

## Lecture II: Public Service Corporations

Besides banks cited in Lecture I, the first large corporations in the United States, chartered by the individual states, provided public services, primarily transportation and communication: canals, steamboats, railroads, telegraph systems, all came into existence during the first half of the 19<sup>th</sup> century. In many, if not most, cases these corporations enjoyed monopoly status and often state aid in getting established. They were loosely regulated by the state governments and usually enjoyed the right of eminent domain, which enabled them to build their infrastructure across private property after paying a fair market price for the right of way and other inconveniences. Public officials were often shareholders in these enterprises. The modern concept of “conflict of interest” hardly applied when it came to sponsorship of private companies that might also have a public benefit. Private interests routinely gave shares in the new concerns to the relevant elected officials in return for their support for tax holidays for the new companies or other helpful public assistance. In some cases, a local or state government might even give a new company the right to set up a private “town” complete with its own police and fire department. This happened with the creation of the Sparrow Point steel mill outside of Baltimore in the 1880s and with the Pullman Works in Illinois about the same time. Eventually such delegations of public power to private interests came to be illegal, but in the heyday of corporate formation in the 19<sup>th</sup> century, such practices were almost routine.

The first canals and railroads often were public-private partnerships, with the government guaranteeing the enterprises bonds so as to enable them to sell to a wider public. The Erie Canal in New York State, completed in 1825, was sponsored by the State of New York, particularly the governor at the time, DeWitt Clinton, as an economic development project. Opening a connection between New York City via the Hudson River to Lake Erie, the canal proved to be a great success and during the 1820s and 1830s it produced good revenue and moved tons of goods from New York to Buffalo on the shores of Lake Erie. It had the disadvantage of freezing solid in the winter, but for most of the year it carried a steady traffic of barges. Starting in the 1840s, however, railroad companies began to build right of way from Albany to Buffalo providing a faster and more economical means of transporting goods and people. Gradually the canal ceased to pay for itself and eventually the bonds issued for its construction became worthless. The state eventually took over operation of the canal, and by the post-Civil War period, it had ceased to be an important means of transport. Today certain portions of the canal remain and pleasure boaters use it to gain access to the Mohawk River and, at its western end, to Lake Erie. Canals, in general, proved to be poor investments, both for the states involved and for private investors. As will be the pattern with other public services, especially transportation, private corporations will exploit the infrastructure until it ceases to be profitable and then turn it over to public ownership, or to liquidation.

By far the largest and most important corporations of the 19<sup>th</sup> century were the railroads. Here again, some of the earliest railroads were actually publicly funded enterprises with some private investors participating. The most famous of the early lines was the Baltimore & Ohio. Construction on the line that Baltimore city boosters hoped would provide this port city with easy access to the Ohio River began in 1835, but the B & O (eventually totally a private enterprise) did not succeed in reaching the Ohio River until the 1850's. By that time other railroads leading out of New York to the west made Baltimore's aspirations of being the main east coast port no longer realistic. Of course New York harbor was far more convenient for shippers than Baltimore, which lays far up Chesapeake Bay from the Atlantic Ocean (but, on the other hand, is closer to Middle Western destinations than any other East Coast port). Like many inventions, the railroad took a few years to catch on, but as the technology improved, it became apparent that a steam powered locomotive pulling a train of cars loaded with people or goods at a speed of 30 or 40 miles per hour was revolutionizing Americans concepts of time and distance.

Many states sought to encourage railroad construction by guaranteeing railroad bond issues and sometimes buying stock in the new enterprises once they “went public.” The immense cost of railroad

construction, however, meant that domestic capital was insufficient. In fact, many of the new railroads were financed by British capital which flowed into the country in the 1850s and then again after the Civil War. Railroad construction required millions of tons of iron and then steel for rails and locomotives. It required whole forests for ties to set the rails on. It provided employment for tens of thousands of laborers (and in the pre-Civil War South, thousands of enslaved people). The railroads also demanded systematic management in a way never before experienced, except perhaps in the Napoleonic Wars of the early 1800s. For many years into the 20<sup>th</sup> century the nation's largest corporation would be the Pennsylvania Railroad and its management would achieve many economic advances, but like the other railroads, it would also demonstrate overbearing arrogance, both toward its labor force and toward its customers. By the 1870s, the railroads had become the playthings of the "Robber Barons," who bought, sold, and exploited the companies with little regard for their essential purpose of providing transportation for goods and people.

Compared to European railroads being constructed at roughly the same time, the American railroad system appeared both inefficient and poorly engineered. Although by the end of the century railroad tracks went almost everywhere, most of the lines simply meandered along rivers or followed the natural terrain. In Europe the lines were constructed so as not to cross roads at grade. They either went under or over in most cases allowing faster, safer operations, but at considerably greater cost for construction, especially when it came to tunnels, which British railroads used far more frequently than their American counterparts.

As often happens when a new technology appears on the scene, hundreds of companies emerged to build railroads, often, critics said, going from "nowhere to nowhere." Especially in the more densely populated area east of the Mississippi River every town tried to gain a railroad connection. Overbuilding of railroads and the plethora of small companies engaged in the business – many with aid from state governments – soon led to bankruptcies and, eventually, to consolidation of the many small lines into essentially seven large "trunk" lines by 1900. The mergers and acquisitions were engineered, so to speak, by financiers like J.P. Morgan and Jay Gould, whose knowledge of railroading was limited but who knew how to realize a profit where other entrepreneurs were simply piling up losses.

As with most other public services, railroads were "natural monopolies." That is, the cost of construction and operation were so great that it made no sense to try to achieve free market competition in order to gain the maximum efficiency. Thus, competing lines were consolidated by the financiers and by 1900 the railroads were, in general, enjoying profitable operations throughout the country while providing generally satisfactory service to passengers and freight customers. The industry's heyday lasted from the 1880s until the First World War and then, faced with growing competition in the 1920s from automobiles and trucks, railroads started their steady decline as a factor in the American economy. Railroad management blamed increasing government regulation starting during the Progressive Era of the early 1900s for many of their troubles. Unable to raise passenger fares and freight rates in response to changes in supply and demand, the railroads suffered declining revenues while continuing to incur high fixed costs for maintenance of their tracks and purchases of new equipments. As government-regulated monopolies they ceased to have many of the advantages of private companies while being forced to provide services at less than profitable rates.

With the Great Depression of the 1930s, many of the main railroads in the country fell into bankruptcy and operated under court receiverships. As with the economy generally, the railroads enjoyed a new lease on life with the outbreak of World War II, with both freight and passenger traffic reaching unprecedented levels. Following the war, however, the long-term trend of moving people and goods by road rather than rail resumed and with the coming of the Interstate Highway system in the 1950s and the great increase in commercial air traffic, the railroads saw their very *raison d'être* thrown into question. By the 1970s, most of the railroads east of the Mississippi River were on the verge (or over) of bankruptcy, with the two

largest systems, the Pennsylvania and the New York Central forced to create a short-lived and spectacularly unsuccessful merger – the PennCentral – followed by a government bail-out and the creation of a quasi public freight operation – Conrail – and a government-subsidized passenger rail system – Amtrak. Conrail was eventually sold off to the two “surviving” railroad systems in the East – the Norfolk Southern and CSX. From a high of over 250,000 miles of tracks in the early 1900s, the nationwide total had fallen to about 90,000 miles by 1990. In the West, the BNSF and the Union Pacific took over the surviving rail lines. Now, with four rail systems nationally, the country has reached somewhat the same level of corporate concentration achieved in the early 1900s, when mergers had created essentially seven large rail systems. The difference, of course, is that today’s railroads operate in a competitive environment where most freight is carried by intercity trucking lines. But, having shucked off the money losing passenger services to Amtrak, the railroads are generally profitable and able to make investments to upgrade their freight hauling services.

What does the evolution of the railroad business tell us about the life and death of American corporations? Perhaps the bottom line is: even the best managed company will go bankrupt once the demand for its products or services disappears. The railroad, like the horse drawn vehicles that preceded it, represented the highest level of technology then available. With the coming of motor vehicles and then airplanes, railroads lost much of their appeal as a means of transport. The railroads also grew up as part of the industrialization process. Heavy industry relies on rail transport more than light industry. Microchips don’t require a rail car to transport them the way large machine tools or coal and iron did. The change in the nature of manufacturing, from heavy industry to high tech, has removed much of the reason for the railroads existence. On the other hand, the millions of freight containers loaded and unloaded in American ports every year do provide a previously nonexistent source of business for the railroads, which can easily transport these containers to distribution centers around the country. Today’s much reduced rail network actually operates at a profit and carries about 40 per cent of the intercity freight tonnage. All of the battles of the “rail barons” of the late 1800s are forgotten, as is the experience of traveling from city to city by rail, but the rail corporations have managed after many bankruptcies and liquidations to emerge as a viable and vital element of the American economy.

## **Telegraph**

While hundreds of railroads were being chartered (and subsidized) by state legislatures during the 1830s and 1840s, the new technology of electromagnetic telegraphy came into being in the 1840s largely as a private enterprise. Small, local telegraph companies were rapidly acquired and integrated into the giant Western Union Telegraph Corporation, incorporated in New York in 1856. Western Union (WU) could be considered the country’s first “tech” company. The technology of telegraphy debuted in the U.S. in 1844 with the famous message “What hath God wrought?” sent by Samuel F.B. Morse from Washington, D.C. to Baltimore along a line built with \$30,000 in Federal funding. The capital needed to start a telegraph company was far less than that required to build a railroad. Thousands of miles of telegraph wire linked major eastern cities by the end of the 1840s. Morse’s code became the accepted language of the telegraph and remains so up to the present day. Morse and some associates tried to start a telegraph company but were rapidly outpaced by more experienced businessmen, including Ezra Cornell, who gave the name “Western Union” to the company. By the outbreak of the Civil War, Western Union lines linked most towns and cities east of the Mississippi River. The telegraph had been used to transmit news of American action in the Mexican-American War (1846-1848), but it did not become a major feature of warfare until the Civil War.

The company expanded greatly after the Civil War, but failed to recognize that the future lay with telephonic, not telegraphic, communication. When offered the opportunity to buy the Bell Telephone Company from Alexander Graham Bell in 1885, the company declined. That same year the business was incorporated as the American Telephone and Telegraph Company (AT&T) which grew to be the

country's largest private business in the 20<sup>th</sup> century. Western Union also bought up all of the patents on Thomas Edison's innovations in telegraphy, including the quadruplex system which allowed the sending and receiving of four separate messages through the same telegraph wire simultaneously. This invention was actually implemented by WU, but many others were simply warehoused to avoid their falling into the hands of potential competitors. The company's anti-competitive policy was evident throughout the heyday of telegraphic communication.

## **AT & T**

The American Telephone and Telegraph Corporation really came into its own between 1900 and 1906, with the intervention of J. P. Morgan and other investors. They promoted a \$100 million dollar bond issue to finance expansion of the company and put Theodore Vail in charge of running the firm. Vail had earlier been dismissed by AT&T's board of directors after a disagreement about the company's future expansion. Vail (and Morgan) saw AT&T as a virtual telecommunications monopoly, stretching from coast to coast and encompassing both telephone and the fading telegraph service. After first trying to drive smaller independent telephone companies out of business, in 1913, as part of a deal to avoid anti-trust action, Vail agreed to Federal Government demands that AT&T divest itself of Western Union and that it cease its anti-competitive actions toward the "Independents." Vail and the government agreed that what became known as the "Bell System" would link all of the smaller phone companies into a nationwide phone system. The smaller operators would be allowed to continue providing service to rural areas that were not attractive to AT&T, while the giant corporation would build long distance connections to which the Independents would have complete access. The company also agreed to government oversight of its operations and rates, accepting lower profits in the short run in the expectation that its monopoly would guarantee long term viability. By the time Vail died in 1920 AT&T had become, for all practical purposes, a government-sponsored monopoly, and would continue as such for the next 70 years, operating under federal regulations.

A crucial drawback to the AT&T model was the company's aversion to any sort of communications innovations that might threaten its monopoly. For a while in the late teens and early 1920s, AT&T sought to take over the fledgling radio broadcasting business, which it feared could allow people to communicate wirelessly, thereby destroying the value of its vast land-line operation. When it became clear that radio would be primarily an entertainment medium, AT&T agreed to sell its interest in the National Broadcasting System to the newly formed Radio Corporation of American (RCA), which enjoyed government sponsorship in somewhat the way that the British Broadcasting Corporation (BBC) did in Great Britain. RCA, and its growing network of radio stations that soon became the National Broadcast Company (NBC) quickly introduced the concept of "commercial" radio, i.e., radio broadcasting supported by the sales of advertisements, and ceased to be of interest to AT&T.

AT&T did play an important role in the area of basic research through its Bell Laboratories, established in the 1920s to study telecommunications and electronics in general. After the break-up of AT&T in 1985, it was revealed that Bell Labs had come up with a number of path-breaking communications innovations which had been squelched by AT&T management out of fear that they would somehow damage the company's core telephone business. One, the creation of the first magnetic tape recorder in 1932, seemed to pose a threat to the telephone by allowing people to record conversations, thus undermining the presumption of privacy. Of course the tape recorder would have been a great money-making machine for AT&T and would have made it easier to preserve the words of politicians and entertainers (whose "performances" had to be saved on standard record discs). Eventually the device was perfected by German researchers. Of course Bell Labs did sponsor the research that led to the discovery of the transistor in the early 1950s, so one could say the company was not completely blind to the benefits of innovation.

## **Electrification**

Electricity generation and transmission monopolies developed with the advent of electrification in the late 1800s. Today most Americans do not have access to more than one electricity provider and electricity rates continue to be regulated by state regulatory agencies. As a result, corporations in the electric power industry tend to be somewhat stodgy bureaucracies with reliable dividends, but not much growth in the price of their stocks. The power industry is also in the crosshairs of environmental concerns, given the huge impact that emissions from power plants powered by carbon-based fuels have on CO2 levels in the atmosphere.

Today we are also faced with the question of whether internet providers are not also public service monopolies in need of regulation. This applies to cable companies that provide consumers with access to news and entertainment as well as search engines like Google that give us access to information on the internet. Similarly, so-called “social media” companies like Facebook and Twitter which enable people to communicate over the public airwaves might also well fall into the category of monopolies requiring government regulation.

Thus our corporations today are more likely than those of a century or a century-and-a-half ago to provide “virtual services,” like the telegraph and telephone companies, than tangible products, like steel, or railroad transportation.

## **Corporate Law and Government Enterprises**

Since the beginning of the use of the private corporation form of business organization in the early 1600s, government has granted to would-be entrepreneurs a license to pursue a business or other enterprise with the understanding that the new entity would serve, first of all, the interests of the company’s shareholders and secondly, the interest of the government or, in some way, the wider public interest. Governments have licensed corporations to perform myriad legal acts, but they have also prohibited companies from engaging in illegal activities, regardless of how profitable they might be for the shareholders themselves. The Delaware incorporation statute explicitly states that corporations chartered in that state can engage in any “legal activity.” This gives the state, or, in many cases, the federal government legal jurisdiction over corporate activities, when and if these political authorities choose to exercise such powers.

Although we think of corporations as business enterprises owned by their stockholders, they can just as well be non-profit institutions – such as colleges and hospitals – operating as non-profit organizations and without stockholders. The corporate form of organization allows public service institutions to enjoy the advantages of limited liability and the other legal advantages of “personhood.” In fact, one of the landmark Supreme Court decisions providing corporations a strong legal foundation was filed not by a business corporation, but by a college: Dartmouth. In the Court’s 1819 decision, in the case of *Dartmouth College v. Woodward*, written by Chief Justice John Marshall, Dartmouth successfully fought off an attempt by the State of New Hampshire to take over the college, essentially turning it into a public institution, following a dispute with the college’s board of trustees. The Court found that the original granting of a charter to the college, even though it dated to colonial times, amounted to a contract between the successor state of New Hampshire and the college and that the state would violate this contract by seeking to revoke the institution’s charter. Marshall cited the Constitution’s Article 1, Section 10 which states, *inter alia*, that “no state shall pass any bill impairing the obligation of Contracts,” and elaborated that the college’s charter was in fact a contract. As long as the corporation continued to abide by the terms of the original charter it would continue to enjoy the privileges granted under the contract. The “inviolability of contracts” is recognized as a foundation principle of the modern corporate system.

It is true that much of the pressure to include this provision in the Constitution stemmed from the practice in the 1780s, before the adoption of the Constitution, of states passing laws releasing debtors from the obligation to pay their creditors. The fear that states, under pressure from hard pressed debtors, might continue to seek legislative action relieving them of their debts, also is one of the reasons that bankruptcy law is strictly federal in nature: states are not allowed to void contracts of bankrupt companies or individuals. Only the federal courts have this power. These provisions of the Constitution are often cited as bedrock principles allowing the growth of the American economy on a national scale. Thus, although American states enjoy the (almost) exclusive right to charter new corporations, when these businesses go bankrupt and seek protection from their creditors, they must take their case to the federal bankruptcy courts.

I say “almost” all corporate charters are issued by states because there is a class of quasi-public corporations that are chartered by the federal government: the Corporation for Public Broadcasting, the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Federal Deposit Insurance Corporation are some of the most prominent such federally-chartered non-profit corporations that have been established by the government to carry out certain specific tasks that Congress has decided should not (for various reasons) be entrusted to the regular federal bureaucracy. Most of these non-profit corporations rely entirely on government funding or fees paid by member banks (FDIC). Fannie Mae and Freddie Mac, however, are “government-sponsored enterprises” (GSE’s) and originally had regular shareholders and their securities were traded on the New York Stock Exchange, just like a private corporation. However, following the 2008-2009 collapse of the housing market, the two corporations teetered on the edge of insolvency and required huge government emergency funding to stay afloat (i.e., pay the interest and dividends on the securities they had issued, amounting to hundreds of billions of dollars). In 2010 the stocks of the two GSE’s were delisted from the New York Stock Exchange when the market price of a share fell below one dollar. The two GSE’s continue to reap huge profits, however, since they can borrow money at low interest (since payment of interest on their bonds is implicitly guaranteed by the U.S. Government) and then re-loan it to mortgage lenders at higher rates. The resulting profits are used to repay the government for its huge bailout loans after the housing crash.

These two GSE’s and other “public service” corporations backed by the federal government date from the Great Depression of the 1930s when the federal government stepped in to revive private home construction and ownership by guaranteeing mortgage loans and, in the case of the FDIC, bank deposits. The Corporation for Public Broadcasting was created in 1968 to channel government funds to educational television stations around the country. The use of government-sponsored corporations can be traced back to the establishment of the Bank of the United States in 1791. Although controversial then, the concept has gained wide-spread acceptance since the 1930s.