**BA 476**

**Railroads, Transportation, and the Marketplace**

**ECONOMIC ASPECTS OF THE CIVIL WAR**

Sectionalism--North vs. South--played an important part in events leading to the Civil War. Slavery itself was primarily a sectional issue. But so were such matters as tariffs, homesteads, steamship subsidies and a Pacific railroad. The South, of course, wanted slavery, a low tariff, no free homesteads, no steamship subsidies, and a transcontinental railroad starting from a Southern city. The North wanted no slavery, a high tariff, free homesteads, steamship subsidies, and a transcontinental railroad starting from a Northern terminus. Only one of these matters was settled prior to the Civil War--the South killed off steamship subsidies. The secession of the South from the Union permitted the North to settle the other matters according to its own wishes.

During the pre-Civil War period, we should keep in mind that the South was economically dependent upon the North--and that it resented this economic dependence, in fact, had an inferiority complex because of it. The South had no liquid capital to speak of. It was largely dependent upon Northern or English banking houses for capital funds. Moreover, most of the services needed by the big cotton planters were provided by Northerners--services such as inspecting, storing, insuring, freighting, and selling of the crop. In addition, Northern agents served as purchasing agents for many planters, often lending them money in the process. For all of these services, the agents charged a commission. It has been estimated that 40 cents out of every dollar paid for cotton ended up in the North. As a result, the typical Southern planter usually was in hock a year in advance to his Northern agents. All told, the South owed the North $300 million at the start of the Civil War.

The South was dependent on Northern money markets, particularly the New York money market. The South generally was paid for its cotton by drafts on New York banks, or with bills of exchange invariably paid in New York banks. If the New York money market was tight and its banks refused to honor drafts and buy bills of exchange, a planter might suffer even though he personally was in sound financial condition. The South resented the lack of control over its economic destiny, and this lack of control was dramatically driven home in the Panic of 1857. At that time, New York banks refused to accept Southern bills or drafts at any price. As a consequence the price of cotton fell drastically. Southerners were indignant and figured that their prices would have held firm if the South had had direct trade with England, instead of having to go through the Yankees.

This unfavorable economic situation inevitably led Southerners to try to free themselves from their economic dependence on the North. In the 1840s and 1850s, for example, they tried to establish manufacturing plants, but made little progress except in the cotton textile industry. Also, they tried to establish direct trade with England, but this effort never got very far.

When the Civil War came, it was not fought because of economics. It was fought over the issues of slavery and secession. On the other hand, Southern secessionists argued that the South would be better off economically if independent. The argument is not completely convincing, but it goes like this: If independent, the South would set its own tariff (no tariff), start direct trade with Europe, develop a manufacturing base, and set up its own financial structure and thus not suffer the effects of Northern financial panics.

The North, on the other hand, supposedly would suffer because it was earning $88 million per year on Southern trade--and the South would stop paying this tribute. The South also believed that the West was economically tied to and would side with the Confederacy. It believed that the free trade ports of the South would have great appeal for the West. But the West, by the time of the Civil War, already was tied to the East by means of canals and railroads. These transportation links were far more important to the West than free ports.

The South also labored under the delusion that cotton was king. South Carolina's Senator Hammon spoke for the South in posing the rhetorical question, "Would any sane nation make war on cotton?" He and others felt that England, if denied cotton for three years, would topple--and bring the rest of the world down with her. There was no denying that England's textile mills relied heavily on Southern cotton, as did Northern mills. But the South, as it turned out, overestimated the importance of its principal crop.

When the war finally came, the North was clearly superior to the South in every economic respect. About 90 percent of the country's manufacturing capacity was in the North, and a similar percentage of the skilled work force lived north of the Mason-Dixon Line. In fact, the only important manufacturing works in the entire Confederacy was in Richmond, and efforts to produce war materials there were severely handicapped by materials shortages and the constant threat of invasion. The North also had the advantage of a larger rail network, and one more strategically designed for direct connection of major population centers. Moreover, the North was in a position to blockade the South; and this blockade was fairly effective from the outset. Cotton exports in 1861, for example, were only about 17 percent of the volume and value of those in 1860. Cotton receipts for the years 1861-65 were only one-eighth that of the crop of 1860. Finally, the North had a much larger population than the South, with all that that implied. In 1860, the North had 22 million people against 9 million in the South, one-third of who were slaves.

The Civil War brought on important changes in the country and in the economy. One profound change was that at the outbreak of war Congress became a Northern legislature. The Republican Party, organized just a few years earlier, was in the saddle. It was kindly disposed toward businessmen, as it has been ever since. The point is the Republicans did almost everything possible to spur economic and business growth in the country during the Civil War and post-Civil War era. The war itself may be considered a victory for industrial capitalism. Large government contracts related to war activity gave a terrific boost to many industries, especially iron, metal-working, wagons, shoes, woolens and meatpacking. During the war the government pumped $3.5 billion into the economy; and many businesses profited accordingly.

Higher tariffs also were the order of the day. With the South out of the Union, practically every industry could lobby successfully for higher tariffs on its products. The only industries that did not get added protection were those few which overlooked asking for it. The tariff level, consequently, moved upward from 20 percent on dutiable goods to 47 percent during the war. Manufacturers generally argued for higher tariffs by saying that additional protection was needed to offset higher tax rates. This argument had some validity during the war, but turned out to be window dressing for the most part since manufacturers continued to insist on a high tariff structure long after the war and the wartime tax. In fact, the country was not able to obtain any real tariff reform until the Wilson administration a half-century after the Civil War.

During the Civil War, businessmen also clamored for a better banking system, and they got one. The Panic of 1857 had convinced many business leaders that something had to be done about the chaotic financial picture. In response to this concern, Congress in 1862 established a new National Banking System which provided for a unified banking organization with a uniform currency. At the same time, state bank notes were to be taxed out of existence. For good measure, Congress in 1862 passed the Union Pacific Railroad Act which provided federal land grants for construction of the first transcontinental railroad--the Union Pacific and Central Pacific. Land grants for railroads were nothing new, but previously land had been made available to states which turned it over to the railroads. From now on the land would go directly from the federal government to the railroads. With respect to the Civil War, it's interesting to recall that the "merchants of death" argument was hauled out by political enemies of the government. But there is no evidence that capitalists provoked civil war to make money. On the other hand, there is no doubt that many entrepreneurs took advantage of wartime conditions to make money. Capitalizing on war is one thing, however, and fomenting war is quite another.

The Civil War also is important from the standpoint that it marks the transition of the U.S. from a nation dominated by agriculture and what might be called commercial capitalism to one dominated by industry. Prior to the Civil War, the U.S. was primarily an agricultural nation. Agriculture remained very important in the U.S. after the Civil War, but a distinguishing feature of the post-Civil War period was the triumph of industry. Industry could not have developed as noted earlier, without skilled manpower, executive leadership, improved transportation, a national market, additional capital, improved machinery and power generation, and so on. All these were developing in the 1850s and no doubt would have pushed ahead with an industrial economy in the 1860s and 1870s, war or no war. But the Civil War accelerated this whole process. The war also was a triumph for industry in that it helped industrial leaders to gain great influence in government. For several decades before the Civil War, the Democrats had controlled the national government. Their stronghold was in the South which was agricultural and anti-tariff. The Democrats had consistently blocked legislation desired by industrialists. But now, with the Republicans in control and the war won, industrial capitalism was to have its day.

**RAILROADS**

The launching of the railroad industry provides an almost classic example of vested interests fighting a new approach. Loud objections to railroads were raised by those who had a stake in turnpikes, toll bridges, plank roads, stage lines, canals, and river boating. Thousands of people made their living from these older methods of transportation, and they fought railroads with all their might. Such people as tavern keepers and hotel owners along roads and canals, for example, reasoned that the railroads would cripple or ruin their businesses. Farmers feared the loss of markets for their horses, hay, and grain (horses pulled wagons along roads and barges along canals). Farmers also protested that sparks from locomotives would set fire to their fields. Some people protested that noise from the railroads would contribute to lunacy, while others insisted that speeds of 20 to 30 miles an hour on railroads were physically harmful. State governments which had invested in canals and other forms of internal improvements also were against railroads. The New York legislature, for example, in 1823 prohibited railroads from carrying freight--and continued to place restrictions on railroads until the 1850s. Other states passed acts which taxed tonnage carried by railroads, or said that railroads could carry traffic only when the canals were not in service--in the winter months. At first there was a tendency to look upon railroads as just another improved artery of transportation open to everyone. It was assumed that everyone could take his own vehicle over the railroad's roadbed. But when it was seen that this idea was impractical, some people began to call the railroads monopolistic.

Railroad construction got under way in America in late 1820s. The early history of railroads can best be understood by considering the rivalries of the great eastern ports, each of which wanted to increase its trading area in the interior of the country. It was apparent to all that New York was benefiting immensely by draining the products of the West via the Erie Canal and Hudson River. Other big ports--Baltimore, Boston, and Philadelphia--saw the railroad as a means of grabbing off some of the Western business from New York.

The Baltimoreans were the first to launch an important railroad in the U.S. A group of Baltimore businessmen obtained a charter to construct the Baltimore & Ohio Railroad in 1827, and had put 13 miles of track into operation by 1830. At first, the cars were drawn along the tracks by horses. Sails also were tried. Finally, in 1830, Peter Cooper built the Tom Thumb out of scraps of iron, and steam railroading was under way in America. It took a long while for the B&O to reach the Ohio River, at Wheeling, but by 1853, the connection had been made.

Meantime, Charleston was eager to tap the interior of South Carolina and Georgia and steal some of the business that had been going to Savannah. So Charleston businessmen went into railroading, and by 1833 had completed the Charleston and Hamburg Railroad, 136 miles in length, the longest in the world at the time. Boston, which had been left behind in the canal race, not being able to run a canal through the Berkshires, pushed a railroad west to Albany by 1841. Boston thus had a connection with the Great Lakes Region and was back in the competition for interior trade. Philadelphia also was on the move, pushing a railroad up the Main Line Canal. The Pennsylvania Railroad, which reached Pittsburgh in 1852, eventually became the most successful railroad in the country. It also eventually bought out the Main Line Canal.

New York State lagged in early railroad construction because it had such a successful system of waterways, and those with vested interests in waterways did everything they could to thwart railroad construction and profitable operation. As a result, during the 1830s, New York did no more than build a number of short lines. Their rates were jumbled, and they made little or no effort to dovetail schedules even when they connected. Finally, by 1851, the New Yorkers did push a railroad across the southern part of the state--the Erie, which was far enough south of the Erie Canal so as not to compete unduly with the canal. By 1853, the short lines between Albany and Buffalo, roughly paralleling the Erie Canal, were put together under the name of New York Central. This road was the parent of the New York Central System. The New York Central during the 1850s and 1860s still didn't own the stretch of track between Albany and New York City--the Hudson Railroad. It didn't control this track until 1870. But by the 1850s New York City was connected with Buffalo by two railroads and the Erie Canal, thus was again in a highly favorable position to compete for Western business.

The next step for the Eastern railroads was to push on to Chicago or St. Louis. The New York Central, Erie, and Pennsylvania all were connected with Chicago before the Civil War. The B&O was into St. Louis by that time. So four great Northern trunk lines led into the West by 1860. Chicago became the rail capital of the country. The Windy City once derived a considerable amount of glamour from being the stopover point for passengers traveling across the country. At the Chicago stopover, politicians, movie stars, sports heroes, and others were besieged by reporters and photographers, and a Chicago press dateline was consequently very prevalent until the 1960s.

The South was no less interested in railroads than the North. The Southern part of the country had lagged behind in road and canal construction for several reasons. The population was sparse and scattered. There wasn't much passenger traffic. Moreover, since most areas of the South produced similar crops, there wasn't much exchange of products. In addition, there was a chronic lack of capital for large-scale investment. Money often was tied up in land and slaves. Most big planters were in debt. But the South hoped it could participate in the burst of railroad construction, and it made a determined effort to push railroads into the interior from both the Atlantic and Gulf ports. The above handicaps proved too much for the Southerners. By the time of the Civil War, the Southern rail gird was not nearly the equal of that of the North. The lack of a first-class railroad system repeatedly handicapped the Confederacy during the Civil War, and it was not until the 1870s and 1880s that the South was able to build up a complete railroad system, and this was done largely with Northern capital.

The coming of the railroads affected the American economy and business conditions in a number of ways. For one thing, railroads served as the pacesetter for the economy from the 1850s past the turn of the century. It served the same function in this regard as the auto industry in the mid-to-late twentieth century. By the 1850s the railroads were the largest single market for iron and a major market for coal, wood, machinery, felt, glass, rubber and brass. Thus what was good for the railroads was good for these industries. Railroads also stimulated the labor market. Tens of thousands of men were needed to construct and operate the roads. In time the railroads became the nation's largest employer, and almost of necessity became leaders in developing patterns of modern labor relations. Railroad workers, in turn, were among the first to form local unions and then to build national federations of their own. The railroad brotherhoods, representing trained men whose skills were hard to replace, quickly became the most powerful and effective unions in the U.S. before the 20th century.

As a major source of investment, the railroads also opened new opportunities for American financiers, bankers and speculators and, in turn, did much to institutionalize investment markets. The railroads also were the first American businesses to work out modern ways of finance, management, labor relations, competition, and government regulation. Railroad promoters and managers pioneered in all of these areas, not because they were a particularly intelligent or perceptive breed of entrepreneur, but because they had to. Their capitalization, their plant and equipment, their running expenses and labor force were such that they had to develop new means of coping with all of the new problems crowding in upon them.

Geographically speaking, the railroads helped to settle the West. They opened the prairies and plains to farmers and cattlemen, permitting the West to be settled far more rapidly than would otherwise have been the case. The railroads also clinched the solidification of the West with the East. What the canals had begun, the rails finished. After the North Central rail gird was put into operation, there was no question but that the West was tied economically with the East and almost no question that the West would fight with the North rather than with the South when civil conflict came. To give you some idea of the reverse movement of goods brought about by the railroads, it might be pointed out that in 1839; only 2 percent of Western corn went east, while 98 percent went downriver. But by 1853, 63 percent of Western corn went east, as opposed to 37 percent going south.

The railroads, as we've seen, took away much of the play from canals and rivers. They were virtually independent of weather conditions, weren't affected by freezing as were canals and northern rivers and experienced no navigation hazards except when an irate farmer put a log across the track. Railroads also had the advantage of being able to build in a straight line. For example, it's only 327 miles from Cincinnati to St. Louis by rail, whereas it's 720 miles by water.

Both the federal government and the states played a role in railroad expansion. Federal aid to railroads in the early years of construction was limited to occasional grants for surveys and a refund on duties on imported railroad iron in the decade following 1832. From the start of construction, private builders had asked the federal government for land along proposed right-of-ways. Land grants had been made in an earlier period to assist in highway and canal construction, so why not for railroads. Thus in 1850 the federal government made its first land grant--actually a subsidy for railroad construction--to the Illinois Central and Mobile & Ohio railroads. These roads ran north and south, rather than east and west, and the reason they were subsidized was because of the sectional controversy then raging. Politicians couldn't agree on which city any east-west line should pass through, what with Chicago, St. Louis, Memphis, and New Orleans clamoring to be the city. No compromise could be reached. Then Stephen A. Douglas, the Little Giant of Illinois, who was ambitious for the presidency, suggested that the government should subsidize north-south lines, rather than east-west lines. This way, both the North and the South would be made happy, and Douglas stood to benefit politically. So the two railroads mentioned earlier, later combined into the Illinois Central, received the first land grants.

The way the grants worked was for the federal government to transfer to the states, for every mile of road constructed, alternate sections of land, in checkerboard fashion, in a strip six miles wide on each side of the right-of-way. The states then turned over this land to the railroads for eventual sale. The alternate sections retained by the federal government eventually were sold by the government. Everybody stood to make money on the land, as it increased in value what with the railroad being put through. The Illinois Central, for example, for many years made more money on its land sales than on its railroad operations. After 1856, the land grant policy was widely extended, as state after state received assistance in pushing through railroads.

A few states built and operated railroads, especially prior to the Panic of 1837, but primarily the states let private enterprisers do the building. States also helped private enterprise get on with the job; in fact, private enterprise often could get on with the job only with assurances of state aid. Thus some states subscribed to railroad stock; some loaned money to railroad builders; while others guaranteed railroad securities. The states also regulated railroads, generally through the issuance of railroad charters. Many charters, for example, fixed the maximum rates that railroads could charge. Usually, these rates were generous.

Railroads, since they got help from the government, were in a weak position thereafter to complain about government regulation of railroads. During the 1950s and 1960s, many roads sought to discontinue little-used lines and money-losing trains. The government made it difficult for them to do so, partly because it had regulated roads for so long that it could scarcely break the habit.

***Government Regulation of the Railroads***

As we have seen, transportation developments have greatly influenced the pace and course of business growth in America. The turnpike and the canal each broadened the market area by lowering costs and speeding distribution. But the influence of railroads dwarfed all that had gone before. Railroads speeded the distribution process and made possible much larger shipments of goods. They lowered freight costs, accelerated the rise of the corporation and the rapid growth of manufacturing, and were a prime force in urbanization and the structure of interregional trade. Railroads, in short, made possible a national market and the growth of business firms to serve such a market. Thus, they were largely responsible for the build-up of the elaborate marketing apparatus, including salesmen, brokers, middlemen, advertisers, wholesalers, and so on.

Railroads pioneered in business administration and enhanced land values enormously. They also had an important impact on the growth of certain cities. Atlanta, for example, was transformed from a spot in the wilderness to a thriving metropolis as a result of the construction of the Western and Atlantic Railroad. Chicago eclipsed St. Louis as the commercial emporium of the West by virtue of its superior railroad connections. St. Louis was the third largest city in the U.S. in 1870, but was passed by Chicago and others as the railroad age replaced the steamboat era.

Railroads also provided a large outlet for savings. Their capital requirements were so great that they provided the first big opening for the investment banker--who by the end of the 19th century was in control of many railroads. Railroads, too, because of the stress of competition, both in construction and operation, were the first of the big firms to experiment with new forms of business organization such as pools and consolidations. It followed--because railroads were so vital to the nation and because their performance was tied in with the business cycle--that the railroads were the first form of business to have their operations regulated in large degree by the government.

Finally, railroads were responsible for a great many jobs, at one time more than 2,000,000 workers. Railroads were easily the nation's largest employers during the post-Civil War-pre-World War I period. In addition, they were responsible, indirectly, for tens of thousands of other jobs in the coal, iron and steel, and engineering industries--in such big enterprises, for example, as the Pullman Palace Car Company and the Westinghouse Air Brake Co. The Pullman Company, in 1909, was the eighth largest firm in the nation in terms of assets, and practically all of its output went to American railroads. Railroads, actually, were to the period 1850-1915 what the auto industry is to today in terms of being the pacesetter or bellwether of the economy. The biggest difference is that no one railroad ever dominated the rail industry as Ford and GM once dominated the auto industry.

In 1865, the nation had 35,000 miles of railroad track. During the post-Civil War era the railroads were extended rapidly into the trans-Mississippi west, sometimes even outrunning the course of settlement and changing the techniques of pioneering. By 1900, America had more than 175,000 miles of track, more than all Europe combined. The West had been filled in, settled with the rapidity of a prairie fire.

The immediate post-Civil war years saw the building of the so-called Granger Roads--so-called because they were built through the region where the National Farm Grange was active--states such as Illinois, Wisconsin, Iowa, Minnesota, and the Dakotas. This period also saw the completion of the first transcontinental road, which connected the Granger roads with the Pacific Coast. A transcontinental road had been talked about as early as the 1840s. Merchants involved in the Oriental trade saw that such a road would be of tremendous aid to them--and of course everyone, including the government, wanted a link-up with California after gold was discovered in that territory. But nothing could be done about building a cross-country railroad before the Civil War, because the conflict between North and South prevented the government from selecting a particular route and giving aid to promoters.

Actual construction of a transcontinental line was dependent upon government aid. There just wasn't enough private capital available to finance such a tremendous project. Moreover, any return from investment obviously was going to be meager for a time. There were very few people in the Great West in the 1860s; consequently, traffic, until this vast area was populated, would be light.

The federal government was quite willing to assist private enterprise, as soon as a transcontinental route could be agreed upon. The question was: Where to build? The North wanted to build west from Minneapolis-St. Paul or from St. Louis, while the South wanted the eastern terminus to be either Memphis or New Orleans. The two sections of the country desperately wanted the route for two reasons; one, of course, economic. The other reason had to do with slavery. New states were certain to be carved out along the transcontinental rail line, and it made a tremendous difference to each section whether these states would be free or slave states. Congress, before the Civil War, simply was unable to resolve the dilemma. In 1861, however, the Southern states, by seceding from the Union, cleared the way for the federal government to move ahead--to pass, in 1862, the Pacific Railroad Act.

The Pacific Railroad Act called for a line to be built across the Northern part of the country. But the line was not to start from Minneapolis-St. Paul or St. Louis--or even Chicago--which by now had become a big rival to St. Louis. The line was to start from Ft. Kearney (Omaha), Nebraska, which in the early 1860s was not even connected by rail with the East. Omaha was a compromise choice between the big Northern cities which wanted to be the Eastern terminus of the road. Omaha, in any event, was a good choice, for it lay astride the Platte River Route used by the Pony Express and stage and freight lines headed for Oregon, Salt Lake City, and California. Within a short time, too, Omaha was connected by rail to Minneapolis-St. Paul, St. Louis, Chicago, Kansas City, and other major cities.

The government authorized two companies to build the first transcontinental. The Union Pacific Railroad was authorized to build from Omaha west. The Central Pacific was authorized to build from Sacramento, California to the east. The government provided financial assistance to both roads. In the Act of 1862, which was modified in 1864, the government agreed to give each company alternate sections of land on each side of its track to a depth of 20 miles--in other words, 20 sections of land for each mile of track. This same assistance subsequently was offered to many other railroads. For their part, the railroads had to complete construction within a given length of time in order to gain title to the land allotted them. Some roads, because they did not finish track laying on time, ultimately had to forfeit land assigned to them. But most roads did get their land grants of 20 sections per mile of track; and one, the Northern Pacific, managed to persuade Congress to give it alternate sections of land on each side of its track to a depth of 40 miles. The government also provided federal loans to the two roads which formed the first transcontinental--the UP and the CP. Each of these roads got $16,000 per mile of track laid in flat country; $32,000 for trackage in foothill country; and $48,000 for mountainous country.

The original railroad act did not provide for a meeting place for the two roads. Thus their construction developed into a great race, each road feverishly laying as much track as possible in order to get as much land as possible. The Union Pacific, using Irish labor, and the Central Pacific, using Chinese workers, were so hell-bent on building that the question arose as to whether the two roads would meet--or build right on past each other. Finally, Congress rose to the occasion and designated a meeting place. The UP won the mileage derby, but the CP did well too, considering that it had to cross the Sierras in California and the desert of Nevada. The promoters of both roads were made wealthy. In fact, the Central Pacific promoters made enough money to buy the state government of California, with plenty of cash to spare.

The two lines met, as mentioned earlier, in 1869, at Promontory Point, Utah. At this spot, one of the most historic ceremonies in American history took place--the driving of a golden spike in the connecting rails amid the cheers and hurrahs of officials and workmen of the two roads. Photographers were on hand, and the scene has been reproduced in countless history texts. The site is in very empty country, on the edge of the Great Salt Desert. Until 1969 the only artifacts which marked the site's historic significance were a small shaft on which there was a descriptive plaque and about 20 feet of original rail embedded in concrete. Since 1969 there has been a National Park Service Visitor Center (museum) on the site, plus reproductions of old locomotives. Incidentally, there is no rail line now running along the original UP-CP route. Nowadays, the Central Pacific runs across the Great Salt Lake, which is quite shallow, averaging only 25 feet in depth.

Other transcontinental roads were built after the completion of the UP-CP route. The Northern Pacific reached the Northwest in 1883, and the Atchison, Topeka and the Santa Fe reached Los Angeles in 1887. The Great Northern reached Seattle in 1893, and the Chicago, Milwaukee and Saint Paul, the last of the Transcontinental’s, reached the Northwest in 1909.

By 1916, the U.S. had 254,000 miles of railroad track, an all-time high. There was a sharp decline in trackage during the Great Depression; since 1930 more than 50,000 miles of track have been abandoned. Railroad employment also has declined. In 1890, the roads employed almost 750,000 people--1.8 percent of all those employed in the country. Employment continued to expand to the 2 million mark or almost 3 percent of the working force. In recent years, total railroad employment has dropped below the 1890 level--to 550,000--and now represents less than .6 percent of the labor force.

Railroad passenger traffic has greatly decreased through the years. Until the 1920s, railroads counted on passenger traffic to generate from one-fourth to one-third of their revenues. But after the 1920s, because of competition from cars, buses, and then airplanes, passenger traffic fell off. Today, railroads carry fewer passengers than they did in 1890.

In 1929, there were 20,000 passenger trains operating in this country. Now there are fewer than 400, and it is impossible to travel by train between many of the largest cities. After 1966, trains, unable to compete with jets, were further crippled by the loss of mail revenue, as the Post Office switched over to shipments by air. As passenger traffic on trains fell off, train crews at times outnumbered travelers on board. Since AMTRACK entered the picture, the number of passengers has increased, and service has been upgraded. But AMTRACK still loses a substantial amount of money annually. Train stations are also disappearing at a rapid rate, once the very nerve centers of a community.

Freight traffic, as opposed to passenger traffic, has stood up well. In fact, no other means of transport has been able to surpass the overall practicality and efficiency of railroads in carrying bulk goods. Railroads have steadily increased their freight business through the years, despite the increased competition of trucks and the comeback in recent years of waterways.

As for the men who managed the nation's railroads through the years, from the 1850s onward they were generally professional managers. Railroads had few owner-managers, because even the smaller railroads were usually too big for one-man ownership. The complexity and size of railroads demanded professional management very early on in the history of railroads. The Pennsylvania Railroad, for instance, in the 1880s was the largest business organization in the world in terms of employment with 30,000 employees. It operated 3,500 miles of main track.

Given the circumstances, much of the managerial pioneering was done on the railroads. By the 1850s and 1860s, the railroads had, in fact, developed a good deal of managerial apparatus. Most of the bigger roads had organization charts, some of which were highly distinctive. The Erie Railroad's organization chart, for example, was shaped in the form of a tree, with the names of the board of directors and officers forming the roots and trunk of the tree; the names of lesser executives and their departments forming branches--on out to the smallest limbs and tiniest twigs, which were reserved for workmen. All told, the Erie's organizational tree designated some 4,000 separate jobs. By the 1860s, too, railroads had allocated authority and responsibility among various departments. Such functions as traffic, transport, and accounting were formally departmentalized, and systematic record-keeping was practiced. All this added up to organizations replete with organization men. Thus the so-called organization man appeared in railroading long before the end of the 19th century--and at least 80 years before his alleged "rebirth" or rediscovery in the 1950s.

The top railroaders were a spectacular breed of businessmen--among them promoters, builders, financiers, and consolidators. The greatest railroad builder of them all was James J. Hill, a Canadian, who completed the Great Northern in 1893 without benefit of land grants or federal subsidies. The Great Northern, thanks to Hill, was the best built railroad in the country. It also was one of the biggest money-makers in the nation.

The greatest consolidators were J.P. Morgan and Edward H. Harriman--and Harriman probably was the greatest railroader who ever lived. Harriman began as an office boy on the Illinois Central, and rose to control of that railroad, the Union Pacific and the Southern Pacific. Along with Morgan and Hill he sought to consolidate the northern Transcontinental’s, and would have succeeded if the Supreme Court had not held in 1904 that the Northern Securities Company was in violation of the Sherman Antitrust Act. Harriman's consuming ambition was to control all of the nation's major railroads, and had he remained in good health and lived longer, he might have gone a very long way toward achieving his goal. As it was, he died in 1909, at the close of the railroad era and the dawn of the automobile age, the Model T having been introduced just a few months before his death.

States and local government units had aided railroads before the Civil War, and they continued to do so after the war, although on a smaller scale than before. After the war, a number of states and many local governments were caught in a bind when railroads were unable to pay off bonds which had been guaranteed by government entities. Several states in the South and West took the easy way out, repudiating their debts, just as several states had repudiated their debts after the Panic of 1837. City, township, and county governments were less fortunate, however. Since they were not sovereign entities, like states, they could not repudiate their debts, even if they wanted to. As a result, some of these lesser governmental units were still paying off railroad bonds well into the 20th century.

The federal government provided more aid to railroads than states or local government. Washington loaned $175 million dollars to the Union Pacific and Central Pacific--and, after litigation, was repaid most of this amount. The most significant kind of federal subsidy, however, was the grant of lands from the federal domain. The government, following the precedent set by the Illinois Central grant in 1850, gave alternate sections of land--varying in number from six to forty--for each mile or road constructed. By 1871, in this manner, Washington had given away 323 million acres of land. At one time rail companies possessed one-fourth of Minnesota and Washington and one-fifth of Wisconsin, Iowa, Kansas, North Dakota, and Montana. Yet there was a catch to this aid. In return for it, Congress provided that roads receiving grants should transport mail, troops, and government freight at reduced rates. Troops and freight were to be shipped at half of the cost of transporting them, while mail was to be shipped at 20 percent less than cost over land-grant railroads. These special rates remained in effect until 1940, when Congress relieved the land-grant railroads of shipping mail and government freight at less than cost. In 1945, military traffic also was exempted from special rates. While the special land-grant rates were in effect, the government saved an estimated $500 to $600 million in shipping costs. This sum was several times the value of the land grants when they were made, and were about equal to what the railroads received from the sale of their land.

Although subsidies were very important with respect to railroad construction, the great bulk of new and replacement capital for railroads came from private sources, domestic and foreign. Established merchants and industrialists in the East provided a major reservoir of capital funds, and the developing securities market enabled entrepreneurs to tap people of relatively modest means. Europeans owned a majority of stock in several railroads. In 1876, for example, European holdings amounted to 86 percent of the common stock of the Illinois Central, which, throughout its long history, has been one of the three or four biggest money earners in the railroad business. In 1915, Europeans, mostly English and Dutch, owned one-fifth of American railroad securities. Of course much of the stock in American railroads and other companies owned by Britons were sold off during World War I in order to pay the costs of financing that war.

During the half-century after the Civil War, railroads had far more power and economic leverage than any other industry. In fact, the power of many railroads in their areas approached the absolute, for until the automobile age most people had no alternate means of transportation. The railroads, as a whole, were notorious in the use of their power. They could and did terrorize and make and break companies and communities merely by juggling freight rates. Moreover, the funds at their disposal--often created by financial manipulation and stock-watering--were so large as to overshadow the budgets of many local and state governments. Small wonder, under the circumstances, that many railroad operators developed the point of view of feudal chieftains. They regarded members of state legislatures and city councils as their vassals, and coerced or bribed them at will. If the bribery did not involve money itself, it involved the payment of campaign expenses, gifts to wives, and the handing out of railroad passes. With elected officials in their pockets, many railroaders came to feel that their industry was above regulation. Many railroaders also became unable to recognize any public interest distinct from their own. What was good for the Southern Pacific, for instance, was good for the country, although not necessarily vice versa.

Railroaders' abuse of their power was tolerated for a long time by Americans, a people imbued with the doctrine of laissez-faire. The people were proud of the progress and growth that had been achieved under the banner of laissez-faire, and they were reluctant to increase the power of government. As a result of the people's forbearance, the first stringent legislation against railroads did not come until the 1870s. The country had some mild railroad regulatory acts before the Civil War, but the first strict regulation did not appear until the 1870s.

The first strong regulatory acts were passed in the Midwest, and they were called "Granger laws" because of passage in states where the National Farm Grange was strong. The Grange did indeed advocate railway regulations, but it was not the most important force behind this state legislation. The key advocates of regulation were the shippers, the commercial element in communities which were affected by the railroads' abuses.

The early Granger laws sought to eradicate railroads' rate discrimination between shippers and communities, and thus they provided maximum rate schedules. As soon as these laws got onto the books, attempts were made to have them declared unconstitutional on the grounds that they were repugnant to the due process clause of the 14th Amendment to the Constitution. The railroads said that such laws restricted the earnings of companies and therefore deprived them of their value. The first lawsuit to test this contention was Munn vs. Illinois 1877, one of the great court cases in American economic history. In this case, the Supreme Court handed down a decision valid today, which said that when a business was clothed with a public interest, its regulation was constitutional. The Munn case, in other words, said that the states could regulate railroads and other enterprises tied in with the public interest.

Although the states could regulate intrastate railroads--roads entirely within their borders--they could not, as later court cases made clear, regulate interstate railroads which passed through their jurisdictions. The big interstate railroads, the courts said, were a federal matter. As a consequence, the federal government found itself moving into the void. In 1887, it passed the Interstate Commerce Act, which prohibited rebates, pools, long and short haul differentials, and unreasonable rates. Enforcement of the Interstate Commerce Act was vested in the first American regulatory agency, the Interstate Commerce Commission--a body which pioneered the way for a number of similar commissions. Eventually these commissions, the ICC, the FTC, the FCC, the SEC, the FPC, and the CAB, were to form a virtual fourth branch of government--and the ICC was the model on which the others were built.

For a few years after its establishment, the ICC had the cooperation of the railroads. But when the honeymoon ended and railroads saw fit to resist an order of the Commission, the ICC found itself going to court to enforce its decrees. Court decisions often were a long time in coming, and the delay held up the ICC's orders. Beyond that, judicial interpretation of the powers of the Commission tended to reduce the Commission's effectiveness. For example, in 1897, the Supreme Court ruled in the Maximum Freight Rate Case that the ICC could not prescribe the rates that railroads should charge. According to the court, railroads should set rates, and then the ICC should either approve or disapprove them. If the ICC disapproved of a rate, it could not tell the railroad what its rate should be, but merely could tell it to set another rate. So the ICC was in the position of passing judgment on rates set by railroads, rather than setting rates itself. The ICC's awkward position was later straightened out.

In 1906 Congress passed the Hepburn Act, which gave the ICC power to fix maximum rates, although the railroad's rates were to remain in effect until any dispute was resolved by the courts. Beyond this, the Hepburn Act put the burden of proof of the reasonableness of rates on the railroad, not on the ICC. The ICC no longer had to prove that rates were unreasonable. It was up to the railroad to prove that the rates it wanted were not unreasonable. The Hepburn Act also outlawed passes on railroads, a provision of law which is still in effect. The railroads, incidentally, applauded the banning of free passes; passes had become exceedingly troublesome, what with great numbers of officials and "friends" of the roads clamoring for them. Also, the Hepburn Act, thanks to Teddy Roosevelt's wish to get at Jersey Standard, added pipe lines to the ICC's jurisdiction. In 1910 Congress, in the Mann-Elkins Act, gave further rate-setting authority to the ICC by permitting it to set rates which would go into immediate effect. In other words, the ICC's rates, not the railroads' rates, were to govern while the courts were making up their mind. The Mann-Elkins Act also enlarged the jurisdiction of the ICC to include telegraph and cable companies and telephones. The ICC continued to handle these communications industries until 1934, when the Federal Communications Commission took them over.

To assist the ICC in setting reasonable rates--defined as a fair return on a fair value of the railroad--Congress authorized the Commission in 1913 to calculate the value of the railroads. This was a gigantic job, since on hundreds of railroads such things as original costs, reproduction costs, and depreciation had to be figured. The job was interrupted by World War I, but the ICC returned to the task after the war. The Commission labored throughout the 1920s to determine railroad values, but its calculations were rejected by the Supreme Court in 1929. The Great Depression swept away any desire to continue the attempt to calculate the value of the railroads, and in 1933 the whole concept of fair value was dumped in the historical graveyard.

Meanwhile, during World War I, the railroads had been taken over by the federal government on a temporary basis. Under the stress of war, the nation's railroad system had broken down. By the end of 1917, rail lines all over the country were snarled. Troops and materials were not moving satisfactorily. The war effort was being impeded. To organize the railroads to meet the needs of the emergency, President Wilson in December 1917 took over the roads. Authority for a takeover had been provided by the Adamson Act of 1916, which permitted the federal government to assume responsibility for the roads in the event of military necessity. In taking over the railroads, the government guaranteed them a standard income based on their earnings in 1914-1917. Wilson named as director general of the railroads the secretary of the treasury and his son-in-law, William McAdoo. He proved efficient, and got the job done. Troops and materials began flowing on schedule. McAdoo did, of course, have certain advantages in carrying on his job. He could run all of the railroads as a single unit. Moreover, he didn't have to concern himself with competitive matters, nor, to any real extent, costs. Consequently, the government lost $1,100,000 on its operations. Some people looked at the deficit and concluded that it proved that government couldn't operate railroads profitably, and therefore should get out of the railroad business at the end of the war. But others thought that McAdoo had done well, considering the fact that he was operating under emergency conditions. They pointed out that the government had not tried to make a profit from its railroad operations--and that it had not been able, from a political standpoint, to raise rates, at a time when prices in general were rising. In other words, these people said that the government consciously took a loss in its rail operations in order not to contribute to inflation. The advocates of government ownership pleaded with Congress to permit the government to operate the roads for five years during peacetime to show what it could do. But these pleas were rejected. The railroads were turned back to their private owners in 1920.

**AVIATION**

For centuries, people had dreamed of flying; of conquering the air. In 1783, the French launched the first hydrogen balloons. In the beginning of the long balloon era, people thought that balloons would become a universal conveyance. They thought that “Air Rivers” in the sky would waft passengers and freight across oceans and continents. Washington, Franklin, and Jefferson each predicted as much. According to Franklin, all that was needed were sails and rudders, which would permit balloons to be navigated in the manner of ships.

But try as they would, inventors found that there was no way to get a balloon to move against the wind; it simply moved with the wind and up-and-down. So balloonists moved with the wind, the first of them crossing the English Channel in 1785. Others crisscrossed Europe; but always at the mercy of the wind. Navigation was impossible.

Meantime, the military saw the balloon as an observation platform. Napoleon trained two balloon companies, but could not get a fleet of balloons into the air before the Battle of Waterloo. Had he done so, that battle might have turned out differently and world history changed.

The Union Army sent aloft observation balloons during the Civil War, and they contributed to at least one Northern victory. But the balloon corps was abandoned after the war.

If balloons could not be navigated, at least man could see how high they could carry him.

In 1875, a balloon carried three Germans more than four miles up. At that altitude--higher than anyone had ever been before--they thrilled to the radiance of light, the vastness and silence of space. Although they noted that their pulse rates had risen, their brains registered no alarm. A subtle and insidious euphoria set in.

The men did not feel their hands becoming cakes of ice. One man alone had the presence of mind to sniff the oxygen the three had brought along. He revived and discovered that his two companions' blue faces had already stiffened into rigor mortis. Their state of rapture, as we know today, was simply a signal that only 30 seconds of consciousness remained.

In 1897, a Norwegian trio tried to cross the North Pole from Norway to Alaska. After drifting 500 miles, they went down, and were buried by drifting snow, their bodies to be discovered 30 years later by a trapper during an unusually warm spell.

Meantime, numerous efforts had been made to develop a heavier-than-air machine. But by 1885 no such machine had been lifted and maintained in the air. No suitable engine was available to do so, and many scientists thought it was impossible for man to fly. The prestigious French Academy of Science refused to accept any more papers on heavier-than-air machines, just as it refused to accept any on directional control of balloons and perpetual motion and the squaring of the circle.

In 1896, Samuel Langley, head of the Smithsonian Institution, catapulted an unmanned airplane 100 feet into the air for three-quarters of a mile.

In 1903, the Wright brothers, Orville and Wilbur, became the first men to fly in a heavier-than-air machine, as Wilbur lifted off for 59 seconds, covering 852 feet. The flight was made at Kitty Hawk, North Carolina, where there were steady, year-around winds and soft sand on which to crash. At Kitty Hawk, there's a monument to man's first flight.

Ironically, newspapers virtually ignored the Wrights' conquest of the air. Editors simply could not believe the claims of a couple of Dayton, Ohio bicycle mechanics, after so many brilliant scientists and inventors had failed before them. But the Wrights had succeeded, and one can see the bicycle shop in which they conducted their many aeronautical experiments in Greenfield Village, along with their home, both buildings having been removed from Dayton. In the back room of the bicycle shop is the Wrights' primitive wind tunnel.

As for the Wright brothers, they hoped to control, if not monopolize airplane production, and for several years concentrated on filing for patents and establishing their validity, rather than manufacturing.

As soon as their patents were squared away, they hoped to have a flood of orders. But the orders did not materialize. Prospective buyers--mainly foreign governments--did not want to purchase what the Wrights had to sell without seeing their planes in flight. The Wrights, in turn, did not wish to give demonstrations--to give away their secrets--without seeing some cash on the line.

Finally, Wilbur in 1908 flew before French Aero Club members, and dazzled everyone with his ship's performance. Now, various governments lined up, checkbook in hand, to deal with the Wrights.

In 1908, the Wrights set up a manufacturing company which was to remain one of America's leading aircraft producers for several decades. The brothers, however, were not to remain long with their firm. Wilbur died of typhus in 1912. Orville, wearying of prolonged legal actions to enforce patents and obtain royalties, sold out in 1916 to a group of automobile men. Thus, Orville missed by one year a billion-dollar order of planes for World War I.

World War I came as a complete shock to Orville. He had believed that his invention would make further wars too frightful, and that statesmen would find other ways of settling their disputes. But at a 1907 peace conference, only 27 of 44 powers agreed to the noncombatant use of the airplane, and they were the countries with the least prospect for making use of planes in warfare.

Orville Wright lived to see air power extended to the mass bombing of cities in two world wars. Later he expressed regret that he and his brother had ever invented the airplane.

Along with the Wrights, the leading pioneer American plane designer and manufacturer was Glenn Curtiss, whose company was to remain one of the nation's leading aircraft makers for some decades.

Meanwhile, men were turning their attention once more to lighter-than-air craft, specifically the dirigible, which unlike an ordinary balloon, could be maneuvered in every direction and even make headway against the wind.

The first successful dirigible was flown in 1899, and within five years the building of them became international in scope. They began to perform spectacular stunts. One crossed the Mediterranean Sea. Another flew from France to Russia. In the early years of the century the belief was universal that lighter-than-air ships would capture the world market for both passengers and freight.

The premier builder of dirigibles was Count Zeppelin. He carried passengers and mail to Germany's principal cities before World War I. During World War I, Zeppelins carried out 58 bombing raids against England. They frightened people greatly.

Aviation progressed slowly but steadily through the years. In 1911, the Hearst papers put up a $50,000 prize for the first aviator to cross the U.S. within 30 days' time. Nobody could win it. One aviator who tried crashed so many times that it took him 89 days to fly from New York to Los Angeles; and when he reached the West Coast, on crutches, nothing remained of his original plane except a rudder and a strap.

Thus, while Zeppelins were carrying passengers from Germany to Switzerland, the airplane was still a frail thing of wood, wire, and fabric, barely able in calm air to carry two men forty miles an hour. Cars could go faster in those days.

Pilots took extraordinary risks. They have been likened to airborne cowboys. As a matter of fact, the U.S. Army initially placed pilots in the Cavalry Divisions, and regulations demanded that all Army pilots wear spurs.

Early in World War I, planes were used only for aerial inspection; and the pilots simply waved to each other as they flew by. But then came orders to prevent enemy pilots from returning to their bases with reports. Not wanting to kill, the pilots at first dangled a brick with a rope, hoping to shatter the whirling propeller of the enemy plane. If a plane started down, the pilot would either go with it, or jump without a parachute, for airmen were not equipped with parachutes for some time after the war began. Authorities didn't issue parachutes because they felt that pilots might too readily sacrifice their planes if they could bail out. Then came more stern orders to pilots--to use revolvers in aerial combat. Finally, pilots were forced to become machine gunners. The airplane itself was transformed into a piece of maneuverable artillery.

Between World Wars I and II, aviators made many mad dashes across continents, oceans, and the poles. The Army Air Service began mail flights in 1918 in open cockpit planes. At a time when there were no light beacons, radio signals, or blind flying instruments, the flights were exceedingly dangerous. Of 40 pilots who flew the Allegheny Mountains, known as the graveyard run, 31 were killed in crashes.

In the 1920s, all of the continents were spanned by airplanes, all of the oceans crossed. However, an alarming number of the air heroes and heroines kept disappearing over Africa, the Pacific, and deserts, never to be heard from again.

The greatest aerial sensation was provided by Charles A. Lindbergh, in his Spirit of St. Louis. Equipped with the new gyroscopic compass which would point to the true North and maintain this position unaffected by the metal of his plane, Lucky Lindy flew from New York to Paris in 33 hours, at an average speed of 100 miles per hour.

After Lindbergh crossed the Atlantic, many others followed. But it still was a hazardous trip. Of the first 31 pilots who followed Lindbergh across the Atlantic, only 11 survived.

Passenger airlines were formed all over the world in the late 1920's and early 1930s. In America, regularly scheduled passenger service was started in 1927 between New York and Boston. That year, Pan American began shuttling the mail from Key West, Florida, to Cuba, then took on passengers. In 1929, TWA, American, and United were established.

There were few passengers at first, and the airlines lost money and relied on government subsidies. In 1925, the U.S. government began to subsidize the flying of mail. In 1926, Washington passed the Air Commerce Act, which provided a program of aid to civil air transport and navigation including the establishment of airports. In 1938, the government went further, creating the Civil Aeronautics Authority, which was empowered to regulate rates of air transport and foster stability in the industry.

The principal aircraft designers and builders of the pre-World War II era were--in addition to the Wrights and Curtiss--William Boeing, Donald Douglas, Glenn Martin, Claude Ryan, William Stout, and Henry Ford.

Stout, the designer, and Ford, the manufacturer, built the Ford tri-motor, the finest passenger plane of the 1920s.

Ford built 198 tri-motors and sold them to most of the major airlines. However, the market dried up in the Depression, and on sales of only three planes in 1932, the auto maker folded his operation. Had Ford hung on for a few more years, he likely would have made his company as much of a factor in the aviation industry as it was in the auto industry. Today, there are still a few tri-motors in flyable condition--and one of them is operated by the Kalamazoo Aviation Museum.

The Model T of aircraft and the first plane to get large numbers of people into the air was the Douglas DC-3, a 21- to 30-passenger plane introduced in 1936. For its day it was a miracle plane, being able to fly to 20,000 feet and a distance of 2,000 miles at about 200 miles per hour; and it quickly captured the passenger market. By 1946, more than 10,000 DC-3s had been bought by airlines in 70 countries. The DC-3 became the workhorse of passenger aviation around the globe. The plane has proved very durable. Some are still in daily service.

Until the DC-3 came along, some people wondered whether the air passenger market would be taken over by airplanes or dirigibles.

In 1926 the Germans, grounded after World War I, again were permitted to build Zeppelins. With their dirigibles, they were able to circle the earth, fly over the North Pole, chart the Siberian wilderness, and establish regularly-scheduled transoceanic passenger service.

The Zeppelins provided luxurious travel. Passengers dined sumptuously at tables with linen and silver, slept in comfortable staterooms, and strolled on a promenade deck for a magnificent view. There was a complete absence of vibration/motion. But dirigibles of the day had one serious downfall--they were kept aloft with flammable hydrogen. In 1937, the largest dirigible in the world, the Hindenburg, burst into flames a few minutes while mooring in New Jersey with the loss of many lives.

This disaster, coming on the heels of the destruction by gales of two American navy airships, doomed all travel by rigid airships.

Today some engineers and designers hope to launch nuclear-powered 1,000-ft long airships able to carry a crew of 100 and 400 passengers. The ships, as projected, could circle the earth for months at a time, taking on and letting off passengers by means of helicopter. The projected dirigibles would use nonflammable helium, rather than hydrogen, to remain aloft.

At present, there are only a few dirigibles and blimps in the country. They are used primarily for advertising purposes, and they attract much attention wherever they go. The same may be said of balloons. Interested onlookers are impressed by the so-called breathing or panting they do, a part of the heating mechanism which keeps them aloft.

The aviation industry grew rapidly in the pre-World War II years, and the war itself gave tremendous impetus to aircraft production.

Toward the end of the war, the American air force had the fastest propeller plane, one that accelerated to just beyond 500 miles per hour. Then the Germans sprang a surprise with an airplane that had no propeller. It took air in the front, mixed it with fuel, and ejected it in the rear in a roaring blast. The jet age had opened.

For the Germans, the jet plane came too late. It would have played a more decisive role in the war had Hitler not made one of his greatest mistakes before the war in ordering that experiments on jets be stopped in favor of work on bombers.

With regard to commercial jets, the British first led the field. During the early 1950s their Comets were the marvel of the age. But several of them blew up while in flight. The problem: Compressed air within the cabin exerted enough force during stratospheric speed to blow out windows and explode the plane. The Comets were withdrawn from service, and it was left to William Boeing’s 707 to revolutionize commercial air travel all over the world. Other jets followed; notably the DC-8 and the so-called “jumbo jets” used on most transoceanic flights today.

Before the Carter Administration deregulated airlines (and trucks), air passenger carriers charged the same prices on identical routes. Thus the lines did not compete on price, but rather with respect to schedules, promptitude, baggage handling, food, and other aspects of service. Since deregulation, there has been strong price competition. Fares are erratic and unpredictable from week to week. On the other hand, price competition has been good for the flying public, less so for the airlines, some of which have failed and many of which have flown through turbulent skies since deregulation.

Pan American, almost a national institution, went out of business in 1991. It had introduced transpacific air travel in the mid-1930s with its China Clipper and commercial-jet travel in the 1950s with its Boeing 707. Braniff, strong in the American Southwest and Latin America, also failed. So did Eastern Air Lines, which once carried more passengers than any other carrier. TWA, Continental, and America West have operated under Chapter 11 of the Federal Bankruptcy Code. Foreigners have acquired equity in Northwest and U.S. Air. United survived only by selling a majority interest in itself to its employees, and it and the other major carriers – American and Delta – are struggling to survive. On the other hand, Southwest and a few other non-traditional “startup” airlines are prospering.

Although many of the carriers' problems stem from pricing issues related to deregulation, some of them are attributable to reduced business travel, a consequence of improved means of business communication. The 9-11-01 terrorist attacks on the U.S. and increased airline-security expenses have also posed major problems, as have higher fuel costs, which again came to the fore in 2005.

Only a handful of U.S. commercial plane makers survive, the largest being Boeing, which now competes with Europe's Airbus Industries as the world’s biggest commercial plane producer.