

Summary of the Report of the Commissioner of Corporations,
Department of Commerce and Labor, on
Standard Oil

This account is based on a report issued by the Commissioner of the federal Department of Corporations, on May 20, 1907, entitled the "Position of the Standard Oil Company in the Petroleum Industry."

In 1904, Standard Oil and its affiliates refined 84 percent of the crude oil that went to American refineries, produced 86 percent of America's kerosene (used primarily to burn in lamps for light at nighttime), and held similar proportions of the export of kerosene (to other countries), the oil that was shipped through its pipelines.

The Standard has as its only competitors in the refining business about seventy-five small refineries, whose total consumption of crude oil is less than that of a single one of the Standard, to wit, the Bayonne refinery, and less than one-fifth of the Standard's total consumption. In the eastern half of the country, there is only one competitor of any significance (the Pure Oil Company), but its business is not more than one-twentieth (five percent) of that of the Standard.

Standard's power never had anything to do with direct ownership of oil fields and the oil that was produced. In 1905, less than one-sixth of oil produced in America came from fields owned by Standard. What did give Standard its biggest edge, in addition to its control of oil refining, was its control over the transportation (both of crude oil and the refined products like kerosene and gasoline).

The most important part of Standard's control over the distribution process was the rebates that it got from railway companies (in the early days, oil was shipped in large barrels on railroads). Because of Standard's large market share, it was able to get secret rebates on every barrel of oil shipped on railroads, and later, after this was disclosed, it still got much cheaper rates because of its bulk shipments. With rebates from the railroad companies coming back to Standard, it could offer its customers lower prices than the other oil companies could (because they were not getting the same rebates from the railroad companies). With lower prices would come more and more customers, providing Standard oil with even more oil to be shipped, making it more and more likely that the railway lines would give it rebates, which then allowed it to lower its prices even more—and the vicious cycle would begin anew.

One famous instance of rebates in the beginning of Standard's dealings was with the Lake Shore railroad, run by the Union Civil War General Devereux. Standard would get a rate of \$1.30 a barrel on kerosene shipped from Cleveland to New York. In return for this, Rockefeller would guarantee to ship sixty carloads a day, assume all risk of fire, and load and unload his own oil. Devereux admitted these rates on the witness stand later.

Devereux told a competitor that he would give this same rebate to anyone who could guarantee him sixty carloads a day, but of course no one else could. Devereux figured that with Standard oil guaranteeing him 60 cars a day full of kerosene to ship, he could use only one-third of the number of railway cars that he would have needed, if he were to try to ship all this kerosene from a variety of refiners, as he would need to keep more cars at all points along the way, because each refiner was only giving him a small amount. Devereux claimed he could make more money for his road under this plan at \$1.30 a barrel than he could at \$2 a barrel handling oil for numerous shippers in the old haphazard way.

In addition to rebates from the railroads, it maintained an impressive network of pipelines (through which oil would be shipped, either to refineries or to ports for export). By 1904, it owned over 40 thousand miles of pipeline (by way of comparison, the distance from the Atlantic to Pacific coasts is in the 2,500 mile range and above). It has consistently refused to ship oil to or from competing refineries, and when it has offered to ship such oil, made it at such a high price, that it was just as expensive to ship it on railroad, although pipeline transportation costs much less than railroad transportation.

Not only did Standard enjoy a vast pipeline network; it fought to keep other companies from constructing their own. When other groups tried to build competing pipelines, it would do a variety of things to keep the pipeline from being completed: get railroads to refuse the proposed pipeline right-of-way across its railway tracks; litigation by a variety of means; by paying higher prices for oil in the markets that the competing pipelines were able to reach (making it unlikely that anyone would want to sell oil to the competing company, at a lower price).

Standard's competition is limited to small companies that service small markets. Investigations discovered that when it has no competition, it will raise prices high, but when it does face competition, it lowers them. As proof of this, the report cited a huge difference in prices that Standard would charge for its products, even when the various cities were the same distance from its refineries. For instance, in December 1904, in New York, the center of Standard's largest refineries, kerosene was priced at 10.5 cents per gallon; At Cincinnati and Cleveland, prices were at 6.4 and 7.0 cents per gallon, respectively. The price at Minneapolis and St. Paul was 7.2 cents; while it was 12.3 cents at San Francisco, 14.5 cents at Seattle, and 14.4 cents in Denver, with only a small fraction of the difference in prices being due to higher costs for transporting the oil. And the prices of gasoline in these cities shows the same differences as that of kerosene.

The Truth about the "Robber Barons"¹

Rockefeller was religious about working and saving his money. After working several sales jobs by age twenty-three he had saved up enough to invest four thousand dollars in an oil refinery in Cleveland, Ohio, with a business partner and fellow church member, Samuel Andrews.

Rockefeller paid meticulous attention to every detail of his business, constantly striving to cut his costs, improve his product, and expand his line of products. He also sometimes joined in with the manual laborers as a means of developing an even more thorough understanding of his business. His business partners and managers emulated him, which drove the company to great success. As economist Dominick Armentano writes, the firm of Rockefeller, Andrews, and Flagler, which would become Standard Oil,

prospered quickly in the intensely competitive industry due to the economic excellence of its entire operations. Instead of buying oil from jobbers, they made the jobbers' profit by sending their own purchasing men into the oil region. They also made their own sulfuric acid, barrels, lumber, wagons, and glue. They kept minute and accurate records of every item from rivets to barrel bungs. They built elaborate storage facilities near their refineries. Rockefeller bargained as shrewdly for crude as anyone has before or since; and Sam Andrews coaxed more kerosene from a barrel of crude than the competition could. In addition, the Rockefeller firm put out the cleanest burning kerosene and managed to profitably dispose of most of the residues, in the form of lubricating oil, paraffin wax, and Vaseline.

Rockefeller pioneered the practice known as "vertical integration," or in-house provision of various inputs into the production process; that is, he made his own barrels, wagons, and so on. This is not always advantageous — sometimes it pays to purchase certain items from specialists who can produce those items at very low cost. But vertical integration has the advantage of allowing one to monitor the quality of one's own inputs. It has the further advantage of avoiding what modern economists call the "hold-up problem." If, say, an electric power plant contracted with a nearby coal mine for coal to fuel its generating plant, the coal mine might effectively break its contract at one point by demanding more money for its coal. In such instances the power plant has the choice of paying up, engaging in costly litigation, or going without the coal and closing down. None of these options is attractive. But if the power plant simply buys the coal mine, all of these problems disappear. That is what Rockefeller, the compulsive micromanager, did with many aspects of the oil-refining business. He reduced his costs and avoided hold-up problems through vertical integration.

Rockefeller also devised means of eliminating much of the incredible waste that had plagued the oil industry. His chemists figured out how to produce such oil byproducts as lubricating oil,

¹ This article is excerpted from chapter 7 of Thomas DiLorenzo's book, *How Capitalism Saved America*. A more full excerpt can be found online at <http://mises.org/story/2317>.

gasoline, paraffin wax, Vaseline, paint, varnish, and about three hundred other substances. In each instance he profited by eliminating waste.

Rockefeller did not skimp in building his refineries. So confident was he of the safety of his operations that he did not even purchase insurance.

Because of Standard Oil's superior efficiency (and lower prices), the company's share of the refined petroleum market rose from 4 percent in 1870 to 25 percent in 1874 and to about 85 percent in 1880.

As Standard Oil garnered more and more business, it became even more efficient through "economies of scale" — the tendency of per-unit costs to decline as the volume of output increases. This is typical of industries in which there is a large initial "fixed cost" — such as the expense involved in building an oil refinery. Once the refinery is built, the costs of maintaining the refinery are more or less fixed, so as more and more customers are added, the cost per customer declines. As a result, the company cut its cost of refining a gallon of oil from 3 cents in 1869 to less than half a cent by 1885. Significantly, Rockefeller passed these savings along to the consumer, as the price of refined oil plummeted from more than 30 cents per gallon in 1869 to 10 cents in 1874 and 8 cents in 1885.

Because he could refine kerosene far more cheaply than anyone else could, which was reflected in his low prices, the railroads offered Rockefeller special low prices, or volume discounts. This is a common, ordinary business practice — offering volume discounts to one's largest customers in order to keep them — but Rockefeller's less efficient competitors complained bitterly. Nothing was stopping them from cutting their costs and prices and winning similar railroad rebates other than their own inabilities or laziness, but they apparently decided that it was easier to complain about Rockefeller's "unfair advantage" instead.

Cornelius Vanderbilt publicly offered railroad rebates to any oil refiner who could give him the same volume of business that Rockefeller did, but since no one was as efficient as Rockefeller, no one could take him up on his offer.

All of Rockefeller's savings benefited the consumer, as his low prices made kerosene readily available to Americans. Indeed, in the 1870s kerosene replaced whale oil as the primary source of fuel for light in America. It might seem trivial today, but this revolutionized the American way of life; as Burton Folsom writes, "Working and reading became after-dark activities new to most Americans in the 1870s." In addition, by stimulating the demand for kerosene and other products, Rockefeller also created thousands upon thousands of new jobs in the oil and related industries.

Excerpt from
Antitrust,
Alan Greenspan²

Americans have always feared the concentration of arbitrary power in the hands of politicians. Prior to the Civil War, few attributed such power to businessmen. It was recognized that government officials had the legal power to compel obedience by the use of physical force—and that businessmen had no such power. A businessman needed customers. He had to appeal to their self-interest.

This appraisal of the issue changed rapidly in the immediate aftermath of the Civil War, particularly with the coming of the railroad age. Outwardly, the railroads did not have the backing of legal force. But to the farmers of the West, the railroads seemed to hold the arbitrary power previously ascribed solely to the government. The railroads appeared unhampered by the laws of competition. They seemed able to charge rates calculated to keep the farmers in seed grain—no higher, no lower. The farmer's protest took the form of the National Grange movement, the organization responsible for the passage of the Interstate Commerce Act of 1887.

The industrial giants, such as Rockefeller's Standard Oil Trust, which were rising during this period, were also alleged to be immune from competition, from the law of supply and demand. The public reaction against the trusts culminated in the Sherman Act of 1890.

It was claimed then—as it is still claimed today—that business, if left free, would necessarily develop into an institution vested with arbitrary power. Is this assertion valid? Did the post-Civil War period give birth to a new form of arbitrary power? Or did the government remain the source of such power, with business merely providing a new avenue through which it could be exercised? This is the crucial historical question.

The railroads developed in the East, prior to the Civil War, in stiff competition with one another as well as with the older forms of transportation—barges, riverboats, and wagons. By the 1860's there arose a political clamor demanding that the railroads move west and tie California to the nation: national prestige was held to be at stake. But the traffic volume outside of the populous East was insufficient to draw commercial transportation westward. The potential profit did not warrant the heavy cost of investment in transportation facilities. In the name of "Public policy" it was, therefore, decided to subsidize the railroads in their move to the West.

Between 1863 and 1867, close to one hundred million acres of public lands were granted to the railroads. Since these grants were made to individual roads, no competing railroads could vie for traffic in the same area in the West. Meanwhile, the alternative forms of competition (wagons,

² This article appeared as chapter 7 of Ayn Rand's *Capitalism: the Unknown Ideal*. Greenspan became Chairman of the Federal Reserve Board of Directors, guiding the United States' money supply from 1987 through 2006.

riverboats, etc.) could not afford to challenge the railroads in the West. Thus, with the aid of the federal government, a segment of the railroad industry was able to “break free’ from the competitive bounds which had prevailed in the East.

As might be expected, the subsidies attracted the kind of promoters who always exist on the fringe of the business community and who are constantly seeking an “easy deal.” Many of the new western railroads were shabbily built: they were not constructed to carry traffic, but to acquire land grants. The western railroads were true monopolies in the textbook sense of the word. They could, and did, behave with an aura of arbitrary power. But that power was not derived from a free market. It stemmed from governmental subsidies and governmental restrictions.

To interpret the railroad history of the nineteenth century as “proof” of the failure of a free market, is a disastrous error.

Greenspan distinguishes what he calls a "coercive monopoly," from a company that may sell the overwhelming majority of a product, although customers can still go elsewhere if they desire. In a coercive monopoly, the customers have no alternative. What does he say is a necessary condition, for a coercive monopoly to come into being?

A "coercive monopoly" is a business concern that can set its prices and production policies independent of the market, with immunity from competition, from the law of supply and demand. An economy dominated by such monopolies would be rigid and stagnant. The necessary precondition of a coercive monopoly is closed entry -- the barring of all competing producers from a given field. This can be accomplished only by an act of government intervention, in the form of special regulations, subsidies, or franchises. Without government assistance, it is impossible for a would-be monopolist to set and maintain his prices and production policies independent of the rest of the economy. For if he attempted to set his prices and production at a level that would yield profits to new entrants significantly above those available in other fields, competitors would be sure to invade his industry.

The ultimate regulator of competition in a free economy is the capital market. So long as capital is free to flow, it will tend to seek those areas which offer the maximum rate of return.

Microsoft vs. the Department of Justice

In 1981, when IBM started selling personal computers (PCs), it chose to use Microsoft's MS-DOS as the operating system for them. And as IBM-compatible computers acquired a large market share of the home computer market, each computer maker would need MS-DOS as the operating system running on their computers. By 1990, MS-DOS was on 70% of new computer shipments. Microsoft then started selling Windows, which would run on top of DOS. By 1992, 60% of home computers sold Windows. By 1993, Windows 3.11 was on 85% of PCs sold. And Microsoft's market share continued to rise, until 2002-03, when its market share topped 95%.

Microsoft was an example of a tech company being eminently successful. Why then were they taken into court in the 1990s? There are two basic reasons.

(1) Microsoft used its method of licensing, to manipulate the computer makers (OEM, for Original Equipment Manufacturer) into installing only Windows on the computers that they sold.

When first available, MS-DOS was sold to OEMs for a flat fee. Microsoft offered an unlimited number of installations of MS-DOS, for \$95,000. But by 1992, 60% of Microsoft's operating system sales made under a new, "CPU license."³ Under its terms, OEMs were required to pay a fee for every computer that they shipped, *whether or not a copy of MS-DOS was on the computer*. Why would OEMs agree to this? Under the CPU license, the licensing fee would be significantly lower. As you can imagine, most OEMs opted for the cheaper CPU license, which then impelled them to sell MS-DOS on as many of their computers as possible. Since they had already purchased the right to put MS-DOS on all the computers they sold, it wouldn't make much sense to sell computers with any other version of DOS, since they would have to pay extra for doing that. This practice was continued with sales of Windows licenses.

(2) Microsoft also used its leverage as the maker of Windows, to get its own web browser, Internet Explorer, to be installed on as many computers as possible, instead of a rival web browser, Netscape Navigator.

Another issue that the courts didn't like was Microsoft's leveraging of its web browser, Internet Explorer (IE), to support future sales of Windows. This was actually one of the more critical points of the legal case against Microsoft. First, however, a bit of background. Netscape Communications made a browser, Netscape Navigator, that they sold for PCs. In 1995, Netscape had an 80% market share of the web browser market. Netscape ran on numerous operating systems, not just Windows—it ran on Macs, Linux, OS/2, and other platforms. The vision of Netscape was not just to be a web browser, but to be an all-in-one software application that would allow you to do almost anything you wanted, either in the browser, or online (thus,

³ CPU stands for *central processing unit*—the chip, and by extension, the computer itself.

eliminating the need for expensive software programs like MS Office)⁴. This presented a major threat to Microsoft. If all your computer work was to be done inside the Netscape browser, the particular operating system would be pretty much irrelevant, since Netscape would run on any operating system. This would make it unlikely that people would need to buy computers running Windows.

For that reason, Microsoft fought hard and by the end of the 1990s, their browser, not Netscape's, was being used by over 70% of home computers (at least in America). How did they do this? One, they distributed Internet Explorer free, by bundling it with Windows, and insisting that the OEMs to sell computers with IE, but not Netscape, with their copies of Windows.

According to the facts published by the court, when Apple was placing the Netscape browser on their computers, Gates called the CEO of Apple and threatened to cancel development of MS Office for Macs, Apple's computers. A month later, Gates had a signed agreement from Apple promising to use IE as the default browser, with Microsoft committing to develop MS Office for Macs for at least 5 more years.

DOJ gets involved

Throughout the 1990s, the DOJ investigated and fought MS in court. In 1999, Judge Jackson issued his Findings of Fact, which told the world about a lot of Microsoft's misdeeds; in 2000, he ordered Microsoft to be split into two companies—one selling the Windows OS, the other, accompanying software such as MS Office. However, in 2001, the Justice Department (under a new President) reached a settlement with Microsoft, approved of by a federal judge in 2002, which nullified the order to split up the company. And so ten years of legal activity against Microsoft, as well as the time and money both sides spent in this legal fight, was rendered moot.

Microsoft could always argue that users of Windows were free at any time, to download Netscape onto their computer, and use it whenever they wanted. Additionally, Microsoft could argue that Windows was cheaper than other operating systems (like IBM's OS/2), and that IE was cheaper than Netscape. It is ironic that Microsoft got into so much trouble giving away a web browser for free—when Netscape first introduced their web browser, it was selling for \$40. They only made it free when Microsoft released their free browser. If you want to think about this in monetary terms, with 100 million computers in use in the United States by the late 1990s, at a savings of \$40 per computer, Microsoft had saved customers some \$4-5 billion. Finally, regardless of what one thinks of Windows, Microsoft did present computer users with an environment where we could sit down at almost any computer, whether at home, work, or school, and have a decent idea of how to work it. This very well might not have happened had several different operating systems been common, instead of just Windows.

⁴ Microsoft Office (MS Office) is actually a suite of software programs—a combination of Word (a word processor), Excel (a spreadsheet), PowerPoint (a presentation program and others such as Access (database).