

## Antitrust is Anti-Consumer

By Benjamin Powell and Adam Summers\*

In antitrust law, there is no way for a firm to know if it is breaking the law before it hears the judge's verdict. If a firm's prices are higher than everyone else's, that implies monopoly power; if other firms' prices are the same, it implies collusion; if prices are too low, this signifies cutthroat competition and predatory pricing. Each one of the above scenarios can be prosecuted under antitrust laws. This is what led Alan Greenspan to write:

The world of antitrust is reminiscent of Alice's Wonderland: everything seemingly is, yet apparently isn't, simultaneously. It is a world in which competition is lauded as the basic axiom and the guiding principle, yet "too much" competition is condemned as "cutthroat." It is a world in which actions designed to limit competition are branded as criminal when taken by businessmen, yet praised as "enlightened" when initiated by the government. It is a world in which the law is so vague that businessmen have no way of knowing whether specific actions will be declared illegal until they hear the judge's verdict—after the fact.<sup>1</sup>

Because of the poor theory of competition underlying antitrust laws, the law's enforcement interferes with the actual process of competition, leading to verdicts that stifle competition, harm efficient firms, and make consumers worse off.

### *What is Competition?*

The neoclassical economic model of "perfect com-

petition" describes a market characterized by many firms, no barriers to entry, perfect information, and homogeneous products. Firms are forced to price products at marginal cost, at which point consumer wealth is supposedly maximized. The model's problem is that it is an end state and does not describe the *process* of competition that occurs in the real world.

The model of perfect competition is an equilibrium condition, and endpoint, and does not describe the market's process of adjustment to that equilibrium. In the real world, where time passes, technology changes, new resources are discovered, and consumers' preferences change, the market can not be in a static state of "perfect competition," but must always be adjusting. The assumptions of the perfect competition model must necessarily be violated while the market is adjusting. A new product that is introduced is not homogenous with others by its very nature of being new. Perfect information did not exist about consumers' preferences; otherwise the new product would have already existed. Capital is not instantaneously mobile so new firms cannot enter a new industry instantly. Although heterogeneous products allow firms to have some "pricing power," consumer welfare is enhanced because their differing tastes and preferences are better met by the existence of different products. Economies of scale, which can allow one large firm to produce at a lower cost than many small firms, can also make consumers better off, even though it violates the assumptions of the model of "perfect competition."

Competition in the real world is a discovery process that aims to learn many of the things that are simply assumed in the neoclassical model. The process involves firms advertising prices and services, discounting list prices, innovating new products, differentiating their products, trying to locate in areas closest to their consumers, and striving to obtain resources more cheaply than competitors. However, since none of these activities exist in the model of "perfect competition," they

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are classified as monopolistic and potentially damaging to consumer welfare.

### *Age of the Robber Barons?*

The Sherman Antitrust Act, passed by Congress in 1890, was supposedly enacted to curb the power of large trusts that were monopolizing industries and harming consumers. If “monopoly power” means anything, it means the ability to restrict industry output and raise prices, in order to increase profits at the expense of consumers.

The Congressional Record of the 51<sup>st</sup> Congress contains a list of industries that were supposedly monopolized by the trusts. Economist Tom DiLorenzo found industry data for salt, petroleum, zinc, steel, bituminous coal, steel rails, sugar, lead, liquor, twine, iron nuts and washers, jute, castor oil, cottonseed oil, leather, linseed oil, and matches—all industries that were identified by Congress. If these industries were monopolists that were harming consumers, then the data would show restrictions in output and rising prices. However, DiLorenzo found:

Real GNP increased by approximately 24% from 1880 to 1890. Meanwhile, the allegedly monopolized industries for which a measure of real output is available grew on average by 175%. The more rapidly expanding industries in real terms included steel (258%), zinc (156%), coal (153%), steel rails (142%), petroleum (79%), and sugar (75%).<sup>2</sup>

The output increases also lowered prices for consumers in these industries. While during the decade of the 1880s, the general price level (measured by the consumer price index) declined by 7 percent, the prices of these industries identified by Congress fell even more. DiLorenzo revealed:

The average price of steel rails fell from \$68 to \$32 between 1880 and 1890, or by 53%. The price of refined sugar fell by 22%, from 9 cents per pound in 1880 to 7 cents a pound in 1890. It fell further to 4.5 cents a pound by 1900. The price of lead dropped by 12%, from \$5.04 per pound in 1880 to \$4.41 in 1890. The price of zinc declined by 20%, from \$5.51 to \$4.40 per pound from 1880 to 1890, and the price of bituminous coal remained steady at about \$3.10 per pound, although it fell by 29%, to \$2.20 from 1890 to 1900. Although the consumer price index fell by 7% from 1880 to 1890 this was proportionately less than all of these items except coal.<sup>3</sup>

If the industries identified by Congress had any monopoly power, they were not exercising it and harming consumers. One possible objection is that these monopolists were engaged in “predatory pricing,” where a firm prices below its cost to drive competitors from the market and then later raises prices to achieve monopoly profits. Pricing below cost for an entire decade leads to great losses that will have to be recouped later when the firm achieves pricing power. Predatory pricing is usually assumed to be a relatively short-term strategy in a limited market segment, so it could not have been sustained by these industries for an entire decade.<sup>4</sup>

In the “age of the robber barons,” consumers enjoyed increased production at lower prices. In the following sections three historic cases will be examined to illustrate that antitrust laws have harmed the very firms that were best satisfying consumer desires.

### *The Standard Oil Case (1911)*

On May 15, 1911, the Supreme Court upheld a lower court’s ruling and ordered the Standard Oil Company of New Jersey to be broken up. Judge Hook of the lower court had found:

A holding company owning the stocks of other concerns whose commercial activities, if free and independent of common control, would naturally bring them into competition with each other, is a form of trust or combination prohibited by Section I of the Sherman Act. The Standard Oil Company of New Jersey is such a holding company.

This lower court ruling, if taken seriously, prohibits all mergers of any companies that might compete with one another from ever forming a single company, regardless of the possible economic benefits for both companies and consumers. The Supreme Court, when reviewing this decision, instead of finding that all holding companies were illegal *per se*, advocated the use of a “rule of reason.” Justice White said that in determining whether a company was guilty of breaking the Sherman Antitrust Act, the Court must consider whether the company possessed

...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.

While the “rule of reason” is mentioned in the court’s findings, there is little evidence to indicate that it was

applied. Instead, the rule of the lower court was essentially upheld because Standard Oil had formed a large holding company. Justice White even said that the allegations against Standard oil were practically “not within the domain of reasonable contention.”

If we look at Standard Oil’s performance, though, we find that it obtained its large market share by relentlessly innovating, creating new products, and lowering costs. It expanded output and lowered prices. Both Standard Oil *and* consumers benefited. The only group that did not benefit were competitors who could not match Standard Oil’s ability to serve consumers.

In 1870, when Rockefeller reorganized his company into Standard Oil, he had a 4 percent share of the kerosene market selling it for 26 cents per gallon. By 1880, his market share was 80-85 percent. During this time he searched for ways to use the byproducts from kerosene production that his competitors simply discarded. He used tars for paving, sent naphtha to gas plants, and used gasoline for fuel. He began selling lubricating oil, petroleum jelly, and paraffin for candles. He also discovered innovative ways to cut costs. He hired his own plumbers and cut the cost of labor, pipes, and plumbing materials in half. Coopers charged him \$2.50 per barrel, so he made his own and cut costs to 96 cents. He eventually hired chemists and developed 300 byproducts from each barrel of oil. All of this led to significant cuts in cost. Rockefeller’s average cost of refining a gallon of kerosene fell from 3 cents a gallon in 1870 to 0.452 cents in 1885. Through most of this time, he held a market share of close to 90 percent. The gains from his innovations led not just to lower costs and larger market shares for him, but also to cost savings and new products for consumers. From 1870 to 1885, refined kerosene dropped from 26 cents a gallon to 8 cents, and by 1897 had fallen to 5.91 cents.<sup>5</sup>

Standard Oil maintained its dominant position, not through any “monopoly power,” but through constant innovation and cost cutting that better served the consumer. Eventually, Standard Oil made some business decisions that did not serve the best interests of the consumers. In the early 1900s, Standard did not invest in the oil boom in Texas, and it delayed in switching production from kerosene to gasoline. When it made these mistakes, its competitors took advantage. Standard Oil’s market share fell from its high of around 90 percent in the 1890s to 68 percent by 1907, and further declined to 64 percent by 1911, when the Supreme Court ordered the company to separate. Standard Oil’s market size did not make it immune from competition.

Standard Oil had achieved its market dominance in the oil industry by creating new products and cutting costs, all to the benefit of consumers. Standard Oil, through the *process of competition*, achieved what com-

petition is supposed to: better products and lower costs. To look only at firm size and industry concentration at a moment in time misses the larger picture. Standard was competing the entire time; it was just doing it better than anyone else. When it did err and made choices that were not in the best interest of consumers, it had no free market “monopoly power” to prevent it from losing market share. Other entrepreneurs exploited the opportunities Standard did not recognize, allowing them to make profits and take away market share. The Supreme Court’s decision only came down after this process was well underway. The process of competition was working.

### *The Alcoa Case (1945)*

In 1937, when Alcoa was indicted, it was the sole domestic producer of virgin ingot aluminum with a 90 percent market share in the U.S. (the other 10 percent was imported). Alcoa had a legal monopoly through a patent on the electrolysis process up until 1910, but thereafter, other firms were free to compete. The reason they did not was because of Alcoa’s superior production abilities and low costs. In *Antitrust and Monopoly*, Dominick Armentano explains:

Why no competitors in primary ingot? Simply put, Alcoa had no direct competition for one essential reason: no competitor could expect to match, much less excel, its economic performance during this period... Alcoa was selling for 22 cents a pound: its average rate of return on capital investment was 10% in the period 1912-1936. It had pioneered an extensive research and development facility that had provided crucial technical breakthroughs in aluminum and related products. For example, Alcoa’s research was responsible for major innovations in the processes for the recovery of alumina from fairly low-grade ores, and for the obtaining of 99.99% pure aluminum in the electrolysis process. In addition, Alcoa developed dozens of methods to increase the strength and anti-corrosiveness of the metal and many alloys used for rolling forging, and making castings. In short, users of ingot or sheet, and ultimately the consumers of fabricated products made from aluminum by Alcoa, were being served at degrees of excellence, prices and profit rates that no one could equal or exceed.<sup>6</sup>

Despite the fact that Alcoa had maintained its position of dominance in the aluminum industry by innovation and cost cutting, it was brought up on antitrust charges in 1937. The government accused Alcoa of a

number violations including unfairly excluding competition through a monopoly of bauxite, using monopoly of water power sites to unfairly exclude competition, monopolizing alumina, and maintaining a monopoly over the production of primary aluminum. The first court recognized that Alcoa possessed a monopoly over production of primary aluminum, but not even Alcoa disputed that. The judge sided with Alcoa, ruling that the company had done nothing illegal to obtain that position, and that there were other sources of competition such as scrap or secondary aluminum with which it did compete. The judge ultimately found: "None of the monopolization charges has been satisfactorily proved and in regard to them the government has not shown that it is entitled to any relief."

In its appeal, the government focused on Alcoa's monopolization of the virgin ingot aluminum market. In the appellate case, Judge Hand defined the relevant market narrowly, not including secondary aluminum, even though the two were economically and chemically competitive. Not surprisingly, he found that Alcoa maintained a monopoly over the market he arbitrarily defined. It did not matter that Alcoa had achieved this monopoly through innovation and cost cutting that better served the consumer. In Judge Hand's own verdict he said:

It was not inevitable that [Alcoa] should always anticipate increases in the demand for ingot and be prepared to supply them. Nothing compelled it to keep doubling and redoubling its capacity before others entered the field. It insists that it never excluded competitors; but we can think of no more effective exclusion than progressively to embrace each new opportunity as it opened, and to face every newcomer with new capacity already geared into a great organization, having the advantage of experience, trade connections and the elite of personnel.<sup>7</sup>

The judge recognized that Alcoa had expanded to serve consumer interests at every opportunity and for that it was guilty of violating the Sherman Act. Alcoa was guilty of successfully satisfying consumer desires.

Luckily, due to the unique circumstances of the time (1945), the judge did not order Alcoa to dissolve, as he hoped the privatizing of some government-owned aluminum plants from the war would instill "competition" in the industry. In 1948, both the government and Alcoa petitioned to reopen the case. The government petitioned because it was not satisfied with the level of competition in the industry; Alcoa also petitioned to clear its name of the verdict of Judge Hand. This time the court found that competition was quite vigorous in

the aluminum industry. Judge Knox rejected the government's petition for divestiture. Even though there was no finding of any guilt on the part of Alcoa, stockholders in both Alcoa and Aluminum Ltd. were still ordered to divest themselves of one company or the other. In 1951, Alcoa's 13-year battle with the government was over.

Ultimately although Alcoa was not split up, the case demonstrates how efficient firms, who have served consumers interests, can be prosecuted under antitrust laws *because they have served consumer interests "too" well*. It also shows how judges can arbitrarily define any company as a monopoly if they define the market narrowly enough, and that one arbitrary definition can be changed by another court. A firm simply has no way of knowing *ex ante* if its market will be defined narrowly enough to make it a monopoly.

### *The Microsoft Case*

Microsoft's legal troubles began in 1990, when the Federal Trade Commission (FTC) initiated a three-year investigation into the company's business practices because concern arose that Microsoft was unlawfully "exploiting" high barriers to entry into the personal computer (PC) operating systems industry. The Commission twice deadlocked over whether an administrative complaint should be filed and closed its investigation on August 20, 1993. However, the Justice Department issued a complaint in July 1994, in which it alleged that Microsoft had monopolized the operating systems market. At the time, Microsoft's MS-DOS and Windows products "accounted for over 90 percent of the market for software programs used to operate applications programs (such as WordPerfect, Word, and Excel), as well as perform other PC functions."<sup>8</sup> The Justice Department claimed that Microsoft had acquired this market position through the use of "anticompetitive" agreements and marketing practices with PC manufacturers.

Microsoft entered into a consent decree in 1995, under which Microsoft agreed to remove contract restrictions on PC manufacturers such as IBM, Compaq, and Gateway, including the requirement that Windows licensees must install Microsoft's Internet Explorer Web browser on their PC units. Microsoft then began offering Internet Explorer at no additional cost with Windows.

In late 1997, the Justice Department charged that Microsoft's bundling of its operating system and Web browser constituted an attempt to use its market power in the operating system market to establish a second monopoly in the Web browser market. The government plaintiffs further alleged that this bundling represented a case of illegal tying under Section 1 of the

Sherman Act and Section 3 of the Clayton Act, and that Microsoft's behavior violated the prior consent decree. Microsoft countered that Windows 95 and Internet Explorer were not two separate products that were tied together, but rather that they were both part of an integrated operating system, and noted that under the consent decree its agreement not to tie-in products "shall not be construed to prohibit Microsoft from developing integrated products." Judge Jackson ordered a temporary injunction on December 11, 1997 requiring Microsoft to distribute Windows 95 and Internet Explorer as separate products. The appeals court overturned the verdict on June 23, 1998, however, ruling that Microsoft's behavior consisted of legal integration, and that hi-tech companies should maintain wide discretion in "technological tying." The Court additionally registered its distaste for government intervention in business practices, stating: "antitrust scholars have long recognized the undesirability of having courts oversee product design."

The Justice Department, joined by attorneys general from nineteen states and the District of Columbia, filed a second antitrust suit, which was also assigned to Judge Jackson. The second case was brought on grounds that Microsoft had violated Sections 1 and 2 of the Sherman Act by using "predatory tactics" to maintain its monopoly of the operating systems market, attempting to monopolize the Web browser market, and engaging in exclusionary business practices intended to thwart competition.

On November 5, 1999, Judge Jackson issued a preliminary ruling in the form of the Court's Findings of Fact. After a failed round of settlement talks, and based on its Findings of Fact, the Court ruled:

Microsoft maintained its monopoly power by anticompetitive means and attempted to monopolize the Web browser market, both in violation of §2 [Section 2 of the Sherman Act]. Microsoft also violated §1 of the Sherman Act by unlawfully tying its Web browser to its operating system. The facts do not support the conclusion, however, that the effect of Microsoft's marketing arrangements with other companies constituted unlawful exclusive dealing under criteria established by leading decisions under §1.

In June 2000, Judge Jackson adopted the governments' proposed remedies, which included the breakup of Microsoft into two separate companies. Despite the fact that Microsoft was exonerated from the illegal exclusive dealings claim, Judge Jackson additionally imposed conduct remedies, to remain in place for a period of three years, that would enjoin the two new compa-

nies from giving favorable terms to any PC manufacturers, from withholding product information from hardware or software developers, and from engaging in tying or exclusive contracts. Microsoft quickly appealed and Judge Jackson suspended his decree pending the final resolution of the case. However, Judge Jackson's repeated discussions with reporters about the case caused a federal appeals court to remove him from the case, which was then reassigned to U.S. District Judge Colleen Kollar-Kotelly.

As of the writing of this paper, Microsoft has reached an agreement with the U. S. government and nine of the plaintiff states that would abandon the divestiture remedy, but would restrict Microsoft's business practices by compelling it to offer uniform licensing agreements for Windows, eliminate "retaliatory" behavior against manufacturers that offer competing software by altering commercial relations with the manufacturer, provide previously confidential information regarding Windows to rivals and business partners, and submit to reviews by representatives of the plaintiff governments of source codes, accounting records, correspondence, and other documents, as well as to interviews of its employees. Under the Revised Proposed Final Judgment, a three-member Technical Committee is charged with the oversight of Microsoft's operations and Microsoft is responsible for paying the salaries of the committee members. The District of Columbia and the remaining nine states, including California, Connecticut, Florida, Iowa, Kansas, Massachusetts, Minnesota, Utah, and West Virginia, have pressed on, calling for still harsher sanctions. These proposed sanctions include forcing Microsoft to put the source code for Internet Explorer in the public domain, requiring its MS Office software to be made available for competing operating systems, and compelling it to develop a version of Windows that would allow computer makers and users alike to remove certain Microsoft applications and replace them with competing software.

As of this writing, both sides have rested their cases. Judge Kollar-Kotelly must now decide whether the settlement with the Justice Department is in the "public interest" and whether any of the additional sanctions proposed by the hold-out states should be adopted. If she does side with the hold-out states in imposing additional sanctions, she must then figure out how to reconcile the two settlements so that there are no contradictions. A verdict is expected late summer of 2002.

### *The Tying and Exclusive Agreements Arguments*

In the Court's Findings of Fact, Judge Jackson found that the bundling of Internet Explorer with Windows was both a good and bad thing. The obvious positive

effects were, in the Court's own words, that "The inclusion of Internet Explorer with Windows at no separate charge increased general familiarity with the Internet and reduced the cost to the public of gaining access to it, at least in part because it compelled Netscape to stop charging for Navigator. These actions thus contributed to improving the quality of Web browsing software, lowering its cost, and increasing its availability, thereby benefiting consumers."<sup>10</sup>

Jackson then argued, however, that Microsoft's business practices and exclusivity agreements "forced" PC manufacturers to "ignore consumer demand for a browserless version of Windows" and provided them with "a Hobson's choice of both browser products at the cost of increased confusion, degraded system performance, and restricted memory."<sup>11</sup> However, there was nothing special about the choice PC manufacturers had to make. That multiple Web browsers were not provided with machines is not because of anything Microsoft "forced" upon PC suppliers or consumers, but likely occurred because those who preferred Internet Explorer already had the browser installed and those who preferred Netscape or some other browser could simply download the software off the Internet for free. Consumers and computer makers simply decided that there was no justification for paying higher prices for several browsers to be pre-installed on PCs. Microsoft never precluded manufacturers from installing additional browsers, presumably because it would have been counterproductive to do so. Furthermore, that Netscape did not offer a similar operating system package with its browser is no fault of Microsoft.<sup>12</sup>

The "barrier to entry" created by Microsoft, then, has nothing to do with sneaky contract arrangements or questionable business practices, but merely the quality of its browser product. Had Internet Explorer been defective or overly cumbersome, in relation to competing browsers on the market, consumers would have easily switched at only the cost of the minuscule amount of time necessary to download and install a free alternative browser. "Thus," according to Armentano, "it was enhanced consumer welfare that excluded competitors and Judge Jackson decided (incorrectly) that this violated antitrust law."<sup>13</sup>

The Court ignored other benefits of tying agreements to producers and consumers. The bundling of goods allows consumers to acquire more products while saving on the search and transaction costs of shopping around. In exchange for the purchase of more of the company's goods, sellers generally offer lower prices for bundled goods than could be obtained by separate purchase.<sup>14</sup> Sellers benefit from increased sales, while consumers benefit from lower prices.

Microsoft, like Standard Oil and Alcoa, is a company that has best served consumer interests over an extended period of time. It has competed vigorously in order to maintain its market dominance. Over the decade that Microsoft has been under investigation by the government, computer software and hardware prices have dropped (Internet Explorer is even free), and industry output has expanded. As with its earlier applications to Standard Oil and Alcoa, antitrust laws have succeeded only in reversing the decisions of consumers at the expense of both efficient firms and consumer interests.

### *Conclusion*

Antitrust enforcement puts mistaken emphasis on industry structure and firm size because of the flawed theory of "perfect competition." Once competition is seen as a rivalrous *process*, which occurs over time, firm size no longer plays a crucial role.

Competition exists in markets in the real world wherever competition is *allowed*. If competition is not interfered with by legal sanctions, the industry is competitive. Just because a firm is large does not mean it has done anything wrong. A firm grows large by better serving consumer interests than rivals. When it ceases to do so, there will be an entrepreneurial opportunity for others to enter the market.

Once competition is looked at as a process of discovering and satisfying consumer desires, instead of the static state depicted by the neoclassical model, government becomes the source of monopoly, not the solution to it. Government licenses, tariffs, regulatory requirements, and other legal barriers to entry prevent or raise the cost for firms to enter and compete to satisfy consumer desires. Antitrust law itself thus serves to undermine competition.<sup>15</sup> It reverses consumer choices, by legally prohibiting large firms from continuing to serve consumers, preventing mergers that could lower costs and provide new products to consumers, and deterring firms from growing larger, due to firms' fears that they may attract government prosecution for becoming too large, by serving consumer interests too well.

Alan Greenspan summed up antitrust laws well, saying, "The entire structure of antitrust statutes in this country is a jumble of economic irrationality and ignorance. It is the product: (a) of a gross misinterpretation of history, and (b) of rather naïve, and certainly unrealistic, economic theories."<sup>16</sup>

Antitrust laws should be repealed before more efficient firms and consumers are harmed. So long as antitrust legislation exists, businesses will have to continue to deal with the uncertainty of their application and the threat of coercive government force, and consumers are the ones who ultimately suffer.

## Endnotes

<sup>1</sup> Greenspan, Alan, "Antitrust" in *Capitalism: the Unknown Ideal*, by Ayn Rand, 1966, New York, NY: The New American Library, Inc., p. 56.

<sup>2</sup> DiLorenzo, Tom, "The Truth About Sherman," *Austrian Economics Newsletter*, Summer 1991, pp. 1-6.

<sup>3</sup> DiLorenzo, Tom, "Origins Of Antitrust: An Interest-Group Perspective" *International Review of Law and Economics* (1985), 5, pp. 73-90.

<sup>4</sup> For a more complete critique of predatory pricing, John McGee's article "Predatory Price Cutting: The Standard Oil (N.J.) Case," published in the *Journal of Law and Economics* 137 (1958), is recommended. McGee offers a myriad of reasons why predatory pricing is an extremely unlikely way of achieving monopoly power.

<sup>5</sup> Facts and statistics in this section are from Boudreaux and Folsom, "Microsoft and Standard Oil: radical lessons for antitrust reform" in *The Antitrust Bulletin*, Fall 1999, Federal Legal Publications, Inc.

<sup>6</sup> Armentano, Dominick, *Antitrust and Monopoly*, 1996, The Independent Institute, Oakland CA.

<sup>7</sup> Judge Hand's decision quoted in *Capitalism: the Un-*

*known Ideal*, p. 64.

<sup>8</sup> Viscusi, W. Kip et al. *Economics of Regulation and Antitrust, Third Edition*, (Cambridge, MA: The MIT Press, 2000), p. 274.

<sup>9</sup> *United States of America v. Microsoft Corporation*, C.A. 98-1232, Conclusions of Law and Order, P.2. Available on the Justice Department Web site: <http://www.usdoj.gov/atr/cascs/f3800/msjudgex.htm>.

<sup>10</sup> Findings of Fact ¶408.

<sup>11</sup> Findings of Fact ¶410.

<sup>12</sup> Armentano, Dominick, "Antitrust and Microsoft," *The Free Market*, Vol. 16, No. 9, September 1998.

<sup>13</sup> Armentano, D.T., "Barriers to Entry," Ludwig von Mises Institute, September 20, 2000. (<http://www.mises.org/microsoft.asp>).

<sup>14</sup> DiLorenzo, Thomas, "Joys of Bundling," letter to the editor of *The Wall Street Journal*, July 29, 1998.

<sup>15</sup> The cases of Standard Oil, Alcoa, and Microsoft are not unique. There are many other firms that have suffered similar fates. Dominick Armentano's book *Antitrust and Monopoly*, is recommended to readers interested in analysis of dozens of similar cases.

<sup>16</sup> Greenspan, Alan, "Antitrust" in *Capitalism: the Unknown Ideal*, p. 63.

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