

FEDERALISM: AN HISTORICAL PERSPECTIVE

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The purpose of this chapter is to explore the historical development of federalism in the telecommunications industry. There have been two significant periods during which legislative bodies passed laws that preempted the regulatory authority of lower districts. First, beginning about 1907, states took over some of the regulatory responsibilities that had previously been held by the municipalities. The next major change occurred in 1934, when the U.S. Congress established the FCC.¹

The first period is of special interest because it coincided with three developments that have modern parallels: the emergence of competition between telecommunication suppliers, the growth of nonexchange services made possible by new technologies, and the call by the Bell Operating Companies (BOCs) for a consolidation of regulatory authority.

The establishment of the FCC did not coincide with any major structural changes in the industry. The formation of the Commission is largely attributable to macroeconomic developments. Although there was clear concern about the earnings of the Long Lines division of AT&T,² the more important factors were the market failures that had led to the Great Depression and a political mood that questioned the propriety of allowing one firm to hold so much power.³ The

¹The Mann-Elkins Act of 1910 gave the ICC the authority to regulate interstate telecommunications. State authority was not preempted by the passage of the act.

²During the period 1913 to 1935, the average annual rate of return on net-book investment was 10.9% for Long Lines and 6.72% for the BOCs. Federal Communications Accounting Department, "Long Lines Department: Financial and Operating Summary," April 15, 1936, p. 15.

³Federal Communications Commission Telephone Rate and Research Department, "Final Report of the Telephone Rate and Research Department," p. 3, June 15, 1938.

Depression spurred government officials to increase oversight of this and other industries.

Because the first era of increased control by the central government offers more parallels and insight into today's policy issues, I focus on that time period.

In many ways preemption appeared to be a natural evolution. New production processes, such as the load coil and metallic loops, extended the distance and nature of communication links, and with these developments, different regulatory needs emerged. The states' assumption of what had previously been considered local government duties seemed to be driven by technology and corporate organization. As the use of long-distance lines increased during the first decade of the 20th century, city governments were the only existing regulatory bodies. However, they were not well positioned to monitor the growth of this new service, because the city councils' authority did not extend beyond the city boundaries. Consequently it seemed natural to assign telecommunications regulation to a body that had more extensive legislative power (Erickson, 1915).

State preemption of municipal regulation also seemed to be a sensible adjustment to the changing corporate structure of the nation's leading supplier—the American Telephone and Telegraph Company. At the turn of the century, for many reasons, including the need to improve the coordination of long-distance service, AT&T merged together some of its operating companies (Garnet, 1985). For example, prior to 1909, seven BOCs served New York state. Separate corporate entities were serving the state's larger cities—such as New York and Buffalo. But during that year, operations were consolidated into one firm, New York Telephone. At that point, it seemed to make little sense to leave the regulation of Bell to local authorities.

The centralization of control was also part of a larger political movement. The proponents of state regulation argued that preemption was a progressive reform because it removed power from corrupt, local political machines.⁴ In addition, some leaders of the progressive movement, especially those associated with the National Civic Federation, believed that a cooperative working relationship should be established between the government and big business (Weinstein, 1968). The state governments, more than the municipalities, had the resources to carry out this cooperative effort. A well-trained, aggressive staff was needed to monitor the utilities.⁵ Whereas large cities might have been able to assume

⁴McDonald, p. 118–120; *Milwaukee Journal*, October 17, 1906; *Milwaukee Daily News*, October 2, 1906; and “Arguments by J. A. Aylward,” 1907, Wisconsin Legislative Reference Bureau.

⁵The Wisconsin Railroad Commission was the first state agency with the power to establish comprehensive regulation of the telephone industry. John R. Commons was one of the primary authors of the bill that established the Commission. Commons was concerned about the necessary conditions for effective regulation. He believed that although an active Commission required broad legislative authority, the record would be determined to a greater extent by the initiative and ability of the agency's personnel. Commons/La Follette, undated report located in the January 1905 paper of Robert La Follette, Wisconsin State Historical Library, pp. 1–6. In this letter, Commons was discussing regulation of the railroad companies.

this cost, smaller ones did not have the resources or general need to hire a permanent, professional staff.

RIVALRY AT THE TURN OF THE CENTURY

In my discussion of the reasons for the establishment of state regulation, one factor was noticeably absent—public demand for state intervention. During the period 1894–1913, AT&T faced stiff competition in many sections of the country. AT&T's rivals, known as the Independents, began by establishing telephone service in small towns and cities, as well as in the rural United States. AT&T had not developed these markets.

An important sector of the Independent's customers desired toll connections with the nation's larger cities. Businesses wanted to be able to contact their wholesalers, and some farmers wanted to have improved access to city markets.

At first, AT&T refused to interconnect with the Independents. In order to satisfy their customers' desire for toll connections, the entrants petitioned city governments for the right to construct exchanges in AT&T's primary markets—the nation's larger cities. These requests received considerable local support in markets in which Bell's customers were dissatisfied with the quality of telephone service, rates, or the lack of connections to surrounding communities.⁶

Most cities granted petitions for competitive exchanges. Head-to-head competition in such places as Cleveland, Los Angeles, Seattle, Philadelphia, Indianapolis, Buffalo, and St. Louis spurred market and technological developments. This competition compelled firms to actively seek new customers, and to offer high-quality service.

By 1901, in order to sustain its control over the large-city markets, AT&T concluded that it had to change its policy toward the less densely populated areas.⁷ During the monopoly era (1876–1893), the market outside large and medium-sized cities had not been developed because AT&T believed that the marginal efficiency of capital was higher in large cities.⁸ Competition taught AT&T an important lesson—due to the externalities of telephone service, some markets should be operated at an apparent loss. Although the direct revenues from serving some rural customers was less than the direct cost, it still made sense to develop these areas. Otherwise, if the regions outside the large cities

⁶See, for example, L. N. Whitney, "Report on Conditions in Indiana," August 1907, box 11, Museum of Independent Telephony.

⁷For example, see Fish/Pettingill, April 21, 1902, Presidential Letter Books (hereafter PLB), v.23-1; Fish/Davis, September 25, 1901, PLB v.16; and remarks of Charles Cutler, President of New York Telephone, at "Conference Held at Boston, January 23, and 24, 1900: Telephone Service and Charges" (hereafter "Telephone Service Conference"), pp. 226, 249, box 185-02-03, American Telephone and Telegraph Company Corporate Archive (hereafter ATTCA).

⁸*Wisconsin Telephone News*, 1 (December 1906), p. 1.

were left to the Independents, this would increase the demand for a second supplier in its profitable, large-city markets.⁹ In order to protect its more desirable service territories, AT&T decided that it must compete with the Independents in rural areas surrounding the nation's cities.

Where direct competition existed, as well as in areas in which there were no major barriers to entry, there was essentially no public demand for state rate regulation. As the theory of contestable markets suggests, it does not take a large number of firms to obtain the positive attributes associated with competitive industry structure (Baumol, Panzar, and Willig, 1982). Duopoly rivalry, or the mere threat of rivalry, drove down prices, compelled the incumbent to improve its service, and led to a rapid growth in the expansion of telephone service to more households.

AT&T monopoly prices were also restrained by demand-side factors. Most important, outside large cities, the price and income elasticity of demand were high. Telephone service had not yet become "essential," and therefore there was little opportunity for a monopolist to earn supranormal profits. Because of this demand-side constraint, there was little need for state regulation in the vast majority of the nation's cities and towns.¹⁰

A strong sentiment for public control existed in the nation's largest cities, particularly in New York and Chicago. Competition was impeded in these metropolises due to municipal regulations intended to avoid further congestion. The rules required the placement of utility lines underground.¹¹ Because of the disruption that the construction of a second exchange would cause to the city's streets and commercial interests, municipal officials were reluctant to issue a franchise to the Independents.

This disruption could have been avoided by requiring the potential entrant to rent conduit and pole space from the incumbent, but the Independents were

⁹Remarks of President Cutler of New York Telephone, American Telephone and Telegraph Company, "Conference Held at Boston, January 23, and 24, 1900: Telephone Service and Charges," AT&TCA, p. 226; Vail/Winsor, March 26, 1909, "Proposed Consolidation," AT&TCA box 47.

¹⁰For example, when the State of New York held legislative hearings on the need to establish telephone rate-regulation, there were no public appearances at the Upstate public hearings. *Telephony*, 18 (November 27, 1909), p. 561.

Competition was strong in Kansas, and the income levels constrained the prices that the telephone companies could charge. An opponent of regulating the telephone industry in Kansas remarked in 1909, that, "Not only is there no public demand, but there is no public *need* for this utilities' bill." "Argument of J. W. Gleed to the Kansas Judiciary Committees," p. 4.

In Wisconsin, although the public made frequent requests to their governors for protection from the Railroad monopolies, there was no call for state control of the telephone industry. See the collected papers of Governors Robert M. La Follette and James O. Davidson, Wisconsin State Historical Society.

¹¹See, for example, New York Laws of 1884, ch. 534; and New York Laws of 1885, ch. 499.

concerned with the threat of monopolistic pricing by the owner of the structures, and the uncertainty of the availability of space to handle future growth.¹²

Typically, entry was opposed by the business and merchant's associations that represented the city's largest firms. Because the competing telephone systems did not interconnect, businesses often rented lines from both systems. The large businesses frequently opposed competition in the hope that they could avoid the expense of renting from the second supplier.

Residential customers were much less likely to rent telephone lines from both systems. Indeed such customers were likely to benefit from the significant price reductions that resulted from competition. Whichever supplier had the largest number of residential customers would also receive the greatest support from the business community. Consequently, the telephone companies promoted residential subscription in order to raise the value, and hence the price, to business customers.¹³

The large businesses were far from satisfied with the rates AT&T charged; monopoly pricing seemed to lead to supranormal earnings for the company in markets in which entry was not a constraint. Due to the absence of competition, the business trade associations asked the government to provide protection. In their appeals to legislators, these associations were particularly bothered by AT&T's profits and its rate structure.¹⁴ They wanted to see rates lowered in the large cities and expressed no support for AT&T's rate philosophy that called for higher rates in urban centers in order to sponsor development in rural communities. Consequently in their requests for municipal or state control, these businesses were interested in seeing the establishment of a procedure that would limit AT&T's earnings in their cities to a "fair" rate of return.¹⁵

Municipal regulation posed a problem for AT&T. Chicago and New York City accounted for approximately 35% of the total earnings of the BOCs at that time. The rate of return in these cities was on the order of 13% to 16%, well

¹²*New York Tribune*, March 15, 1905; and Federal Communications Commission Accounting Department, "Report on American Telephone and Telegraph Company Corporate and Financial History," Special Investigation Docket No. 1, volume III, appendix 14.

¹³"Telephone Service Conference," footnote 9, pp. 168-169 (Sabin, President of Pacific Telephone), and 196 (U. N. Bethell, General Manager, New York Telephone).

¹⁴Federal Communications Commission Accounting Department, "American Telephone and Telegraph Company Corporate and Financial History," vol. 2, schedule 44 sheet 1 and schedule 46 sheet 4, January 16, 1937; Hearing Before Assembly Committee on General Laws on Assemblyman Krulwich's Bill Entitled 'An Act to Regulate the Toll Charges for Local Telephone Communication,' Albany, April 4, 1906, pp. 36-42; "Speech of Simon Sterne, Esq., Before the Assembly Committee on General Laws, January 30, 1889, in Favor of Bill Limiting Telephone Charges" (New York: George F. Nesbitt & Co., 1889); and *Telephony*, 17 (January 2, 1909), p. 22.

¹⁵Although AT&T challenged the claimed level of earnings, they did offer rate adjustments that limited earnings to a "fair" level. *New York Herald*, May 26, 1906; and U. N. Bethell, "Argument Before the Finance Committee of the Senate of the State of New York," March 10, 1898, Senate Bill No. 360: Telephone Rates (n.d., n.p.).

above the 5% cost of capital.¹⁶ If municipal regulation prevented AT&T from earning supranormal profits in these markets, it would retard their effort to develop rural exchanges. It would also limit the available funds for their aggressive response to competition in other cities.

AT&T agreed with the business community that regulation was preferable to competition. In order to thwart the demand for competitive exchanges in the nation's largest cities, and also to address the grievances of its business customers, AT&T began to advocate the establishment of state regulatory commissions in 1906. The firm was the leading proponent of state regulation in Wisconsin—the first state to establish comprehensive regulation of the industry.¹⁷ AT&T sought regulation as a means of preventing entry into its most profitable market, Milwaukee. State regulation was more desirable than municipal control, because in this way the large earnings in Milwaukee could be hidden by the losses of competitive exchanges.¹⁸ Because the statewide earnings of Wisconsin Telephone were normal, AT&T expected that state regulation would have little effect on its pricing. In exchange for opening its books to state auditors, AT&T expected the legislature to prohibit the Independents from establishing a competitive exchange in Milwaukee.¹⁹

In 1906 AT&T also advocated regulation as an alternative to competition in Chicago and New York. But because the New York and Chicago Bell Companies had essentially been limited to exchange service in these two cities, the initial rate regulation involved price control negotiations between the BOCs and these cities' officials. The need to obfuscate the New York City and Chicago earnings encouraged AT&T to consolidate the operations of these profitable BOCs with less profitable AT&T-owned subsidiaries.²⁰

Although municipal regulation did pose a threat to the firm's pricing and competitive strategy, it also offered some immediate relief to the most pressing problem being faced by AT&T—the threat that the Independents would establish competitive exchanges in these profitable markets. With entry into the heart of AT&T's profit centers—Chicago and New York—blocked, it was difficult for the Independents to sustain their competitive effort (Gabel, 1994). Hence, by 1907, many Independents had concluded that competitive exchanges could not be

¹⁶Federal Communications Commission Accounting Department, "American Telephone and Telegraph Company Corporate and Financial History," vol. 2, schedule 44 sheet 1 and schedule 46 sheet 4, January 16, 1937; *Wall Street Journal*, April 2, 1906; and Harry P. Nichols, "Report of the Bureau of Franchises Upon the Application of the Atlantic Telephone Company," October 12, 1905, p. 22.

¹⁷*Wisconsin Joint Committee on Transportation: Hearings on Public Utilities Bill, Number 933*, A, May 21, 1907, Wisconsin State Historical Society.

¹⁸Fish/Burt, August 19, 1905, Presidential Letter Books, Vol. 40, ATTCA; Wisconsin Telephone Company, "Telephone Talks," no. 4, 8, and 13, 1906, Wisconsin State Historical Society.

¹⁹*Wisconsin Joint Committee on Transportation: Hearings on Public Utilities Bill, Number 933*, A, May 21, 1907, Wisconsin State Historical Society, p. 89.

²⁰Vail/Winsor, March 26, 1909, "Proposed Consolidation," ATTCA, box 47.

established in AT&T's profitable monopoly markets. Therefore, they either sold their properties to the incumbent or joined its network through a sublicensee contract.²¹

Competition had forced a radical decline in the price of telephone service. Rivalry, along with secondary factors, had caused the revenue per station to fall from a level of \$90 in 1894 to \$43 in 1907 (FCC, 1939). As competition diminished around the nation, customers were concerned that these price reductions would be reversed. No longer could users count on competition, or the threat of it, to ensure that quality service would be available at reasonable rates. The diminution of rivalry led to an increase in the demand for regulation. Although the opportunity for the earning of supranormal profits existed essentially only in the large cities, state level regulation nevertheless became the accepted solution.

Neither the hearings nor the legislation that authorized the establishment of state public utility commissions (PUCs) provides much insight into the policies that the legislature wanted the PUCs to pursue. Although they were clearly concerned that rates be "fair," there was little guidance as to how these agencies should balance fairness with policies that promoted the state's infrastructure. Instead, as is often the case with the U.S. legislative process, broad authority was granted to the delegated agency. It is mainly in the actual practices and policies of the PUCs, rather than the enabling legislation, that the objectives and means of preemption became apparent.

REGULATORY PRACTICES

Bernstein (1955) argued that regulatory commissions go through four phases: gestation, youth, maturity, and old age. During its early years, a regulatory commission may regulate an industry aggressively. Although its *raison d'être* is to protect the "public interest," over time the agency loses sight of this objective. Due to limitations imposed by state and federal courts, most state PUCs authorized to oversee the telephone industry did not go through this initial aggressive stage. Rate cases were conducted in 1910 in much the same way in which they are handled today. In the first phase of the hearing, the revenue requirement of the firm was determined. In the second stage, the rate structures and levels that would generate the previously established revenues were set.

The first step was cumbersome and costly because of the legal requirement to determine the "fair value" of the utilities' property. The courts said that the determined rates must compensate investors for providing funds to the utility.²² This return on investment was intended to reflect the opportunity cost of investing

²¹Historians typically attribute the turn of events in 1907 to the ascendancy of Theodore Vail to the presidency of AT&T. The policy of entering into sublicense agreements with Independents had been well established by this time. It was the supply of Independents willing to become sublicensees that changed dramatically.

²²See, for example, Michigan Railroad Commission, Re: Michigan State Telephone Company, PUR 1918C, p. 84.

funds in a utility. Prior to the Great Depression, it was the general legal standard that the return be calculated as a percentage of the fair value of the property. Fair value was defined in terms of the economic value, or replacement cost, of the property.²³

The regulated utilities, as well as the state PUCs, found it difficult and time consuming to estimate the replacement cost of the property.²⁴ Its value was typically determined by taking a physical inventory of the firm's facilities. The quantities of property were multiplied by current costs and then summed up in order to determine the fair, or market value, of the property.

These appraisals were conducted in excruciating detail. In 1914, accountants working on an appraisal of New York Telephone's investments in New York City, foresaw the need to determine the market value of almost 25 million units.²⁵

Due to the burden of establishing the fair value of the facilities, few resources were left to conduct studies of individual rate items.²⁶ Cost studies were rarely undertaken, but when they were, the degree of analysis was often equal to or superior to what is done today at the federal or state level. For example, shortly after 1910, the City Counsel of Chicago and the Wisconsin Railroad Commission authorized detailed studies of the cost of providing different services in Chicago and Milwaukee, respectively.²⁷

In both jurisdictions, the analysts identified the fixed and variable costs of production. Fixed costs were allocated between classes of service based on the number of lines in service. Variable costs were assigned to the customer classes based on peak and 24-hour usage.

²³*Smyth v. Ames*, 169 U.S. 466, 546-7. See, also, *Democratic Central Committee of the District of Columbia v. Washington Metropolitan Area Transit Commission*, 485 F.2d at 800-01.

²⁴C. A. Wright and D. B. Judd, "Standardization of Telephone Rates" (Columbus: Ohio State University Engineering Experiment Station, 1923), p. 1; and *Final Report of the Joint Committee of the Senate and Assembly on Telephone and Telegraph Companies, State of New York* (Albany: J. B. Lyon Company, 1915), pp. 446-447.

²⁵*Telephony*, Vol. 67, no. 4, 7/25/14, p. 30. In 1914, the state authorized \$100,000 for the appraisal. It was expected that it would take 2 years to complete. Because of the cost and time requirements, most areas in the State received only cursory attention. *Final Report of the Joint Committee of the Senate and Assembly on Telephone and Telegraph Companies*, pp. 25-28. The \$100,000 expenditure is approximately equal to \$1.2 million in 1988 dollars.

The Minnesota Commission undertook a statewide valuation of Northwestern Bell Telephone's properties at a cost of \$1,000,000. The study took 3 years to complete, and in the end, the Commission found that the fair value of the plant was approximately 4% in excess of the book cost of the properties. Nebraska State Railroad Commission, Re: Northwestern Bell Telephone Company, PUR 1923B, pp. 117-120.

²⁶Thompson and Smith (1941, p. 208); and Federal Communications Commission, "Final Report of the Telephone Rate and Research Department," pp. 20-21, 43.

²⁷William J. Hagenah, *Report on the Investigation of the Chicago Telephone Company: Submitted to the Committee on Gas, Oil and Electric Light* (Chicago: Henry O. Shepard Co., 1911); and Wisconsin Public Service Commission, "Valuation and Bases of Allocations and Apportioning Property Groups of the Various Classes of Service," 1915, box 10, series 41/4/8, Wisconsin State Historical Society.

There are three striking aspects of these cost studies. First, the quality work done at the state and city level was clearly superior to the analytical work that was being done by the federal regulatory agency—the ICC.²⁸ Second, in the markets in which there was the greatest need for regulation, such as Chicago, city officials were able to marshal the expertise to do the same high-quality work that was being done by the nation's preeminent regulatory agency—the Wisconsin Railroad Commission (Stehman, 1925). Third, the work done by these two regulatory bodies was also superior to the work effort made at most commissions.

Most PUCs' boards were overwhelmed by the task of determining the revenue requirement. Pricing decisions had to be based on information other than cost studies. The size of the agency budgets left few remaining resources for the undertaking of detailed cost-of-service studies.

Furthermore, there was little push on the part of the regulated firm for detailed cost analysis. AT&T's strategists recognized that depending on the nature of regulation, state oversight could be either harmful or helpful to its operations. Regulation was beneficial to AT&T where it blocked competitive entry. State oversight could hinder AT&T if it interfered with the firm's goals. AT&T wanted the PUCs' attention restricted mainly to determining the firm's revenue requirement.²⁹

Although cost studies were an input to AT&T's internal rate setting process, the BOCs believed that cost studies should be kept out of the public record. Accountants and economists could estimate the cost of service, and this information would give the PUCs some independent indication of how rates should be designed. AT&T wanted the PUCs to base prices on the value of service.³⁰ This required little or no cost data, and gave the regulated firm the greatest pricing freedom. It was much easier for a PUC staff or its consultants to use engineering and accounting data to determine the cost of service, than to appraise

²⁸The ICC was granted regulatory authority in 1910, but did little more than adopt AT&T's accounting practices as the standard for the industry, processed annual reports, and approved mergers of competing firms as being in the public interest (Brock, 1981, pp. 158–159; and Joint Application of Rock County and Wisconsin Telephone for Certificate that Acquisition Will Be in the Public Interest, 70 ICC 636).

The U.S. Congress and the staff of the FCC attributed the lack of activity at the ICC to inadequate funding (Federal Communications Commission, "Final Report of the Telephone Rate and Research Department," pp. 3–4). The ICC's large staff concentrated on railroad issues. The failure to establish a communications division within the Commission has been attributed to the lack of public interest in interstate telephone regulation (Wheat, 1938, pp. 846–847; Fainsod & Gordon, 1941, pp. 366–367).

²⁹Stigler (1971) argued that a firm will favor regulation if the benefits derived (protection) exceed the burdens assumed (constraint on prices and earnings). AT&T apparently believed that if commissions did not undertake cost studies, price constraints would be, essentially, nonbinding, and this would increase the net benefits of regulation.

³⁰See, for example, W. S. Ford, "Memorandum: Concerning Certain Peculiar Features of Telephone Exchange Service," September 10, 1901, "Telephone Rates—Basis—1880–1908," box 12, ATTCA; "Telephone Rates: A Few Suggestions as to How They Should Be Defended" (n.a.), "Rates—Basis for Determination—1906," box 48, ATTCA; and Lee (1913, p. 79).

the relative demand for different services. Therefore, due to the combination of lack of resources and staff initiative, and AT&T's rate philosophy, most of the early state regulatory decisions reflected the value-of-service pricing concept.

With few exceptions, the states decided not to consider the cost of providing service in each market; instead they established rate classifications that were based on the number of telephones in service. The number of exchange access lines was considered to be the best gauge of the value of service. Based on this criteria, customers in large cities were charged the highest prices. The earnings in these exchanges were then used to cover the apparent loss in localities in which the traffic could not bear compensatory rates (Baird, 1934).

CONCLUSION

Three primary conclusions can be reached from this history: jurisdictional authority is not necessarily crucial, policymakers should be mindful of the need for diverse approaches, and regulatory policy can be used to promote technological change. State-level regulation was favored by AT&T in 1907, in part to obfuscate the price-cost relationship of various services. Firms can hide data on earning levels regardless of the regulatory jurisdiction. Because today's telephone companies provide multiple services in different states, and also offer products through unregulated operations, any agency will have a difficult time determining which costs are associated with which services.

A commission is effective to the extent to which it can establish service standards and quantify the cost of providing the multiple products offered by the exchange companies. In addition, regulators must develop a perception of the market. Knowledge of demand-side factors will help a commission set prices that meet criteria such as sustainability, optimality, and promotion of growth (e.g., developing new network services).

The pricing of new services is an area in which a new regulatory agenda must be considered. The pricing history of the telephone industry shows that new services typically have been offered at a loss. AT&T was willing to serve markets and sell products at a loss because it believed that once a critical mass was achieved, or certain externalities came to fruition, the service would eventually become profitable.³¹ In today's contentious atmosphere, and especially because of the legitimate antitrust concerns of several interested parties, it would be risky

³¹In 1926 the President of AT&T, H. B. Thayer, remarked that "telephone service was not created to fill a demand . . . the service creates the demand. That is the business of our system, to try to discover and determine what it is that will be helpful to the people of the United States in the way of service and then to provide it. The demand follows the creation of the service instead of being impelled by it." *Proceedings of the Bell System Educational Conference for Faculty Representatives of Colleges of Liberal Arts and Collegiate Schools of Business* (New York: AT&T, 1926, p. 11). See, also, Hall/Vail, May 12, 1885, box 1011, AT&TCA.

for a local exchange company to admit that a new product was being offered below cost initially.

Because new services often require a redesign of the existing network, it is necessary to establish a mechanism that will account for the full cost of introducing a new product or service. This means recognizing that it is quality, and not just quantity, that drives new capital expenditures.³² Furthermore, a procedure must be developed in which the basic-usage telephone subscribers are compensated for the money that they have previously provided for the establishment of these new services (Gabel, 1990).

The measurement of the cost of service is an art that the FCC and the state PUCs have largely failed to master. The task is becoming more challenging as new services are increasingly based on software enhancements. Because telephone companies have the best sense of their markets, even where cost standards have been established, they essentially control the rate-setting process. This is part of the larger regulatory problem, as summarized by Platt: "The private sector has better access and use of legal, economic and technical information about essential public services" (Platt, 1989; p. 44).

This informational asymmetry exists at both the state and federal levels. The agencies' problems are compounded by the general uncertainty regarding the nature of the future demand for services.

The former Bell System had a wonderful way of dealing with uncertainty—new products and managerial innovations would be tested in selected cities, and subsequently analyzed by the parent company and the heads of the different operating companies. It was through this inductive learning process that the firm was able to develop its long-term strategy. Today, state PUCs share information and learn from one another, just as they did at the start of the decade. One clear loss resulting from federal preemption would be the latitude and initiative to test different policies. The FCC would have a difficult time authorizing and supervising regulations that varied across regions of the country.

History also suggests that before federal oversight be increased, we need to determine the reasons for inadequate state supervision. The lackluster record of the first state commissions was due mainly to the court-imposed requirement that the fair value of the property be the basis for rate setting. Replacing state with federal regulation would not have eliminated this obstruction during the pre-World War II era. The proponents of federal preemption must identify the limitations of state regulation, and show how the FCC will be able to overcome these barriers.

Recent history suggests that the FCC does not have the know-how or the initiative to handle effectively the difficult standards, pricing, and cost issues associated with the development of intelligent, broadband, and open networks.

³²For example, data services need a "cleaner" line than the type of connection needed for voice services.

During the 1974 antitrust case, the Department of Justice argued that the FCC did not have the expertise to regulate the operations of AT&T (Noll & Owen, 1989). In the postdivestiture era, this essential point has not changed. Following the decision to apply price caps to local operating companies, the Commission's Chairman, Alfred C. Sikes, remarked to the *New York Times*: "I don't believe that career Government people, or for that matter career non-Government people, can find out what the true cost of a service should be."³³

AT&T's original regulatory strategists would be quite happy to read Sikes' comment. They realized that as long as the regulatory commissions did not have data about costs that could be used to gauge the reasonableness of a rate, regulators would be seriously hampered in their efforts to challenge the company's rate proposals.³⁴ As noted earlier, AT&T did conduct internal cost studies; they just did not want the regulatory commissions to use cost data as an input to policy decisions.

An intelligent decision-making process, by either private or public policymakers, involves collecting and analyzing information. For internal purposes, the telephone companies have identified, and will continue to identify, the cost of providing different services. Instead of trying to develop the needed cost data for policy decisions, the FCC has selected quick, but inefficient cost and rate making solutions.

The record of the states is only somewhat better. But their response to this lack of cost data has been more constructive. Instead of claiming that they can not determine the cost of service, the state commissions have used their resources to develop some first-rate cost models.³⁵

Finally, some argued that governmental controls of economic activity, such as regulatory commissions and antitrust laws, serve to offset free market decisions that might otherwise result from technological innovation. Where vocal sectors of the body politic begin to lose their advantage in the wake of technological

³³September 20, 1990, p. D2.

³⁴Sikes' comment is consistent with the Commissions' decision that it did not have the expertise to determine the cost of different services, and therefore would use relative-use as an allocator between regulated and nonregulated operations. "Separation of Costs of Regulated Telephone Service From Costs of Nonregulated Activities," 2 FCC RCD 1298 (1987), modified on reconsideration, 2 FCC Rcd 6283 (1987), modified on further reconsideration, 3 FCC Rcd 6701 (1988), petition for review pending *Southwestern Bell Corp. v. FCC*, D.C. Circuit No. 87-1764 (filed December 14, 1987).

In its modifications to the Separations' procedures, the Commission has reduced or eliminated its recognition of the cost difference between exchange and nonexchange services. The modifications are inconsistent with the internal cost studies done by the industry. For example, although every long-run incremental cost study recognizes that the switching costs of an interoffice call is higher than the cost of an intraoffice call, the Commission favors using relative minutes of use to allocate switching costs.

Because of the Commission's expressed inability to identify the costs of existing services, it will be in a poor position to judge the reasonableness of ONA and CEI tariffs.

³⁵See, for example, Pollard (1990) and Mount-Campbell and Choueiki (1987).

change, they may lobby for nonmarket controls that mitigate or eliminate dislocations from technological change (Hughes, 1977; Owen & Braeutigam, 1980). The early history of the telephone industry shows how regulation may be used to aid the growth of the network. State regulation reduced the regulatory authority of municipal governments. This change in authority established the conditions for the flow of funds from the cities to cover the costs of extending the network into less populated areas. Federal regulation may serve a similar purpose—earnings from high-traffic volume, low-cost states may be used to cover the cost of network services in areas where the population density and traffic volumes are relatively low.