



**The attached material is posted on [regulation2point0.org](http://regulation2point0.org) with permission.**



**J O I N T   C E N T E R**  
AEI-BROOKINGS JOINT CENTER FOR REGULATORY STUDIES

## **Telecommunications Policy Reform in the United States and Canada**

**Robert W. Crandall and Thomas W. Hazlett**

Working Paper 00-9

December 2000

Robert W. Crandall is a senior fellow in Economic Studies at the Brookings Institution. Thomas W. Hazlett is a resident scholar at the American Enterprise Institute for Public Policy Research. The views expressed in this paper reflect those of the author and do not necessarily reflect those of the institutions with which he is affiliated.



## J O I N T C E N T E R

---

In response to growing concerns about understanding the impact of regulation on consumers, business, and government, the American Enterprise Institute and the Brookings Institution have established the AEI-Brookings Joint Center for Regulatory Studies. The primary purpose of the center is to hold lawmakers and regulators more accountable by providing thoughtful, objective analysis of existing regulatory programs and new regulatory proposals. The Joint Center builds on AEI's and Brookings's impressive body of work over the past three decades that has evaluated the economic impact of regulation and offered constructive suggestions for implementing reforms to enhance productivity and consumer welfare. The views in Joint Center publications are those of the authors and do not necessarily reflect the views of the staff, council of academic advisers, or fellows.

ROBERT W. HAHN  
Director

ROBERT E. LITAN  
Co-director

### COUNCIL OF ACADEMIC ADVISERS

---

MAUREEN L. CROPPER  
University of Maryland  
and World Bank

JOHN D. GRAHAM  
Harvard University

PHILIP K. HOWARD  
Covington & Burling

PAUL L. JOSKOW  
Massachusetts Institute  
of Technology

RODNEY W. NICHOLS  
New York Academy  
of Sciences

ROGER G. NOLL  
Stanford University

GILBERT S. OMENN  
University of Michigan

PETER PASSELL  
Milken Institute

RICHARD SCHMALENSEE  
Massachusetts Institute  
of Technology

ROBERT N. STAVINS  
Harvard University

CASS R. SUNSTEIN  
University of Chicago

W. KIP VISCUSI  
Harvard University

© 2000 AEI-Brookings Joint Center for Regulatory Studies. All rights reserved.

All Joint Center publications can be found at [www.aei.brookings.org](http://www.aei.brookings.org)

## **Executive Summary**

The Telecommunications Act of 1996 marked a fundamental departure in U.S. regulation. Monopoly market structures were officially deemed inefficient, and extensive rules were authorized to jump-start competition. Canada opened long-distance markets to entrants in 1992, and did likewise with local telephone access five years later, but employed distinct tools from those utilized by U.S. regulators. In this paper we compare and contrast the two alternative approaches to deregulation. The conventional wisdom is that telephone competition in the U.S. has lagged under the Telecommunications Act. Rates are alleged to have risen for most customers, just the reverse of what was promised by policy makers. We examine broad trends within the sector, and conclude that the Act, while flawed, actually scores well in comparison to previous reform measures. We prefer the approach taken in Canada, however, which is less regulation-intensive in the transition to competition.

# **Telecommunications Policy Reform in the United States and Canada**

**Robert W. Crandall and Thomas W. Hazlett**

## **I. Introduction**

The regulation of telecommunications in the United States and Canada has undergone formidable reform in recent years. Most attention is understandably focused on the United States' Telecommunications Act of 1996 because it marked a fundamental departure from decades of established regulatory policy. The Telecommunications Act was an official declaration by the Congress of the United States that the basic assumptions of the 1934 Communications Act were defunct. Monopoly market structures are no longer presumptively efficient and best accommodated through common carrier rules and rate regulation. Instead, competition is now to be phased in because it is presumed to be the better market alternative for customers and for providing incentives for productivity growth. Barriers to entry in local and long distance telephony, as well as cable television delivery service, are to be eliminated. Moreover, transitional mechanisms are to be used by regulators to squeeze competitors quickly into the marketplace.

By contrast, Canada has introduced competition in its telecommunications sector through administrative decisions of its regulatory authority, the Canadian Radio-Television and Telecommunications Commission (CRTC) under a new Telecommunications Act that allowed such liberalization, but did not require it. The CRTC opened Canadian long-distance markets to competition in 1992, more than two decades after interstate competition began in the United States. Five years later, the CRTC also opened local markets to competition, but – as we shall show – in a less disruptive and contentious environment than that produced in the United States by the 1996 Telecommunications Act.

In this paper we focus most heavily on the impacts of the new Telecommunications Act in the United States, comparing U.S. results with those from Canada wherever possible. The conventional wisdom, expressed regularly in a spate of “anniversary” articles appearing about February 8<sup>th</sup> each year,<sup>1</sup> is that telephone competition in the U.S. has lagged while a string of mega-mergers has combined the largest telecom providers into market-dominating behemoths. Rates are alleged to have risen, not declined, as advertised by policy makers. Leaders of both political parties, in defense, continue to tout the bi-partisan legislation, suggesting that more time is needed to observe the benefits yet to come. Curiously, rising cable TV rates and declining cellular telephone rates are often cited as outcomes of the Act, despite the fact that the 1996 law had little or no impact on the policies that govern these services.

Sorting out the effects of legislation—pulling out the actual effects associated with one law when legal and economic changes are buffeting the sector—is yeoman’s work. In this paper, we attempt a modest first step by examining broad trends within the U.S. telecommunications sector to discern if they are consistent with the announced goals of the legislation. No doubt more intensive and subtle study lie before us in the many years of telecom policy debate ahead.

## **II. Background**

The regulation of telecommunications in the U.S. has always involved a complex struggle among the states, the Federal Communications Commission (FCC), and the courts. Liberalization of long-distance services began when the FCC inadvertently allowed MCI to begin offering switched services in the mid 1970s. Failing to construct a serious argument why such entry should not be allowed, the FCC was essentially defenseless in the federal court system

---

<sup>1</sup> The Telecommunications Act was signed into law by President Bill Clinton on February 8, 1996.

when MCI began offering switched interstate (long-distance) services without an FCC license.<sup>2</sup> The FCC scrambled to devise an access-charge policy, eventually settling on a system that provided entrants with subsidized access rates until an equal-access regime was implemented by local-exchange carriers as the result of the 1984 AT&T divestiture. Eager to protect competitors thereafter, the FCC developed a “dominant-carrier” regulatory regime through which it restrained AT&T’s competitive impulses through 1995.

Until 1996, virtually all liberalization in the United States was undertaken by the FCC or (to a much more limited extent) by state regulatory commissions without federal legislation. Although a variety of court cases had shaped U.S. telecommunications regulation over the previous sixty years, the 1934 Communications Act’s basic framework for the regulation of wireline telecommunications services remained largely unchanged. States had the authority to regulate intrastate wireline services and, therefore, to block entry into the delivery of these services. Most accepted the invitation eagerly until 1996.<sup>3</sup> For example, no state moved before 1996 to require equal carrier access for intrastate long-distance calls. Only six states allowed even a modicum of local-service competition for dispersed small-business and residential customers, although most had allowed competitive urban fiber-optics rings to be built in large cities by Competitive Access Providers (CAPs). This equilibrium might have remained undisturbed, but for the suffocating effects of the AT&T divestiture on the Regional Bell Operating Companies (RBOCs).

In 1984, seven RBOCs were established to take over the local-exchange operations of AT&T. These new companies were expressly prohibited from manufacturing equipment,

---

<sup>2</sup> See *MCI Telecommunications Corp. v FCC*, 561 F.2d 365 (D.C. Cir. 1977), *cert. denied*, 434 U.S. 1040; and *MCI Telecommunications Corp. v FCC*, 580 F.2d 590 (D.C. Cir. 1978), *cert. denied*, 439 U.S. 980 (1978). Liberalization of terminal equipment, although contested by state regulators, proceeded far more rapidly in the late 1970s.

<sup>3</sup> The FCC preempted state rate regulation in 1986, but a federal appeals court narrowed this preemption to wireless interstate services in 1987. (*NARUC v FCC*, No. 86-1205 (D.C. Cir. 1987))

offering “information services,” or offering long-distance services outside their Local Access and Transport Areas (LATAs).<sup>4</sup> These provisions of the AT&T divestiture decree prevented the divested Bell companies from participating in the national long-distance market and greatly frustrated their attempts to develop new services and technologies.<sup>5</sup> After failing to obtain relief from the court enforcing the AT&T decree, the RBOCs turned to a legislative solution. In 1996, they finally obtained such legislation, but the price was quite high: a new asymmetric regulatory regime and the liberalization of entry into local and intrastate markets.

### **III. The U.S. Telecommunications Act of 1996**

At least twenty years in the making, the Telecommunications Act of 1996<sup>6</sup> is the most comprehensive piece of U.S. legislation to be enacted in this sector since the 1934 Communications Act. Its stated purpose is “to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition...”<sup>7</sup> One hundred and twenty-eight pages later (Adobe Acrobat version), the rules are laid out defining how this transition is to proceed.

Despite its “de-regulatory” purpose, the Act mandates an extraordinary number of regulatory proceedings to be conducted by the Federal Communications Commission. Pursuant to the Act, the Commission was to conduct over eighty separate rulemakings or investigations.

---

<sup>4</sup> The 1984 consent decree created 161 Local Access and Transport Areas within which the divested RBOCs could offer long-distance service. However, the RBOCs could not provide service between LATAs, even those in the same state or wholly within the RBOC's region. In effect, this limited the RBOCs to service areas comprising about 20 percent of all long-distance service.

<sup>5</sup> See Jerry Hausman, “Valuing the Effect of Regulation on New Services in Telecommunications,” *Brookings Papers on Economic Activity: Microeconomics*, 1997, pp 1-38.

<sup>6</sup> Pub. L. No. 104-104, 110 Stat. 56.

<sup>7</sup> *Telecommunications Act of 1996 Conference Report*, 104<sup>th</sup> Congress 2<sup>nd</sup> Session, Report 104-458 (Jan. 31, 1996), 1.



By October 1997, the FCC had listed some 184 Reports, Orders, Public Notices, meetings, or hearings associated with FCC responsibilities under the Act.<sup>8</sup>

While the Act addresses a sweeping range of activities, the “big ticket” economic items involve the deregulation of three markets:

- Long distance telephone service
- Local exchange telephone service
- Local cable television service

In each of these areas, the Act is designed to increase competition. In long distance (IXC) service, the basic policy reform is to permit the RBOCs to enter subject to certain conditions. The most important of these conditions are the obligations to obtain (1) state certification from public utility commission (PUC) regulators that the company has opened its market to local competition; (2) FCC and Department of Justice certification that a 14-point checklist of requirements are satisfied, guaranteeing that local markets are open to competitors; and (3) FCC certification that RBOC entry into long-distance would be in the public interest.

The Act places these requirements on the Bell companies in order to accelerate local-market competition; the RBOCs are not allowed to enter lucrative long distance markets until they facilitate entry into their own local markets. But two additional important reforms are applied specifically to local markets. First, the Act requires that “No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.”<sup>9</sup> This eliminates the monopoly franchises for local telephone service issued by most U.S. states. Second, the Act mandates that the incumbent carriers provide “unbundled access” to their networks for any entrant that wishes to use parts of their networks. The incumbent

---

<sup>8</sup> See FCC web page, <http://www.fcc.gov/Reports/telecom-rpt.html>.

carriers have “[t]he duty to provide, to any requesting telecommunications carrier for the provision of telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory....” In addition to the unbundling obligation, the Act also requires incumbents to allow entrants to resell their retail services by allowing the entrants to buy the entire package of customer services at a wholesale discount.<sup>10</sup>

Cable television markets are subjected to a phase-out of rate regulation and the abolition of restrictions on telephone-company provision of video services. Developments in these markets will not be covered in this paper.<sup>11</sup> Nor will the myriad other issues touched upon in the Act, including the V-chip mandate (program ratings for sex and violence on television), relaxation of limits on radio and TV station ownership, pre-emption of any auction for digital television licenses, the Communications Decency Act (restricting online content deemed harmful to children), utility pole attachment rules, and reform of universal service subsidies.<sup>12</sup> Our paper focuses on how the Act’s major economic initiatives in local and long distance telephony have succeeded in delivering benefits to consumers. We compare the progress in the United States with that achieved in Canada under its more recent liberalization policies. Finally, we include a section detailing some basic public choice issues regarding the U.S. Telecommunications Act.

#### **IV. Long Distance Competition in the United States and Canada**

##### *Regulatory Strategy*

It is commonly assumed that competition in the U.S. long-distance market could not develop until the courts dismembered AT&T, separating the local “bottleneck” facilities from the

---

<sup>9</sup> Telecommunications Act of 1996, Sec. 253, “Removal of Barriers to Entry.”

<sup>10</sup> Telecommunications Act of 1996, Sec. 251, “Interconnection,” (3), (4).

<sup>11</sup> See Thomas W. Hazlett, “Economic and Political Consequences of the 1996 Telecommunications Act,” 50 *Hastings L. J.* 1359 (August 1999).

long-distance and manufacturing operations. The 1982 consent decree divesting AT&T was designed to remedy unlawful acts in the 1970s to restrain competitive entry into the long-distance and terminal-equipment markets. But vertical divestiture—though arguably a sufficient condition for establishing competition—was not a necessary condition. For this reason, the CRTC and the Canadian competition authorities have not attempted to force vertical divestiture on the Canadian incumbents—Bell Canada, Telus, BC Tel (now part of Telus), MT&T, Island Telephone, and NewTel. All continue to offer both local and long-distance service.

In the United States, the divested Bell operating companies had been barred from the long-distance market for twelve years prior to the passage of the 1996 Act. The new law allows them to enter this market on a state-by-state basis, but only after three regulatory authorities—the state regulatory commission, the Department of Justice, and the FCC—certify that the Bell company is in compliance with the Act’s unbundling requirements. In Canada there is no such *quid pro quo*.

The Canadian approach to facilitating entry relies on simple interconnection between networks rather than on interconnection for resellers or lessees of incumbent facilities. In the case of long distance services, the CRTC learned from a critical U.S. error—the failure of regulators to mandate equal access to local switches.<sup>13</sup> The FCC had such an opportunity in 1969 (when MCI was first allowed to enter as a private-line carrier), in 1971 (when private-line entry was allowed generally), and in 1977 (when the courts pried open all long-distance services), but declined to take it. Equal access for all long-distance carriers became a reality only when it was mandated by the 1982 decree that broke up AT&T and was subsequently extended to non-Bell local companies by the FCC. Compliance was generally not achieved until 1986-87,

---

<sup>12</sup> For further analysis of the Act, including many of the regulatory issues we exclude from our paper, see: Michael Kellogg, John Thorne, and Peter Huber, *The 1996 Telecommunications Act*, Little Brown, 1996.

more than a decade after MCI began offering ordinary (switched) long-distance service. By contrast, the CRTC required that incumbent carriers provide equal access to all certified entrants in its 1992 order opening the long-distance market to competition. As we shall see, this requirement would quickly unleash long-distance competition.

### *Market Results*

The United States began to admit competition into long-distance services nearly twenty-five years ago. Canada began much more recently, waiting until 1992 to allow facilities-based competition. Nevertheless, Canada's long-distance market is now at least as competitive as that of the U.S. The U.S. long-distance market has become much less concentrated since MCI ventured forth in the mid 1970s. Because U.S. local carriers were not required to offer equal access to long-distance carriers until AT&T was broken up by the courts, most analyses of U.S. long-distance competition begin with 1984.

### *Market concentration*

Long-distance carriers may be facilities-based or resellers. Since 1984, the number of both types of U.S. carriers has expanded dramatically. Many of these carriers offer services over only a small region, but the number of national carriers has grown steadily. Between 1984 and 1995, AT&T was a regulated carrier whose pricing discretion was limited by a price-cap regime with rate floors and by a requirement to file tariffs. To some observers, this combination of price caps and tariff-filing requirements provided a convenient mechanism for tacit collusion among the three largest carriers, AT&T, MCI, and Sprint.<sup>14</sup> Shortly after the imposition of FCC price caps,

---

<sup>13</sup> Equal access refers to the ability of competitive carriers to offer interconnected services without discrimination. In long distance, it has generally meant that customers of non-dominant firms not find it necessary to dial additional numbers or pay additional tolls in order to substitute carriers.

<sup>14</sup> See Paul W. MacAvoy, *The Failure of Antitrust and Regulation to Establish Competition in Long Distance Telephone Services*, Washington: The American Enterprise Institute, 1996.

MCI and Sprint's market share growth began to slow down (Table 1). Between 1986 and 1991, MCI and Sprint's combined market share of national long-distance revenues grew from 11.9 percent to 25.1 percent. Since 1991, it has grown by only another 4 percentage points to 29.1 percent. A Herfindahl-Hirschman Index (HHI) based on total long-distance carriers' revenues<sup>15</sup> continues to decline, but it remains at more than 2500, far above the threshold for Department of Justice action on horizontal mergers.<sup>16</sup>

**Table 1**  
**Market Shares of U.S.**  
**Long-Distance Carriers**  
**(Percent of Total Revenues)**

<i>Year</i>	<i>AT&amp;T</i>	<i>MCI</i>	<i>Sprint</i>	<i>WorldCom</i>	<i>Others</i>
1984	90.1	4.5	2.7	--	2.6
1985	86.3	5.5	2.6	--	5.6
1986	81.9	7.6	4.3	--	6.3
1987	78.6	8.8	5.8	--	6.8
1988	74.6	10.3	7.2	--	8.0
1989	67.5	12.1	8.4	0.2	11.8
1990	65.0	14.2	9.7	0.3	10.8
1991	63.2	15.2	9.9	0.5	11.3
1992	60.8	16.7	9.7	1.4	11.5
1993	58.1	17.8	10	1.9	12.3
1994	55.2	17.4	10.1	3.3	14.0
1995	51.8	19.7	9.8	4.9	13.8
1996	47.9	20.0	9.7	5.5	17.0
1997	44.5	19.4	9.7	6.7	19.6
1997	43.1	[Acquired by Worldcom]	10.5	25.6	20.8

Note: Excludes local-exchange carriers' long-distance revenues, but includes both intrastate and interstate revenues of long-distance carriers. Source: FCC (1999a).

<sup>15</sup> This is not an antitrust market because long-distance carriers offer both intra-LATA and inter-LATA services and thus compete to some extent with local exchange carriers. Moreover, one might argue that large businesses and residential customers are in different markets. Because the Bell companies cannot compete in the inter-LATA market yet and long-distance carrier participation in intra-LATA markets has been impeded by state regulators, including local-exchange carriers' revenues—equal to 15 to 20 percent of all long-distance revenues—in the tabulations in Table 2 would be misleading.

<sup>16</sup> The HHI is the sum of the squared market shares for all market participants. An HHI of 2500 is roughly equivalent to that generated by an industry with four firms of equal size.

Although Canada's liberalization occurred nearly two decades after MCI began offering switched long-distance service in the U.S. and eight years after the AT&T divestiture, long-distance competition in Canada is well advanced. Spared from the contentious court debates that clouded the U.S. environment and proceeding much more deliberately in implementing equal access, the Canadians have avoided much of transition required in the United States to move from monopoly to a more competitive market. Indeed, because Canada did not pursue vertical divestiture, the incumbent local companies are aggressive competitors with a shadow price of access that is equal to marginal cost.

Within six years of Canada's long-distance decision, the incumbent companies had lost about 35 percent of their market shares (Table 2). In the U.S. AT&T's market share fell from 84 percent of interstate minutes in the third quarter of 1984 to 65 percent in 1989, five years after divestiture and about 14 years after MCI began to offer switched long-distance service. These results suggest that an equal-access regime without divestiture can work well to assure entry into long-distance services.

**Table 2**  
**Canadian Long-Distance**  
**Market Shares, 1995-98**  
**(Percentage of Minutes)**

<i>Company</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999 (Q2)</i>
Former Stentor (Incumbent) Companies	78	71	66	64	65
AT&T Canada	8	11	12	10	-
Sprint Canada	8	11	14	12	-
Others	6	6	7	14	-
Total Non-Incumbents	22	28	33	36	35

Sources: 1995: Stentor Hearings Evidence in CRTC Forbearance Proceeding; 1996-98- Call-Net Interrogatory Responses in CRTC 99-5.

## *Prices*

Because long-distance rivalry among the largest carriers has taken the form of intense marketing of a bewildering array of discount programs, it is difficult to measure the degree to which long-distance rates have declined with regulated access charges and other costs. Taylor and Taylor contend that for much of the decade after divestiture, AT&T's rates fell by less than its access costs.<sup>17</sup> Hall has argued that their analysis is misleading because it fails to take discount plans into account.<sup>18</sup> MacAvoy contends that even when one allows for discounts, the price-cost margin in long-distance services has risen since 1990.<sup>19</sup> Moreover, MacAvoy shows that a substantial number of telephone subscribers do not avail themselves of discount pricing plans.

Ultimately, any judgment about the degree of competition is based on the proximity of rates to incremental cost. Figure 1 shows the trend in average long-distance prices in the U.S. and Canada since 1992, the year in which the CRTC opened the Canadian market to competition.<sup>20</sup> Access charges are now similar in Canada and the U.S., yet Canadian long-distance rates have fallen below those in the U.S. Equal access and the ability of the incumbent local carriers to compete aggressively appear to be sufficient to generate results that now surpass those in the U.S. more than 20 years after MCI began offering switched long-distance service. This result strongly suggests that it was not vertical divestiture, but equal access, that created the environment for long-distance competition.

---

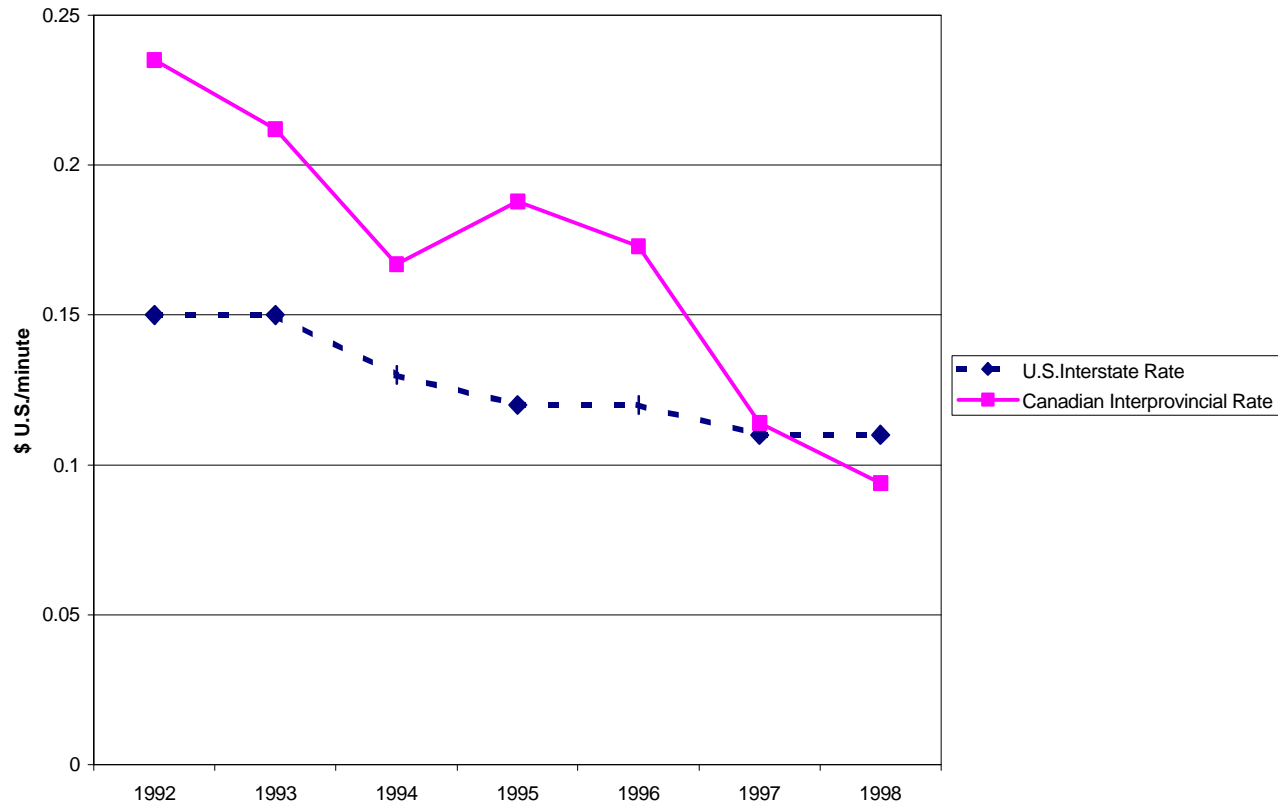
<sup>17</sup> See William E. Taylor and Lester D. Taylor, "Post-divestiture Long-Distance Competition in the United States," *American Economic Review: Papers and Proceedings*, Vol. 83, pp. 185-90 (May 1993).

<sup>18</sup> See Robert Hall, *Affidavit on Behalf of MCI*, U.S. Federal Communications Commission, In the Matter of Application of SBC Communications, Inc., Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Oklahoma, (April 1993).

<sup>19</sup> See Paul W. MacAvoy, *supra*, note 13.

<sup>20</sup> These are average prices for domestic interstate calls (U.S.) and for national calls (Canada).

**Figure 1**  
**Average Domestic Long Distance Rates in Canada and the U.S.**



The rates shown in Figure 1 are averages for all long-distance customers, business and residential. Average residential rates are much higher for U.S. consumers. In 1996-7, interstate rates averaged about 17.5 cents per minute; in 1998 they were 15.3 cents per minute.<sup>21</sup> The recent introduction of new 5 to 7 cent-per-minute plans reduced the average consumer charge to 14 cents per minute in 1999—15 years after divestiture. In Canada, just 7 years after the introduction of switched long-distance competition, carriers offer residences off-peak rates of as little as 1.6 cents (U.S.\$) per minute.<sup>22</sup>

Through 1998, long-distance rates in both countries were substantially in excess of long-run incremental cost. The long-run incremental cost of long-distance service is estimated to be

<sup>21</sup> Data from TNS (formerly, PNR.), Bill Harvesting, Philadelphia, PA.

<sup>22</sup> Sprint Canada's rate. See [www.fonorola.com](http://www.fonorola.com).



no more than 2 cents exclusive of marketing costs and administrative overhead.<sup>23</sup> Wholesale rates in Canada are now about 2.5 cents (U.S. \$) per minute, and they have been as low as 1.5 to 2 cents per minute in the U.S. Even with access charges at 5 cents per minute, rates should decline to substantially less than 10 cents per minute in a competitive market for customers with heavy usage.<sup>24</sup> Indeed, business rates in both countries in 1998 averaged about 8 cents (U.S. \$) per minute. Given current U.S. carrier access charges of 2 cents per conversation minute, the long-run incremental cost of residential service, exclusive of marketing and other administrative costs, is already less than 5 cents per minute, equal to the lowest rate now available.

When the Bell companies are finally admitted into the long-distance market, they are likely to combine in-region facilities with resale to compete in the inter-LATA market.<sup>25</sup> They should be able to lure a substantial share of their own in-region local subscribers to their long-distance service. This entry, in turn, could set off a much more vigorous general round of long-distance price reductions that could even reach the average residential subscribers who were still paying an average of 15 cents per minute in 1998.<sup>26</sup>

The losses to consumers from barring Bell entry into long distance have surely been substantial. Had long-distance rates fallen as rapidly in the U.S. as in Canada—a reasonable counterfactual given that vertically-integrated Canadian incumbents continued to compete in long distance—rates might have been substantially lower throughout the 1990s. At 1998 volumes, the annual increase in consumer welfare for a 1.1 cent per minute reduction in

---

<sup>23</sup> See Robert W. Crandall and Leonard Waverman, *Talk is Cheap: The Promise of Regulatory Reform in North American Telecommunications*, Washington: The Brookings Institution (1996).

<sup>24</sup> There are fixed marketing, billing, and administrative costs that must be covered from revenues, but these costs are increasingly being recovered on a flat monthly basis. Marginal prices should not reflect these costs, assuming healthy competitive market constraints.

<sup>25</sup> The first such entry has now been authorized by the FCC. On December 22, 1999, Bell Atlantic gained approval to offer interLATA services in New York.

<sup>26</sup> TNS, [Bill Harvesting](#) data.

interstate residential rates is \$1.2 billion.<sup>27</sup> Were intrastate rates also reduced by a similar amount, the consumer welfare gains would be about \$1.8 billion per year. Since business calling volumes are approximately twice the residential volumes, the consumer welfare gains from lower prices of telecommunications-intensive final goods and services would surely be a multiple of this \$1.8 billion per year, depending on the derived-demand price elasticities. Had Bell-company entry into long-distance services been permitted in the 1990s, interstate long-distance rates would surely have been several cents per minute lower and consumers would have realized welfare gains that would be reckoned in the tens of billions of dollars. Blocking competition—ostensibly to promote competition in other markets—has incurred substantial social costs. These losses are reminiscent of earlier FCC decisions delaying entry into cellular and voice-mail services.<sup>28</sup>

## **V. Local Exchange Competition in the United States and Canada**

### *Regulatory Strategy*

It would be an understatement to suggest that there was skepticism about the feasibility of local competition during the debate leading up to the 1996 U.S. Telecommunications Act that “deregulated” the telephone business. The popular view of the local telephone exchange was one of “natural monopoly.” The established local carriers—the RBOCs, and GTE—are viewed as having enormous first-mover advantages that Sprint, MCI, AT&T, or the cable television companies cannot easily overcome. Regulators therefore attempted to jump-start local competition through a variety of policy instruments beyond (legally) open entry.

---

<sup>27</sup> This estimate was derived by Jeffrey Rohlfs and Robert Crandall in FCC comments submitted in support of the CALLS proposal currently before the Commission.

<sup>28</sup> See Jerry Hausman, “Valuation and the Effect of Regulation on New Services in Telecommunications,” *Brookings Papers on Economic Activity: Microeconomics*, 1997.

Prior to 1996, few states had competitive local carriers except for the fiber-ring Competitive Access Providers (CAPs) in urban business centers. Dispersed small businesses and residential subscribers had no alternative to the traditional regulated local-exchange carriers (LECs) for fixed wireline local service. Large businesses could utilize PBXs, purchase direct connections to long-distance carriers, or develop their own private networks and thereby avoid many of the above-cost rates that were forced on smaller businesses to cross-subsidize residential services. These choices were not available to smaller subscribers.

The 1996 Act requires state regulators to admit entrants into the provision of local and intrastate services. The first step in the process of gaining entry, however, is negotiation of interconnection agreements with incumbents. These interconnection agreements specify, among other provisions, the rates for unbundled elements, the rates for exchanging traffic, points of interconnection, and wholesale discounts. Under the 1996 Act, the incumbents must unbundle their networks into separate facilities or “elements” and lease them to entrants. This requirement has been interpreted by the FCC to require that virtually all incumbent facilities be unbundled except for the new equipment used to deliver broadband services.

The FCC has also ruled that the rates established in state arbitrations should be grounded on a forward-looking measure of long-run incremental cost, Total Element Long Run Incremental Cost (TELRIC). Under this approach, the entrants may lease any facilities they choose for any period of time at TELRIC rates that assume the facilities are held for their full useful economic lives.<sup>29</sup>

---

<sup>29</sup> For a description and critique of this methodology, see Alfred E. Kahn, *Letting Go: Deregulating the Process of Deregulation*. MSU Public Utilities Papers, Institute of Public Utilities and Network Industries, Michigan State University, 1998; Jerry Hausman, “Regulation by TSLRIC: Economic Effects on Investment and Innovation,” *Multimedia Und Recht*, 1999; and Jerry Hausman “The Effect of Sunk Costs in Telecommunication Regulation,” in James Alleman and Eli Noam, eds., *Real Options: The New Investment Theory and its Implications for Telecommunications Economics*, Kluwer, 1999.

This approach, providing a “free option” to entrants is still the subject of federal litigation.<sup>30</sup>

The rates that have resulted from these arbitrations/agreements are shown in Table 3. Note the enormous variance in these rates despite the FCC’s ruling that “total element long-run incremental cost” (TELRIC) would be the model by which the states would determine the cost of local access.” The data shown in Table 3 are for the densest areas in each state where states “de-average” these rates.<sup>31</sup> The forward-looking cost of serving these areas should be relatively similar across states, but the state-arbitrated rates widely vary. The politics of rate setting apparently prevent FCC methodology from consistent application.

<p style="text-align: center;"><b>Table 3</b>  <b>The Distribution of RBOC Unbundled Business Loop Rates (UNEs) and Wholesale Discounts for Business Service Lower 48 States, 1998</b></p>		
<i>Unbundled Business Loop Rate—Most Dense Area (\$/Mo.)</i>	<i>Number of States</i>	<i>Share of Access Lines (%)</i>
Less than 10	6	20.8%
10-14.99	15	48.0%
15-19.99	16	22.2%
20-24.99	6	5.5%
25 or More	4	3.6%
<i>Wholesale Discount for Business Service(%)</i>		
Less than 15	9	6.2%
15-17.49	11	0.4%
17.50-19.99	14	32.0%
20 – 22.49	12	22.8%
22.5 or more	2	3.7%

Source: Crandall and Hausman (1999) Derived from industry sources.

<sup>30</sup> Jeremy Pelofsky, “Appeals Court Throws Out FCC Access Price Model,” Reuters (July 19, 2000).

<sup>31</sup> Many states have uniform wholesale rates for unbundled elements despite large cost differences that exist between dense areas and more rural areas. In Table 3, the rates are for the most dense areas in the states that allow different rates across geographical areas.

Similarly, local and intrastate long-distance rates reflect the redistributive politics that drive state regulatory actions. (See Table 4.) Local rates for businesses are far above local residential rates, and state regulators have not allowed these rates to change very much since 1996. Intrastate long-distance rates also vary enormously, with rural states having much higher rates in order to cover their proportionately larger deficits from setting rural residential rates far below cost.<sup>32</sup>

Canada's local competition policy does not require interconnection at all "technically-feasible" points, as required by the U.S. 1996 Act. Instead, it simply requires that each LEC must designate or establish a local point where traffic is exchanged. The existing wire centers are where interconnection takes place.

---

<sup>32</sup> See Robert W. Crandall and Leonard Waverman, "Who Pays for Universal Service? When Telephone Subsidies Become Transparent," The Brookings Institution, draft, (1999).

**Table 4**  
**Monthly Residential and Single-Line**  
**Business Rates in**  
**Selected Cities, October 15**  
**(\$/Month)**  
**Residential Rates**

<i>City</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>
Pine Bluff (AR)	22.22	22.06	22.14	22.22	22.22
San Diego (CA)	12.18	15.59	15.69	15.57	16.01
Atlanta (GA)	24.53	24.80	24.98	24.98	24.92
Chicago (IL)	18.20	17.31	17.63	17.18	17.18
Louisville (KY)	24.17	23.66	23.66	24.63	24.63
Baltimore (MD)	24.98	24.98	24.98	24.98	24.67
Boston (MA)	23.07	23.07	23.07	23.07	23.07
Grand Rapids (MI)	17.53	18.06	17.95	18.01	18.25
Butte (MT)	18.22	18.22	18.22	19.26	19.69
Memphis (TN)	20.25	20.25	20.33	20.33	20.33
<b>Business Rates</b>					
Pine Bluff (AR)	41.10	40.91	41.05	41.12	41.13
San Diego (CA)	26.54	30.43	30.65	31.10	N.A.
Atlanta (GA)	53.64	58.82	58.87	58.87	58.81
Chicago (IL)	34.12	32.12	31.91	31.91	33.87
Louisville (KY)	60.96	61.01	55.87	56.84	55.27
Baltimore (MD)	43.57	43.57	43.57	43.60	44.97
Boston (MA)	43.12	42.78	42.78	42.78	44.10
Grand Rapids (MI)	35.29	36.02	35.81	35.88	34.63
Butte (MT)	43.82	43.82	43.82	44.07	45.36
Memphis (TN)	54.70	54.70	54.95	54.95	54.95

NA = Not available

Source: FCC (1999).

Only “essential” facilities, such as local loops in rural areas, must be unbundled and then only for a limited number of years. Resale is permitted, but incumbents do not have to offer resale discounts to entrants. Nor does Canada use the “carrot” of allowing the incumbent local companies into long distance as an inducement to facilitate this interconnection seamlessly. The local companies are already in the long-distance business. In short, Canada’s local competition

policy is far less regulatory, relying almost entirely on facilities-based competition rather than entrants' use of incumbent facilities.

### *Market Results for the United States*

Despite the problems of regulation-intensive policy, entry into local telephony by new competitors is now occurring in the U.S. Whether such entry is due to the elaborate TELRIC rules for unbundling or the simple prohibition of monopoly franchises by state authorities is the subject of intense debate. A principal criticism of the 1996 Act's requirements for comprehensive unbundling and the FCC's TELRIC pricing policy is that they combine to reduce the incentive for entrants to build their own facilities. In addition, because incumbents face the prospect of having to lease their facilities at rates that do not reflect their sunk costs, the incumbent local carriers' incentives to invest are also reduced substantially.<sup>33</sup> Thus, the ambitious architecture in the 1996 Act for unbundling and mandatory (discounted) resale may have undermined as much competitive activity as it has encouraged. Nonetheless, competition is emerging as the result of the overall policy reforms initiated by the Telecommunications Act.

### *Competitors' Revenues and Market Share*

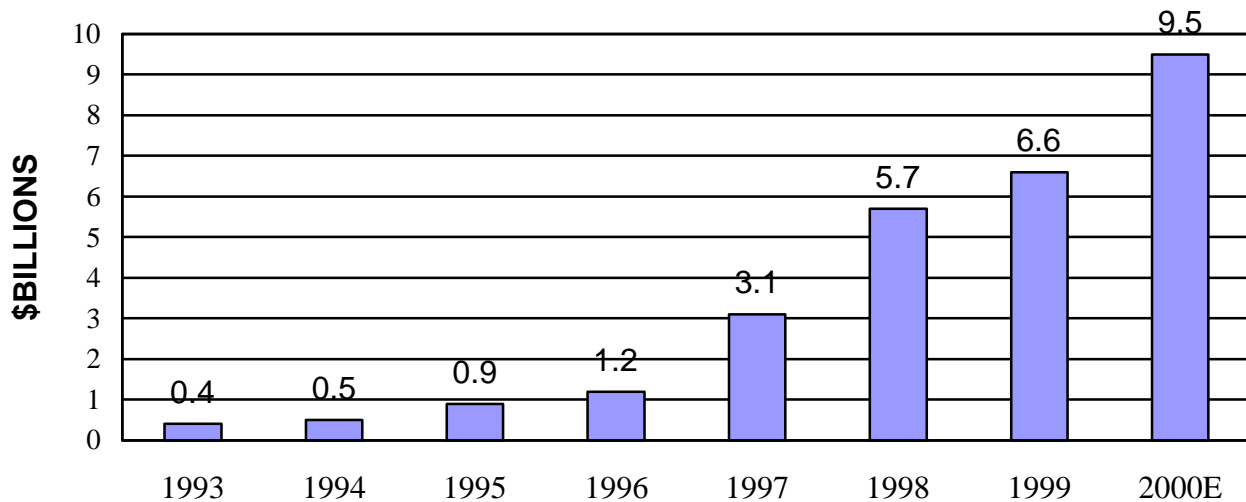
While the health of competitors can be a misleading guide to the state of competition, in this instance it appears a reasonable starting point. By the revealed preference of consumers, prices adjusted for quality are declining where competitors gain market share from rate regulated incumbent monopolies.<sup>34</sup>

---

<sup>33</sup> See Robert W. Crandall and Jerry Hausman, (2000) "Competition in U.S. Telecommunications Services Four Years After the 1996 Act," Brookings, 2000, forthcoming. Jerry Hausman, "The Effect of Sunk Costs in Telecommunication Regulation," *supra*, note 28.

<sup>34</sup> This abstracts from the possibility of implicit or explicit subsidies. That issue, while interesting, forms a separate discussion.

**Figure 2.**  
**COMPETITIVE LOCAL EXCHANGE CARRIER REVENUES, 1993-2000**



Sources: 1993-98: Federal Communications Commission, Telephone Trends, 2000; 1999-2000E: Credit Suisse/First Boston, Telecom Services – CLECs, June 5, 2000.

The revenue growth of the competitive local exchange carriers (CLECs) has accelerated markedly since 1996 according to FCC data.<sup>35</sup> (See Figure 2.) The small sample size limits the conclusions that may be drawn from these data, but CLEC revenues grew more rapidly after the 1996 Act was passed. In the 1993-95 period, CLEC revenues rose by 50 percent per annum while in the period just following the Act, 1995-97, CLEC revenues grew by 86 percent per year.

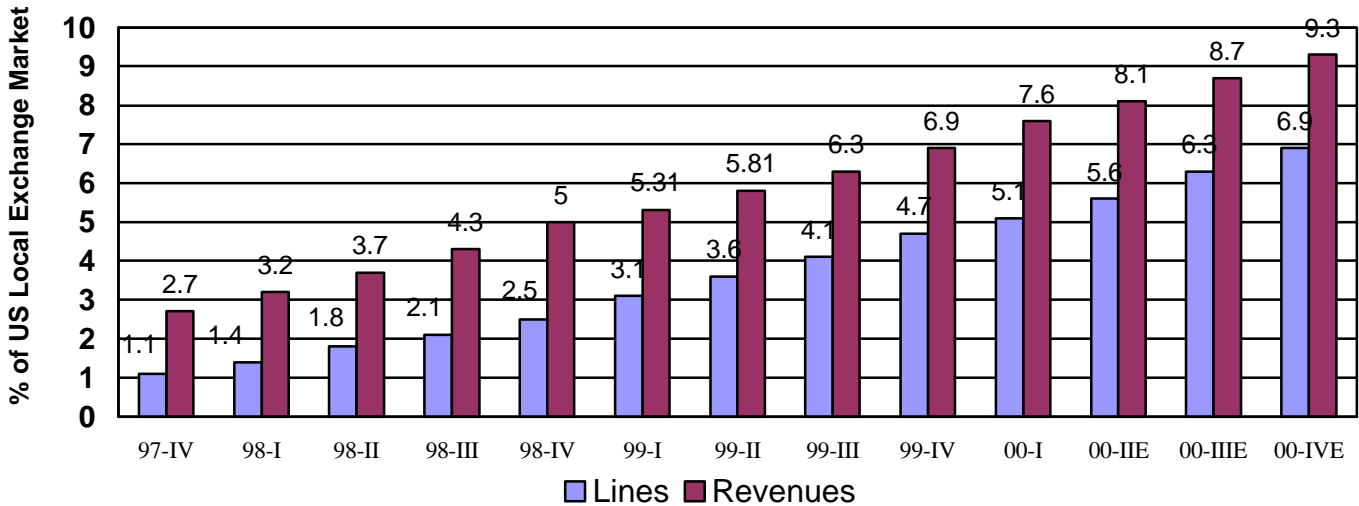
The number of local carriers has increased substantially since 1995. One observer has noted that “165 new phone companies [were] spawned by the law.”<sup>36</sup> Moreover, the new competitors’ combined market share continues to grow strongly, both in terms of access lines and revenues. (Figure 3). The CLECs now appear to have about 9 percent of local revenues and early 7 percent of access lines. Although this growth pales in comparison with pace at which long-distance competition developed, it suggests some progress towards a more competitive marketplace.

<sup>35</sup> See the Common Carrier Bureau data on carrier revenues.

<sup>36</sup> “Critics, Backers of '96 Act Joust on Phone Markets,” *NATIONAL JOURNAL'S CONGRESS DAILY*, March 10, 1999, p. 4.



**Figure 3.**  
**COMPETITIVE LOCAL EXCHANGE CARRIERS, 1997-2000**



Sources: 97-IV through 98-IV, Merrill Lynch, Telecom Services -- Local (March 11, 1999); 99-I through 00-IVE, Credit Suisse/First Boston, Telecom Services--CLECs.

*CLEC stock market performance*

The modest market shares of the CLECs reflect the slow start of local competition in the U.S. both due to legal battles over implementation of the Act and the substantial capital costs and time required to build local networks. The equity-market performance of the small number of publicly listed CLECs during the five year period, 1994-98, provides at least modestly positive evidence of the financial effects of the 1996 Act on competitive local exchange carriers. (Table 5). Only four companies can be charted throughout this period,<sup>37</sup> a span during which the Act was drafted, debated, amended, passed by Congress, signed by the President, enacted by the FCC, and litigated in federal courts.

<sup>37</sup> Indeed, one of the four has only been publicly listed since March 1994. Many more firms were listed for some part of the sample period, including several firms which were delisted when acquired via merger. The CLEC firms listed are the only companies lasting for the entire 5-year period (or close to it), 1994-98, on the web site devoted to tracking competitive local exchange carrier stocks: [www.clec.com](http://www.clec.com).

## Table 5

### CLEC Equity Returns: 1994-98

<i>Company</i>	<i>March 1999 Market Capitalization (\$million)</i>	<i>Initial Offering Date</i>	<i>Annual Growth Rate (Percent)</i>	<i>S&amp;P 500 Adjusted Growth Rate (Percent)</i>
Intermedia	953.70	Mar-92	21.56	1.25%
ICG	908.70	May-92	6.98	-10.89%
Winstar	1360.00	Oct-93	66.37	38.57%
GST*	253.70	Mar-94	2.31	-17.06%
S&P 500			20.06	

\*GST returns calculated from IPO date in March, 1994  
\$40,000 invested in 4 CLECs returns \$163,547 in five years.  
\$40,000 invested in S&P 500 returns \$99,781.88.  
Abnormal CLEC portfolio return of 10.39 percent annually.

Since the Act ostensibly aimed to enhance competition in the local exchange market, it is reasonable to expect that firms specializing in providing such service would enjoy windfall gains during this period. However, while all four of the listed companies produced positive returns for shareholders, 1994-98, only two (Winstar and Intermedia) out-performed the S&P500 Index, which grew at an average rate of 20.06 percent per year. Winstar's performance was sufficiently in excess of the market return as to make the performance of the portfolio of CLEC stocks superior to the market as a whole. Had one invested \$10,000 in each of the CLECs at the beginning of 1994, the equally weighted portfolio would have been worth \$179,226 at the end of 1998. The same amount (\$40,000) invested in the S&P500 would grown to just under \$100,000. Hence, capital gains in the small, publicly listed CLEC sector were more than twice that for the S&P 500.

Some of this supranormal return is likely a risk premium for holding CLEC stocks,<sup>38</sup> all of which have betas in excess of one. Still, CLEC returns appear to be in excess of the market as

<sup>38</sup> In early 1999, Winstar's beta was 1.57, Intermedia 1.26, GST 1.91, and ICG 2.56. The risk premia associated with these betas accounts for up to about 80% of the excess CLEC returns.

a whole even with this adjustment. It is also of interest that the star performer in this CLEC group was Winstar, a wireless firm offering facilities based competition as opposed to service over leased portions incumbents' networks.

Further information can be gleaned from the stock market evidence on CLECs shown in Table 6. Despite the fact that there is only a small sample of CLECs publicly listed throughout the relevant period, the sample becomes substantially larger over time. By March 2000, listed CLECs had a market capitalization exceeding \$130 billion, up from the sector total of under \$3 billion in 1996. By this measure competitive entry into local telecommunications has been impressive. By way of comparison, throughout the years following the 1984 Cable Communications Policy Act (legislation promising greater competition in local cable markets), no new public firm—of any size—emerged to offer head-to-head competition in cable service.

**Table 6**  
**Market Capitalization for U.S.**  
**Competitive Local Exchange**  
**Carriers: March 22, 2000**

<i>Company</i>	<i>Market Capitalization (\$ million)</i>	<i>Initial Offering Date</i>
Intermedia	2889	Mar-92
ICG Communications	1552	May-92
Winstar	4786	Oct-93
GST	334.7	Mar-94
e.spire	619.9	Mar-95
CTC Communications Group	1030	Aug-95
McLeodUSA, Inc.	13043	Jun-96
Advanced Radio Telecom	958.5	Nov-96
RCN Corporation	4818	Sep-97
ITC/DeltaCom, Inc.	2261	Oct-97
Nextlink	11200	Oct-97
Electric Lightwave	1214	Nov-97
Teligent	4735	Nov-97
Worldpages.com	193.3	Feb-98
Level 3 Communications	38115	Apr-98
US LEC	1144	Apr-98
Adelphia Bus. Solutions/Hyperion	4080	May-98
MGC Communications	1480	May-98
Allegiance Telecom	8237	Jul-98
Caprock Telecommunications	1580	Aug-98
12 Others	28885.8	Jan. 99 – Mar. 00
Total Market Cap	133156.2	

Sources: [www.quote.yahoo.com](http://www.quote.yahoo.com) and [www.clec.com](http://www.clec.com).

Perhaps an even better indication of the progress of the new competitive local carriers is their willingness to devote real capital resources to local telecommunications markets. Table 7 provides the available data on capital spending by all listed CLECs in 1996-99. These companies are now spending at a rate of about \$14 billion per year, or more than the recent levels for all U.S. commercial mobile wireless carriers.<sup>39</sup> As these CLECs begin to complete the roll-out of their networks, they should be much more potent competitors. Such robust capital spending also questions the need for wholesale unbundling of incumbents' networks.

### *Local Competition in Canada*

At this juncture, it is difficult to assess the impact of the Canadian policy towards local competition because the CRTC only began to allow competition in May 1997.<sup>40</sup> Moreover, given much slower economic recovery from the 1990-91 recession, Canada's cable television companies have only recently evidenced an interest in offering telecommunications services. Thus, it is too early to observe the result of Canada's much less intrusive policy of liberalizing local telecommunications markets.

---

<sup>39</sup> Cellular Telecommunications Industry Association, *Semiannual Survey*, December 1999.

<sup>40</sup> Telecom Decision CRTC 97-8, *Local Competition --Local Unbundling and Interconnection*, May 1, 1997.

## Table 7

# Capital Spending by Competitive Local Exchange Carriers, 1996-99

(millions of \$)

<i>Company</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
Adelphia Business Solutions	77	121	349	478
Allegiance Telecom Inc.		22	114	273
Advanced Radio	17	17	11	NA
US LEC Corp		13	47	57
Concentric Network		5	23	42
Convergent Communications Inc		2	20	49
Covad Communications		2	60	208
CTC Communications Corp.	1	6	36	NA
CapRock	10	14	36	201
Electric Lightwave Inc.	56	104	201	180
e.spire Communications Inc.	108	135	249	287
Focal Communications Corp.		12	64	129
GST Telecommunications	98	214	248	271
ICG Telecommunications Inc.	175	287	395	765
Intermedia Communications	147	260	473	680
IDT Corp.	12	NA	72	95
ITC DeltaCom Inc.	6	44	148	166
Level 3 Communications Inc.		26	910	3,311
McLeod USA Inc.	174	601	340	1,317
Metromedia Fiber Network	107	19	115	549
MGC Communications	4	58	82	83
Network Access			5	55
Network Plus CP	2	3	11	94
NorthPoint Communications		1	42	197
Nextlink Communications	78	254	594	1,127
Primus		40	76	111
RCN Corp.		79	286	526
RSL		36	182	208
Rhythms NetConnections		1	10	193
SpeedUS.Com			31	20
Teligent Inc.	-	10	183	262
Time Warner TLC	145	127	126	221
Winstar Comm. Inc.	46	220	402	1,278
Other	12	29	99	190
Total	1275	2762	6040	13623

Source: Company financial statements from [www.quote.yahoo.com](http://www.quote.yahoo.com).

## **VI. The Wireless Sector—Competition without Regulation**

It may be instructive to examine parallel developments in a similar telecommunications sector where entry by facilities-based operators has been the sole driver of increasing competition. This entry, moreover, has occurred without the elaborate regulatory protections afforded new competitors in local exchange markets. We refer to wireless telephony.

Competition in U.S. commercial wireless services had been slow to develop until very recently. For more than a decade, the U.S. had but two wireless (cellular) providers in each market because of an FCC decision to allocate only two 25 MHz licenses to each market. In addition, unlike Europe or Canada, the U.S. licensed wireless services on a geographically-fragmented basis. In 1990, however, the FCC began to allocate microwave spectrum for personal communications service (PCS), a cellular substitute.<sup>41</sup> In 1995 licenses were auctioned to assign PCS licenses in the A and B bands (each allocated 30 MHz). More recent wireless telephone auctions have assigned licenses in the C (30 MHz), D (10 MHz), E (10MHz) and F (10 MHz) bands. In addition, an entrepreneurial company—Nextel—succeeded in obtaining FCC approval to reallocate approximately 10 MHz of spectrum from a dispatch-mode service to Enhanced Specialized Mobile Radio (ESMR), a commercial wireless service competitive with cellular and PCS. (See Table 8). Hence, nine licenses are available in local wireless telephone markets, markets essentially unregulated with respect to pricing. Licenses may be aggregated, but given the FCC's 45 MHz "spectrum cap," four or more competitors are maintained per market.

## Table 8

### U.S. Wireless Telephone Licenses, 2000

<i>Service</i>	<i>License</i>	<i>Bandwidth</i>	<i>No. of License Areas</i>
Cellular	A	25 MHz	734
Cellular	B	25 MHz	734
PCS	A	30 MHz	51
PCS	B	30 MHz	51
PCS	C	30 MHz	493
PCS	D	10 MHz	493
PCS	E	10 MHz	493
PCS	F	10 MHz	493
ESMR	—	10 MHz	—

#### *Wireless rates*

The first of the new PCS services began in late 1995. Since that time, a large number of companies have begun building facilities. All but 28 of the Top 100 metropolitan markets in the U.S. had at least five wireless competitors in early 1999—two cellular providers, two to four PCS services, and Nextel.<sup>42</sup> The effect of the resulting competition on wireless rates in the U.S. has been stunning. (See Figure 4.) Throughout the 1984-1995 period real, inflation-adjusted cellular rates had fallen at a rate of 3 to 4 percent per year.<sup>43</sup> Between 1995 and 1999, however, real cellular rates fell at a rate of 17 percent per year as PCS service providers offered service at per minute prices less than 50 percent of prevailing cellular rates. There is evidence that with open entry just one new player is sufficient to drive rates sharply lower.<sup>44</sup>

<sup>41</sup> Federal Communications Commission, First Report and Order and Third Notice of Proposed Rule Making R: *Redevelopment of Spectrum to Encourage Innovation in the Use of New Technologies*, 7 F.C.C.R. 6886, September 1992.

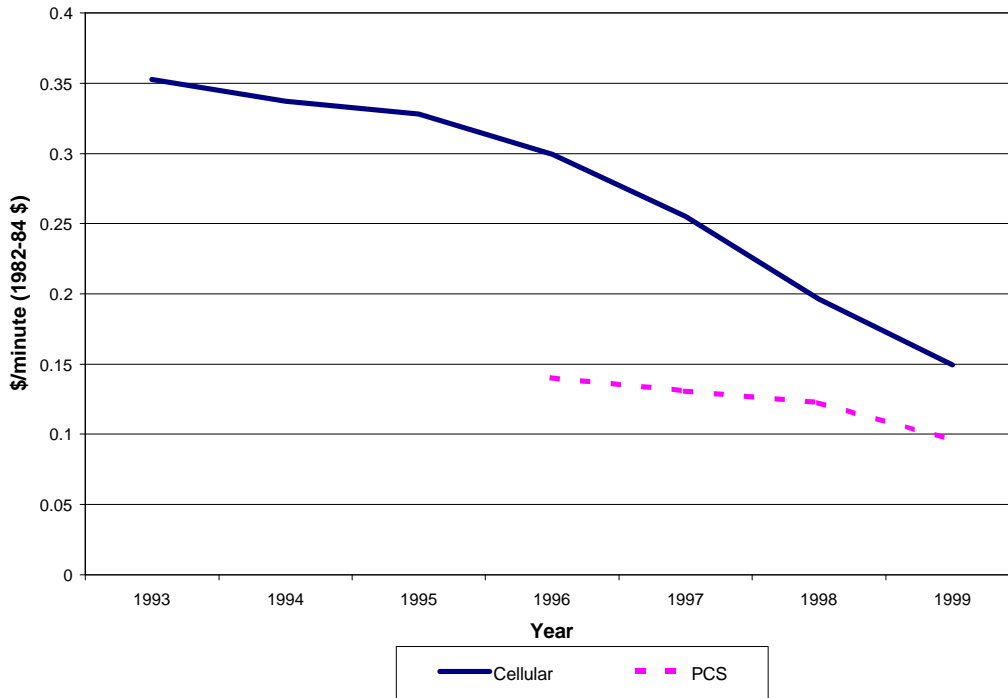
<sup>42</sup> See Merrill Lynch, *The Next Generation III*, March 10, 1999, p. 13. for data on the number of carriers by market.

<sup>43</sup> See Jerry Hausman, "Cellular Telephone, New Products and the CPI," *Journal of Business and Economics Statistics*, 1999.

<sup>44</sup> See the Declaration of Robert W. Crandall and Robert H. Gertner filed on behalf of Bell Atlantic in the merger of Bell Atlantic and GTE before the Federal Communications Commission, 1999.



**Figure 4**  
**Real Wireless Prices**



The only new regulation imposed on the wireless industry by the 1996 Telecommunications Act was the requirement for “reciprocal compensation” on wireless-wireline interconnection. Prior to 1996, the rates for exchanging traffic were often in excess of 2 cents per minute; today, they are in the 0.5 to 0.7 cents per minute range because wireless companies are afforded the same interconnection rates as the new CLECs. Otherwise, competition has increased dramatically without unbundling, resale, or other new forms of regulation. Indeed, wireless services are essentially fully exempt from retail-price regulation. The result has been a major decline in real wireless prices.

#### *Subscriber penetration*

The U.S. has lagged some European countries in cellular penetration, in large part because of its fragmented approach to licensing and the resulting roaming charges as well as FCC-mandated charges on both calling and receiving parties. The development of national service by AT&T, Sprint, Nextel, Bell Atlantic-Vodafone, SBC, Voicestream, and U.S. Cellular, however,

has recently led to national one-rate pricing. While subscriber penetration is still only about 30 percent of the population, growth has accelerated with price declines resulting from entry of PCS operators.

As long as the U.S. keeps residential wireline rates low and does not allow local carriers to charge for local usage, the equilibrium U.S. penetration may remain below that realized by Hong Kong, Italy, and the Scandinavian countries. However, we have not yet witnessed the full effect of the recent sharp decline in U.S. wireless rates. Nor has the U.S. been able to implement “calling-party-pays” tariffs, motivating wireless subscribers to leave their lithium-ion powered handsets on continuously to receive calls.

U.S regulators have provided us with an illuminating experiment. In wireless telephony, additional facilities-based competitors were licensed and then permitted to operate without rate controls, unbundling requirements, or mandated resale. Local wireline telephony, on the other hand, was approached as a natural monopoly market that required extensive regulation to jump-start competitive entry. The rules establishing cost-based access to the incumbents’ facilities proved difficult to devise and arduous to implement, particularly given the litigious nature of regulated industries in the United States. The simpler approach to regulation not only has administrative efficiencies to recommend it, it appears to generate greater competition. Facilities-based competition may develop in wireless telephony than in wired systems because the latter must build connections to the final subscriber. But both sets of service providers now co-exist, pitting wireless against wireline carriers in a head-to-head rivalry for local dial-tone service, thereby eroding the case for regulatory supervision of local competition.<sup>45</sup>

---

<sup>45</sup> Federal Communications Commission, *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services: Fourth Report*, FCC 99-136 (June 24, 1999), 12-15.

## **VII. The Political Consensus Behind the U.S. Telecommunications Act**

The Telecommunications Act was the product of *realpolitik*. Reform involves compromises and political bargains such that an actual majority—or super-majority to circumnavigate the veto power of various interest groups and committee chairs—can form a coalition to enact law. In political institutions interest groups jockey for advantage, angling for better deals. Often the interests of incumbent officeholders in continuing contentious legislation into future legislative sessions (where support groups can be cajoled or threatened, and electoral benefits for the official thereby extracted), combines with the interests of reform opponents to block legislation altogether. The status quo is rarely without a considerable number of friends - which is how it *became* the status quo. Hence, the twenty-year legislative impasse which preceded the 1996 Telecommunications Act, as countless efforts to “update” the 1934 Communications Act had been repulsed since the ambitious effort by Cong. Lionel van Deerlin (D-CA), then chair of the House Subcommittee on Finance and Telecommunications, to chart a new course in the 1976-80 period.<sup>46</sup>

To overcome such natural inertia in controversial legislation, it is helpful to have a powerful counter-veiling motivation for Congress to act. A public emergency is the classic legislation-moving pressure, a situation where the standard reasons for not legislating are momentarily overwhelmed by political actors who seize the opportunity (partly out of desire to seize credit for forging a solution, partly out of fear of appearing unresponsive or “out of touch”). Yet, no great crisis gripped the public in 1996; the issue of telecom reform was no more visible than in previous years. Why did legislation pass at this moment, and not before?

While motivation factors are sometimes difficult to pinpoint, an important moment of decision was at hand in telecommunications law: Any policy shift governing the MFJ’s line-of-

business restrictions would have to come just about the time the telecommunications act was passed. Elsewise, the federal courts would likely soon relax the restrictions. Congress preempted this in the Act, moving jurisdiction away from Judge Harold Green, and seizing it for Congress and an agency it oversees, the FCC.

The RBOCs had been constrained by the consent decree that ended the AT&T antitrust suit in 1982. The restrictions were challenged almost at once by the RBOCs, however, and the challenge gained momentum following a 1987 Department of Justice report documenting that the telecommunications market was changing so rapidly that the rationale for restrictions was becoming dubious.<sup>47</sup> Between that time and the mid 1990s there was intense legal skirmishing. As described by Peter Huber, author of the 1987 report:

[Judge Greene's] courtroom operated as a shadow FCC, an independent authority that scrutinized, cajoled, hectorred, and prosecuted. There were hundreds of motions, complaints, and other requests to enforce, modify or interpret. The Justice Department issued thousands of advisory letters. The court received over six thousand briefs. Thirteen groups of consolidated appeals were carried to a federal appellate court in Washington. The Supreme Court received half a dozen divestiture-related petitions for review...

A 1995 Justice Department proposal to grant limited relief to two local phone companies in Chicago and Grand Rapids occupied twice as much paper as the entire consent decree that broke up the national Bell System. This Son-of-Sam decree addressed network information, billing services, and customer lists. It devoted four paragraphs to regulations for marketing services to business customers and another three to marketing to residential customers. The Justice Department itself was to review and approve a written script used by Ameritech to sell interexchange service. Two paragraphs were required to spell out how Ameritech would list local competitors in its white pages.

The 1996 Telecommunications Act put an end to all this. It transferred authority over the key line-of-business restrictions to the FCC, and it established a process and timetable for getting rid of them all.<sup>48</sup>

While certain of the RBOC requests were granted by the courts (typically the D.C. Circuit overturning Judge Greene, who exercised a high degree of skepticism regarding the RBOC filings), the activity generated by interest groups fighting for position created a demand for

---

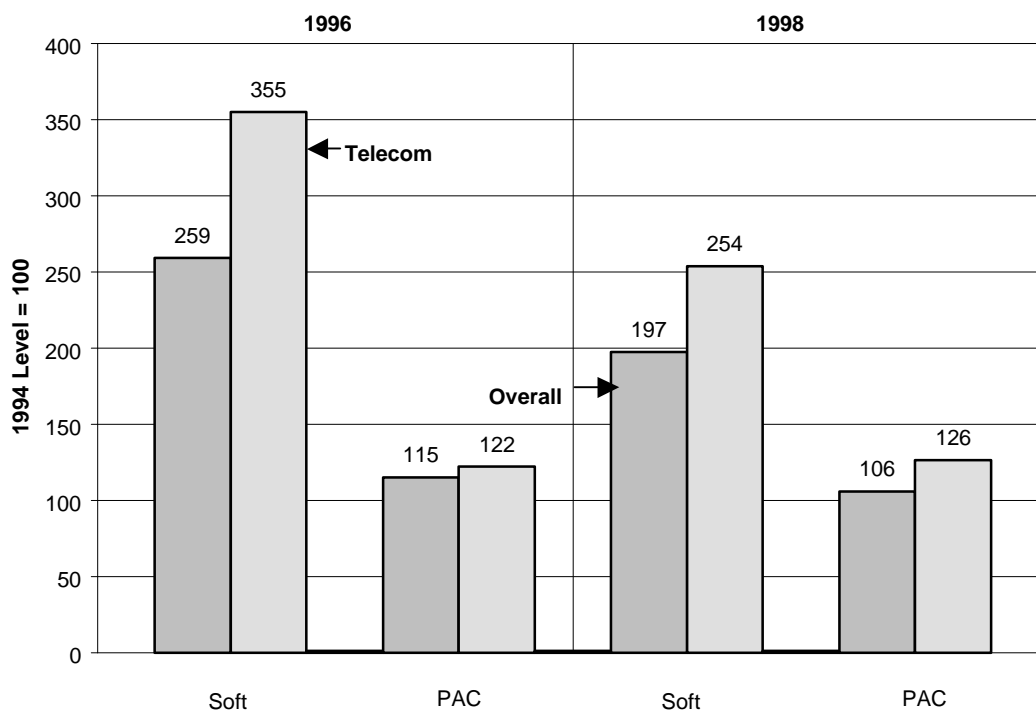
<sup>46</sup> For a fascinating, detailed account of this episode, see: Krasnow, Longley, and Terry, 1982.

<sup>47</sup> U.S. Department of Justice, *The Geodesic Network: 1987 Report on Competition in the Telephone Industry*, 1987.

judicial rulings rather than regulatory—or legislative—favors. This state of affairs was undoubtedly less than optimal in the opinion of incumbent congressmen. In short, passing the Telecommunications Act, moving the marketplace back to *Congress's* line-of-business restrictions, was a popular, bipartisan objective among legislators. This propelled legislation which had been stalled for, literally, decades. We may now judge whether Congress's self-interested objective has been met.

The evidence suggests that it has. In both the 1996 and 1998 election cycles, federal

**Figure 5.**  
Soft Money and PAC Contributions in 1996 and 1998 Cycles



political contributions by telecommunications firms rose both absolutely and relative to the overall rise in political giving, according to data supplied by the Center for Responsive Politics (Figure 5.) Indeed, in both cycles, both categories (soft money and PAC donations) of telecommunications spending increased. This 4 for 4 outcome could be achieved by random chance just 6 times in 100. This increase in political contributions is all the more impressive in

<sup>48</sup> See Peter Huber, *Law and Disorder in Cyberspace*, (New York: Oxford; 1997), 99.

light of the Act's announced goal of "de-regulation." Rent seeking predictably subsides as government intervention recedes. Here reported expenditures on political contributions actually increase.

Add to this quantifiable political gain the fact that the Telecommunications Act has provided a platform for an exceptionally newsworthy set of public issues, from the major competitive issues discussed in this paper to the "hot button" social issues in the Act, from TV violence (and the V-chip) to Internet indecency. Even failings attributed (rightly or wrongly) to the Act (say, cable rate increases) have afforded the opportunity for high-profile hearings and voluminous incumbent publicity. It is not an overstatement to label the Telecommunications Act close to an unmitigated political success for congress as a whole.<sup>49</sup>

### **VIII. Conclusion**

A sober assessment of the effects of the 1996 U.S. Telecommunications Act reveals that the legislation has been successful in promoting entry into local telecommunications, albeit at a rather slow rate. It has not, however, yet allowed the RBOCs to enter most long-distance markets and has thereby slowed the development of inter-exchange competition. By contrast, Canada has not attempted to divide its telephone industry into a set of local carriers and a set of long-distance companies, yet it has achieved as much long-distance competition in seven years as the U.S. has achieved over a quarter century.

We conclude that the 1996 U.S. Act, while flawed, still scores relatively well in comparison with previous U.S. telecommunications laws. Increasingly, customers are facing choices between service suppliers. Where head-to-head rivalry has developed, rates are falling

---

<sup>49</sup> It was not a universal political success, however. The Chair of the Senate Commerce Committee and key sponsor of the Act, Larry Pressler (R-SD), was the only incumbent senator defeated for reelection in 1996. His opponent raised the TA as a campaign issue.

and service choice increases. Entry by new rivals appears to be speeding deployment of enhanced services, including highspeed broadband access for both business and residential customers.

Capital markets—always looking to the future—indicate that competitive forces in the U.S. will intensify. Billions of dollars are now being employed on bets that firms offering competitive local telephone and cable service will prosper and grow. Regardless of the impatience justifiably exhibited with monopoly services in the interim, it must be pointed out that previous legislation—two comprehensive and much heralded Cable Acts in 1984 and 1992, for instance—never succeeded in producing the degree of service rivalry that now exists on the competitive fringe of local telephone markets.

It is still too early to provide a definite measure of the importance of the 1996 U.S. Act or the 1997 Canadian Local Competition decision. Unfortunately, market forces are not labeled, *Made in the Act*. But having observed that previous “reforms” have produced demonstrably counter-productive impacts for consumers, it is telling that such problems have not yet arisen in the wake of the 1996 U.S. legislation. Indeed, the failings of the Telecommunications Act in promoting competition are likely to be found in its conservatism. The measure did not liberalize radio spectrum allocation nor move aggressively to promote long distance entry by the RBOCs. It mandated extensive “safeguards,” and led the FCC to micro-manage reforms so tightly that the leading U.S. regulatory economist, Alfred Kahn, has proposed “deregulating the process of deregulation.”<sup>50</sup>

---

<sup>50</sup> Alfred Kahn, *supra.*, fn. 28.