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Standard Oil: Cost Reductions and Predatory Pricing

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By

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Thank you

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Sin el apoyo que me dan todos los días, algo como esto jamas hubiese sido terminado. Los quiero mucho.

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Research Question

Did Standard Oil attempt to monopolize the market of kerosene by employing predatory pricing – and if not, why did the Supreme Court still find it guilty of this allegation?

Abstract

Standard Oil was founded by John D. Rockefeller and later dismantled by the US Supreme Court in 1911 for attempting to monopolize the market of the refined-oil kerosene. The objective of this thesis is to determine if the Supreme Court's accusations relating to predatory pricing were based on facts; or did the government make groundless denunciations due to pressure from society at the time.

My objective revolves a historical case study that can be understood with economic theory. I intend to use empirical information from historical data about the growth of the company to determine whether the accusation of employing predatory pricing with an attempt to monopolize the market of kerosene is based on facts. Given that this is essentially a case study and the focus on the topic will be from a historical point of view, I will compliment this empiricism with economic theories and several key assumptions in order to understand the implications of the subject.

Introduction

The theory of predatory pricing remains as one of the most important reasons for anti-trust policies. The case brought to the Supreme Court against the Standard Oil Company in 1911 was based on a number of allegations made by its critics, yet predatory pricing remains one of its most contentious. The purpose of this research is to assess whether or not the testimony accusing Standard Oil of engaging in predatory pricing with the objective to become a monopoly, or to *monopolize*, the market of the refined-oil kerosene is based on facts or not.

This research will be divided into three main chapters. The first will outline the number of measures Standard Oil employed to lower its average costs and be able to compete against an already established market by having lower prices. The second chapter will contain the economics behind predatory pricing and whether it is a rational or irrational pricing strategy for any company. The third chapter relates the theory of predatory pricing to historical testimonies from the trial in 1911 to determine whether Standard Oil employed, or did not employ, said practice to monopolize the market of kerosene.

Efforts to Lower Standard Oil's Average Costs

"From the beginning, I was trained to work, to save, and to give."[1] John D. Rockefeller's vision was to produce for the, "poor man [who has to have kerosene] cheap and good." One of his first partners was quoted saying that Rockefeller was, "methodical to an extreme, careful as to details and exacting to a fraction." These citations reflect Rockefeller's objective and means to acquire it. He focused on decreasing the production cost to reduce inefficiencies and transfer this lower cost onto the customer via lower prices, so that they can enjoy the product.

Rockefeller managed to create countless methods to decrease his production costs. The following are merely the most famous cases, but they reflect Rockefeller's business vision. These can be divided into two sections. The first focuses on lowering the average costs of production outside the boundaries of Standard Oil. This relates primarily to Standard Oil's relationship with the railways and the advantages the company gained from this. The second focuses on lowering the average costs of production within the boundaries of the company. These include finding methods to increase the amount of production to enjoy economies of scale that would eventually lead to lower costs of production for the good.

[1] Folsom, 1

Reducing Cost: Outside the boundaries of Standard Oil

Rockefeller devised a plan to lower his own average costs by dealing with other industries. The most famous example is the relationship between Standard Oil and the railway companies that transported Standard's kerosene. Given the importance of these savings to the final selling price of kerosene and the prominent role this question has assumed in history it merits its own section.

Railroad Rebates

John D. Rockefeller had an obsession with efficiency that was incomparable. His drive to improve Standard Oil everywhere he could, awarded him with an unmatchable fortune, however, this did fuel public anger towards him and the company. Public outrage towards Rockefeller and his company can be understood with the railroad rebates, or discounts, Standard Oil enjoyed from the railway companies. It was with these rebates that the American public associated Standard Oil as an abusive company that used illegal means to monopolize the market of kerosene. Eventually, Judge Atherton of the Supreme Court would argue, "a discrimination in the rate of freights resting extensively on such a basis ought not to be sustained. The Principle is opposed to sound public policy"[2] Consequently, a number of railway companies were found guilty of discriminating against the smaller refineries that required the transportation services.

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[2] Tarbell, 74

The basis behind this accusation is that Standard Oil coerced railway companies into rewarding it rebate prices for transporting its barrels of oil. Much like the accusations of monopolizing the market through predatory pricing, this one is also quite false. Standard Oil did have helpful net railroad freight rates which enabled them to increase profits, however they did not gain them through means of threat or force with the mindset of gaining market share, it received them by creating a system where both the railway companies and Standard Oil benefited from them. Also, Standard did not achieve its heights in the market by having these rates, it was already a large company when it struck its first deal.

Similar to the comprehensive essay by Reksulak and Shughart II, this section will be divided into two sub-sections: the first explaining the infrastructure behind the "economics of railroading… at a time when the industry's explosive growth ignited … [fierce] competition"[3] triggering such contentious rebates on oil companies; and the second will concentrate on Rockefeller's obsession with innovation leading to railroad companies to find profits in this new transport methodology. As a result, these transporting companies offered Standard Oil advantageous rebates.

Economics of Railroading in the late 19th century

[3] Reksulak and Shughart II, 6

In the second half of the nineteenth century, the railroading business witnessed a relentless battle of appealing net railway freight rates. Two factors led to this behavior in this industry. The first was a particular high ratio of fixed to variable costs. The cost of creating a railway is very steep before a single client could board a train. "A railroad must first secure rights-of-way, lay down tracks, build warehouses and terminals and acquire locomotives and rolling stock." Once all these payments and requirements are covered, the traffic and transportation of goods make the variable costs relatively low[4]. The second factor was the unsustainable growth of the railroad network that depended on continuous high volumes of traffic to cover all its costs. "[I]n pursuing that goal, every bit of excess capacity invited rate-cutting to secure more business and to utilize that transportation capacity more fully."[5] These two factors meant that there was a high start-up cost that needed to be met, and whichever company met them was rewarded with attractive rebates to ensure business for the future.

Economically speaking, the infrastructure behind the railroading business is no different to other industries. In fact, the start–up costs for developing a new company of the size of railroading, or even oil refining are usually large while the production of the marginal good is very small. The graph below shows how the fixed costs of a company over time drop dramatically:

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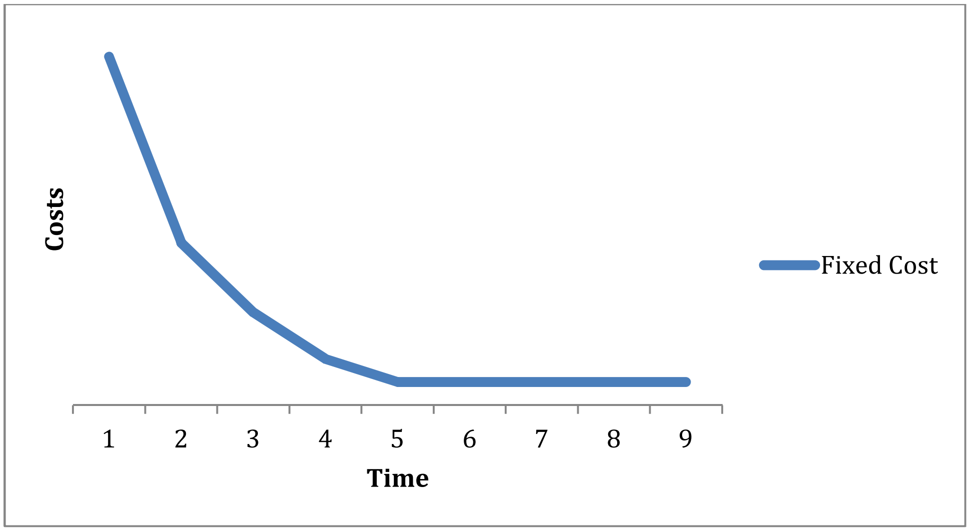
[4] Reksulak and Shughart II, 7
[5] Reksulak and Shughart II, 8



Legal Precedents for Lower Railroad Rebates

A legal precedent in English courts, mentioned by Reksulak and Shughart II in "Of Rebates and Drawbacks: The Standard Oil (N.J.) Company and the Railroads", was *Nicholson v. G.W. Ry. Co*. where the courts essentially insisted that discriminating rebates where not illegal. Further, The influence of this case onto American law and its implication of lower rebates being open to those parties interested was *Everett Messenger v. The Pennsylvania Railroad Company* where the judge at the time "declared exclusive contract between a railroad and an express company null and void in light of the public interest nature of common carriers."[6] According to Chernow in his 1998 "Titan: The life of John D. Rockefeller, Sr", the Ohio courts, in 1867 "defeated a bill…that would have made nondiscriminatory

[6] Reksulak and Shughart II, 8 (footnote)

rates a requirement."[7] Legally, it was not until 1906, through the Hepburn Act, that the Interstate Commerce Commission (ICC) had the power to establish maximum rates. And even then, it was not until 1920, nine years after Standard Oil was dismantled, that the ICC had the authority to set minimum rebate rates.[8]

Contentious Lower Railroad Rebates

Based on the economic infrastructure and the legal framework of the railroading business, the presence of rebates awarded to large shippers in exchange for business was very likely in the second half of the 19th century.[9] Needless to say, the rebates led to inevitable bankruptcy of several businesses that could not meet the costs of their transportation. The "large volume, long distance" mantra that the railways depended on to be sustainable was a factor that led to much anger and disapproval by the American public. Childs argues that this anger was based on a misunderstanding of the economic truths.

> "American's unhappiness with railway service rested on their inability to understand how the economic force at work, especially rate making, were different from pre-industrial business activity. Railway rates were based on a variety of considerations, but, significantly, not the actual *cost* of service. Instead, the *value* of the service was derived from

[7] Chernow, 117
[8] Shughart, 241
[9] Hovenkamp, 1042

> consideration of several factors…the volume of the shipment, the distance travelled, and the availability of the alternative transportation…"[10]

For at least the period after 1860s until 1906, public dissatisfaction did not affect whether or not oil and railway companies did business with employing rebates. Large profits were available and, "they were for the wariest, the shrewdest, the most persistent[,]"[11]who better at the time than Rockefeller fits those criteria? Since the beginning of the railroad business, advantageous rebate rates were a common practice. Though carried through history as "secrete rebates", they were far from secret. In some cases they were expected in order to do business. According to Reksulak and Shughart II, "It was not only normal for railroads to offer 'bargains' in negotiations with important customers that undercut the rates published in tariff books, but it was also widely understood to be an effective bargaining tool for such customers to demand lower rates for large and regulate shipments."[12]

Drawbacks

It is noteworthy that alongside 'secret rebate rates' there was another key mechanism that railway companies could use in order to ensure business from important clients such as, but not limited to, Rockefeller's Standard Oil Company. This other mechanism was a drawback, or 'drawbacks'. Introduced in literature by

[10] Childs, 21
[11] Tarbell, 101
[12] Reksulak and Shughart, 10

Tarbell and later summarized by Reksulak and Shughart, "'[D]rawbacks' described a system in which a favored shipper not only received a rebate from the published tariff applicable to shipment of its own goods, but in addition received from the railroad a rebate on the tariffs paid by all other shippers, some of which presumably were the competitors of the so-favored company."[13] Tarbell provides an example where in 1871 an agreement awarded a rebate of $1.06 per barrel shipped from Cleveland to New York. A service to 'non-members' would have cost $2.56, and a drawback of equal sum per barrel.[14]

The drawbacks, similar to the freight rebates were not welcomed by the American public who chastised Standard Oil for reaping the benefits of the system while condemning competitors. Equally important the railway companies were attacked for allowing the development of this system in the first place and joining arms with Standard Oil. Flynn penned the zeitgeist of the public and their anger towards this system:

> "[T]here was no practice which the Standard Oil exacted and which apparently these oil men invented for which no excuse can be found; a practice which perpetuated an injustice so grave, so cruel, so indefensible…"[15]

However it should be noted that Standard Oil did not 'invent' this drawback system. Grodinsky explains in an exchange with Destler that, "drawbacks to shippers as a

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[13] Reksulak and Shughart, 11
[14] Tarbell, 61
[15] Flynn, 267

means of diverting traffic from one road to another had been employed for many years prior to… 1868"[16]

Regardless of who conceived the rebate or drawback systems, John D. Rockefeller seized the opportunity to aid his company by reducing its transportation costs by employing this system. What remains unclear is that this preferential system enabled his company to gain 'unfair' competitive advantage and to outdistance its rivals in the race to monopolize the market. "[E]ven before Rockefeller accepted his first rebate, he was the world's largest refiner, equal in size to the next three largest Cleveland refineries combined"[17] In fact, "many refineries received rebates, not just the leading firms, and some tiny rivals actually got superior discounts[.]"[18]

It was the railroading industry as of the 1860s that was culpable for developing such a system where shippers such as Standard Oil Company benefitted from (not instituted). Standard Oil and Rockefeller had nothing to do with the creation of this system, legally bound by precedents, but they surely benefited from it. It remains a fact that none of these practices were illegal.

While the lower 'secret railway rebates' are an understandable advantage that Rockefeller enjoyed, the drawbacks are harder to grasp. After all, why should Standard Oil have been paid for its competitors to use the line? Rockefeller essentially created a positive externality in the market benefitting its competitors. A

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[16] Grodinsky 618
[17] Chernow, 114
[18] Chernow, 115

positive externality is a benefit to a third party. In this case, Rockefeller's 'reform' of the railroading business lowered the costs of the railroads, which subsequently lowered the costs of his competing oil refineries. As a result of this Standard Oil had the understandable right to charge those competing refineries for using his method of shipment. [19]

The Standard Oil Company gained its reputation as a company that used the infamous system of secret rebates rates and drawbacks sponsored by the railroads it dealt with to gain an unfair market share with the attempt to monopolize the market. Critics such as Tarbell focus on the mechanisms that purportedly "made Standard Oil into what it was…"[20] Critics advocate that Standard Oil used its sheer size and influential power to coerce railroad companies into awarding the company with discriminating high rate freights rebates which enabled it to lower its oil-transportation costs in order to exploit its power. Contrary to this belief, Rockefeller became "primus inter pares…for special favors from the railroads because he was able to offer them value in return that his rivals were unable to offer."[21]

In reality, Standard Oil became as successful as it is known as today due to John D. Rockefeller's business vision. His obsession with innovation and focus on lowering average costs at every possible point of the product line are the reasons for

[19] Reksulak and Shughart II, 20
[20] Reksulak and Shughart, 14
[21] Reksulak and Shughart, 14

his undoubted success.[22] It is for these reasons that he has to be remembered for, not for alleged illegalities. Even Tarbell, its most ardent critic, concedes Rockefeller's qualities are key to the company's stature. She says, his "remarkable commercial vision" and "genius for seeing the possibilities in material things" alluding to his attention to even the smallest, often trivial, detail that would separate him from other Cleveland oil refineries.

Rockefeller's Other Revolutions to the Railroading Business

Rockefeller drove two main revolutions in the railroading business, that of tank cars and the power of high volume and long distances as opposed to low volume and short distances.

Tank Cars

Part of Standard Oil's success and also part of the reason for its preferential treatment from the railroad firms were Rockefeller's other innovations to the railroading business. In the early days of oil transportation, the refined oil was transported into wooden barrels. Rockefeller, a man with a 'high –volume, low-cost

[22] In some cases his vision went beyond the product. His refinery locations were strategically placed near water at times so that he can save in transportations costs on the onset of the company (Reksulak and Shughart II, 16).

production'[23] vision was naturally dissatisfied with this process of transportation. His solution was to make use of tank cars.

The process prior to his involvement was the following. The oil barrels (hundreds and thousands at times) had to be filled at the onset and then removed upon arrival. This of course was only possible if there were not pertaining fires or leakages during the transportation. After all, wooden barrels were not made for oil, but were originally made for wine and whisky.[24]

Rockefeller's solution to this inefficient system was to make use of tank cars. Tank cars are essentially large compartments on a train that carry vast amounts of liquid, in this case kerosene. This way, the time and costs pertaining to filling each barrel with oil and then removing said oil afterward was decreased dramatically. With tank cars, the oil was to be filled all at once (per tank) and let out all at once. This system, at least in theory, would mean that during the transportation process there would be fewer fires and fewer leakages at a lower cost. Also the process itself would take far less and also be cheaper. The image below[25] illustrates how these tank cars were (and still are now):

[23] Tarbell, 257
[24] Epstein, "The Monopoly Myth: The Case of Standard Oil" video recording at the Ayn Rand center
[25] www.photocraft.com

It should be noted that these oil tank cars were not John D. Rockefeller's creation. He merely adopted them for the transportation of his oil. Other companies used tank cars before Standard Oil, but not as productively. In fact, Standard Oil "[bought] all the oil tank cars from the railroads[.]"[26] The railroad companies at the time were uncertain of the returns they would receive from using tank cars, as still not all of their clientele were oil-refiners and had to cater to other types of shipments. Rockefeller then decided to invest heavily on these oil tank cars. He "raised tens of thousands of dollars in new capital to build cars on his own account which he then leased back to the railroads at a stipulated mileage rate, thereby assuring adequate rail transportation capacity.[27] This movement alone already propelled Rockefeller to a high position in the trade.[28]

[26] Oil City Derrick, 441
[27] Chernow, 170
[28] Gibson, 17

This foundation of useful capital (later used by all oil refineries) enabled Rockefeller to gain first-mover advantage and placed Standard Oil at a dominant position strong enough to "bargain hard for concessions with the various railroads.[29] Conceivably, apart from inevitable pipelines and water transportation, Standard's operations ensured enormous cost-savings for whomever carried the oil from Standard Oil Company.[30]Economically, by having such a prominent fleet of tank cars can only be profitable if they are used at a scale that would ensure profits.

The Power of High Volume and Long Distance

Beyond tanks cars, Standard Oil revolutionized the railroad industry by changing another aspect of the shipping of kerosene. Tarbell provides an account of essentially why the Standard Oil Company (and the railroads that won its contracts) were able to turn much profit. Its sheer volume is what set it apart from the rest.

> "Consider what Mr. Rockefeller could offer the road –sixty car-loads of oil a day, over 4,000 barrels… It permitted them to make up a solid oil train and run it out every day. By running nothing else they reduced the average time of a freight car from Cleveland to New York and return from thirty days to ten days. The investment for cars to handle their freight was reduced by this arrangement to about one-third what it would have been if several different persons were shipping the same amount every day"[31]

[29] Reksulak and Shughart, 18
[30] Reksulak and Shughart, 18
[31] Tarbell, 130

The volume involved with the shipment of Standard Oil can be seen as a rare mutually benefitting deal. If a company seeking rebates did not offer such volume, then the deal would not be as attractive for the railway companies. For example, "Lake Shore Railroad, by which most of the shipment went, told [other competitors] frankly that they could not have the rates of the Standard unless they gave the same volume of business."[32]

This is the point the history of the Standard Oil where critics argue that the power of Standard Oil to gain rebates due to its volume transported was plainly unfair. Their argument is centered in the idea that if volume is what was necessary to gain said rebates then other refineries simply could not sustain the transportation of vast amounts product. Even so, part of this attractive deal that Rockefeller would put forth to the railroads was that they would have freights even when the demand had slacked, meaning that the road would make more profit from the Standard Oil transportation than through its competitors.[33]

Needless to say, Standard Oil's investment into the development of the transportation system sustained by large volumes of shipments, the company was awarded even more attractive rebates than its competitors.[34] And understandably so, their contracts with the railroads helped both parties lower their average costs by thousands of dollars annually.

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[32] Tarbell, 71
[33] Chernow, 116
[34] Reksulak and Shughart II, 20

In essence railway rate differences were not uncommon by the time Rockefeller struck his deal with the railroad companies nor where they illegal. They cannot be quoted as the reason behind the growth of the company because Standard Oil was already a leading refinery.

Regarding the oil transporting business and its mechanisms meant two things for Standard Oil. First was that Rockefeller's revolutionary business vision provided Standard Oil with enough bargaining power with the railroad companies to be awarded appealing rates. He used these mechanisms to make the most for his company. Second, railroads themselves benefited as well from Rockefeller's innovations, meaning that rebates were a way to share the profits. Correctly noted by Reksulak et al, "this is how market are supposed to work". [35]

Reducing Costs: Inside the boundaries of Standard Oil

Standard Oil's comparatively lower price was also due to its lower costs driven by improvements made within the boundaries of the company. Rockefeller innovated Standard Oil consequently lowering its production's average cost, enabling it to cut their prices. Separate from his improvements to the railroading business, these following changes represent the measures he took of his company to

[35] Reksulak and Shughart II, 22

improve it further. The next four examples show his ability to spot redundancies and/or opportunities in the production line and making the appropriate changes.

Rockefeller's Investments in Research and Development

John D. Rockefeller was famous for making investments in research in development before that was even a common practice for businesses trying to explore new possibilities. His vision of looking at the long-run benefits of his high investments in the short-run were contested at first even by his own workers, but later made Standard Oil incredible sums of profit. The following three cases are essential in understanding how, even against adversity, Rockefeller took risks by investing in projects that would maintain the lower costs and lower prices of Standard's oil or also provide the company with needed cash to increase its inventory.

Lima Sulfur-based oil

In the early 1880s, the supply of oil in Northwestern Pennsylvania was gearing towards a possible demise. In 1885, in Lima, Ohio, drillers found oil, however the nature of this particular smell of crude made it unappealing to anyone. It was nicknamed, "skunk-oil" because it exhumed smells of rotten eggs. No one wanted to drill it as even touching the oil caused its stink to be washable only after several hours of cleansing. Further no one was interested to be shipped this oil as it would burn poorly and in some cases even explode when heated.[36]

Rockefeller understood that even though this was a difficult raw material to work with, letting the opportunity go could mean the end of his business in the long run, especially with the threat of oil-droughts in the area. He bought up $40 million barrels of this skunk oil and held them for two years. During that time he hired to German chemists to find a way to develop this crude oil into something marketable so Standard Oil could sell it.

The board of directors, in fact, outvoted Rockefeller for continuing to use the company's funds in order to see if this product could possibly be marketable. Rockefeller then said, "Very well, gentlemen, at my own personal expense, I will put up the money to care for this product: $2 million-$3 million, if necessary." The board understood the vision that Rockefeller had and they changed their vote in support for the venture. Rockefeller then said:

> "This ended the discussion, and we carried the Board with us and we continued to use the funds of the company in what was regarded as a very hazardous investment of money. But we persevered, and two or three of our practical men stood firmly with me and constantly occupied themselves with the chemists until at last, after millions of dollars had been expended in the tankage and buying the oil and constructing pipelines and tank cars to draw it away to the markets where could sell

[36] Folsom, 5

> it for fuel, one of our German chemists cried "Eureka!" We…at last found ourselves able to clarify the oil."[37]

Standard Oil could finally sell the product to the public and continue to offer cheap product to the public for the long run.

Development of By-products

John D. Rockefeller was a strong advocate of not being wasteful. This led Standard Oil to gain economies of scale to increase its volume and lower their costs of producing kerosene through economies of scale. This identified Standard Oil from the other refineries. Other oil-refineries were wasteful with the by-products gathered from the refining of the crude oil. They argued that their portfolio of saleable goods did not include the remaining by-products so they simply got rid of them. Rockefeller did not share the same philosophy and invested heavily to make use of these by-products in whatever way to his benefit.

Rockefeller, with the help of his business partner Samuel Andrews, actively searched ways to make use of the remaining products after kerosene had been refined from crude oil. At the time, the yield of refined crude oil would be "60 per cent kerosene, 10 per cent gasoline, 5 to 10 percent benzol or naphta, with the rest being tar and wastes." Other refineries argued that their business was kerosene and

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[37] Folsom, 6

consequently dumped the oil in the lakes or the rivers, such as the Cuyahoga River.[38] In addition, Epstein mentions some cases where the by-products were burnt.[39]

Rockefeller realizing that doing what other refineries were doing would not distinguish Standard Oil from the rest. As a result he decided to use the by-products at the time for several things. He "used gasoline for fuel, some of the tars for paving, and shipped naphtha to gas plants. They also sold lubricating oil, Vaseline and paraffin for making candles."[40]

Similar to the hiring of the German chemists to explore ways to purify the Lima Oil, Rockefeller hired chemists to develop the by-products further. Chemists ultimately developed close to 300 by-products from each barrel of oil. "They ranged from paint and varnish to dozens of lubricating oils to anesthetics."[41] Rockefeller sold the by-product to companies that had the appropriate machinery to deal with the yields. Whatever he did with the by-product was better than making zero revenue out of it, something that separated Standard Oil from the rest.

The cost of kerosene by finding all of these potentially saleable by-products did not decrease. It simply made Standard Oil more money than the competition. This meant that Standard Oil could produce more barrels and increase the revenue per barrel of raw petroleum as the volume sold increases.

[38] Folsom, 3
[39] Epstein
[40] Folsom, 3
[41] Folsom, 3

Ore from Mesabi Iron from the Great Lakes region

Similar to the economies of scale earned through selling the by-products of refined crude oil, Rockefeller increased Standard Oil's economies of scale by investing in other projects. For example he invested heavily on the ore from Mesabi iron found in Minnesotta near the Great Lakes.

Other notable visionaries (or barons) of the time such as J.P. Morgan and Charles Schwabb distinctly questioned and mocked Rockefeller for his business venture in 1873. They did not believe in the potential of this ore. Yet Rockefeller controversially invested $40 million on this ore betting that they can be useful. As it turns out, the ore became useful and saleable. Rockefeller ended up selling to J.P. Morgan and Schwabb and even Carnegie for $80 to $90 million for his ore.[42]

Again, this did not reduce the price of producing kerosene. The volumes of barrels he could now produce were larger lowering the cost per barrel, and consequently lowering the price of kerosene charged to the American public.

Treatment of employees or "Standard Oil Family"

One thing that cannot be argued is the progressive treatment of the employees within Standard Oil. The workers were well paid, well treated, and

[42] Folsom, 9

enjoyed benefits no other company offered or could afford. Rockefeller believed that, while paying higher wages than commanded by the labour market, would eventually lead to happier workers delivering better products.

All Employees Shared the Same Vision

Rockefeller believed that within Standard Oil, all employees, including himself, were part of a family, the "Standard Oil Family", where everyone worked towards the same objective. All the family members combined had more ideas than just Rockefeller on how to save money. "[Rockefeller] managed to get everybody interested in saving, in cutting out a detail here and there." Everyone felt welcome and part of an organization where the common goal meant that everyone could contribute to its cause. Folsom mentions the following account that best illustrates this holistic view within the company and how Rockefeller treated Standard Oil's employees:

> "One time a new accountant moved into a room where Rockefeller kept an exercise machine. Not knowing what Rockefeller looked like, the accountant saw him and ordered him to remove it. "All right," said Rockefeller, and he politely took it away."[43]

There was no distinction between ranks when it came to making the company efficient. And why should there be? Though Rockefeller mainly improved Standard

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[43] Folsom, 9

Oil, he hired talented people who could spot opportunity where Rockefeller did not. In fact, Rockefeller saw himself as a mere member of this family. He believed that every person, regardless of their status within the company, had to understand the intricacies of the different levels of the production line and the industry. In the early years of the company, Rockefeller, for example, would rise early and help the workers by "rolling barrels, piling hoops, and wheeling-out shavings."

When all the minds of the company are working towards the same goal, more can be achieved this way. Thomas Wheeler, one of Rockefeller's main buyers said, "I have never heard of his equal in getting together a lot of the very best men in one team and inspiring each man to do his best for the enterprise."[44]

Generous Salaries and Comforting Life-style

Rockefeller believed that having above-market wages being paid to employees would benefit the company on the long-run. They argued that happy employees would be less likely to strike. This method allowed Standard Oil to acquire labour much easier than the competition and at the same time command loyalty to the company.

Rockefeller recognized the talent of his employees and understandably did what he could to keep them from working for the competition. "Rockefeller treated

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[44] Folsom, 9

his top managers as conquering heroes and gave them praise, rest, and comfort." He understood that the ideas and the future production and performance of the company were dependent on how happy and healthy his managers were. Rockefeller wrote the following to one of his leading buyers, "I trust you will not worry about the business. Your health is more important to you and to us than the business." And to a newly acquired refinery's manager he said, "Please feel at perfect liberty to break away three, six, nine, twelve, fifteen months, more or less…Your salary will not cease, however long you decide to remain away from the business." This was a package that included fully paid vacations for workers whom stayed loyal to Standard Oil.[45] Going back to the anecdote about the exercise machine, Folsom continued by saying:

> "Later, when the embarrassed accountant found out whom he had chided, he expected to be fired; but Rockefeller never mentioned it."[46]

This shows the power of the welcoming working conditions at Standard Oil. For a super-competitive firm, the work environment was far from that. While in any other company that accountant would have been fired, in Standard Oil, Rockefeller had no reason why to reprimand him. Rockefeller welcomed the accountant's attitude because that kind of attitude was one of the reasons why Standard Oil was as dominant as it was.

[45] Folsom, 9
[46] Folsom, 9

Miscellaneous improvements within Standard Oil

Besides from the product and employee-based improvements, Rockefeller addressed the actual facilities where the kerosene was being refined as an area of where money could be saved. The following three examples represent what may be minor and sometimes even trivial methods to decrease the average cost of the product, but in reality represent millions of dollars saved over decades. This sub-section does not mean to imply that Standard Oil could refine oil for less, simply that Rockefeller found ways to reduce overall costs of production enabling Standard Oil to produce more barrels every time making it more competitive.

Building of Standard Oil Factories

From the onset of Standard Oil, Rockefeller faced close to 250 other competitors and needed to find ways to offer a cheaper product to the public in order to be successful. Before even producing barrels of oil, he would save money by building his factories that would reflect, in principle, his ideology of saving money.

Where he could, Rockefeller built his factories in areas near rivers, where he could transport his products via water making the transportation costs much cheaper than by rail. When Rockefeller gained the lower rebates from different railroads this changed, but at the beginning he enjoyed lower costs by making this move. Even after he gained the railroads, he could always let the railroads know that if he wasn't awarded the appropriate rebates, he could leave their business and transport his product via water.[47]

Further when he built his oil-refining factories he did not pay for insurance. The nature of kerosene and crude oil being flammable items meant that insurance was a necessity for the refineries at the time. But Rockefeller built his factories so well designed that he minimized the amounts of fires. By doing so, he waived the need for paying insurance. Rockefeller gambled by self-insuring Standard Oil.[48]

Even before producing the actual barrel of kerosene, Rockefeller had devised the locations and designs of his factories to diminish the amounts of costs. No other refinery had done this before and as a result, Standard Oil had a slight competitive advantage over them.

Development of his own Barrels

As mentioned before, the oil industry was such at the time that barrels for transportation had to be purchased from whisky and wine producers. These were already used and were cheaper than what coopers had to offer. Rockefeller devised the plan to buy his own forest to develop his own type of barrels that were particularly designed for carrying oil in order to shave costs.

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[47] Epstein, Ayn Rand Center
[48] Folsom, 3

The barrels produced up until then were not safe. They were made for products other than oil. Standard Oil and the other refineries had to pay a sum between $2.50 to $3.00 per barrel depending on the location. As Standard Oil's volume of production increased and the price of kerosene began to drop, the value of the contents of the barrel were less than the actual barrel thus raising a problem. Rockefeller's solution was to buy a forest "of white oak timber and his own kilns to dry the wood," thus being able to depend on a more appropriate wood to carry oil at a cheaper price. He famously managed to lower the cost per barrel to $0.96. This alone had huge implications on the price of a gallon per barrel charged to the public.

Soldering the Barrels

Perhaps one of the most famous examples of Rockefeller's incredible attention to detail is his vision of changing a method of production in order to save a micro-cent at a time. Though slightly, he altered the way that soldering the cans with barrels was done saving the company thousands of dollars over time.

Ron Chernow best describes how Rockefeller achieved to make hundreds of thousands of dollars by making minute changes to the soldering of metal cans containing kerosene:

> "During an inspection tour of a Standard Oil plant in New York City, for instance, he observed a machine that soldered the lids on five-gallon cans of kerosene destined

> for export. Upon learning that each lid was sealed with 40 drops of solder, he asked, "have you ever tried 38?" It turned out that when 38 drops were applied, a small percentage of the cans leaked. None leaked with 39, though. "'That one drop of solder', said Rockefeller…'saved $2,500 the first year; but the export business kept on increasing after that and doubled, quadrupled – became immensely greater than it was then and the saving has gone steadily along, one drop on each can, and has amounted since to many hundreds of thousands of dollars'"[49]

The vision to decrease that micro-cent not only benefited Standard Oil greatly, but it benefited the consumers as well. Standard Oil transferred these decreases in the costs along to the consumers with lower prices, who could at one point enjoy a gallon for $0.08, a decrease from $0.30. [50]

Summary

Rockefeller devised a number cost-saving techniques that he implemented onto Standard Oil. These techniques can be divided into two different kinds. The first is those methods involving other industries, mainly the railroad companies and taking advantage of the already present net freight rates and drawbacks. The second one being the improvements he made within the boundaries of Standard Oil and the production methods he led the company take to lower their production costs.

This eventually led to the prices of Standard Oil kerosene to be lower than the competition causing consumers to prefer the cheaper option. Standard Oil

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[49] Chernow, 180-181
[50] Folsom, 8

became highly competitive in the market place by being able to produce a product that was cheaper, not through illegal means. These examples have shown that Standard Oil differentiated itself from the competition by genuinely (not artificially) enjoying lower costs that could be transferred to the public as genuine lower prices. These lower prices were not artificial, in other words, predatory pricing as is led to belief by the Supreme Court's decision in 1911.

The Economics of Predatory Pricing

With respects to the dismantlement of John D. Rockefeller's Standard Oil based on the momentous decision by the Supreme Court in 1911, John McGee researches if, both theoretically and empirically, predatory pricing was a strategy employed by the Trust. McGee, and now most economists, conclude that it would have been illogical for Standard Oil to engage in predatory pricing to attempt to monopolize the oil-refining business. This strategy would have been futile and would have lost the company more than would have gained. Further it was not within the company's interest to engage in price wars.

Definition of 'Predatory Pricing'

Predatory pricing is the competitive strategy that firms may employ to drive the competition out of the market. The theory behind predatory pricing is straightforward. In a market, a predatory firm (or predator) lowers its prices to the point where they fall below its average cost and the average cost of the competitors.[51] This causes the competitors (or prey) to follow along by lowering their prices below their average costs in order to remain competitive. Ceteris

[51] In order to simplify this theory, the competitor firms and the predator will have the same average costs. In reality, different firms have different costs and can therefore price differently.

Paribus (such as ignoring customer loyalty, cash reserves of the prey, etc), a strategy other than lowering prices by the prey will mean an inevitable loss of market share. This consequently incurs a loss for every unit sold, until bankruptcy is unavoidable. After the competition has been removed from the marketplace, the predator firm increases its prices to a profitable point (a monopoly price) in order to offset its losses while predating (period during predatory pricing) and thereon gain monopoly profits.

Assumptions of Predatory Pricing

The following assumptions need to be taken into account when studying the theory of predatory pricing. They outline both the market conditions and the firm's conditions necessary to embark on a price war with predatory pricing.

To begin with, a firm needs to have some sort of 'war chest' to subsidize the tenure of the pricing war. Predatory pricing means that in the future all the losses incurred while preying will be balanced out by monopoly profits, but the question as to when the other firms will drop out of the market remains. A 'war chest' is then necessary to battle out the tumultuous predation period.

Also, it can be understood that a firm attempting to engage in predatory pricing must have had some sort of previous predominant market dominance enabling it to acquire said war chest. It is assumed that the funds necessary to form a war chest may come from outside the profits gained while working on the industry. However, in order to simplify this theory, the acquisition of the war chest will be assumed to have come from the gains earned within the industry. This leads to conclude that the market is not perfectly competitive, but more characteristic of a monopoly as theory suggests.

In addition, it must not be forgotten that predatory pricing is a method with *intention* to gain market share and establish a monopoly, or to *monopolize*. Building on that, if there is intent, then it is crucial to select an area of the market where there are barriers to entry, either imposed by the government or through economies of scale.[52] Otherwise attempting to monopolize an area of the market that is easy to enter would be irrational and futile as will be explained later.

Lastly, the theory is not explicit in defining whether the 'prey' is a new firm entering the market or an already established company. It is understandable that if the predator has been monopoly all along, then the prey has to be a new entrant in the market. However, for all intents and purposes of this paper, it can be assumed that the prey could be an established firm, and the dominant firm, the predator, is a firm aiming to gain market share.

Based on the definition and the assumptions of predatory pricing, the following graphs illustrate how this strategy works:

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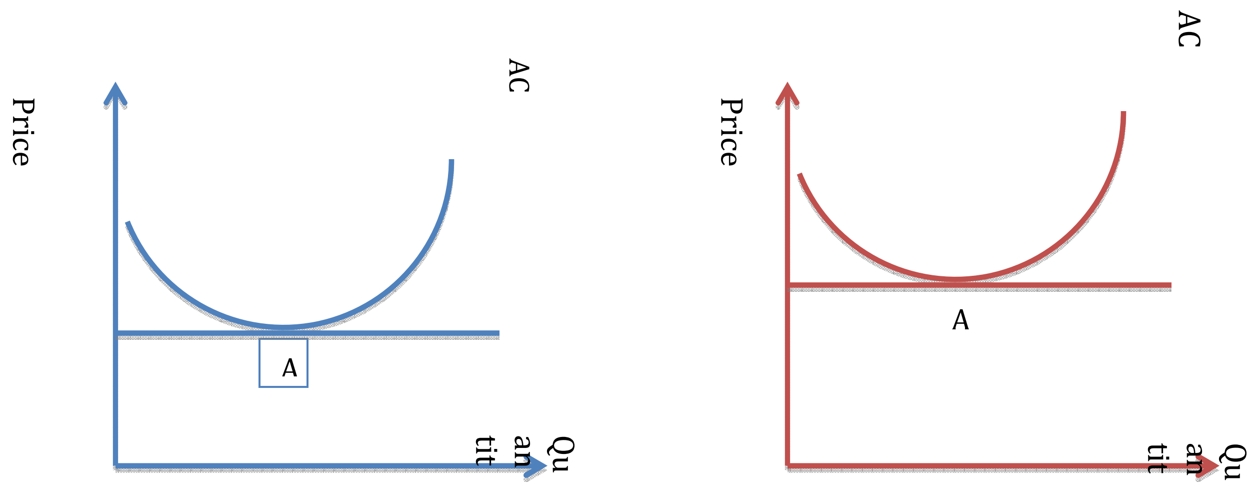
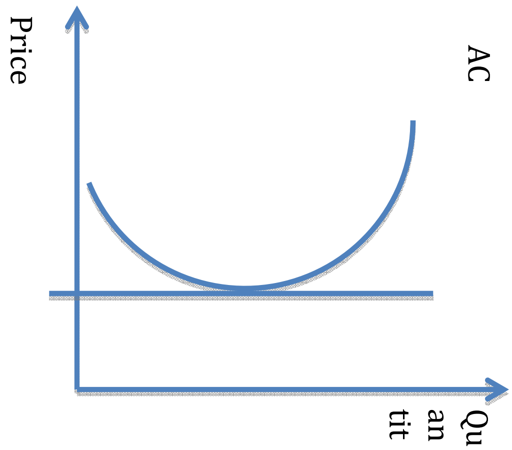
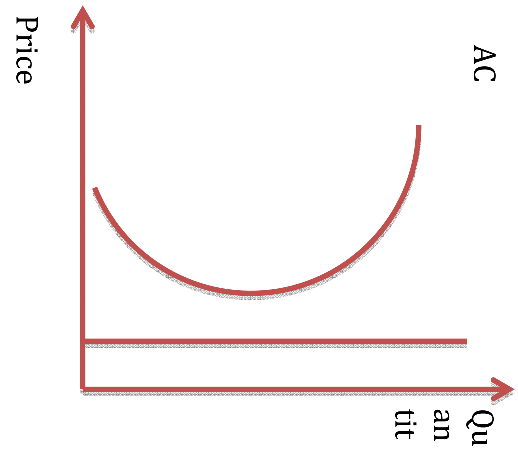
[52] There are other ways of barriers to entry more relevant in other industries. Patents, high start up and sunk costs, access to raw materials, access to distribution channels and recognition, etc. (Tom Spencer, Barriers to Entry)

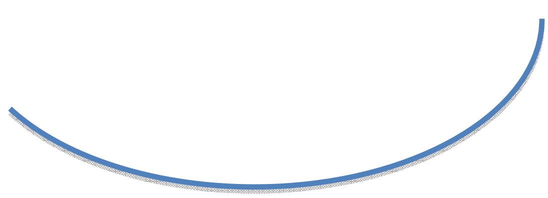


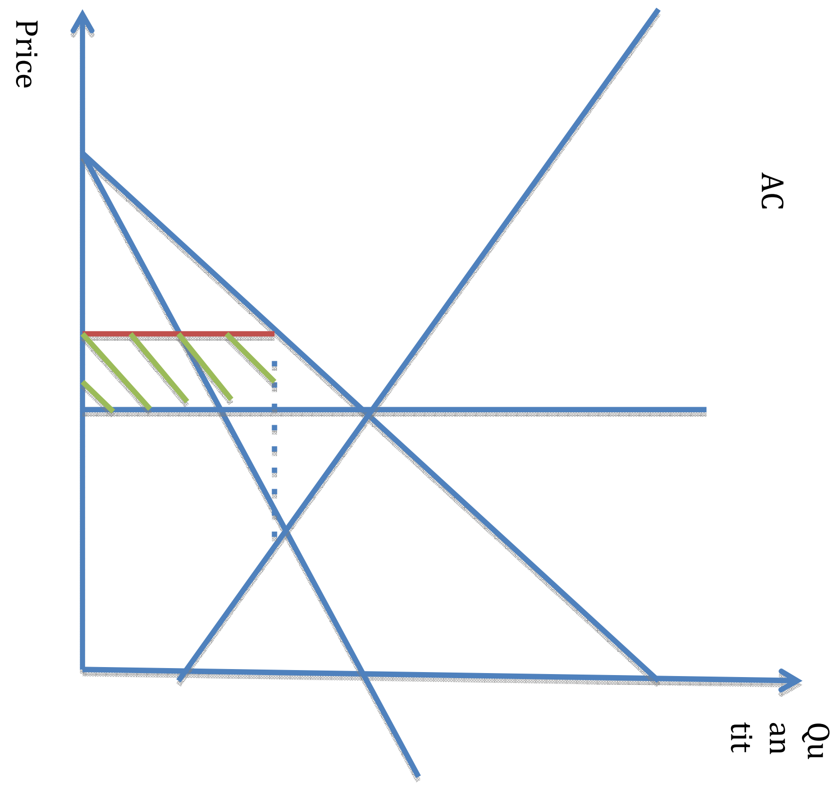
First, all the firms in the market charge a price that is equal to its average cost, as it is determined by the lowest point on their average cost curve. That is point A on the graphs.





Second, the predator chooses to charge a lower price than the prey in order to take the prey's market share provided that there is no customer loyalty. The red line represents the predator's lower price indicating a temporary loss in revenue until the competition is driven out of the market. The blue line represents the price charged by the preys.





Third, once the competition leaves the market the predator can now increase its prices to a monopoly price indicating profits that will offset the losses incurred during predating. The upward trending straight line is the marginal cost. The area shaded in green represents this profit for the now monopoly.

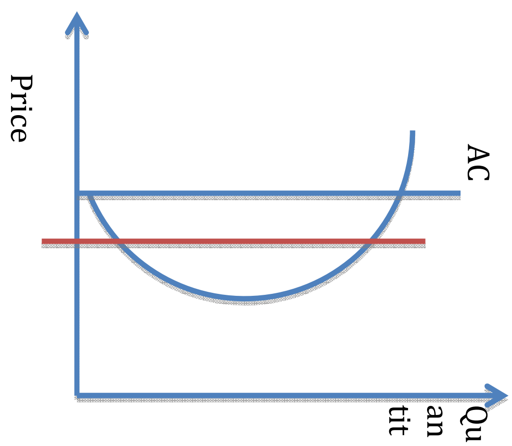
Differences between predatory pricing and price-cutting

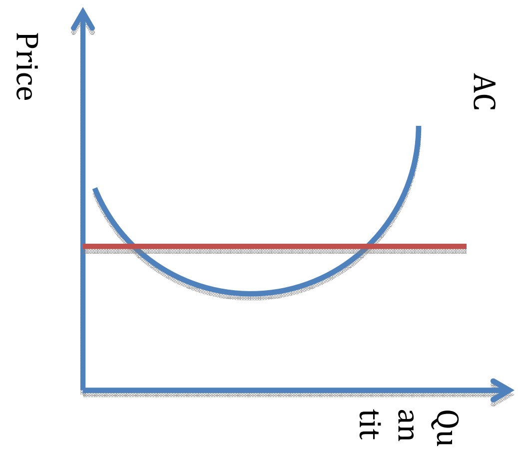
Standard Oil allegedly drove its prey out of business in order to monopolize the market. To an extent this is the key detail in predatory pricing. There has to be *intent* (or *attempt)*[53] of establishing a monopoly within a market and therefore charge super-normal (monopoly) prices for it to be called predatory pricing. Attempting and having an intention to monopolizing the market are used interchangeably. The evidence used by courts and economists to determine predatory pricing are testimonies and financial data gathered from the company[54]. If there is no attempt to monopolize the market, then it is otherwise called normal competition or *price-cutting*. If the intent is to monopolize the market, then there are a few key conditions that need to be met. Keep in mind, that both predatory pricing and price-cutting are different to simply lowering prices due to lower costs in the market. The first two allude to some sort of price war whereas the latter is a pricing strategy in response to internally lowering of costs, not artificially lowering of prices.

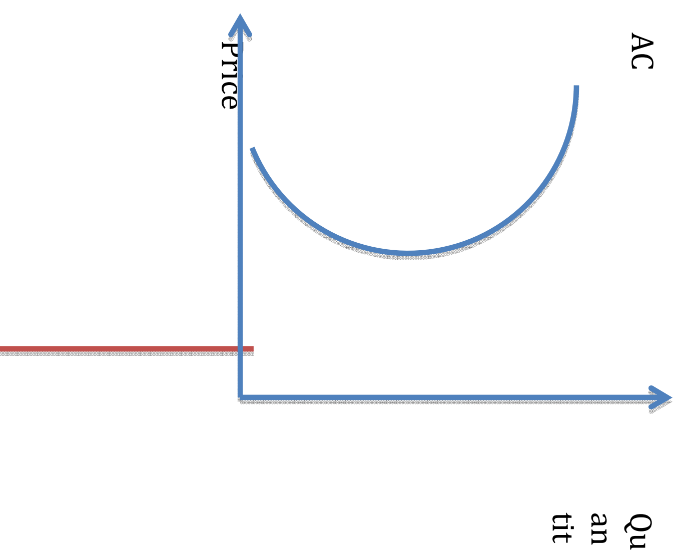
The next set of graphs illustrate how the theory of price-cutting can be drawn graphically:

[53] Cornell Law School , Legal Information Institute, 15 USC §2: Monopolizing trade felony; penalty

[54] As It will be explained later, this paper will not focus on Standard Oil's price data as the price differences across markets is misleading and inconclusive. The paper will focus on testimonies given in 1911 from other oil-refiners.

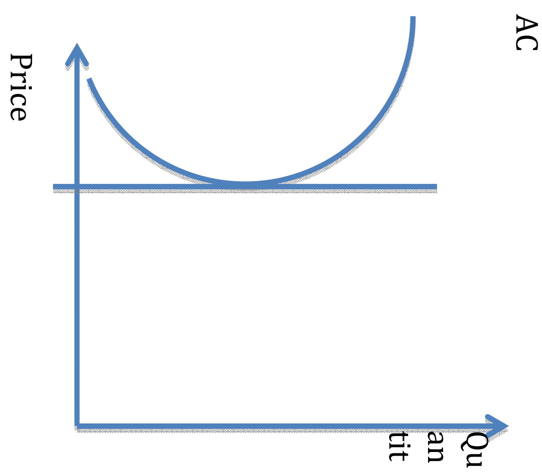


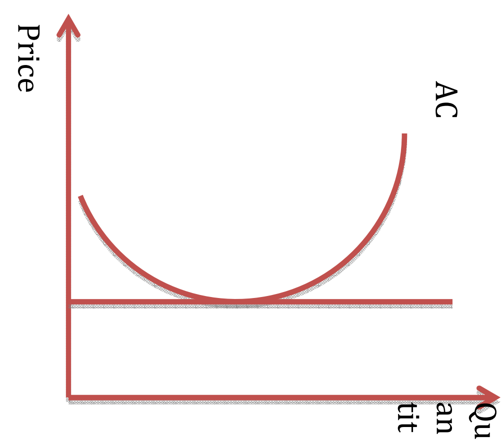




At first, in order to attract consumer, a company lowers the price of its product below that of the competitor's but still above or on par with its average costs. The line in red represents this decrease in price. Then, in order to remain in the market, the competitor chooses to lower its price as well in order to meet the lower price of the market so as to not lose customers. Once again, this new price is above or on par with the average costs. This is conducted until all the prices are on par with the market price and the lowest point on their average costs curve.

This is inherently different to the next set of graphs that show how a firm, most notably Standard Oil had lower costs than the competitor and could consequently charge its customers lower prices:





The two graphs show how Standard Oil, depicted in red, has lower average costs meaning that it could command a lower price but still charge above its average costs. Superficially, it may be perceived that Standard's price is predatory, but it is not. It should not be judged by the market's average cost but by the company's average costs.

The distinctions between predatory pricing and price-cutting are the following. Whereas predatory pricing, leads companies to lower their prices below their respective average cost *with intention* to dominate the market; price-cutting is to lower the prices, in a competitive manner, usually falling above (or on) the average cost, but also below the average cost in some instances[55]. It can be concluded that price-cutting remains a competitive strategy used daily notably by oil stations around the globe or new businesses trying to push new products into the market against otherwise established companies. This remains different to predatory pricing where its practice is malicious, irrational in theory and also illegal since the passing of The Sherman Act in 1890. Predatory pricing's negative connotation is due to its nature of purposely driving hard-working companies out of the market. Price-cutting merely seems like a way of surviving in the market.

Predatory Pricing as an Inefficient and Irrational Strategy for Competition

After more than a century and over a hundred cases citing predatory pricing, the court finally conceded, "the success of such schemes is inherently uncertain: the

[55] Refer to the subsection 'More Economics of Predatory Pricing" below.

short-run loss is definite, but the long-run gain depends on successfully neutralizing the competition."[56]

To non-economists, the theory of predatory pricing seems sound, plausible and also possibly destructive. To economists who have followed cases of predatory pricing through history (and even those who have not), it is clear that this strategy simply does not work and is therefore irrational to apply it. History has shown that there has not been a single case where predation has been proven, nor has there been a case where it has been successful in establishing a monopoly.[57] Further, there has been no case recorded where predatory pricing has led a company to maintain monopoly power. According to Thomas DiLorenzo from the Cato Institute, predatory pricing "gets virtually no respect from economists."[58] However, this theory remains important even in today's world because it accounts for large amounts of money in litigation in high-profile cases when accusations citing this pricing strategy are made. "Standard Oil case of 1911 is a landmark in the development of anti-trust law…the firm whose history it relates became the archetype of predatory monopoly."[59]

[56] Matsushita Electric Industrial Co. v. Zenith Radio 475 U.S. 590, Supreme Court Report, 1986, p. 1357

[57] In truth, it can only be concluded that predatory pricing has yet to be proven successful in case. For the purpose of this paper and the theory developed thus far by economists, most notably McGee, I will only focus on the 123 cases filed so far, where the theory has been defective.

[58] DiLorenzo, 1

[59] McGee, 137

The following reasons explain why predatory pricing does not aid a company in becoming dominant in an industry. Actually, it ends up hindering the predator more than the prey.

To begin with, forgoing the short-term profit is expensive for any firm, more particular for dominant firms that produce more than their competitors. A firm cannot afford to price below its average cost because it means that it cannot cover all of its costs for the future. Bigger firms suffer a bigger loss as a percentage of sales affecting their total earnings capabilities and future investments. This may have consequences in the long run where these losses become a cycle in which bankruptcy is looming in horizon. This is a phenomenon that is not found in smaller firms whose percentage losses of sales are smaller. Even with assuming that employees' salaries are being covered, suppose a firm that produces tenfold what the smaller firm produces. For every particular good that is sold, the loss is ten times greater for the bigger company than for the smaller company.[60] This means that the bigger company, be it with a war chest or not, accelerates to bankruptcy for every extra good they sell. In other words, for every extra good they sell more than the competitors, the period of predation has to be cut shorter or else bankruptcy is inevitable.[61]

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[60] DiLorenzo in page 2 produces an example of the bigger company producing 1000 widgets contrasted to the 100 that its competitor produces. "Losing a dollar on each of 1,000 widgets sod…is more costly than losing a dollar on each of 100 widgets.
[61] Firms can choose to sell their products in other markets as will be explained later, but for the paper of this example, a competition within one market will be considered.

Regarding losses, companies not only have to worry about the cost per unit forgone during the price war. They also have to keep into account the cost of the impending litigation major corporations have to pay to defend themselves in the future if tried. For instance, according to DiLorenzo, AT&T paid an excess of $100 million dollars defending itself from accusations in the 1970s.[62] Also, "[i]t has been estimated that the average cost to a major corporation of litigating a predation case is $30 million."[63] No firm can last during predation if the war chest is spent in legal fees to defend itself, as the employees will not be provided for.

Applying this example to Standard Oil has no different results to the theory. For a decade or so Standard Oil enjoyed a market share of 75%, it is widely accepted now that the company never owned 100% of the market. In some instances it did grow to have 90% though. But even supposing that Standard Oil had 75% during the predation period, then there would be the following consequences. Mathematically speaking, Standard would have sold 3-times more than their competitors. This means that their losses would triple that of the entire competition combined.[64] Now, suppose the following. As opposed to Standard having one other competitor owning the remainder 25% of the market, there are now 25 other competitors each owning 1% of the market. This means that the losses would increase to the ratio of 75-1. Relative to its competitors, Standard would lose 75 times what its competitors are losing.

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[62] DiLorenzo, 1
[63] Easterbrook, 334
[64] McGee, 140

There is also the inevitable uncertainty of how long the prey will remain in the business. In other words, how long does the predator need to engage in predatory pricing to drive the competition out of the market? There is no straight answer to that question, meaning the predator will lose money indefinitely. DiLorenzo states plainly, "[t]he prospect of incurring losses indefinitely in the hope of someday being able to charge monopolistic prices will give any business person pause."[65] It was public perception at the time that not only Standard Oil was guilty of engaging in predatory pricing –in fact all trusts were accused of employing this strategy to gain outrageous market share dominance. Objective thinking would lead to conclude that rational businessmen are not going to employ this practice indefinitely.

Another reason why predatory pricing is faulty is that the prey can temporarily leave the market when being preyed upon, as argued by McGee and DiLorenzo. By leaving the competition for a definite time, they would await for the predator to raise its prices back to the monopoly rate, at which point the prey would re-enter the market forcing the predator to lower its prices again. This ensures that the predator does not enjoy a period of profits to balance out the losses. In fact it continues to pile up losses consistently. McGee and economic theory advocate that even if the competitor files for bankruptcy, they can still sell their assets to a new entrant and re-enter the cycle over again, if the market is dominated by a monopoly meaning that there are profits to be made, as opposed to perfect competition where there cannot be any profits according to theory of the firm; then there will always be

[65] DiLorenzo, 2

entrepreneurs eager to join that market. They will be even more eager to enter the competition if the capital is already available.

Probably the most compelling explanation as to why the theory of predatory pricing seems defective is the following. As previously explained, predatory pricing requires a war chest in order to weather-out the predation period as fixed costs, employee wages and key variable costs still have to be met for next period's production. DiLorenzo correctly questions, "how does that war chest come into being if the firm has not yet become a monopoly?" Theoretically speaking, a firm can therefore not become a monopoly before being a monopoly creating some sort of Catch-22 scenario. In the early years not even Rockefeller could inject enugh money to buy a war chest to sustain a predation period as he himself was from a humble origins and had little money until Standard Oil was large. This explanation alone, should be enough to convince any trial, with or without economic background, that predatory pricing is merely an illusion and not a real strategy to monopolize a market.

Finally, a point brought up and studied by McGee is the idea behind the opportunity cost of engaging in this method of competition. In essence, he questions two things. First, whether it is beneficial in the long run, to *begin* a price war as there are profits forgone in the short-run. On a superficial level there is some acceptable reasoning behind starting predatory pricing, but not when all of the facts of the theory have been analyzed. Second, whether the rate of return of bankrupting a company is higher than that of any other investment, such as an *actual* investment in research and development or lobbying to protect the company with barriers to entry. It seems illogical to forgo profit with and uncertain future of reclaiming it instead of improving the company further.

Even if future profits are somehow guaranteed, they would need to be discounted to truly understand their future value and be compared to the present value of the profits forgone in the short run.[66] The discounting would lead to the losses now being higher than the profits in the future. For these and other reasons, predatory pricing is irrational for firms attempting to monopolize the market. [67]

In summary, predatory pricing is not a sound theory. Also this does not lead to a monopoly power. A firm must first have a monopoly power to engage in predatory pricing, but even then the outcome is bleak and profits are not secured.

Prey's Response

Even in the most inefficient of markets where the prey makes the wrong decisions such as losing the price war and not re-entering the battle, the behavior of the market simply does not lend itself to predatory pricing being successful. In fact markets are highly efficient and company leaders are experienced and capable people who tend to make the right decisions. DiLorenzo outlines how the prey could defend itself from the predator and turning the strategy on its head. Frank

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[66] DiLorenzo, 4
[67] McGee, 142

Easterbrook argues “the antitrust offense of predation should be forgotten [,]”[68] alluding to the fact that even if antitrust laws did not protect companies against predatory pricing, these companies should be able protect themselves as the market will not aid the predator.

To begin with, it is understood that the predator can only turn a profit if the consumers cooperate. Predators hope that the consumers purchase the items at a lower price to remove the competition from the market, but also continue to buy when the prices have increased to monopoly prices. However, consumers are rational beings that can do the following to benefit themselves. They can stock up of the product, provided it is a non-perishable good[69], following the drop of the prices due to the price war. Consumers will be averse at paying the monopoly prices in the future, so they stock up with enough product today and not buy anything in the future. This will then lead the predator to not have a profit period because no one will buy its goods when the prices are jacked up again. Even by supposing that the predator goes against basic economic theory altogether and somehow offers fewer goods at a *lower* price, then the competitors can jump in the market and supply the necessary goods at a higher price making profit. “A predator that puts a cap on sales thus [preys] against itself”[70]

Predatory pricing also falls apart when the financial institutions capital markets finance the preys. As explained above, the degree of loss is higher with a

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[68] Easterbrook, 337
[69] Kerosene is a stable fluid but, similar to gasoline and diesel, it can perish within the year.
[70] Easterbrook, 269

bigger company than with a smaller company during the predatory period. If a smaller company is well financed, or can show that it can be financed in other to withstand this period, then the predator may be discouraged from starting a price war in the first place. The following fictional extract regarding Standard Oil and John D. Rockefeller by George Stigler illustrates this idea:

> "There is a threat of a three-month price war, during which I will lose $10,000, which unfortunately I do not possess. If you lend me $10,000, I can survive the price war and once I show your certified check to Rockefeller the price war will probably never be embarked upon. Even if the price war should occur, we will earn more by cooperation afterward than the $10,000 loss, or Rockefeller would never embark upon the strategy."[71]

Although, briefly discussed before, the following is yet another reason why predators can end up losing this type of price war. Supposing that even if the prey does lose the price war and files for bankruptcy, its assets, such as capital, manpower and know-how of the company and industry can be usable again by another firm. According to the theory, the labour of the workers will technically be worth the same as it was when they worked for the previous company, yet the capital costs of the bankrupt company and the depreciating machinery will be priced lower. With this cheaper capital, the firm can then stand a better chance while fighting in the price war. It is important to think that when a company goes bankrupt, non-cash assets such as remainder inventory, property, plant and equipment can still be usable by the firms that take over the bankrupt firm.

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[71] Stigler, 116

In addition, assuming that the prey can foresee some sort of price war looming, they can secure long-term contracts with their customers who will ensure market prices, and profits for the future. This may be particularly appealing to the customers who can understand that a market price now will be cheaper than the monopoly price later.

Further Economics of Predatory Pricing and Price-Cutting

As explained above, predatory pricing is not the same as price-cutting. Predatory pricing is a theoretical practice possible (arguably) only when certain assumptions are present in the market, such as 'perfectly competitive markets'. In reality, that is not case. Whether the market is characterized by a monopoly or not, firms often have different average costs consequently leading to different prices for their respective goods. All of this takes part in *competition*. Competition can mean a number of things in different contexts. DiLorenzo chooses to define competition as Austrian economists do. Nobel laureate Fiedrich Hayek says that competition, "is the action of endeavoring to gain what another endeavors to gain at the same time."[72] Competition by nature means that using price-cutting and an array of other techniques available to differentiate and move ahead from the competitors are innate when competing. In theory though, perfectly competitive markets are

[72] Hayek, 96

everything but that.[73] There is no product differentiation, no price-cutting and no difference in costs. This leads Hayek to conclude that, "[p]erfect competition means the absence of all competitive activities", or the stale mate among competitors. Theory is different to reality in this case, where a perfect competition is not the case, especially in the oil-refining business.

In business, price-cutting, even to rates below the average cost, are paramount in order to gain market share, particularly when entering a new market. New businesses depend on selling their products below the average cost (below their long-run average cost and price) to gain market share from the established businesses. DiLorenzo puts forth two examples to illustrate this idea. The more relevant case that somehow mirrors Standard Oil is that of Henry Ford's production, development and sales strategy of his model T car at a price lower than the average cost to eventually become the most famous car producer in history. The following excerpt shows this trajectory:

> "Ford set his price not on the basis of his existing costs or sales but on the basis of the much lower costs and much expanded sales that might become possible at a lower price. … By 1916, he had reduced the price of a Model T to $360 and increased his market share from 10 percent to 40 percent." [74]

Ford hurt his competitors in what may seem to be predatory pricing, but in reality he understood that he could only get market share away from Buick and Oldsmobile by engaging a highly competitive price war. It is important to assess just how

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[73] DiLorenzo, 4
[74] Gilder 157

important Ford's policy of lowering its prices were on the consumers. He did not engage in predatory pricing to eliminate Oldsmobile and Buick out the market, he did it to benefit his company and to benefit the consumers. With Ford's Model-T and its pricing strategy, consumers now had access to high quality cars at a much cheaper price than before. The groundbreaking method of producing his car lowered Ford's costs and its prices, but even then, he realized that his new product needed to be sold at a price lower than the competition while still providing a large volume to compete against economies of scale. His pricing strategy led Ford to earn high market share in the market. Eventually Ford became the leading automobile manufacturer in the industry. With regards to antitrust laws against predatory pricing, it can be concluded that Ford would never have been able to take his Model-T to the public due to its below-cost prices. [75] Ford's success story is merely another example where a company benefited from lower prices without the intention to monopolize a market

It needs to be clarified that, based on the research conducted; my position is that Standard Oil never embarked on predatory pricing. Based on the testimony described later, I have to concede that Standard Oil was involved in several price wars, by price-cutting throughout the latter parts of the 19th century and the first decade of the 20th century, but this is neither illegal nor immoral within the fair grounds of the market.

[75] Gilder 157

There are a number of other reasons why a competitive firm would want to engage in price-cutting. It is important to understand these in order to determine their difference with predatory pricing. According to Hayek and summarized by DiLorenzo "[sellers] may be discounting their prices as a way of introducing their new and unknown products to consumers." Also, as the product loses its value due to expiration dates, shelf life or other reasons, the seller may want to just sell the product at a loss to not lose all the investment on the good. Imagine a product that costs $10 to make. Although incurring a loss, selling the product at $7 will mean that there is still some revenue the firm can use to pay some variable costs. These are two basic examples of why price-cutting is may be employed as a strategy with the best intentions in order to remain in the market.

McGee points out another key point of competition and price wars. He says that a price difference in different areas does not necessarily mean price discrimination with intent to monopolize. It simply means being more competitive. Imagine a monopolist firm in two distinct areas of the market. In the first area the costs are smaller than in the second area. Now suppose that the second area has more expensive supplies inevitably raising the prices. The areas will experience two different prices for the same good and from the same supplier. "An objective fact-finder discovers that the monopolist is discriminating in price between the two markets. A bad theorist then concludes that he is preying on somebody. In truth, the principle established only that greater supplies bring lower prices."[76]

[76] McGee, 142

These are only a few reasons covered that would explain why price discrimination and price-cutting may not always mean predatory pricing. It is simply to become competitive, not uncompetitive. This is a basic principles that courts need to be aware of this when trying a company accused of employing predatory pricing, as these are the reasons for them price-cutting their competitors. Their intentions are not to monopolize the market but to penetrate it with their products.

History of Predatory Pricing and the Courts

Before attempting to dissect Standard Oil's involvement, if any, with predatory pricing, it is important to look at history because it reveals the application of economics in a number of cases. Quoting DiLorenzo, "there have been hundreds of federal antitrust cases based on claims of predatory pricing, economists and legal scholars have to this day failed to provide an unambiguous example of a single monopoly created by predatory pricing."[77] As advocated throughout this chapter thus far, predatory pricing does not work in practice; even its theory is unconvincing at best. The research conducted by Ronald Koller and summarized by DiLorenzo further agrees with this standpoint.

[77] DiLorenzo, 6

Ronal Koller looked at, "123 federal antitrust cases since the passage of the Sherman Act in 1890 in which it was alleged that behavior generally resembling predation had played a significant role." Koller asked the following questions to determine if a monopoly was formed through the predatory pricing strategy employed by the firm. It should be with this set of questions that Standard Oil and any other entity being accused of predatory pricing ought to be measured by. In the words of DiLorenzo:

> "Did the accused predator reduce its price to less than its short-run average total cost? If so, did it appear to have done so with a predatory intent? Did the reduction in price succeed in eliminating the competitor, precipitating a merger, or improving "market discipline"?"[78]

Following this set of questions, Koller concluded that in the 123 cases, below-cost pricing was only attempted in seven cases.[79] Out of the seven cases, only four were concluded with intention to eliminate the competition.[80] Before continuing, four out of 123 cases (3.3%!) shows that hardly anyone, in the span of over a century, has tried to make this strategy work to monopolize the market. Most firms are aware that predatory pricing simply will not work to gain market share. Further, in cases where the competitor was eliminated by the predator's lower prices, not all of the competition in the market was bankrupt meaning that technically absolutely *no* monopolies were formed. This proves that predatory pricing has never worked successfully. It should be said that the public in all those cases enjoyed lower

[78] DiLorenzo, 6
[79] Koller, 110
[80] Koller, 112

prices.[81] In conclusion, extending over a century and after more than a hundred cases, Koller found "absolutely no evidence of any monopoly having been established by predatory pricing between 1890 and 1970"[82]

In summary, economics has been backed by history in concluding that there has never been a successful example of predatory pricing. This is because the theory, which is questionable, cannot be successfully applied to reality. In the real marketplace their preys, in a number of ways, can beat their predator firms. The case of whether Standard Oil became a monopoly by employing predatory pricing is no different to other historical cases. Not only would it have been irrational for Standard Oil to use predatory pricing, there would have been better alternatives.

[81] Koller, 113
[82] DiLorenzo, 7

Historical analysis of Predatory Pricing by Standard Oil Company

There is no better way of introducing the hindsight associated with predatory pricing by Standard Oil than with the words of John McGee. As mentioned before, he remains the most authoritative economist regarding his research in this particular subject and is quoted constantly. He says:

> "According to most accounts, the Standard Oil Co. of New Jersey established an oil refining monopoly in the United States, in large part through the systematic use of predatory price discrimination. Standard struck down its competitors, in one market at a time, until it enjoyed a monopoly position everywhere. Similarly it preserved its monopoly by cutting prices selectively wherever competitors dared enter. … The main trouble with this "history" is that it is logically deficient, and I can find little or no evidence to support it."[83]

Economics has shown time and again that predatory pricing has not been successful in any case it has been attempted. Standard Oil is not different. Even though it requires economics to arrive to that conclusion, it does not require an economist to understand said conclusion. But even if the theory of predatory price discrimination is too attractive to disregard, the following empirical basis should be enough to exonerate Standard Oil from its accusations of monopolizing the market by using this system. Was enough evidence provided at the time of trial through testimony or not? Or was the evidence that was provided misunderstood or even

[83] McGee, 138

ignored when making the final decision? Based on the following information, the latter of the two questions was weighted more heavily by the courts in May of 1911.

It needs to be said that much of the criticism against Standard Oil was that it used predatory pricing with intent to monopolize and maintain its dominant power in the market. Further, it used this power to practically force companies to be acquired through a series of mergers and acquisitions as opposed to letting it go bankrupt –"Standard acquired 123 refineries"[84]. This is what was considered troubling about Standard Oil. According to its most ardent critics such as Ida Tarbell in her chapter "Cutting to Kill" of A History of the Standard Oil Company from 1904, Standard Oil used predatory pricing to then acquire its preys and thus eliminate the competition from the market place. It is a matter of public knowledge that Standard Oil acquired companies as a means of reaching its heights, however, it did not do so by employing predatory pricing.

Ida Tarbell's extensive book is considered to be the catalyst that brought the entire Standard Oil down seven years later (technically the trial began in 1906, but it reached the Supreme Court in 1911) As explained before, she is subjective and biased against John D. Rockefeller and Standard Oil. Tarbell's father and brother lost price wars against Rockefeller leading to her inevitable negative attitude towards the company. Not to say that she fabricated anything, she just shared biased statements and chose to ignore other compelling evidence, in order to stir up anger towards Standard Oil. This is why, as opposed to following Tarbell's subjective

[84] McGee, 144

examples, I have decided to follow John McGee's research, who is intentionally more objective than the former.

John McGee found the best way to organize the different testimonies to show that Standard Oil never used predatory pricing, and I have emulated that for simplicity. In his quintessential research titled Predatory *Price Cutting: The Standard Oil (N.J.) Case* from 1958 McGee presents his evidence in the following way. He first makes the distinction between price-cutting against competing firms that were acquired by Standard and the companies that were driven out of business while competing against the company. Then he looks at price-cutting involving jobbers and refineries. All of the attention will be given to the former of the two sections because competing firms had more weigh on the Supreme Court's decision than individual independent jobbers or small distant retailers.

It is important to notice that McGee did not look at the history of costs and prices of Standard Oil and other companies for the following reasons. First he realized that from market to market the prices and costs varied constantly. Even though there were enough refineries to somewhat evaluate their costs across the board, the sizes of these firms varied. There were large companies such as Standard Oil that enjoyed economies of scale, and there were smaller companies whose average cost was larger due to its relative size. This is why McGee is reluctant on looking at the price data and more keen on the testimonies and opinions of the leaders of the companies that left from the market at the hands of Standard Oil.[85]

Price-cutting Against Firms that were acquired by Standard Oil

Firms that were acquired by Rockefeller and that provided testimony as to the reasons behind their takeover are summarized in this section. John McGee provides nine examples where price-cutting was alleged with testimonies but the author debunks these to prove that predatory pricing was not the reason behind the falling of these companies. I have chosen these four key companies out of the nine examples because I believe these are essential to understanding the following concepts. First, these show the former competitors' discontent for Standard Oil and John D. Rockefeller. And second, these four testimonies exemplify how the Supreme Court's guilty verdict was grounded on information that was false, exaggerated or unfounded.

The Cleveland purchases and Mr. Lewis J. Emery

[85] McGee, 143

This first example is importance for two main reasons. First is the period in which they happened and the second is the testimony given after by Mr. Lewis J. Emery, an oil producer who had "talked" to refiners that sold out to Standard Oil.

From 1871 to 1872 (merely a year after the company was founded by Rockefeller in 1870), Standard Oil acquired 17 different Cleveland based oil-refineries.[86] The infancy of Standard at this point should be enough to suggest that the company had no market dominance nor had it amassed some sort of war chest large enough to withstand the period of predatory pricing. "Standard Oil was not born as monopoly" suggests McGee. This is an example of the pure genius of Rockefeller. He built a company from the ground-up and within the year, he made it competitive enough that it could acquire other firms within the vicinity.

As far as Mr. Rockefeller is concerned the acquisition of these 17 firms benefited all of the parties involved. He argued that, "[everyone involved began] to recognize the changes that were coming, and the lessening of the chance of good returns from the refining business on account of the overproduction of refined oil."[87] Mr. Emery, an oil producer who did not own nor worked for one of those 17 companies taken over by Standard Oil insisted that not all parties were happy with the acquisitions. "I talked with a number of them afterwards, and they said they thought the case was hopeless and they had arranged with the combination." [88] Here Mr. Emery is referring to the railway rebates (explained in the Railroad Rebates of

[86] McGee, 144
[87] McGee, 145
[88] McGee, 145

this research) that Standard Oil had struck with the railways that would transport his barrels. Regardless of whether Rockefeller misunderstood how the people taken over truly felt, nothing in Emery's testimony even alludes to predatory pricing by Standard Oil. In fact, according to Epstein, Rockefeller's common practice was to hire the managers and workers from the companies acquired and awarded and made them shareholders.[89] "Victimized ex-rivals might be expected to make poor employees and dissidents or unwilling shareholders."[90]

Not to say that Mr. Emery testified on behalf of the 17 other refiners, he believed that he was afflicted for the same reason for their demise. Emery began producing oil in Pennsylvania at the same time as Rockefeller founded Standard Oil. By 1876 he sold his company to Standard claiming that Standard's agreements of railway rebates with the interstate railway companies drove him out of business. He continued in the oil-refining business and according to McGee's research he made money throughout the years competing against Standard Oil.[91] This leads to belief that while highly competitive, the oil refining business was not hostile nor did it have illegal practices on behalf of Standard Oil at the time.

The Empire Oil Works and the Globe Refining Co. and Mr. David O. Reighart

[89] Epstein, "The Monopoly Myth: The Case of Standard Oil" video recording at the Ayn Rand center
[90] McGee, 145
[91] McGee, 146

The importance of this example is to show that while not everyone decided to join Standard Oil when their company was acquired, they were well taken care of after the acquisition. In some cases, retirement was an immediate possibility.

David O. Reighart had been an oil producer as early as the 1870s and had experience by leading a few refineries until the beginning of the 1890s. Previously, he had taken part of Holdship & Irwin, a refining company that was eventually sold to Standard Oil after having leased their company for five years to Rockefeller. According to Irwin, upon the eventual acquisition of his company, they both retired presumably from the goodwill earned paid by Standard Oil.[92]

Reighard returned to the business in the latter part of the 1880s and started a few refineries around the area of Pennsylvania. As it turned out he ended up selling to Standard in two more occasions. The sells themselves were hugely beneficial for Reighard who sold above market price[93]. In fact he went on and said, "I found that the bonus that I asked those people was as much as I could actually make on the profits for 15 to 20 years to come."[94] Reighart did not work for Standard Oil at any point throughout his career and was not forced to make that statement. He was financially benefitted from dealing with Standard Oil on a number of cases.

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[92] McGee, 147
[93] "Reighart sold for $1,224,800 in trust certificates and $50,000 cash. Each of the last two refineries that Reighard sold to Standard had cost between $200,000 and $250,000" McGee, 148
[94] McGee, 148

Predatory pricing is at no point the reason why Reighard sold the three companies to Standard Oil. In fact, at no point he complained of the hostility of the marketplace. Apparently he was happy to deal with Standard Oil.

The Rocky Mountain Oil Company and Mr. E. M. Wilhoit

The importance of this example is that Mr. Wilhoit, similar to Mr. Castle, was particularly vociferous against policies of Standard Oil Company to eliminate the competition. Also, this shows an explicit example where Standard Oil admittedly was involved in a cartel in the 1880s. Cartels were technically banned with the Section 2 of the Sherman Act enacted in 1890 making Standard's practices legal at the time they were made. Also, this example shows that other companies at the same time did not respect agreements with Standard Oil and consequently hurt the market and consumers with their higher prices. Standard Oil never had to raise its prices and its consumers always benefited from his products lower price.

According to McGee, out of the hundreds of testimonies during the trial in 1911, "this incident is the nearest thing to predatory price cutting… found." But he outlines a few reasons why predatory pricing is not to blame for this. To begin with, there was no complaint from the Rocky Mountain Company in the Record (at this time Mr. Wilhoit was an employee of Standard Oil). Also, Standard Oil, through one of its subsidiaries had entered into a semi-cartel between Florence Oil and Refinery Company and the United Oil Company. The agreement stated that these companies would sell all of their refined-oil to Standard Oil and Standard Oil alone.[95] While this may seem hostile on the surface, it benefited all parts involved. The other refineries shared the profits once Standard Oil sold the good and they would not be run out of business given the economies of scale and Standard Oil's inherent lower average costs. Consumers, on the other hand, benefited from Standard Oil's traditionally low price and also from more products available (the other refineries and Standard Oil combined produced more than Standard Oil). This agreement effectively terminated Rocky Mountain Company, which was eventually dissolved by its owners.

Even though the producers benefited from providing all of their refined-oil to Standard Oil as per their agreement, there was always the incentive to break the agreement. When there is a limited output available in the market, other firms can supplement that deficit and at the same time charge higher prices. This is an inherent problem with cartels. McGee collected from the Records that Rocky Mountain Company resurfaced as a bogus company that would supply this deficit of refined oil to the market. The other firms had formed a cartel within them in which they would provide Rocky Mountain Company with the supplementary oil the market needed at higher prices going around Standard's subsidiary. The Words of Henry Tilford, the President of Standard Oil's subsidiary best describes this, "They were not satisfied with the interest…and they built another refinery to take part of their own business."[96]

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[95] McGee, 149 (this includes the quotation in the paragraph)
[96] McGee, 150

The market for refined-oil was highly competitive given the nature of the profits. Clearly companies broke agreements to gain that extra profit margin even at the expense of the consumer. Having said that, there remains no evidence in which Standard Oil ever defeated companies by employing predatory pricing. Their seemingly uncompetitive agreement in fact benefited all of parties involved. It did nothing to threaten other companies not involved in the deal and benefited the consumers.

Scofield, Shurmer and Teagle

The importance of this example and firm is that it was one of the largest rivals of Standard Oil. Ever since the early 1870s Scofield, Shurmer and Teagle (SS&T) and Standard Oil fought over market share. One episode between the two even ended by the two parties signing an agreement of market share. In the market place SS&T could be considered Standard Oil nemesis. Perhaps SS&T is a good example of what other decently sized companies were in terms of the market-share compared to Standard Oil. Even so, Standard Oil welcomed most[97] of their staff upon their acquisition.

Even in the most ardent of competitions, Standard Oil was not accused of predatory pricing. Going back to DiLorenzo's *The Myth of Predatory Pricing*, the author says that seeking litigation citing predatory pricing is a way to underperform

[97] All of Scofield, Shurmer and Teagle's employees were kept except for only three

and expect to be protected by the government. "Claims of predatory pricing are typically made by competitors who are either unwilling or unable to cut their own prices."[98] Scofield, Shurmer and Teagle never complained against the price policy of Standard Oil because it was a company ready to compete for market share, as opposed to shy away and claim abuse from Standard Oil. Smaller companies that had complained before that did not share the rivalry between Standard Oil and SS&T quickly aimed to protect themselves citing false accusations.

With regards to the companies that were eventually acquired by Standard Oil, and based on their testimonies, it can be concluded that there are absolutely no instances in which predatory pricing was employed. Further, even since the inception of the company (when Standard Oil was definitely not a monopoly) it had been out-competing its rivals legally and smartly. Standard Oil made sure that the companies it acquired were bought-out with dignity and not left the managers and capable workers unemployed, that is including its most ardent of competitors. Leaving potential talent unemployed for other firms to acquire would not be beneficial for Standard Oil, and Rockefeller realized this.

Tarbell's arguments focused on the misery it was to lose a battle against a bigger opponent. What she failed to convey is that Standard Oil was a smaller opponent once and it grew large enough to compete with the established refineries. There should not be any excuses as to why other companies did not grow to the extent Standard Oil did. When other companies could have acquired Standard Oil while it

[98] DiLorenzo, 1

was still an infant firm, they were not motivated enough to keep growing. Standard Oil was and that is why it prevailed – not through predatory pricing.

Price-cutting Against firms that were not acquired by Standard Oil

Having covered how predatory pricing was not the avenue taken by Standard Oil to acquire firms, there still remains the chance that some firms were driven out of the market without being acquired – that is, they were eliminated. Following on what John McGee found from his research on the different testimonies of the trial, I have selected the main cases that exemplify the lack of predatory pricing evidence enough to convict Standard Oil from employing this strategy. Critics argue that Standard Oil created hostility in the market of refined oil either by acquiring firms after preying on them using below-cost prices. Critics also say that in a number of cases Standard chose to exterminate the competition as opposed to acquiring it. This section focuses on the latter of the two. I have selected two out of the many examples singled out by McGee because I believe these are essential in understanding how the market place was undoubtedly harsh, but not abusive from Standard Oil's point of view.

The Red C Oil Manufacturing Interests and Mr. W. H. Fehsenfeld

There are a couple reasons why this case is important. First, this example carries testimony that proves that Standard Oil did not always start a price war (in fact it was not Standard Oil's focal strategy to do so). Second, the allegations that Standard Oil took over its competitors to monopolize the market, is false.

Mr. Fehsenfeld was the leader of the Red C Oil Manufacturing in Baltimore, Maryland. Fehsenfeld testified in 1911 that Standard Oil modernized its transportation department by introducing a new shipment method different to the obsolete barrels in trains. Standard Oil invested heavily and worked with tank wagons as a medium of transportation as of 1897[99]. While this may have had a high fixed cost at the beginning it allowed Rockefeller to charge lower prices than the competition as time went by. Fehsenfeld accused Standard Oil of giving inducements to people for using his new product. Mr. Fehsenfeld then complained that his refinery was competing against five "bogus companies" that were working together resembling a cartel; and were all under the umbrella of Standard Oil. It should be noted that if that was the case then Standard Oil's actions could not be justified, as they would have been illegal as the Sherman Act banned had been enacted by then and deemed said practices illegal. But even then, his allegations were never proven. Economically speaking, the tank cars allowed Standard Oil to sell at a cheaper price as opposed to a cartel in which, theoretically speaking, keeps the prices high to ensure profits. Fehsenfeld then admitted that, "Red C clearly started price-cutting" and "[i]n going into a territory we would have to offer some inducement" This

[99] McGee, 153

completely exonerates Standard Oil from its accusation of abusing the market by ways of predatory pricing in order to rid itself from the competition. [100]

Further, C.T. Collins from Standard Oil in Kentucky insisted that price-cutting was not the goal of Standard Oil. In principle, starting a price war, be it below average costs or not, translates to less profit for the company that starts the price war. This makes the strategy irrational to employ when not threatened. Collins words illustrate Standard Oil's policy

> "We rely on our having been the pioneers in establishing the business, serving the trade with good oil in the most-up-to-date manner, and that if a competitor comes in there to get our business he must necessarily cut the prices or offer some inducement in order to wean the trade away from us. Therefore it is not necessary for us to cut prices."[101]

Collins also mentioned that the battle with Red C lasted three decades during the time both companies became very profitable. Standard Oil tried to acquire it twice before giving up.[102] The market of refined oil was a highly competitive one – not hostile. The innovations made were rewarded with profits, while keeping within some sort of comfort zone was punished by bankruptcy, but that is the same in every market. Those companies that did not revolutionize themselves lagged behind until their inevitable exit from the market.

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[100] McGee, 154
[101] Vol. 12 at 895-96; also found in McGee, 154
[102] McGee, 154

Cornplanter Refining Company and Mr. Todd

The importance of this example is to show how old competitors testified alleged coercion and threats from Standard Oil even they though the allegations were never substantiated with any hard-evidence. Even more worrying is how firms joined Standard Oil in agreements in a number of occasions that made them highly profitable and still testified *against* Rockefeller's company. Had these agreements hurt the consumers in someway, it would make sense to distant itself from Standard Oil, but they did not. Consumers constantly benefitted from these agreements.

Mr. Todd was the manager of Cornplanter Refining Company, where he competed against Standard oil for decades. Todd "testified that Standard had threatened Cornplanter with extinction" If Cornplanter did not join Standard Oil in some sort of agreement limiting Cornplanter output, then Standard Oil would run its competitor out the business. "This threat never materialized".[103]

While they did join each other in a number of agreements, price wars still broke up between the two, benefitting the consumers greatly. In some areas Standard Oil started price-cutting according to Mr. Todd but in other areas, namely Boston, Cornplanter triggered the war. Regardless of the struggles within the two

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[103] McGee, 155

companies, the Mr. Todd became incredibly wealthy and Cornplanter grew from $10,000 to $450,000 in less than twenty years. [104]

Joined by legal agreements, Standard Oil and Cornplanter became powerful. They did not do so by employing predatory pricing at any point according to the testimony of Mr. Todd. Yet, eerily, Mr. Todd still chose to accuse Standard Oil of coercion. Slightly counterintuitive, this exemplifies that even people helped by Standard Oil were dissatisfied with it.

I attest that Rockefeller is not the executioner of these companies. The consumers who preferred refined oil at lower prices should be the ones on trial, because they are the agents in the market that punish the companies that could not hold their own against Standard Oil.

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[104] McGee, 156

Summary

Predatory pricing is an economic theory that can be employed to help explain how competitors are eliminated from the competition. It is distinctively different to price-cutting or simply lowering one's prices when the costs are lowered. For a number of reasons, this pricing strategy is actually theoretically flawed. Also, the competitors can defend themselves against predatory pricing in a way to overcome any threats making redundant the protection of the government. Also, in history, there has been no clear-cut case where predatory pricing has been successful in establishing a monopoly.

Based on the theory of predatory pricing and the research by a number of economists namely McGee, it can be judged that "Standard Oil did not use predatory price discrimination to drive out competing refiners, nor did its pricing practice have that effect." While there is debate as to the exact market share Standard Oil enjoyed, it can be concluded that whatever percentage of the market Rockefeller had, it did not gain it through predatory pricing. [105]

Actually, supposing that Standard Oil had somehow successfully employed predatory pricing as means to monopolize the market of refined-oil, then the following extract from McGee's work best exemplifies what would have happened to the market:

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[105] McGee, 168

> "In doing so [monopolizing through predatory pricing] would surely have gotten no greater monopoly power than it achieved in other ways, and during the process consumers could have bought petroleum products for a great deal less money. Standard would thereby not only have given some of its own capital away, but would also have compelled competitors to donate a smaller amount."[106]

There is no mention of consumers being hurt with higher prices.

Standard Oil did not need to engage predatory pricing. Rockefeller's efforts to lower the company's average costs serve as a testament of why Standard's prices were so low relative to the competitions.

It cannot be denied that Standard Oil engaged in price discrimination, but this is because of different costs in different areas. As the dominant firm, it could price lower than the competition but this must not be misconstrued as predatory pricing.[107] Also admittedly it did join price wars by price-cutting the competition, but Standard Oil rarely started them according to the testimonies, and did so to defend itself from exiting certain markets. Regardless, at no point Standard Oil was an actual monopoly (its most reported market share was around 90%) and predatory pricing did not help it reach that level. In fact it could not help any company reach that level of market share.

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[106] McGee, 168

[107] Eric Lowe, Standard Oil: A Centennial Evaluation (Part II: 'Unfair' practices and rebates reconsidered)

Why was Standard Oil found guilty then?

Standard Oil did not employ predatory pricing to gain monopoly power. Chief Justice White, from the Supreme Court condemned Standard Oil to be dismantled, and from its carcass rebuilt in the form of 34 different, competing companies. According to him, the guilty verdict pertaining to predatory pricing was due to Standard Oil employing "unfair methods of competition, such as local price-cutting at the points where necessary to suppress competition [.]"[108] Up to this point, it remains counterintuitive to find a company guilty for something that they had not done. So what was really the reason why Standard Oil was found guilty?

The government brought a formal lawsuit against Standard Oil in 1906 for breaking the Sherman Act. One of the main accusations was based on ruthless business tactics such as charging lower than average cost prices. John McGee's research has proven that these prices were not predatory in nature. Eventually, the Supreme Court decided in 1911 that these prices were below costs, judging by their verdict and found the company guilty. It can be said that the government was fooled by the idea that predatory pricing could be a possible strategy that firms can employ to gain market share. Economists and history have since proven the complete opposite. But regardless, the company was found guilty of violating the Section 2 of the Sherman Act.

[108] Broderick quoting Chief Justice White

Broderick sheds some light onto the reasons as to what happened in the courts in 1911 in the following excerpt:

> "The case…shows a court wrestling with only partially understood and not well articulated economic concepts, and yet formulating what proved to be a workable legal principle (the "rule of reason") and coming away with a second decision."[109]

The 'rule of reason' is in violation of the Section 2 of the Sherman Act enacted in 1890 only when the policy undertaken by firms is an unreasonable restraint on trade[110]. If a company aims to monopolize the market by organizing in such a way as to restraint trade affecting the consumers with either pricing higher or producing less output then they would be in violation of the rule of reason. But even so, for a jurisprudence legal system, this precedent is worryingly ambiguous. More than a precedent, this is leaves the courts with no set ground rule on what is legal and what is illegal. Powell, Benjamin and Adam Summers say that the unreasonable restraint on trade is "the intent to do wrong to the general public and to limit the rights of individuals, thus restraining the free flow of commerce and tending to bring about the ends, such as enhancement of prices, which were considered to be against public policy."[111]From this definition, Standard Oil did not 'do wrong to the general public' because these benefited from continuously lower prices on kerosene for decades. Equally important, there were no enhancement of prices

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[109] Broderick
[110] www.uslegal.com
[111] Powell, Benjamin and Adam Summers, Excerpt from Antitrust is Anti-Consumer

Rule of reason was hardly applied, if at all, during the Standard Oil case, even though its precedent was established then. What basically happened was that Standard Oil was targeted for being a large company, ran by an incredibly wealthy man, which at some point dominated most of the market. Surprisingly, even Justice White said regarding the allegations, “not within the domain of reasonable contention.” As I have explained throughout my research and by a number of economists cited, it is the company’s outstanding performance that led Standard Oil to be able to deliver more products at a lower price benefiting themselves and the consumers. Standard Oil was not being uncompetitive, as was argued by the courts. Indeed it was through a sheer competitive mindset and intentions, at their most extreme sense, that it achieved its enormous market share during its heyday.[112]It can be said that Standard Oil’s superb performance ironically led to its own demise.

Naturally, the only people that did not benefit from Standard’s magnificient progress were its competitors. A large number of competing firms were driven out of business due to Rockefeller’s extremely proficient management of the company. In Ida Tarbell’s <u>A History of the Standard Oil Company</u> she interviews a number of refiners that had been beaten by Standard Oil, and logically they all express their discontent. This is what influenced the Supreme Court. The Supreme Court believed that Standard Oil was being uncompetitive by dominating the market for years and emphasized these opinions over hard economic facts.

[112] Powell, Benjamin and Adam Summers, Excerpt from Antitrust is Anti-Consumer

Yet the Supreme Court missed the point of what was actually going on in the market of kerosene all along. Not only did Standard Oil own close to 64 percent market share in 1911, but it never actually completely dominated the market, reaching heights of 90 percent at most. Even then, the reported 90% market share was not a product of predatory pricing in the least.

Conclusion

Standard Oil should not have been found guilty of monopolizing the market by ways of predatory pricing. Predatory pricing, in theory, is inherently faulty for a number of basic economic reasons. In addition, if threatened by a malicious price war, the prey has a number of strategies at hand to defend itself. The testimonies studied by McGee and summarized in this research show that the Standard Oil did not acquire or out-compete its rivals by using predatory pricing. There is no clear-cut case suggesting the opposite. In fact, Standard Oil was able to beat its competition by charging lower prices to the general public because its own average cost was significantly lower than the rest.

McGee makes it clear that he is not an advocate of studying the cost-price data as it varies significantly from market to market. This is why I have chosen to follow his method of research and only focus on the testimonies presented in court in 1911. I accept that maybe looking at a couple of markets where predatory pricing was alleged would bring an alternative view. I strongly feel that even venturing in cost-price research would show results similar to the ones explained above.

The purpose of this research is to show if Standard Oil used predatory pricing to monopolize the market of refined oil or not. It can be concluded that the company never used predatory pricing, either when it was an infant firm, or when it was a dominant firm (never quite achieving monopoly power). It never had to engage in predatory pricing because its costs were inherently lower therefore pricing lower. While there still remain a number of other allegations to which the Supreme Court found Standard Oil guilty, that remains beyond the scope of this research. What it can be concluded thus far is that the Supreme Court should not have found Standard Oil guilty of using predatory pricing.

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