

# TELECOMMUNICATIONS LAW: THE UNITED STATES MODEL FOR ECONOMIC REGULATION OF TELECOMMUNICATIONS PROVIDERS

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## Summary

Telecommunications law—the law governing telephones, radio and television broadcasting, cable television, satellite broadcasting, and enhanced information services such as information distributed over the Internet—has developed as a separate body of law. This is because policymakers long believed that competition among providers and general legal principles could not promote social welfare in telecommunications markets. For nearly a century, telecommunications law set the parameters for regulating monopoly providers of telephone service and selecting the companies that are permitted to provide broadcasted news, information, and entertainment. Within the last decade of the twentieth century, telecommunications policy has shifted course. Policymakers believe that most areas of telecommunications should ultimately be governed by competitive forces. As a result, modern telecommunications law is focused on undoing past regulatory structures and replacing them with regulatory measures designed to facilitate competition.

## **1. Introduction**

Telecommunications law is a body of law governing the marketing and use of technology and devices that transport information—the spoken word, pictures, or data—very rapidly from one place to another. Modern telecommunications originated with the invention of the telegraph and the telephone in the nineteenth century, and continued to adapt with the invention of radio, television, and the computer in the twentieth century.

In the US, telecommunications is governed by a separate body of law codified principally in the Communications Act of 1934 and its various amendments, most significantly the Telecommunications Act of 1996. This body of law is industry specific and includes numerous requirements and limitations that differ in breathtaking ways from the competitive market principles that apply to most industries. Although not addressed in detail in this article, other areas of law including antitrust, copyright, and the legal doctrine setting the parameters of the First Amendment of the US Constitution, have played significant roles in the shaping of the telecommunications industries.

Section 2 of this article explains the beliefs about telecommunications markets and the telecommunications industry that led to the adoption of this unique legal structure. Sections 3 and 4 explore the law governing the two principal means of transporting information—radio waves transmitting information through the air or electricity (electrons) or light (photons) transmitting information through wires or cable. Each of these sections explains the historic regulatory regime and the modern attempts to use regulation to transform the telecommunications industry from a regulated industry to a competitive industry.

## **2. Regulation versus Competition in Telecommunications Markets**

### **2.1. Economic Theory of a Competitive Economy**

Capitalist economies generally rely on competition among providers of a good or service to advance social welfare. A firm that charges a higher price for an inferior product will soon see its customers flocking to competing firms. By forcing firms to charge lower prices and produce higher quality goods and services in order to attract business, a society's resources are optimized.

In a fully competitive market, firms should charge a competitive price: No more than an amount sufficient to cover their costs and generate sufficient profit to attract investment capital to the industry. A firm that can produce a higher quality good at a lower cost is said to be more productively efficient than a firm with lower quality and higher costs, and the productively more efficient firm will win the most customers. A competitive market also ensures that goods are distributed in an allocatively efficient manner, i.e., to those who value the goods or services most highly by demonstrating a willingness to pay more than others to get them. Competition is believed to ensure not only static efficiencies—that competitors at any particular moment will be productively and allocatively efficient—but also dynamic efficiencies, a continuing system of innovation and competition that ensures efficient production and allocation over time. The competitive forces embodied in the free market are supplemented by generally

applicable antitrust rules prohibiting certain restraints of trade as well as contract, tort, and property law. Through these laws, government limits business behavior to some extent. But direct government regulation of prices or market entry is rare.

## **2.2. Unique Aspects of Telecommunications Markets Render Competition Ineffective**

The telecommunications industry, policymakers long believed, required more intrusive government regulation, because competition was incapable of ensuring efficient production and allocation of resources. This was believed to be true because of the nature of the two modes of transmitting information—using frequencies along the electromagnetic spectrum and using wires connecting participants in a network.

The competition inhibiting aspect of the electromagnetic spectrum was thought to arise from its scarcity. Any attempt by more than one firm to use the same frequency at the same time causes interference that prevents anyone from receiving the information. If spectrum was for practical purposes unlimited, interference would not pose a significant problem. Each user could find its own frequency. But useable spectrum given the current state of technology has always been more limited than the number of potential users. As a result, competition for spectrum space absent government regulation would not enhance efficiency, but would instead render broadcasting valueless unless some means to allocate spectrum among users was employed. In addition, use of the spectrum for broadcasting has long been viewed as an essential means of disseminating ideas and facilitating debate. The need to ensure an open marketplace for diverse ideas thus also helps explain the decision to regulate use of the spectrum.

Wiring homes to transmit and receive information poses a different problem. The marginal cost of adding new telephone customers to an existing network interconnected by a wire system continues to fall no matter how many users sign up. This economic condition is said to create a natural monopoly. Natural monopolies do not compel regulation unless the good or service in question has no ready substitute. For example, even if the production of ceramic tile were a natural monopoly, consumers could readily substitute other sorts of wall and floor coverings such as wood, natural stone, porcelain tile, and various man-made alternatives. The competitive process, while perhaps not perfect, could still function. But where a service has no close competitors, and in the 1930s telephone service surely had none, the competitive process cannot function. Because the largest firm will always be more efficient—that is it will be able to produce a higher quality and lower cost good than its smaller rivals—smaller firms will eventually be driven from the market. For this reason, monopoly is a natural outcome.

The natural monopoly concern is magnified in the telephony market because users of a telecommunications system would find that the value of the system increases as the number of users increases, a phenomenon known as network effects. One telephone is useless. But if two people become part of a system, the potential for long distance communication is extremely valuable. As more people become part of the system, the system becomes more valuable to each of them. As a result, expanding an existing network would likely be more efficient than forming a new competitive network to serve a sub-set of users. The combination of network effects and natural monopoly

characteristics of wiring each individual telephone led policymakers to conclude that the standard competitive market model could not function properly in the telephone market, and regulation would thus be required to ensure the efficient provision of telephone service.

In part because the value of the system increases with the number of users and in part to ensure broad access to the telephone system for emergency uses, policymakers have long sought to ensure that as many people as possible would have access to at least basic local telephone service, a goal commonly referred to as universal service. Competitive markets effectively ration service based on the cost of providing it and the willingness of individuals to pay. Without regulation, even a fully competitive telephone market would likely exclude some low-income consumers and those in rural areas where providing service is expensive. Regulation is thus necessary to best pursue the universal service goal.

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#### Biographical Sketch

**Professor Steven Semeraro** is an assistant professor of law at the Thomas Jefferson School of Law in San Diego, California, US. He attained a Bachelor of Arts degree in history with highest honors from Rutgers College in 1984 and a juris doctorate with distinction from Stanford Law School in 1987. At Stanford, Professor Semeraro was president of Serjeants-at-Law and co-editor-in-chief of the *Stanford Environmental Law Journal*. He then clerked for the Honorable Stephanie K. Seymour on the United States Court of Appeals for the Tenth Circuit. In 1988, he joined the law firm of Covington & Burling in

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