

Achieving Competition: Antitrust Policy And Consumer Welfare

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WHAT DOES IT MEAN FOR A COUNTRY to be “competitive”? In its popular usage, competitiveness is often equated with the degree of success in the global economy of a country’s industries. Under this view, a country with a high level of exports is considered very competitive. However, as Paul Krugman and others have discussed elsewhere, the popular definition of competitiveness is a poor criterion by which to judge the state of a country’s economic well-being.

A more important criterion, and a better way to define and measure a country’s competitiveness, is provided by the welfare of its consumers. Consumers benefit when their country has successful industries that display high levels of innovation and low levels of costs and prices, whether or not these industries export. In this situation, consumers have access to innovative products at low prices. Since antitrust policy plays an important role in determining consumer welfare, governments must carefully weigh the appropriate extent of antitrust intervention (regulation or enforcement of antitrust laws). Inappropriate antitrust intervention can actually harm consumers—by preventing companies from taking actions that would increase consumer welfare, such as introducing new products and services. However, lack of antitrust enforcement can allow companies to take actions that harm consumers, such as engaging in price-fixing. The antitrust questions raised in the context of high-tech industries such as computers and telecommunications are particularly difficult to answer appropriately because of demand-side issues, such as networks, competi-

bility and production issues as, for instance, the high levels of R&D that are typically required to innovate.

In the US, the Department of Justice (DOJ) and the Federal Trade Commission (FTC) are responsible for antitrust enforcement. The difficulties these agencies face in determining when, if at all, to intervene in high-tech industries are exemplified by their investigations of Microsoft. Microsoft has been a very successful company and its very success with certain products such as MS-DOS and Windows may have given it an advantage in the sale of other products such as online services. Microsoft’s competitors think this advantage is “unfair”; they want a “level playing field” and appear to have convinced the DOJ that an antitrust problem might exist. The ultimate issue in the Microsoft case is an old antitrust question that has risen anew: is competition hurt when competitors are hurt?

When is a company’s advantage over its competitors an antitrust problem? Should we be concerned merely because America Online may find it difficult to compete with the Microsoft Network?

After a brief history of antitrust thinking, we examine the “competitors versus competition” questions that arise in high-tech industries, using the Microsoft case as an example. In light of the difficulties of determining the proper course of antitrust intervention, some argue that the dangers of overly lax antitrust enforcement necessitate an aggressive stance in cases like the Microsoft situation. But overzealous antitrust enforcement and regulation can also be dangerous by delaying innovations that would otherwise yield important benefits to consumers. We conclude by considering the high-tech cellular telephone industry to illustrate how government antitrust inter-

vention there has actually harmed consumers.

Consumer Welfare and the Chicago School

The US antitrust laws stem from statutes passed in the late 1800s and early 1900s and have been developed through case law over the years. The Sherman Act of 1890, for instance, proscribes two types of activities. The first type, so-called “Section 1” violations, involve conspiracies by groups of firms to reduce competition. A price-fixing conspiracy is an example of a Section 1 violation. The second type, “Section 2” violations, involve attempts by a single firm or group of firms to gain market power through “bad acts” which eliminate rivals from the market. The “bad acts” proviso is important because the US Supreme Court has recognised that firms can obtain a high market share, even a “monopoly”, simply by producing a superior product to that of their rivals. Of course, such “good acts” are legal.

At an abstract level, most economists, antitrust lawyers, and federal judges in the US agree that the purpose of antitrust laws is to promote consumer welfare. Under such a view, antitrust intervention by the courts or by government authorities in Section 2 situations should be undertaken only when the intervention would benefit consumers. In some quarters, however, the misguided notion that the antitrust laws should also protect the welfare of competitors has persisted. Over the years, costly litigation and government intervention have been motivated by this type of thinking, which in turn has led to a reduction in competition and consumer welfare by restricting firms that were harming their competitors through actions which were actually pro-competitive.

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The extent to which the antitrust laws have been misapplied in this way has changed over time as various “schools” of antitrust thought have gained prominence. Prior to the rise of the Chicago School in the 1970s and 1980s, it was more common to find antitrust laws being used to protect firms from competition. An important contribution of the Chicago School was to successfully attack the economic underpinnings of the arguments put forward by those wishing to protect competitors from competition.

The fate of “predatory pricing” claims provides a good example of the Chicago School’s effect on antitrust thinking. Predatory pricing litigation was typically brought by plaintiff firms who claimed that their (usually larger) competitor had lowered price with the purpose of driving them out from the market. It is obviously difficult to distinguish pro-competitive price cutting from anti-competitive “predatory” price cutting. But the Chicago School also pointed out that a predatory pricing strategy on the part of a firm would be economically irrational under many circumstances. The firm would have to have a reasonable likelihood of success, both in driving out its rival and in raising its prices significantly in the future. Otherwise the firm would not subject itself to the significant short-run losses that a predatory pricing scheme requires. But a future price increase would be possible only if the driven-out rival would not re-enter the market and if no other firm would be able to enter after the predator raises its price. The Chicago School view on predatory pricing was more or less adopted by the US Supreme Court, which commented in its 1986 *Matsushita* decision that predatory pricing is “rarely tried and even more rarely successful”.

Another success of the Chicago School was casting doubt on the “monopoly leverage” theory which had been used as the basis for a number of antitrust lawsuits. Under this theory, the defendant company attempts to leverage its monopoly power from the market for one product where it is a monopolist (call this product M) into the market for a second product which is competitively supplied (call this product C). The method for achieving the leverage of monopoly power is typically a “tie”: the defendant

company offers to sell only a package of the two products, refusing to sell customers product M unless they buy product C from it as well. According to the monopoly leverage theory, the defendant can then raise its implicit price for product C (it is part of the package), achieving a leverage of its monopoly power into the market for product C. This theory was part of the basis for the *IBM v United States* case. The government alleged that IBM tied the sale of accessories (for which it faced competition) to the sale of its machines (for which it was alleged to be a monopolist) in an attempt to leverage its monopoly power from the machine market into the accessories market. For instance, IBM required its machine customers to buy tabulating cards exclusively from IBM. In addition to the government, product C competitors brought cases against alleged product M monop-

consumer’s maximum willingness to pay for product M and therefore can charge \$15 for it. Suppose that the competitive price for product C is \$5. Faced with these prices, the consumer would buy product M for \$15 and product C for \$5, for a total expenditure of \$20. Now suppose the monopolist introduces a tie, offering to the consumer only a package of the two products. The insight of the Chicago School is that the most the monopolist could charge for the package would be \$20—the same amount the consumer was paying for the two products without the tie. To see why this statement is true, note that a price higher than \$20 for the package, say \$21, would lead the consumer to forego the package and buy only product C. By so doing, the consumer would get a “surplus” value of \$5 (the \$10 total value to the consumer of the product C minus its \$5 price). If the consumer were instead

to buy the package offered by the monopolist, the consumer’s surplus value would be only \$4 (the \$25 total value of the two products minus the \$21 package price). Thus, the consumer would get a greater surplus by rejecting the package. Consequently, the monopolist would be forced to charge only \$20 for the package and the consumer would be no worse off from the tie. The Chicago School argued that ties did not require antitrust intervention because although competitors might be hurt by the tie due to loss of business, consumers were not harmed by the tie.

The Rise of Post-Chicago Antitrust Views

In the last decade, so-called “post-Chicago” antitrust views have gained prominence. This development followed on the heels of a change in the way economists who study the organisation of industries built their theories. Advances in game theory provided economists with means by which to analyse industries characterised by a moderate number of firms. Such industries are called “imperfectly competitive” because the number of firms is small enough that strategic interaction between the firms can be an important determinant of industry outcomes. The ready-to-eat cereal industry provides a good example of an imperfectly competitive industry; five firms make up the primary competitors in the industry (Kellogg, General Mills, Post, Quaker, and Ralston).



lists, claiming that their business had declined due to the tie so that they as well as consumers had been harmed.

The Chicago School argued that the leveraging theory makes no economic sense—that a tie could not have anti-competitive effects. To see the argument, consider the following example. Consider a consumer who is willing to pay a maximum of \$15 for product M and a maximum of \$10 for product C—these amounts represent the total value of each product to the consumer. Suppose that without a tie, the monopolist knows the

Why does imperfect competition prevail in many industries? The answer often lies with the fixed and sunk costs that it takes to do business. For example, in the cereals industry, a large capital investment in specialised production equipment is required to produce cereals. Furthermore, large advertising expenditures are required to introduce and support a cereal brand. Given the existence of fixed costs, only a moderate number of firms can exist and cover their fixed costs. If too many firms are in the industry, competition will drive price below the level at which firms can cover their fixed costs, with the result that one or more firms will be forced to exit the industry.

Imperfectly competitive industries fall between the polar cases of monopoly (one firm) and “perfect competition”. Under perfect competition, the number of firms is so large that no single firm’s actions are important. Thus, no strategic interactions between firms take place. The textbook example of perfect competition is wheat farming. However, it is difficult to come up with many other real-world examples. Instead, most US industries are best described as imperfectly competitive. Thus, the new theories addressing imperfect competition were an important development. The Chicago School arguments against the old monopoly leverage theories were typically based on assumptions of perfect competition and monopoly, because theories of imperfect competition were not yet well developed. After the development of such theories, however, the post-Chicago School was able to build economically sound models that described potential exclusionary conduct which simultaneously harms competitors and competition. An example of a post-Chicago development is the revival of the monopoly leverage theory. The Chicago School’s argument rested in part on the assumption that the tied product market (product C) was perfectly competitive. Then, although the tie might hurt some competitors, the loss of one competitor among many would have no effect on the industry price. The post-Chicago school has shown that, when the market for product C is instead imperfectly competitive, an anti-competitive leveraging model can make economic sense.

If the product M monopolist can use the tie to drive its competitors in the product C market out of business by not allowing them to cover their ongoing fixed costs, the monopolist can reduce the competition it faces for product C and raise its price (its implicit price since product C is offered only in a package with product M). In using the tie to drive its competitors out of the product C market, the monopolist harms its competitors as before. But it also harms consumers because the monopolist can charge consumers higher prices after its competitors have been driven out. The key to the “new” leverage theory is the exclusion of a competitor who is constraining the monopolist’s pricing for product C. If the tie does not exclude the competitor, but simply reduces its share of product C sales, the tie is likely to be pro-competitive. The monopolist has offered a product (the package) which consumers prefer. Consumers demonstrate this fact by directing more of their dollars to the package and less to the competitor’s product C. But because the competitor has not been driven out of the product C market, it still exists to constrain the monopolist’s pricing of product C.

Innovation, Success, and Consumer Welfare

While the post-Chicago theorising has raised important issues that should be considered in formulating antitrust policy, an unfortunate by-product has been the breathing of new life into the practice of protecting competitors instead of competition. Firms harmed by competition can attempt to shoe-horn their circumstances into a post-Chicago theory and bring an antitrust suit against their competitors or convince the federal antitrust authorities to investigate. The DOJ and FTC, armed with the post-Chicago theories, appear anxious to find applications.

The targets of recent antitrust scrutiny have often been large, successful companies whose smaller competitors have found only limited success. Companies become

successful in one of two ways. Eliminating competition through anti-competitive acts is one way. But, more commonly, companies become successful by innovating—either by introducing new products and services or by lowering their

costs. Companies remain successful for long periods of time because they continue to innovate. Kodak has remained successful in film despite competition from Fuji. Boeing has remained successful in aircraft despite competition from other US and foreign firms. When companies do not continue to innovate, they rapidly fade from the competitive landscape, as happened to RCA in televisions and IBM in personal computers (although IBM has made a comeback with its innovative notebook computers). The important antitrust question is to determine whether a large, successful company has become successful by innovating or by excluding its competitors. Failure to make this distinction can be disastrous—imposing antitrust restrictions on innovative companies keeps the benefits of innovation from consumers. Successful companies should not be subject to antitrust scrutiny merely because they are successful.

The US Computer Industry

The US computer industry is one of the first industries that comes to mind when the subject is innovation. Comprising software and hardware products, the US computer industry has provided an important example of how competition, of both the price and innovation variety, works to benefit consumers. Personal computers (PCs) and the software that runs on them are the high-tech success stories of the past two decades. PCs are used in virtually all facets of life. For under \$2000, a home computer user can buy a PC equipped with an Intel Pentium chip running Microsoft Windows, a CD-ROM drive and a high speed fax/modem. This PC has computing power equal to that of the PCs used by university professors to conduct their academic research and by the largest US corporations to run their business applications. The number and types of software applications available to PC users have exploded over the last two decades. The PC can also access networks such as America Online, CompuServe, and the Internet which provide information to the desktop well beyond the highest expectations of only a few years ago. In short, the US computer industry has been leading the world in product innovation.

The success of the US computer industry has been the result of market competition with little antitrust intervention. The US government has not seen fit to intervene in almost any aspect of the computer industry, nor has it provided significant subsidies to the most successful compa-

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nies such as Intel and Microsoft. The comparison of outcomes in the US and Japan is stark. In Japan, the \$500 million “Fifth Generation computer project” to develop a new generation computer technology ended in failure in 1993. No Japanese company is a significant competitor in either microprocessors, the “brains” of the PC, or in software for the PC. The outcome in France is even worse. The French government spent more than \$4.5 billion on Groupe Bull over the 1991-1994 period and protected it from foreign competition. Yet Groupe Bull remained in the doldrums with cumulative losses of about \$2.4 billion over the period. The French government appears finally to have realised its mistake, implementing in 1995 a privatisation plan and allowing competition to take place.

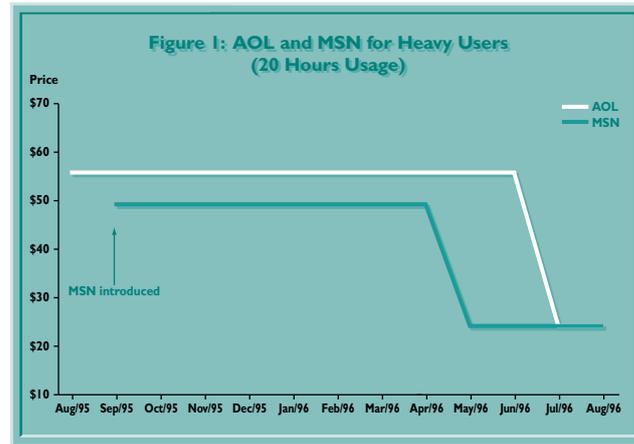
The computer industry is typical of high-tech industries. It consists of a number of very large firms together with constant entry of small start-up firms, some of which succeed and rapidly grow into large firms while others fail and soon disappear. Many economic factors have led to the emergence of large firms in the computer industry. These include the hundreds of millions of dollars worth of R&D required for a new generation microprocessor or a new operating system, the billion-dollar investment needed to build a state-of-the-art chip-fabrication plant, and the gains arising from consumers having computers with common standards in both microprocessors and operating systems. The industry is a good example of imperfect competition where strategic interactions between a moderate number of firms are an important factor in determining industry outcomes.

Has Microsoft Been Too Successful?

Despite the success of the US computer industry, or perhaps because of it, the US antitrust authorities have begun recently to intervene, particularly with regard to Microsoft, the most successful of software firms. The FTC and DOJ have both investigated Microsoft. The agencies appear to be concerned that Microsoft has violated the antitrust laws by using its strong position in operating systems (DOS and Windows) to harm competition in markets for other software products. In assessing whether intervention by the antitrust authorities is a good idea, we return to the

key question: would such intervention make consumers better or worse off?

Microsoft’s competitors have urged the government to intervene. Their chief claim is that Microsoft’s success with its Windows operating system gives it an unfair advantage in applications pro-



grams such as online services, spreadsheets, and word processors. They want the government to take actions that would eliminate Microsoft’s advantage. For instance, prior to Microsoft’s introduction of the Windows 95 operating system in August 1995, America Online (AOL) and other online service providers tried to convince the DOJ to stop Microsoft from bundling software for its Microsoft Network (MSN) with Windows 95. Microsoft planned on giving users one-button access to MSN. AOL feared that its subscriber base would be eroded if MSN was easily available to users of Windows 95. The basis of AOL’s claim was a variant of the post-Chicago leveraging theory: it alleged that Microsoft was attempting to leverage its market power in operating systems into the market for online services. Microsoft countered that it was offering a new product to consumers.

AOL went to the DOJ and asked that Microsoft be stopped from offering one-button access to MSN, or be forced to offer one-button access to AOL as well. Intervention preventing Microsoft from using its advantage would certainly have helped Microsoft’s rivals in online services. But the welfare of Microsoft’s rivals is not the appropriate standard. Instead, we should ask whether intervention would have benefited consumers. Would consumers have faced lower prices and better products if Microsoft were prevented from using its advantages? Or would consumers be worse off because Microsoft was not able to pass any of its advantages on to consumers?

Ultimately, the DOJ chose not to intervene although it threatened to delay the introduction of Windows 95. The facts demonstrate that one-button access to MSN has benefited consumers and has not lead to the monopolisation of online services by Microsoft. MSN has been moderately successful, reaching about 1.2 million subscribers in 1996, compared to AOL’s 6.5 million subscribers. With its one-button access, MSN has probably enticed some users of Windows 95 who would not otherwise have subscribed to an online service to do so. Price competition in the online services industry has increased since the arrival of MSN. As Figure 1 shows, both MSN’s and AOL’s prices for heavy users have dropped by over 50% since the introduction of MSN (MSN led the price cutting). Thus, MSN has benefitted consumers in two

ways—expanding the industry subscriber base and lowering industry prices. Furthermore, while AOL may have been harmed by MSN’s competition, it has not been driven from the industry. Indeed, in terms of subscribers, AOL remains quite successful and thus continues to compete actively with MSN. It would therefore have been a mistake from the point of view of consumers for the DOJ to attempt to prevent Microsoft from offering one-button access to MSN.

Would it have also been a mistake for the DOJ to force Microsoft to give AOL one-button access within Windows 95? This action would have been tantamount to allowing AOL to free-ride on the costly investments Microsoft made in developing Windows 95. Here, the antitrust analysis gets more complicated because it is important to make an *ex ante*, not an *ex post*, analysis of the competitive effects. *Ex post*, AOL and some consumers might be better off if Microsoft were forced to give AOL one-button access. *Ex ante*, however, Microsoft’s incentives to make the investments necessary to bring the new product to market would have been diminished if it knew that the government would later force it to allow free-riders to take advantage of its investment. Thus, looking forward, if the government’s policy is to force innovators to provide access to its products to free-riders, the innovators’ incentives to be innovative are reduced. Reducing innovation would be a high price to pay to provide access to free-riders, especially in cases where access is not “essential” to the free-riders’ existence.

Government Intervention in the Cellular Industry

In the telecommunications industry, government intervention has a long history. But it has not always benefitted consumers. Indeed, government intervention in the cellular telephone industry, much of it motivated by companies who feared competition from rivals, has in a number of ways harmed consumers.

The cellular telephone industry in the US has grown rapidly—by roughly 35% in the last five years—reaching a subscriber base of approximately 40 million people. The fast growth suggests that great benefits have been conferred on consumers with access to mobile telephone service. Indeed, many people have changed the way they do business and run their lives.

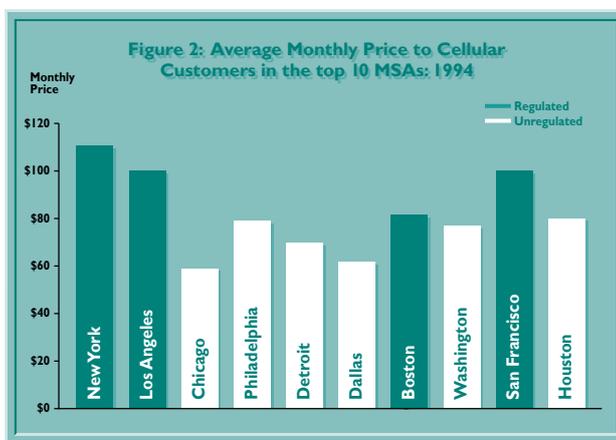
Cellular telephones were a long time coming. AT&T developed cellular technology in the 1970s. At that time, since its activities were still governed by federal regulation, AT&T had to obtain permission from the Federal Communications Commission (FCC) to introduce cellular service. In the FCC proceedings to determine how competition in cellular telephones should be structured, AT&T's potential cellular competitors argued that AT&T should be barred from providing cellular service because of its landline telephone monopoly and the advantages that monopoly might confer. In the early 1980s, by which time the AT&T breakup had occurred, the FCC finally came to a decision regarding how to implement cellular service. It decided to allow competition between two cellular carriers in each metropolitan area. For a given city, the rights to one block of cellular spectrum were given to the landline telephone provider (typically a Bell Operating Company) while the rights to the other block of cellular spectrum were given to another competitor. In setting up what was essentially a duopoly in each city, the FCC was attempting to balance the benefits of competition against those of economies of scale. However, the FCC still allowed individual states to regulate the cellular providers. About half the states decided to do so.

By late 1995, state regulation of cellular telephones had ended. But prior to then, government intervention, both by state regulators and by the FCC, had caused two types of negative effects on competition and consumers: delay effects and

price effects. Unfortunately, much of this government intervention had been motivated by the desire to protect competitors, not consumers.

The initial ten-year delay between AT&T's invention of cellular and the introduction of cellular service to consumers was costly, likely in the billions of dollars. In large part, the FCC's slowness in coming to a decision about how to structure competition was due to the protestations of AT&T's competitors who wanted to keep AT&T out of the industry. The fears of AT&T's potential cellular rivals turned out to be unfounded. Subsequent events demonstrated that, in many cities, the landline phone company's cellular service has been less successful than its cellular competitor (which does not provide landline service). In the cities where the landline phone company was prevented from starting service until its competitor was established, consumers were again hurt by delayed access to cellular service with no offsetting benefits. In other cities where the landline competitor got a 1-2 year headstart, it was quickly eroded by its rival.

The second harm to consumers caused by government intervention was that state regulation of cellular service actually led to higher prices for cellular service.



As Figure 2 shows, among the ten largest US cities, cellular prices in 1994 were highest where they were subject to state regulation. A somewhat more sophisticated econometric analysis of pricing in the 30 largest US cities finds regulated prices to have been about 15% higher than unregulated prices.

This surprising result was caused in large part by state regulators attempting to protect small “resellers” of cellular service. These resellers buy cellular time wholesale from the two cellular carriers and then resell the time to retail cus-

tomers. In California, resellers on a number of occasions protested retail discount plans proposed by the cellular carriers, because they feared having their retail prices undercut. In response to the protestations of resellers, California regulators forced the cellular carriers to maintain their retail prices at a certain markup over the wholesale prices at which they sold to resellers. While this type of regulation protected resellers from the competition provided by the cellular carriers, it clearly harmed consumers by preventing the cellular carriers from lowering prices.

Regulators also restricted the use of long-term contracts and “bundling” by cellular carriers. Business customers get lower prices when they agree to long-term contracts with cellular carriers. To protect resellers who could not match the low prices of the cellular carriers for business customers, California regulators put restrictions on the length of contracts. The ultimate effect of these restrictions was to harm customers. Cellular carriers also offer customers lower prices for equipment when they are allowed to bundle the phones with the service. Indeed, it was common in unregulated states for phones to be given away virtually for free to customers who signed up for service of a given duration. Again, California regulators opted to protect resellers who protested against bundling by the cellular carriers. The net result was that customers paid higher prices for equipment—and we have seen that the price for service was higher as well. Overall, these regulatory restrictions were quite detrimental to consumers.

Achieving Competition

The problems that government antitrust intervention caused in the cellular telephone industry can, in principle, be easily avoided in other industries. The goal of any antitrust analysis should be to enhance consumer welfare. Such an analysis should examine closely the effects of intervention on innovation, a key determinant of consumer welfare. It should also look with suspicion at complaints raised by competitors. Too often these complaints, though dressed up in post-Chicago clothing, are simply attempts by competitors to protect themselves from competition. Listening to these types of complaints harms consumers and leads to less, not more, competition. ♦