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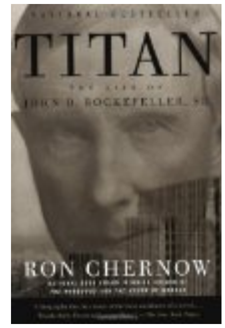
Ron Chernow. *Titan: The Life of John D Rockefeller, Sr.* New York: Random House, 1998. 774 pp. $30.00, cloth, ISBN 978-0-679-75703-0.



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Historians studying the economic developments of the Gilded Age open themselves to questions about the proper methods of business that have never been comfortably resolved. The "second industrial revolution" surpassed the textile factories of England in bringing consumers large quantities of useful commodities at affordable prices, and producers had either to adapt to the new economy of mass production or sell to larger producers. In many cases, single figures all but eradicated the competition and exerted what some considered an undue influence over the market of a particular commodity.

One figure who thrived in this atmosphere was John D. Rockefeller, Sr., who outwitted his competitors in the oil refining business and obtained close to 90 percent of the American market, becoming the world's first billionaire in the process. Ron Chernow's thoughtful biography Titan: The Life of John D. Rockefeller, Sr. (New York, 1998), gives us an opportunity to discuss the issue of why monopolies are such a feared economic development, and if this fear is well-placed, how they affect consumers and other businesses.

Monopoly presents the economic theorist with a dilemma. In theory, the only way for a firm to become a monopoly, outside government sponsorship, is to win the loyalty of consumers by lowering prices and creating a more useful product than competitors. Would-be monopolists are a positive force in capitalistic systems because they have an incentive to bestow such benefits on consumers, in hope of later charging high, monopolistic prices. Paradoxically, if firms have a real chance at becoming a monopoly, the economy is in danger from monopolies that charge higher prices. The ideal economic system for the consumer, then, would cajole producers into thinking that they have a chance at obtaining a monopoly without actually giving them the chance. This is, of course, unworkable, but the apologist for monopolies contends that a system with a real chance of monopoly is the best we can achieve in a less-than-ideal world. The danger of prospective competitors and substitute products would keep prices down, they claim, and that the benefits conferred in pursuit of monopoly outweigh the marginally higher prices that set in after the monopoly is achieved. Does history justify this economic theory? From the evidence given in Titan, what situation really existed in the paradigm case of Standard Oil? Did this situation warrant the antitrust case against it?

One way in which a business can confer benefits on consumers is to provide a superior product. Did Standard Oil fulfill the free market economist's promise of monopoly in this manner? Here, we must digress from Standard Oil to illustrate the role oil played in the economy of Standard Oil's time. Oil provided an affordable way to light people's homes in the evening. When refined into kerosene, it was the only "cheap illuminant that burned in a bright, clean, safe manner," by far better than blubber and lard (p. 73). Oil was also available in much larger quantities than earlier products, and therefore cheaper. Prior to kerosene lamps, most lamps consisted of whale blubber. The whaling industry had already hunted sperm whales close to extinction, and desperate whaling ships were pursuing them in icy waters. By the mid 1860s, whale-oil was unaffordable to most people, and to the extent that it could light homes, was an unsustainable source of light. The amount of oil one well could produce in a day exceeded the amount of whale oil collected from two to three years of whaling in the depleted oceans of the 1860s.[1]

Oil was also a far better lubricant than lard, which greased the gears of most engines and factories before the 1860s. Within five years of the development of the oil industry, oil replaced lard.[2] By the 1880s, oil refiners developed varieties of oil suited to different lubricating jobs, whereas the lubricant made from animal fat had been one and all-purpose.

Standard Oil, however, cannot receive the credit for this technological progress. John D. Rockefeller was mostly in the business of refining oil, rather than gathering crude oil from oil wells. Before the 1860s, kerosene was refined from coal, and the process by which kerosene was refined from oil was readily adapted from the coal refinery before Standard Oil was founded. Even the technology for the transportation of oil--pipelines and single iron tank cars--was established before Rockefeller's entry.

Rockefeller was unquestionably an able, hands-on businessperson. He oversaw every step of the production process in the early years. Chernow writes that "he was often seen at Kingsbury Run at 6:30 A.M., going into the cooper shop to roll out barrels, stack hoops, or cart out shavings, reflecting the thrift inculcated by his mother and his puritanical religious upbringing" (p. 79). He made small improvements to cut waste. For example, he hired chemists to increase the kerosene yield per barrel of oil. He also tried to make use of the by-products of oil, selling benzine, paraffin, and petroleum jelly, and at one point drawing up plans to convert sulfuric acid into fertilizer (p. 100). Rockefeller found that he could obtain better barrels, and at lower prices, by having Standard Oil produce them. Standard Oil could then make them for less than a dollar per barrel, down from $2.50 from external barrel suppliers (p. 100).

Nevertheless, Rockefeller's main advantage over other oil refiners was, at first, his ability to obtain loans, and later, his ability to obtain low rates from railroads. The confidence of bankers in Rockefeller enabled him to secure loans, develop a deep war chest, and buy out other Cleveland refineries. Local bankers trusted Rockefeller because of his strict adherence to Baptist morality, honest presentations of his business predicament, and outstanding credit history (p. 105). In addition, his brother William proved to be adept at securing loans from banks in New York City, where credit was more loose. By 1868, John D. Rockefeller's refining capacity was larger than the next three largest refineries combined.

He could then secure concessions from railroads by promising large, steady volumes of oil. He managed to promise sixty carloads daily, partly by arranging for shipments from other refiners. Railroads could load oil from warehouses (that

Rockefeller provided) straight onto a train composed solely of oil tanks, instead of having a train composed of different types of freight cars stopping at random points to load oil from smaller refiners. Rockefeller also appeased his railroad customers by constructing the facilities for loading oil near the train stations, building and renting his own oil-tank cars, and assuming responsibility for accidents on railroad property (p. 113). Rockefeller's Cleveland-based victory over Pittsburgh refiners was fortuitous, as Pittsburgh refiners could not persuade obtuse railroad owners to grant discounts. The Pennsylvania Railroad charged high rates for Pittsburgh refiners to ship their oil to New York and Philadelphia, not realizing that over time, they were allowing competition in Cleveland to wipe out their Pittsburgh customers.

To some extent, Rockefeller's management resulted in lower prices for consumers, but a quantitative study of Standard Oil's impact on consumers is problematic due to its secret discounts p. (259). The cost of processing a gallon of crude oil dropped from 2.5 to 1.5 cents between 1880 and 1885, while between 1870 and 1890, the market price of Standard Oil dropped from 23.5 cents per gallon to 7.5 cents per gallon. Rockefeller's critics attribute this drop to a fall in crude oil prices, though Rockefeller claimed that this only accounted for half the drop (p. 258).

On top of this long-term drop, consumers indulged themselves in the occasional periods in which prices were cut to the bone to drive competitors out of business. Chernow estimates that Standard Oil charged unprofitably low prices in 9,000 out 37,000 towns where tank wagons distributed the oil (p. 259). According to economic theory, firms in a capitalist economy will not cut prices below cost for long time periods, for the price cuts will cut into profits. But this was just what Rockefeller did, because profits were not his only concern (p. 265). Rockefeller had an emotional need for stability, and he eliminated all significant competitors at a cost to his profits.

If the benefits to foreign consumers count, Standard Oil usually kept foreign prices depressed--subsidized by higher prices to American consumers--to maintain a market in Asian and European countries, in which competition from Russian oil at times captured the market from Standard Oil. In the 1870s, Standard Oil was providing free kerosene lamps to remote parts of the world, and teaching foreigners to use them, in order to build a global consumer base (p. 244).

The domestic price of oil declined during the long reign of John D. Rockefeller, but who knows whether prices would have become even lower if Rockefeller had not acquired such a large percentage of the oil market. By the time Standard Oil was founded in 1870, transient oil refiners overcrowded the oil refining business to the point where many refiners sold at a loss. Chernow writes that "With sky-high profits and ridiculously low start up costs, the field had soon grown overcrowded.... Rampant speculation had so overbuilt the industry that total refining capacity in 1870 was triple the amount of crude oil being pumped" (p. 130).

Contrary to neoclassical economic theory, these conditions did not discourage people from entering or remaining in the field. Chernow explains that "the oil market didn't correct itself...because refiners carried heavy bank debt and other fixed costs, and they discovered that, by operating at a loss, they could still service some debt" (p. 149). All oil refiners, including Rockefeller, risked bankruptcy while competing with firms selling below cost. Certainly, Rockefeller was able to lower his prices due to economies of scale, but had his competitors continued to sell at a loss, he may have been forced to reduce prices even more than he historically did. The virtual monopoly of Standard Oil was not in the interest of the lowest possible prices, unless the plethora of unprofitable oil operations would have driven it out of business before it could utilize economies of scale.

The whole point of Rockefeller's efforts to consolidate the oil-refining industry under his thumb was to sell at profitable prices and avoid the unprofitably low prices of the early oil industry. In the early oil industry, oil refiners obtained more investments when oil was more scarce and the price was high; French and German investors would not lend William Rockefeller money when news of abundant crude oil reached New York City (p. 103). Rockefeller's greatest nightmare was to "drown in a sea of cheap oil that would drag prices below their overhead costs" (p. 283).

Rockefeller's contemporaries resented him because he acquired a fortune by what it thought to be unfair, ruthless dealings with competitors and other businesses, some of which may have violated common law. The earliest episode that provoked a public outcry was the South Improvement Company (SIC), a "grand scale collusion such as American industry had never witnessed" (p. 136). Tom Scott, the overlord of the Pennsylvania Railroad, first proposed the secret cartel among Standard Oil and three major railroads (the Pennsylvania, New York Central, and Erie railroads), in which the railroads would not only give rebates to Standard Oil and a few other large refiners, but also raise rates for all other oil refiners. Additionally, the SIC oil refiners would receive "drawbacks," which were rebates on oil shipped by other refiners, and information about the prices charged by other oil refiners, which would allow Rockefeller to underprice them. Chernow exclaims "On shipments from Pennsylvania to Cleveland, for instance, Standard Oil would receive a forty-cent rebate on every barrel it shipped, plus another forty cents for every barrel shipped to Cleveland by competitors!" (p. 136) Rockefeller could obtain this bargain by agreeing not to ship oil on other railroads or waterways, and use their railroads consistently. The lure of a large, predictable customer was irresistible.

While rumors of this conspiracy circulated in the oil industry, Rockefeller acquired 22 out of 26 of his Cleveland competitors (p. 143). Rockefeller did not directly allude to the SIC in his negotiations, but these acquisitions would not have taken place so quickly without the rumors. Chernow writes that "The threat of the SIC, critics alleged, was the invisible club that he had waved over Cleveland refiners, forcing them to submit to his domination" (p. 143). Rockefeller's most significant competitor, James Clark, later told critic Ida Tarbell that fear of the SIC caused him to sell to Rockefeller (p. 144). With the exception of Clark, Rockefeller bought these competitors at prices equivalent to only a quarter of their original construction costs.

Had the plan succeeded, the rebates may have enabled Rockefeller to sell oil at lower prices. Historians have no way of knowing, since the public retaliated against the SIC as the news soon leaked out. In nonviolent protest, many oil drillers signed a pledge not to sell oil to Standard Oil and other conspirators printed on blacklists. Thousands of people held public demonstrations, and vandals attacked Standard oil barrels and oil cars. So great was the public opinion against Standard Oil that people would not (or could not, due to fear for their safety) purchase it, and Rockefeller laid off 90% of his workers in 1872 (pp. 139-141).

After the SIC led to the "Cleveland Massacre," Rockefeller started a similar cartel called the National Refiner's Association, which differed by being open to all interested parties. Rockefeller designed the association this way because the secrecy and exclusivity of the SIC aroused so much protest (pp. 158-59). Competition thwarted this cartel when members reneged on the deal, exceeding their quotas. Moreover, "free riders" outside the cartel benefitted from higher prices without restraining their own output. The National Refiner's Association was soon dissolved. Though Standard Oil later recovered and prospered, these events surely revealed to future entrepreneurs that they could not join cartels and trusts at no risk. Competitors and consumers checked outrageous price agreements while the law turned its head the other way.

Having tried other paths to restricting overproduction, Rockefeller started what Chernow calls an "unrelenting campaign of national consolidation," buying out competitors nationally as he had done in Cleveland (p. 161). When industries refused to sell, Rockefeller engaged in predatory pricing in the local areas subject to competition. He required that grocers and hardware merchants sell only Standard Oil, or else he would drive them out of business with his own retail tank wagons (p. 253). Rockefeller could also dictate the business of railroads, since he could delay shipment of the lubricating grease they needed to run their trains. He had the railroads thwart his competitors by cutting off transportation for noncustomers, agreeing not to ship products by or to businesses that did not buy Standard Oil, or raising rates for problem customers (pp. 164, 170).

Rockefeller's effort to eliminate intermediaries and market Standard Oil directly to retailers by tank wagons won resentment from thousands of small retailers. Rockefeller forced these people to sell only Standard Oil. If they did not comply, Standard Oil would either sell oil door-to-door or open its own general store to drive them out of business. His station managers had to command at least 85% of the local oil trade, and it was understood that they were to spy on other distributors to make sure they were not selling competitors' oil. Incidentally, the direct control over retail probably benefitted consumers, as intermediaries had increased the price of each gallon by three to five cents for their own profit, and often mixed inferior kerosene with Standard Oil kerosene (pp. 256-258).

Rockefeller succeeded in his campaign of consolidation by 1877, when he controlled the oil markets of Cleveland, Philadelphia, Pittsburgh, West Virginia, and Baltimore, forming a total of 90% of the market. By the time Standard Oil was broken up in 1911, it faced competition from various companies in Texas and Russia, but these competitors would not have existed if political reasons did not preclude Rockefeller from eliminating them. In Texas, state antitrust laws and popular animosity toward Rockefeller made the making or selling of Standard Oil difficult, making room for new companies like Texaco. Foreign governments were simply beyond the reach of Rockefeller to obtain protection.

Chernow notes some of the disincentives that unregulated capitalism offered against Rockefeller's techniques, calling them "expensive extravagances that accompanied the creation of the monopoly" (p. 162). Some of the competitors Rockefeller bought out started up new oil firms, and many refiners entered the business just so that Rockefeller would buy them out. Rockefeller started hiring the original competitors as managers at wages above their value to him, paying them not to produce. Expensive skeleton crews were maintained on plants that were producing little or no oil. Rockefeller also bought shares in newspapers to disseminate Standard Oil's version of current events, and hired critics to work for Standard Oil to silence them (pp. 208, 212).

The market was inadequate to prevent Standard Oil from acquiring 90 percent of the oil refining industry. Costs such as the skeleton crews, selling below cost, and buying out competitors did not prevent Rockefeller from obtaining monopoly; although they did cost him money, he still had reduced the oil refining market to token competition by 1877. Sometimes, as with Oil Creek refineries in Pennsylvania, firms that Rockefeller bought would take on a name other than Standard Oil, so that they did not arouse hatred of Rockefeller among the workers or consumers of this oil. Consumers who thought they were buying a different brand of oil in protest were often buying Standard Oil (pp. 166-167).

Part of the reason critics saw need for regulation was, ironically, other government regulations that worked in Standard Oil's favor. Rockefeller resorted using government to weed out competitors, in the late 1870's. His many attempts to bribe legislators to root out competition are too numerous to be labeled as exceptions. In 1879, Standard Oil had a near monopoly in the new method of oil transport - pipelines. A serious competitor emerged in Pennsylvania with the Tidewater Pipe Line Company. When the usual tactics failed, Standard Oil bought exclusive charters, or rights to build pipelines, in states where Tidewater planned to develop a pipeline. Not only did Standard Oil take advantage of exclusive charters, but it also lobbied and bribed legislators to continue the practice of them. Chernow writes "During the Tidewater battle, Standard lobbied hard to perpetuate the system that allowed state legislatures to grant exclusive pipeline charters...to foster the impression of a popular groundswell against the bill, he hired lawyers to pose as incensed farmers and landowners in favor of the status quo...." (p. 209)

The combination of predatory pricing and state charters ultimately led Tidewater to make a pact with Standard Oil, restricting its activities to 11.5 percent of the pipeline business and leaving the rest of the market to Standard Oil. In mixed economies, people may fear a monopolist because a person with so much control over the market has the opportunity to use the regulatory power of the state for his or her own benefit.

Even if Standard Oil were clearly, on balance, good for society, the reaction of politicians would be that its business practices were "still wrong." In 1890, during the debate over the Sherman Act, Representative William Mason argued that "trusts have made products cheaper, have reduced prices; but if the price of oil, for instance, were reduced to one cent a barrel, it would not right the wrong done to people of this country by the 'trusts' which have destroyed honest men from legitimate business enterprise" (Congressional Record, 51st Congress, 1st session, House, June 20, 1890, p. 4100). Later in the debate, Senator George F. Edmunds argues that although "the oil trust has reduced the price of oil immensely, that does not alter the wrong of the principle of any trust" (Ibid., p. 2558).

The popular sentiment against Standard Oil that made the antitrust case politically fruitful was produced by sensational news stories that presented business history as a tale of "good-guys" versus "bad-guys." Ida Tarbell's reports in McClure's Magazine and Henry Demarest Lloyd's Wealth Against Commonwealth mobilized public opinion against Rockefeller, who was unofficially retired by the twentieth century. Historians still cite these works as evidence of Standard Oil's depravity.

Apart from the aforementioned stories of unfair business practices, the most noticed parts of both works were the ad hominem attacks on Rockefeller and other high officials of Standard Oil. Lloyd's work was so vitriolic that he did not refer to Rockefeller or Standard Oil by name to avoid libel prosecution. Wealth Against Commonwealth pronounced blatant falsehoods, accusing Standard Oil of routinely keeping prices high and making secret arrangements with European competitors. Chernow writes that Lloyd "filled notebooks with flaming diatribes against . . . a cruel, selfish, carnivorous, short-sighted herd" and "ennobled any businessman, however greedy or inept, who opposed Rockefeller" (pp. 340-341, 437). The book's inflammatory character made its influence all the more seminal among politicians, becoming "the bible of Washington trustbusters," and the final straw that motivated Ida Tarbell to launch her attacks on Standard Oil (pp. 340-341, 437).

Ida Tarbell had watched Rockefeller put her father and other independent oil refiners out of business in her hometown of Titusville. Her motive was not to indict Rockefeller for his impact on consumers at large, then, but on other oil refiners. Chernow writes that "It revolted Ida that the trust could turn proud, independent entrepreneurs into beaten men taking orders from distant bosses" (p. 436). Contrary to the stories of "Miss Tarbarrel," as Rockefeller referred to her, the independent refiners engaged in anti-competitive agreements when they could, and many small oil producers--who Rockefeller eventually bought out along with the refiners--also resorted to violence rather than competition, destroying pumps and wells. Chernow writes "The producers terrorized each other, meting out nocturnal punishment...by setting their wells ablaze or smashing their pumping engines with sledgehammers. The producing end of the industry was populated by thousands of free booting, high-spirited speculators who were far harder to organize than the more sober refiners...." (p. 159).

Tarbell revived an inaccurate story that Rockefeller had defrauded Mrs. Fred M. Backus, an elderly widow who sold her Cleveland lubricating plant in 1878. Backus' factory was highly inefficient and headed toward bankruptcy, but Rockefeller had offered $79,000 for it (out of goodwill toward an old acquaintance), which was at least twice the cost of constructing a better factory (447). Backus estimated the factory's price at $150,000, and was furious at Rockefeller during the whole episode. Far from being an impoverished victim of capitalism, she was worth $300,000 at her death (p. 447). Chernow writes that the story's "Dickensian ring" caused it to spread like wildfire in the press and McClure's readership of 375,000--including President Roosevelt (pp. 447, 449).

Tarbell issued memorable diatribes against Rockefeller's personality and presence. She described him as a "living mummy" and a citizen whose churchgoing habits were only a "hypocritical facade brilliantly created by the predatory businessman" (p. 453). She completed her portrait with his physical appearance as an elderly man: "The disease which in the last three or four years has swept Mr. Rockefeller's head bare of hair, stripped away even eyelashes and eyebrows, has revealed all the strength of his great head.... The big cheeks are puffy, bulging unpleasantly under the eyes, and the skin which covers them has a curiously unhealthy pallor. It is this puffiness, this unclean flesh, which repels, as the thin slit of a mouth terrifies..." (p. 453).

Tarbell had also included "dirt" on Rockefeller's family, including his bitter and paranoid brother Frank, who called John a "monster," even though he depended on him for loans to finance his prodigal spending habits (p. 455). Most devastating to Rockefeller himself was the publication of the activities of his utterly depraved father, "Doc" William Avery Rockefeller, a lifelong con artist who employed the name Dr. William Levingston ever since he left his first wife for an unsuspecting younger woman.

The public was aggravated by Rockefeller's refusal to answer to the writers' charges. Standard Oil had no public relations department, and Rockefeller thought that he should not dignify the charges with a response, believing the public furor would subside. He greatly underestimated the growing influence of the press during the Progressive Era.

President Roosevelt initiated the campaign to break up Standard Oil. Roosevelt was not against trusts per se, but trusts "which gouged consumers." He favored maintaining trusts "which offered fair prices and good service" (p. 433). The price of Standard Oil fell during the nineteenth century, but the new boss, John Archbold, had increased prices during Roosevelt's time. When Roosevelt gained momentum in 1903 - by informing reporters that Rockefeller used his connections in Congress to fight the Elkins Act (which strengthened penalties against railroad rebates)--he zeroed in on the prey.

The breakup of Standard Oil may have been in the interest of lower oil prices. John Archbold raised the price of Standard Oil to increase average dividends to larger figures than Rockefeller would have permitted, keeping the twenty five-year average at 13.86%, whereas Rockefeller's average had been 8%. It was under Archbold's leadership that Standard Oil was broken up in 1911. Presidents Roosevelt and Taft claimed that they were not against trusts in and of themselves, but trusts that used their competitive advantages to raise prices. Would the antitrust case discourage future "titans" from doing their best work in industry? Rockefeller himself was imbued with missionary zeal, and would have been likely to expand his business as far as possible, even with constant pressure from antitrust laws.

Ron Chernow's ***Titan: The Life of John D. Rockefeller, Sr.***, shows that in the case of Standard Oil, the Gilded Age's most notorious monopoly, the benefits conferred on consumers in pursuit of monopoly were ambiguous. However, net economic benefits to consumers were far from the minds of journalists and politicians, who used inappropriate criteria to excite popular agitation against Standard Oil. At best, politicians and intellectuals measured the plight of businesses displaced or harassed by Standard Oil against the success of Standard Oil, rather than measuring the plight against the advantages of a non-antitrust policy to the public. Standard Oil was and is judged not on the basis of whether it was, on balance, good for society, but whether it adhered to a moral obligation to refrain from eliminating competition.

[1]. Conversation with Professor Joseph Steim, chemistry department, Brown University, on January 14, 1999.

[2]. Ibid.