Inc.*, Memorandum Opinion, 102 FCC2d 110, ¶ 40 (1985), *vacated as moot*, 61 Rad. Reg. 967 (1986).

⁸⁸ The highest end dedicated access facilities of the ILECs, provided by fiber optic technologies are not regulated granted full pricing flexibility in 19XX. This left access facilities provided over DS1 (also called T-1) and DS3 b (also called T-3) facilities as the special access services that were, and are, the subject of regulatory scrutiny. DS-1 and DS-3 carry 1.544 and 45 megabits per second, respectively.

investments in the specific geographic area.⁸⁹ The logic for this regulatory structure was that once competitors had made sunk investments in a particular geographic market, firms would compete aggressively for the patronage of dedicated access customers. In that case, the governance of pricing in that geographic area could more efficiently be provided by a more market-oriented governance mechanism.

The specific mechanism consists of three tiers. In the absence of competitive indicators, a price cap mechanism is retained. “Phase I” relief from the default regulatory regime (viz., price caps) is granted upon a showing that competitors to incumbent local exchange carriers have made irreversible, sunk investments in the facilities needed to provide dedicated access.⁹⁰ Under the FCC’s regulatory structure, the showing that this threshold has been met requires that certain “triggers” be met that demonstrate in concrete terms the presence of competitors’ irreversible, sunk cost investments.⁹¹ Under Phase I relief, ILECs are permitted to offer volume and term discounts, while requiring them to maintain their generally available price cap constrained tariffed rates, thereby protecting those customers that lack competitive alternatives.⁹²

To obtain “Phase II” relief, ILECs must show that competitors have established a sufficient market presence such that the incumbent telephone company is precluded from

⁸⁹ For a specific, detailed description of the regulatory framework, see U.S. General Accountability (2006).

⁹⁰ See Federal Communications Commission (1999) access charge Order, at 14.

⁹¹ Specifically, the FCC requires that competitors who are unaffiliated with the incumbent LEC have established operational collocation arrangements in a certain percentage of the incumbent LEC's wire centers in an MSA, or have established operational collocation arrangements in wire centers accounting for a certain percentage of the incumbent LEC's revenues from the services in question. See *In the Matter of Access Charge Reform*, CC Docket No. 96-262, *Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1, *Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers*, CCB/CPD File No. 98-63, *Petition of U S West Communications, Inc. for Forbearance from Regulation as a Dominant)* CC Docket No. 98-157 *Carrier in the Phoenix, Arizona MSA*), Before the Federal Communications Commission, Washington, D.C, p. 41 (hereafter, *Special Access Price Flexibility Order*)

⁹² *Id.* 37.

exploiting any individual market power over a sustained period.⁹³ The “triggers” for Phase II regulatory relief are more stringent than for Phase I relief, requiring a greater showing of competitive presence in specific metropolitan areas. Under Phase II relief, ILECs are granted full pricing flexibility.

In recent years, this regulatory structure has come under attack and calls for the reimposition of pricing and profit controls for these services have arisen.⁹⁴ Some have gone so far as to assert that “special access market is an Economics 101 textbook example of a market failure.”⁹⁵ Others contend that the regulatory structure is flexible enough to permit incumbent telephone companies with an ability to respond to competition as it demonstrably arises and, as more competition emerges, more pricing flexibility is appropriately granted.⁹⁶ As regulators ponder the future of the governance of this market a number of lessons emerge from the RBR framework.

Consistent with Principle 1, the FCC approach to establishing the current regulatory regime explicitly recognized that its use of triggers was adopted, in part, in recognition that alternative market governance mechanisms would impose greater administrative regulatory burdens with little or no assurance of superior outcomes.⁹⁷ As when this market governance methodology was adopted, today Principle 1 requires regulators continue to recognize that

⁹³ *Id.* 15.

⁹⁴ See Stephen E Siwek, *Economic Benefits of Special Access Price Reductions*, Economists Inc. (2011)

⁹⁵ Sprint submission to FCC available at

<http://www.justice.gov/atr/public/workshops/telecom2007/submissions/227819.htm>

⁹⁶ This approach to easing regulatory controls in response to emergent competition was outlined by the FCC in 1999, stating that it envisioned an approach that “would enable it to give carriers progressively greater flexibility to set rates as competition develops, until competition gradually replaces regulation as the primary means of setting prices”. See *supra*, Note 86, Special Access Price Flexibility Order, p. 4.

⁹⁷ *Id.* 50-51.

criticisms of the triggers-based regulatory approach cannot, in and of themselves justify scrapping this approach. Proposals to scrap the current approach in favor of either price or profit regulation cannot be made under idealized notions of how these alternatives might work in an idealized setting, but rather can only be evaluated in light of the imperfections and costs each of these alternatives in practice. That is, the question is not whether the current regulatory regime is perfect, but rather whether the proposed alternative create the assurance that economic metrics of interest can be improved sufficiently to warrant the change in regulatory regimes.

On this matter, a careful historical assessment of the performance of these alternatives suggests skepticism. Profit regulation is notoriously difficult and costly in practice and has shown itself to create a number of economic distortions.⁹⁸ Indeed, it was widespread criticism of the performance of profit regulation in the 20th century that stimulated calls for price regulation.⁹⁹ And calls for price regulation raise at least two concerns. First, price regulation of markets in which firms compete creates the profound risk of distortions to the incentives for much needed investment.¹⁰⁰ And second, the determination of the appropriate price, often yoked to the economic concept of marginal cost, has proven to be an especially elusive and costly exercise in practice.¹⁰¹

⁹⁸ See e.g., Stephen Breyer, *Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reform*, 92(3) Harvard L. R. 562-565 (1979).

⁹⁹ See Mark Armstrong and David E.M. Sappington, *Recent Developments in the Theory of Regulation*, in HANDBOOK OF INDUSTRIAL ORGANIZATION, vol. 3, (Mark Armstrong and Robert Porter, eds., 2007).

¹⁰⁰ This disincentive to invest can arise simply because the regulated price is too low, or, in the event that the price regulated service is made available at wholesale to competitors those competitors simply purchase from the regulated firm rather than making their own investments.

¹⁰¹ See Crandall, Robert W. and Jerry A. Hausman. "Competition in U.S. Telecommunications Services: Effects of the 1996 Legislation," in *Deregulation of Network Industries: What's Next?* In Peltzman, Sam and Winston, Clifford, Eds., AEI-Brookings Joint Center for Regulatory Studies, 2000.

Principle 2 is especially relevant to the governance of the provision of special access services. That principle highlights the important pro-competitive reinforcement and backstops afforded by the antitrust authorities in markets such as telecommunications where mergers have altered the structural landscape of the market. In the case at hand, in the face recent telecommunications mergers, the DOJ drew upon the standard competitive assessment tools from the antitrust arena to evaluate whether the mergers would give rise to competitive concerns. To ensure that the mergers did not have the effect of substantially harming competition in the provision of special access services, the DOJ required certain divestitures of dedicated facilities owned by the merging parties.¹⁰² Similarly, any attempts by ILECs that provide dedicated access to employ any extant market power to enhance or maintain that market power through anticompetitive contractual restrictions on customers will fall directly within the reach of the antitrust enforcement officials that are charged with preventing attempts to monopolize. The competitive protections afforded by the antitrust enforcement agencies can, then, give comfort that consumer interests are being served under the existing regulatory regime.

Principle 3 also speaks to the regulation of special access. In the case at hand, the regulatory construct of three separate tiers of regulation might seem to afford the potential for meaningful comparisons across these tiers, with the result that one could compare the effects of each tier on relevant economic metrics. In the case of the provision of special access services, however, this cross-sectional analysis is not possible. In particular, a substantial portion of special access contracts are for large enterprises with presences multiple locations, including both Phase 1 and Phase 2 metropolitan areas. Due to the large, multijurisdictional nature of

¹⁰² See U.S. General Accountability Office, “FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services,” Report to the Chairman, Committee on Government Reform, House of Representatives, November 2006. (hereafter GAO Study)

special access customers, discounts are typically specified as a percentage off tariffed prices and are by contract rather than by regulatory area.¹⁰³ Thus, because price cap regulation dictated lower tariffed prices, the discounted prices in these areas nominally appears to be lower than in phase 2 areas. This confounds any value in a cross-sectional comparison of prices.

While cross-sectional analysis is not useful in this instance, it is possible to utilize a before-and-after approach, guided by Principles 4 and 5, to address the question of the effectiveness of the current special access governance mechanism. In particular, although somewhat speculative at the time of the 1999 decision to adopt the current regulatory regime for special access, the FCC proffered that “regulatory relief will increase the efficiency of the interstate access market and reduce prices to end-user customers.”¹⁰⁴

With the passage of time, it is now possible to assess the consequence of the FCC’s triggers as a market governance mechanism. Because special access services are most typically sold to large firms, it is typical that these customers do not pay the tariffed or so-called “rack” rates but rather negotiate among vendors for discounted payments.¹⁰⁵ The result is that the most meaningfully measured prices are in the form of average revenue per unit. In the case of special access, several studies have examined the evolution of these prices over time. In each case, the result-based conclusion is that consumers have benefited by price reductions since the implementation of the current market governance mechanism.¹⁰⁶ For instance, the General

¹⁰³ See Peter Bluhm and Robert Loube, *Competition Issues in Special Access Markets, Revisited Edition*, National Regulatory Research Institute (2009) at 20, noting that firms selling special access do not typically differential the price by regulatory jurisdiction but rather offer a single set of prices across their respective footprints.

¹⁰⁴ See Special Access Price Flexibility Order, *supra*, note 86 at p. 42.

¹⁰⁵ See Patrick Brogan and Evan Leo, *Hi-Capacity Services: Abundant, Affordable, and Evolving*, US Telecom: The Broadband Association (2009), at 42.

¹⁰⁶ See GAO Study, *supra* note 97. See also Brogan, Patrick and Evan Leo “High-Capacity Services: Abundant, Affordable, and Evolving,” US Telecom: The Broadband Association, July 2009, and Peter Bluhm and Robert

Accountability Office studied the evolution of the pricing of special access services in the wake of the 1999 establishment of the Triggers framework.¹⁰⁷ They conclude that “the decrease [in prices] appears to be consistent with the prospect of competition that FCC predicted.”¹⁰⁸ Such RBR benchmarks should provide useful input to regulators as they consider the merits of alternative market governance of the special access market. Similarly, other economic metrics also provide the opportunity to gauge the merits of the current FCC approach to governing special access. While a number of factors including the rapidly expanding demand for wireless telephony have led to growing demand for special access, it appears that the current regulatory regime has readily facilitated that expansion. Special access circuits have expanded in recent years by annual growth rates of 16 percent.¹⁰⁹ I should emphasize here that the goal here is not to engage in a full-blown RBR analysis, but rather simply to point to the sorts of economic metrics that can be employed by regulators under such an approach.

Conclusions and Caveats

Concurrent with issuing an Executive Order to review and ferret out unnecessary regulations that are acting to hamper economic welfare and growth in the United States, President Obama recently observed that “This is the lesson of our history: Our economy is not a zero-sum game. Regulations do have costs; often, as a country, we have to make tough decisions about whether those costs are necessary. But what is clear is that we can strike the right balance.

Loube, *Competition Issues in Special Access Markets, Revisited Edition*, National Regulatory Research Institute (2009).

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* 13.

¹⁰⁹ Peter Bluhm and Robert Loube, *Competition Issues in Special Access Markets, Revisited Edition*, National Regulatory Research Institute (2009), at 8.

We can make our economy stronger and more competitive, while meeting our fundamental responsibilities to one another.”¹¹⁰ The aim of this paper has been to provide a new lens and fresh perspective for regulators as they seek that balance. Importantly, the RBR framework offered here relies neither on simple appeals to ideology to guide the regulatory or deregulatory policy balance; nor on the ability of regulators to simply balance the strengths of opposing interest groups. Rather, the RBR framework points regulators to a set of principles that have proven themselves in practice to be useful in discerning how to move the policy lever in a way that promotes economic welfare.

I wish to emphasize that while the framework of RBR presented here is offered in the spirit of a fresh approach, I do not seek to make claims of excessive originality. The concepts presented here do not arrive entirely *de novo*, but rather draw from and build upon the work of a number of others. As early as 1989, Alfred Kahn spoke of the importance of a “Demonstration Effect” that was at work as the airline industry moved through its deregulatory phase.¹¹¹ More recently, Joskow has identified the growing adoption of natural experiments in industrial

¹¹⁰ President Barak H. Obama, *Toward a 21st-Century Regulatory System*, WSJ, January 18, 2011, available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>. Note that such calls are not new. President Bill Clinton once observed that, “We all want the benefits of regulation... But let's face it, we all know the regulatory system needs repair. Too often the rule writers here in Washington have such detailed lists of dos and don'ts that the dos and don'ts undermine the very objectives they seek to achieve, when clear goals and operation for cooperation would work better.” See President William J. Clinton, *Remarks by the President at Regulatory Reform Event* (1995), available <http://govinfo.library.unt.edu/npr/library/speeches/265e.html>

¹¹¹ See Peltzman, Sam *The Economic Theory of Regulation after a Decade of Deregulation*, Brookings Papers on Economic Activity, Microeconomics, 1989 at 59.

organization research of regulated industries as a vehicle for improved insight into the effects of regulation or deregulation.¹¹²

The emergence of RBR also parallels developments in administrative law. In particular, beginning with president Reagan, but continuing under President Bush and Clinton, and now Obama a series of presidential Executive Orders have been promulgated that required federal agencies to engage in a determination of the likely benefit and costs of rules that they consider promulgating. A dispassionate reading of such a call for assessing the benefits and costs of regulatory measures would appear to be unobjectionable. Nonetheless, a number of critics have asserted that requirements for administrative agencies to engage in a benefit-cost assessment of potential regulatory requirements is meant not to be a tool for advancing sound economic policies, but rather as a tool of those ideologically opposed to regulation. In this instance, the inability to separate the tool from a larger ideological push act to undermine the credibility and effectiveness of what would be, otherwise, a viable regulatory assessment tool. Hahn offers a recent discussion of the available mechanisms to improve the viability of benefit-cost analysis.¹¹³

Perhaps most akin to the framework presented here, Breyer offers an approach that is “built upon a simple axiom for creating and implementing any program: determine one's objectives, examine the alternative methods of obtaining those objectives, and choose the best method for doing so.”¹¹⁴ Indeed, as here, Breyer observes:

¹¹² See Joskow, Paul L. *Regulation and Deregulation after 25 Years: Lessons Learned for Research in Industrial Organization*, Review of Industrial Organization, Vol. 26(2), December 2005, pp. 169-193.

¹¹³ Robert Hahn, *Designing Smarter Regulation with Improved Benefit-Cost Analysis*, 1(1) J. of Benefit-Cost Analysis (2009), available at <http://www.bepress.com/jbca/vol1/iss1/5> . In this vein, see also Cass R. Sunstein, *The Benefit-cost State: The Future of Regulatory Protection*, American Bar Association (2002).

¹¹⁴ See Stephen Breyer, *Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reform*, 92(3) Harvard L. R., January 550 (1979).

Whether reform should take place ... depends on a detailed examination of the actual effect of the regulatory program at issue. A detailed empirically based inquiry is necessary because, regardless of the regulatory program's basic objective (and the possible inability of regulation to achieve that objective), any existing program will in fact serve a host of subsidiary objectives.¹¹⁵

Thus, his approach, as mine, is less driven by philosophical arguments about the merits of free markets or government regulation, but rather is rooted in an assessment of practical alternatives and their outcomes.

I necessarily close with an uncomfortable, but logical, observation. Principle 1 of the RBR framework for 21st century regulatory and deregulatory policy observes that in practice all market governance mechanisms are imperfect. This principle can be no less true for a RBR approach to market governance than the prominent twentieth century mechanisms of rate-of-return regulation, price controls or hybrids thereof. Moreover, as Smith warned over 250 years ago, it is difficult to fully anticipate the dynamic reactions of firms or regulators in the wake of adhering to the RBR principles that I have enunciated.¹¹⁶ That caveat notwithstanding, empirical, granular focus on the actual outcomes of economic metrics within an RBR framework create the opportunity for discriminating industries in which deregulatory policies have been successful from where they may have failed. In so doing, the realistic prospect arises for RBR as a foundation not of perfect market governance for the 21st century but better regulatory and deregulatory policymaking.

¹¹⁵ *Id.* 604.

¹¹⁶ SMITH, ADAM. THE THEORY OF MORAL SENTIMENTS. ORIGINALLY PUBLISHED 1759, KESSINGER PUBLISHING, LLC, 2004.

REFERENCES

- Allesina, Alberto, Ardagna, Silvia, Nicoletti, Giuseppe and Fabio Schiantarelli. "Regulation and Investment," *Journal of the European Economic Association*, Vol. 3(4), 2005, pp. 791-825.
- Armstrong, Mark and David E. M. Sappington. "Recent Developments in the Theory of Regulation," in *Handbook of Industrial Organization*, Vol. 3, Mark Armstrong and Robert Porter, Eds. North Holland, 2007.
- Averch, Harvey and Leland Johnson. "Behavior of the Firm under Regulatory Constraint," *American Economic Review*, December 1962, pp. 1052-1069.
- Baumol, William J., Koehn, Michael F. and Robert D. Willig. "How Arbitrary is 'Arbitrary?' or Toward the Deserved Demise of Full Cost Allocation," *Public Utilities Fortnightly*, September 1987, Vol. 120, No. 5, pp. 16-22.
- Beard, T. Randolph, Kaserman, David L. and John W. Mayo. "A Graphical Exposition of the Economic Theory of Regulation," *Economic Inquiry*, Oxford University Press, Vol. 41(4), October 2003, pp. 592-606.
- Blair, Roger, Kaserman, David L. and James T. McClave. "Motor Carrier Deregulation: The Florida Experiment," *Review of Economic and Statistics*, Vol. 68, February 1986, pp. 159-164.
- Blank, Larry R. and John W. Mayo. "Endogenous Regulation and the Emergence of Hybrid Regulatory Constraints," *Review of Industrial Organization*, Vol. 35(3), November 2009, pp. 233-255.
- Peter Bluhm, with Dr. Robert Loube "Competitive Issues in Special Access Markets, Revised Edition," National Regulatory Research Institute, January 21, 2009.
- Bonbright, James C., Danielsen, Albert L. and David R. Kamerschen. *Principles of Public Utility Rates*, Public Utility Reports, 1998.
- Borenstein, Severin and Nancy L. Rose "How Airline Markets Work...Or Do They? Regulatory Reform in the Airline Industry, in _____ University of Chicago Press, forthcoming.
- Breyer, Stephen. "Analyzing Regulatory failure: Mismatches, Less Restrictive Alternatives, and Reform," *Harvard Law Review*, Vol. 92(3), January 1979, pp. 547-609.
- Brock, Gerald W. "Historical Overview," in *Handbook of Telecommunications Economics*, Cave, Martin, Majumdar, Sumit K. and Volegsang, Ingo, Eds. North Holland, 2002.
- Brogan, Patrick and Evan Leo "High-Capacity Services: Abundant, Affordable, and Evolving," *US Telecom: The Broadband Association*, July 2009.
- Burton, Mark L. "Railroad Deregulation, Carrier Behavior, and Shipper Response: A Disaggregated Analysis," *Journal of Regulatory Economics*, December 1993, Vol. 5(4), pp. 417-434.

Crandall, Robert W. and Jerry A. Hausman. "Competition in U.S. Telecommunications Services: Effects of the 1996 Legislation," in *Deregulation of Network Industries: What's Next?* In Peltzman, Sam and Winston, Clifford, Eds., AEI-Brookings Joint Center for Regulatory Studies, 2000.

Daughen, Joseph R. and Peter Binzen, *The Wreck of the Penn Central*, Little Brown, Boston, 1971.

Faulhaber, Gerald. *Telecommunications in Turmoil: Technology and Public Policy*, Ballinger Publishing Company, Cambridge, MA, 1987.

Glaeser, Edward L. and Andrei Shleifer. "The Rise of the Regulatory State," *Journal of Economic Literature*, Vol. 41(2), June 2003, pp. 401–425.

Hahn, Robert. "An Evaluation of Government Efforts to Improve Regulatory Decision Making" *International Review of Environmental and Resource Economics*, Vol. 3, 2009, pp. 245–298.

Hahn, Robert. "Designing Smarter Regulation with Improved Benefit-Cost Analysis," *Journal of Benefit-Cost Analysis*, Vol. 1(1), Article 5. Available at: <http://www.bepress.com/jbca/vol1/iss1/5>

Hogan, William W. "Electricity Market Structure and Infrastructure," Conference on Acting in Time on Energy Policy, Harvard University, September 18-19, 2008.

Joskow, Paul L. "Regulation and Deregulation after 25 Years: Lessons Learned for Research in Industrial Organization," *Review of Industrial Organization*, Vol. 26(2), December 2005, pp. 169-193.

Joskow, Paul L. and Roger G. Noll. "Regulation in Theory and Practice: An Overview," in Fromm, Gary (ed.), *Studies in Public Regulation*, Cambridge, MA, MIT Press, 1981, pp. 1-65.

Kahai, Simran, Kaserman, David L. and John W. Mayo. "Is the 'Dominant Firm' Dominant? An Empirical Analysis of AT&T's Market Power," *Journal of Law and Economics*, Vol. 39(2), 1996, pp. 499-517.

Kahn, Alfred E. "The Road to More Intelligent Telephone Pricing." *Yale Journal on Regulation* Vol. 1 (1984): 139-157.

Kahn, Alfred E. *The Economics of Regulation: Principles and Institutions*. MIT Press, Cambridge, 1990.

Kaestner, Robert and Brenda Kahn. "The Effects of Regulation and Competition on the Price of AT&T Intrastate Telephone Service." *Journal of Regulatory Economics*, Vol. 2(4), 1991, pp. 363-378.

Kanazawa, Mark T. and Roger G. Noll. "The Origins of State Railroad Regulation: The Illinois Constitution of 1870," in *The Regulated Economy: A Historical Approach to Political Economy*, University of Chicago Press, 1994.

Karr, Timothy. "Speaker Boehner's Space Odyssey," Huffington Post, March 1, 2011. Available at: http://www.huffingtonpost.com/timothy-karr/net-neutrality-under-new-_b_829612.html

Kaserman, David L. and John W. Mayo. "Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing," Yale Journal on Regulation, Vol. 11(1), January 1994, pp. 119-148.

Kaserman, David L. and John W. Mayo. "Government and Business: The Economics of Antitrust and Regulation." Dryden Press, Harcourt Brace College Publishers, 1995.

Kaserman, David L., Mayo, John W. and Joseph E. Flynn. "Cross-Subsidization in Telecommunications: Beyond the Universal Service Fairy Tale," Journal of Regulatory Economics, Vol.2(3), September 1990, pp.231-250.

Kaserman, David L., Mayo, John W. and Patricia Pacey. "The Political Economy of Deregulation: The Case of Intrastate Long Distance," Journal of Regulatory Economics, Vol.5, March 1993, pp.49-64.

Kaserman, David L. and John W. Mayo "Competition in the Long Distance Market," (with David L. Kaserman) in Handbook of Telecommunications Economics, Martin E. Cave, Sumit K. Majumdar and Ingo Vogelsang, Editors, North Holland Elsevier, 2002.

Kerry, John. "The Future of Telecom is Now," Politico, February 10, 2011. Available at: <http://www.politico.com/news/stories/0211/49177.html>

Levine, Michael "Is Regulation Necessary? California Air Transportation and National Regulation Policy," Yale Law Journal, 74, July 1965, pp. 1416-1147.

Lyon, Thomas P. and John W. Mayo. "Regulatory Opportunism and Investment Behavior: Evidence from the U.S. Electric Utility Industry," RAND Journal of Economics, Vol. 36, Autumn 2005, pp. 628-644.

Macher, Jeffrey T., Nickerson, Jackson and John W. Mayo. "TITLE," Journal of Law and Economics, forthcoming.

Mathios, Alan D. and Robert P. Rogers. "The Impact of Alternative forms of state regulation of AT&T on Direct-dial Long-Distance Telephone Rates," RAND Journal of Economics, Vol. 20(3), Autumn 1989, pp 437-453.

Mill, John Stuart. "On Liberty." Harvard Classics Vol. 25, Copyright 1909 P.F. Collier & Son, originally published 1860.

Noam, Eli. "Regulation 3.0 for Telecom 3.0," Telecommunications Policy, Vol. 34, 2010, pp. 4-10.

Obama, Barack "Toward a 21st-Century Regulatory System," Wall Street Journal, January 18, 2011. Available at: <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>

Noll, Roger G. and Bruce M. Owen. *The Political Economy of Deregulation: Interest Groups in the Regulatory Process*, American Enterprise Institute for Public Policy research, Washington DC, 1983.

Peltzman, Sam. "The Economic Theory of Regulation After a Decade of Deregulation," *Brookings Papers on Economic Activity, Microeconomics*, 1989, pp. 1-60.

Peltzman, Sam and Clifford Winston. *Deregulation of Network Industries: What's Next?* AEI-Brookings Joint Center for Regulatory Studies, Washington, D.C., 2000.

Peltzman, Sam, Levine, Michael E. and Roger G. Noll. "The Economic Theory of Regulation after a Decade of Deregulation." *Brookings Papers on Economic Activity, Microeconomics*, Vol. 1989 (1989), pp. 1-59.

Pildes, Richard H. and Cass R. Sunstein. "Reinventing the Regulatory State," *University of Chicago Law Review*, Vol. 62, Winter 1995, pp. 1-129.

Priest, George L. "The Origins of Utility Regulation and the 'Theories of Regulation' Debate," *Journal of Law and Economics*, Vol. 36, April 1993, pp. 289-323.

Rahn, Richard W. "Costs without Benefits," *Washington Times*, June 15, 2010. Available at: <http://www.washingtontimes.com/news/2010/jun/15/costs-without-benefits/>

Shelanski, Howard. "Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy." *Yale Journal on Regulation*, Vol. 24, Winter 2007, pp. 55-106.

Short, Jodi. "The Paranoid Style in Regulatory Reform," *Georgetown University Law Center*, working paper, December 2010.

Sunstein, Cass R. *The Benefit-Cost State: The Future of Regulatory Protection*, American Bar Association, 2002.

Smith, Adam. "The Theory of Moral Sentiments." Originally published 1759, Kessinger Publishing, LLC, 2004.

Smith, Adam. "An Inquiry into the Nature and Causes of the Wealth of Nations." Originally published 1776. Simon and Brown, 2011.

Stigler, George "The Economic Theory of Regulation," *Bell Journal of Economics*, Vol. 2, Spring 1971, pp. 3-21.

Stigler, George J. and Claire Friedland. "What Can Regulators Regulate? The Case of Electricity." *Journal of Law and Economics*, Vol. 5, 1962, pp.1-16.

Stimson, James A. "Public Opinion in America: Moods, Cycles, and Swings." 2nd Edition. Boulder: Westview Press. 1999.

Stimson, James A. "Tides of Consent: How Public Opinion Shapes American Politics." Cambridge: Cambridge University Press. 2004.

Siwek, Stephen E. "Economic Benefits of Special Access Price Reductions," Economists Inc., March 2011.

U.S. General Accountability Office, "FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services," Report to the Chairman, Committee on Government Reform, House of Representatives, November 2006.

Wallsten, Scott "Understanding International Broadband Comparisons: 2009 Update," Technology Policy Institute, June 2009.

Winston, Clifford. "Economic Deregulation: Days of Reckoning for Microeconomists." *Journal of Economic Literature*, Vol.31(3), September 1993, pp. 1263–89.