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Commentary: Kenneth Davidson
NUMEROLOGY AND THE MISMEASUREMENT OF COMPETITION LAWS

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COMMENTARY

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Abstract

This Commentary discusses why it is difficult to measure the overall effectiveness of antitrust enforcement on the nation's economy and why there are difficulties in using enforcement data to deduce whether new programs are likely to improve compliance with antitrust laws and improve competition in the economy. Enforcement data is important and necessary to create and evaluate enforcement programs but it is useful only to the extent that it informs our understanding of those programs. Accordingly, the Commentary advocates the development of more data and the continued search for greater understanding of what that data means.

NUMEROLOGY AND THE MISMEASUREMENT OF COMPETITION LAWS

Kenneth M. Davidson

This Commentary is about measurements that are designed to evaluate, predict or improve the enforcement of antitrust or competition laws. For more than a quarter of a century, I have carried in my wallet a footnote from a 1977 antitrust article by John Flynn. The footnote has been a continuing caution to me about the use and misuse of data that is used to promote policy recommendations. The footnote concerns the use of quantifiable data (such as body counts, number of bombs dropped, number of villages "pacified," etc.) during the Viet Nam War which the footnote labeled as "MacNamara's Fallacy" for the reasons described below:

> The first step is to measure whatever can be easily measured. This is okay as far as it goes. The second step is to disregard that which can't be measured or give it an arbitrary quantitative value. This is artificial or misleading. The third step is to presume that what can't be measured easily really isn't very important. This is blindness. The fourth step is to say that what can't be easily measured really does not exist. This is suicide. (125 U. Pa. L. Rev 1182 at n. 9)

We need information – data, quantitative, qualitative, and historical – to formulate and to evaluate policies and budgets. Flynn's "Fallacy" however reminds us of the need to consider the context of the data that we find and to make sure that we do not use models simply because they are tractable. The fact that a formula will give us an answer does not mean that it is the correct or best answer. Indeed in my Commentary, *GPRA and the Streetlight Effect* (3/12/2007), I argued that existing modes of measuring the Antitrust Division and the FTC distort the actions of the agencies in negative ways and give little or no useful information about the overall effectiveness of the agencies. In this Commentary, I try to elaborate on the difficulties of creating an overall measurement of enforcement effectiveness. I also consider two examples that illustrate the difficulties of using more direct data that relates to the actions of the competition agencies. My conclusion is that data alone will not give us answers to important questions we have about priorities and effectiveness.

Evaluations of antitrust are very much in the air: in part because of the publication of yet another national report on antitrust enforcement, the report of the Antitrust Modernization Commission; in part because of the approach of a new Presidential administration; and in part because of the call by FTC Chairman Bill Kovacic for developing "metrics" to judge the effectiveness of the competition agencies -- a call that has been seconded by the American Antitrust Institute in *The Next Antitrust Agenda,* its recommendations to the next administration. This phenomenon is not new. The arrival of every New Year provokes people to crow about achievements of the past year, to predict future accomplishments, to encourage others to eat crow over past incorrect predictions, to compliment, to criticize, to critique and to engage in other arcane exercises in numerology.

For example, I remember the subject was raised in a dozen or more emails on the listserv chat board of the American Antitrust Institute in response to the proclamation of 2006 achievements by the Department of Justice's Antitrust Division. The emails inquired how can we know whether there are too many or too few cases and whether they were the right cases to bring or not bring. Could we determine the benefits and/or failures of antitrust cases that were or were not brought by looking at the pricing behavior of firms in each market? In so far as I could determine, there was no response from those who rightly raised these questions, or to the question asked by AAI president Bert Foer whether any of these critiques provided a testable procedure for answering the questions raised.

Another inconclusive argument arose in the fall of 2006, when former Deputy Assistant Attorney General for Antitrust, William Kolasky, argued in a speech that the Antitrust Division resolved merger consent negotiations more quickly than the Federal Trade Commission; therefore the FTC antitrust proceedings unnecessarily harmed businesses in a way that the Department of Justice did not. The assertion that there was a time difference between the two agencies, whose fault it was if such a difference existed, and which agency better protected the public interest was not resolved in the discussions which followed the Kolasky speech. This is not surprising. To measure the public benefit of the resolutions of these merger cases would require evaluating the remedies ordered and comparing their effects over time, something no one attempted.

Unfortunately, attempts to prove benefits or harms resulting from antitrust enforcement actions have rarely been persuasive to any broad group of readers. Having been a participant in the sometimes criticized, sometimes lauded, 1999 FTC Divestiture Study, (*A Study of the Commission's Merger Remedies*), I am sensitive to the difficulties of proving such benefits (or harms). Indeed, my colleagues and I concluded that we could not calculate competitive effects of merger orders based on the data that we had. We encouraged further studies that might shed some light on that and other issues that the study did not consider; however, I think it is important to place some perspective on what kinds of enquiries are likely to be productive. For reasons discussed below, it is unlikely that, by themselves, quantitative studies will provide a firm basis for adding to or subtracting from the resources allocated to the federal antitrust agencies or for modifying specific procedures used by those agencies. To understand why I doubt that quantitative studies are likely to provide such answers, it is important to consider the kinds of benefits that are thought to arise from competition and the questions of how these benefits can be measured or whether the impact of antitrust or competition law enforcement can be isolated sufficiently to be measured.

Why Measuring the Effectiveness of Competition Laws is So Difficult

Measuring the effectiveness of American competition laws is difficult because the laws are so broad and the intended effects so various and ambitious. In 1958, the United States Supreme Court famously stated, "The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions." *Northern Pacific Railway Co. v. United States*, 356 U.S. 1, 4-5. It is hard to conceive that any metric would measure all of these elements. In the paragraphs below I consider some difficulties in calculating whether antitrust has achieved its economic objectives.

Prices

It is perhaps easiest to begin with an examination of price fixing to understand why there is so little dispute about the value of having some kind of antitrust laws even though that consensus is not based on statistical data. The assumption of *Northern Pacific* that antitrust laws are necessary is a based on a logical proposition that, absent special circumstances, competition between rival sellers will tend to lower prices in order to attract purchasers. Adam Smith warned as early as 1776 in the *Wealth of Nations* that those special –negative-- circumstances may be common when he said "people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices." The Antitrust Division's annual list of new criminal convictions for price fixing conspiracies confirms that at least some businesses continue to seek private gain by agreeing with other firms – firms that might otherwise compete -- to raise the price on their products to the public. Without competition, such businesses often have the power to establish a higher price for their products. The annual reports on cartel and merger enforcement actions by the Antitrust Division and the Federal Trade Commission illustrate that businesses have obtained or seek to obtain the same kind of market power to raise prices by buying out competitors. Thus the annual reports suggest the need for antitrust enforcement but also make clear that the laws that these agencies enforce have not eliminated anticompetitive actions by businesses.

The conventional wisdom is that this kind of "market" or "monopoly" power is bad is most usually expressed in terms of the likelihood that such power will be used by a business to reduce output in order to its raise prices for the now scarcer product. The lower output/higher prices result is bad (1) because it results in a misallocation of resources (less investment is made in the production of and fewer of the monopolized goods are sold because the price is higher than a competitive price and fewer people will buy the product at this higher price) and/or because (2) consumers are cheated by being forced to pay the higher monopoly price when they have a legitimate expectation that they will only pay a presumptively lower competitive price. It seems therefore, as a theoretical matter, that we ought to be able to measure the success of competition laws by determining whether or to what extent competition laws have eliminated or reduced the power of businesses to set prices and output.

As a practical matter, however, the cases brought by competition agencies demonstrate that it is often hard to detect individual price fixing

conspiracies, identify practices that facilitate coordinated actions that raise prices, and prove that particular mergers are likely to increase market power. Moreover, antitrust law has limited tools for attacking oligopolistic prices based on conscious interdependence or tacit collusion that result in higher prices. Estimating the aggregate pricing effects of antitrust cases seems unrealistic when we have such partial and fragmentary evidence about the portion of anticompetitive cartels or mergers that are subject to prosecution.

Unfortunately, even the assumption that the lower output/higher price outcome will be harmful to economic growth and development is open to some debate. Increased, i.e., monopoly, profits could, as Schumpeter and Galbraith sometimes argued, promote more innovation and economic growth because the monopoly firm is likely to have more money to invest in research and development, production and marketing. The justification for granting explicitly legal monopoly rights for patents, copyrights and trademarks rests on the assumption that some forms of monopoly power are or can be good. Intellectual property rights can be an indispensible incentive to innovate and to attract the capital necessary to market a new product, a new movie, or a new service. Figuring out the design of optimal intellectual property rights requires a delicate balancing of attracting or rewarding innovation against the monopoly rights that can also stifle competition that could improve the product or service. The balancing involves how broad a monopoly rights should extend and for how long should they be granted. At best, we can only grope our way toward legislating a framework that appears to do more good than harm. Although antitrust cases show that intellectual property rights can be abused in ways that overreach and diminish competition, there is no calculus for integrating the monopoly rights with the competitive markets.

Some have argued that we might avoid the difficulties involved in examining price effects of particular practices by measuring the prevalence of high profits of companies and industries. That was part of the rationale of the short lived Line of Business programs at the FTC. High profits that are earned by a particular corporation over a sustained period (like the cola companies or the cereal companies) might indicate the existence of anticompetitive practices that control or exclude rivals who would otherwise compete with lower priced or better quality products. However high profits can also be the product of luck, of accurate business insights, of large scale economies, and of lower costs derived from greater production experience. Individual antitrust cases have proved that anticompetitive practices of a

company or a group of companies have raised prices and profits, but the existence of profits does not demonstrate that a company has acted anticompetitively. Indeed, the achievement of or the prospect of high profits is normally thought to be the most important incentive for businesses to create new better products and services at lower prices.

Experience suggests that high profits are not necessarily even an indicator of monopoly power. A business might keep its prices low and consequently earn low profits to discourage entry by potential competitors. By discouraging entry, such a company might obtain a degree of security that it would not enjoy if high profits attracted new competitors.

A company might even price its products below its costs for a period of time to eliminate its competitors, but even below cost pricing is not necessarily an indication of an attempt to create a monopoly. Texas Instruments, for example, introduced the hand held calculator at a very low price – a price that at the time might have appeared to be below its then projected long term cost. The low price was intended to create a mass market and the company's expectation was that, with experience and high volume production, the company would learn how to make the product more cheaply. The expectations of TI were fulfilled, and although it reaped large profits, it quickly found it had started an industry with many new competitors. If TI's pricing and marketing defied conventional expectations about monopolist behavior, the market also proved to be unexpectedly resilient.

The counterintuitive pricing strategy of TI illustrates why we should be wary of over generalizing the success or shortcomings of competition law and policy based on prices or other single indicators. Antitrust and business history illustrate that the market competition in America includes a rich variety of pricing policies that have both helped and hurt our economy. We may be able to identify individual pricing actions that have caused competitive harm but we are a long way from being able to calculate whether the competition agencies are winning or losing the overall battle against anticompetitive prices.

Choice

Many have emphasized the importance of competition, and even competition law, in generating choices for consumers. If determining the aggregate effect of competition law on prices is difficult, methods of proving

aggregate effects on consumer choice from enforcing antitrust laws lacks a vocabulary.

It is clear that competition can promote choice for consumers. Competition in response to consumer preferences can overwhelm the competitive advantage of lower costs. Consider the results of Henry Ford's view that "consumers were free to buy Model T's in any color that they wanted, as long as they wanted black cars." Ford had transformed the modern world by creating a low cost, reliable car for mass consumption. He improved that car every year and sold it for less than the cars of its competitors. Nevertheless, despite being annually the world's largest seller of automobiles, there came a time in the 1920's when it became obvious that the black soft top Ford was losing so much of the total share of car sales that Ford would have to also make closed sedans in multiple colors with other driver conveniences offered by other car makers. If it did not, it would cease to sell the most cars and continue to lose market share. So Ford closed down the world's most efficient car production line for an entire year to retool its production process to be able to make cars that were different from the Model T. Were these competing cars better than the Model T? There is no way to answer this question in the abstract. The only answer is that customers, that is, the market, preferred the other choices.

Antitrust cases have the same potential to enhance consumer choice. The *AT&T* case ended a monopoly that not only broke up the existing phone system, it enabled the development of competing phone companies, competing phone technologies, and competing phone equipment; and by doing this it helped launch a new era of telecommunications and computer technology.

Too much choice or lack of standardization can also retard the efficiency that leads to lower prices. The industrial revolution was founded on specialization of work and the creation of interchangeable parts. Standardization agreements on the size and form of products allows producers to establish longer lower cost production runs and buyers to compare products more easily and shop for lower priced items. Standardized products, such as those established by Microsoft and Intel, have provided a platform which hundreds of companies have used to create new applications that give consumers greater choice. As the FTC's *Rambus* and *N-Data* cases and the Justice Department case against Microsoft

illustrate, standardization can also be abused in ways that limit competition and result in higher prices.

Whenever business practices are successful in excluding competitors, one of the potential effects is to prevent the marketing of alternative products that might be preferred by consumers. To evaluate the efficacy of antitrust in maximizing consumer choice we would have to begin by identifying what actions block the entry of firms that would provide consumer choices and what actions facilitate the creation of platforms for new competition and lowering of prices.

Quality and Service

Others have emphasized the role of competition in improving the quality of products and the service to consumers. The 20th Century was notorious for its examples of slow, slovenly and insolent service provided by private monopolies and socialized public services. Whether it was state liquor stores, national health services, gas and electric companies, or telephone companies, consumer complaints about slow or ineffective service often had to run a gauntlet of public or public bureaucratic procedures to get their complaints about unsatisfied needs or desires heard. Even when heard and justified, complaints might be ignored for good reasons or bad. Competition does not end with the agreement to sell products, the service offered to maintain or replace products may be equally important and equally a result of competition. Competition agencies have been a frequent advocate for breaking up private monopolies and for privatizing public monopolies in an effort to employ competition as a means to improve quality and service to consumers.

To be sure the free market is not always a guarantee of the quality of goods or services. Without some degree of regulation, the snake oil salesmen, the purveyors of fool's gold and sellers of swampland retirement sites have demonstrated that the free markets can be rigged against buyers. The modern regulation of trade has moved some distance from the buyer beware doctrines of pre-20th Century legal doctrines and replaced them with legal actions to recover damages from cheats. Regulation has also brought us preventative rules concerning product safety.

Note, however, many of these rules assume that competition will function better with such restrictions. They are not generally intended as substitutes

for the free market; rather this kind of regulation seeks to enhance the public benefits of markets by eliminating or reducing certain kinds of public harm that might otherwise occur. Competition rules issued by the FTC, the SEC and other agencies generally require disclosure of information and risks and leave the market result to consumer choice.

Again, to evaluate the efficacy of competition agencies in promoting quality and service depends on knowing what actions the agencies should have taken, but did not, and integrating that understanding with effects on price, choice and innovation.

Innovation

The persuasive writings of mid-20th Century economists, Robert Solow, Edward Dennison and others, demonstrated that innovation creates the greatest contribution to consumers. Contrary to previous thinking by economists -- that industrial progress was primarily determined by the amount of capital invested in a business -- they and others showed that most of the progress in productivity has been made possible by innovation and a more trained labor force. Solow estimated that only 19 percent of increased productivity was due to increased capital investment. Dennison's 12 percent estimate was even lower. These estimates are based on a variety of assumptions, but the greater importance of innovation and a more trained labor force does not seem to be disputable.

According to Mike Scherer's definitive textbook, these mid 20th Century studies greatly understated the role of innovation because they sought only to measure the effects of process innovations, not the effects of the introduction of new products that change the quality and usefulness of products. The later work of Paul Rohmer on the effects of learning and technological change may have made a more comprehensive calculation possible. In any case, it is a abundantly clear that transistors and then solid state circuitry have transformed a host of industries from calculators, computers, space exploration, automobiles, electronic communications and many others. The Green Revolution of the 20th Century agriculture radically altered the shape of the world's workforce. We now feed many more people with the labor of a fraction of the population that was needed for farming a hundred and fifty years ago. These and other product innovations have reshaped the economy of the world and raised/changed the standard of living of most people.

The sources of innovation are complex and multiple, but Michael Porter's *The Competitive Advantage of Nations* and his later work demonstrates that competition within clusters of companies is a much stronger generator of innovation than greater research resources available to monopolies. Competition, whether that of a hundred years ago, between the Detroit auto companies, between the Pittsburgh steel companies, between the Hollywood movie companies, or within the New York financial markets, or the late 20th Century emergence of computer companies in Silicon Valley, consumer electronics and smaller cheaper well-crafted cars in Japan, or designer tiles in Italy seems to have been the key to rapid development of product and process innovation. David Warsh, in *Knowledge and the Wealth of Nations,* describes alternative routes to innovation, innovation based on economic competition and innovation based on intellectual competition and dedication to improving the human condition. Both of these alternatives are most frequently brought to consumers by businesses in competitive markets.

All of these aspects of competition -- price, choice, quality, service, and innovation -- can be beneficial outcomes of a market based economy, but none are determined in their entirety by competition or the enforcement of competition laws. As I noted in an earlier Commentary, (*An Historical Approach to Competition Advocacy in Market Economies, 9/11/2007*) there is not a single country that had a competition law in force at the time it developed a sustainable market economy. Seemingly more important historically were the establishment of property and contracting rights, including intangible property rights, effective business and legal institutions that promote the use of capital and savings, social and judicial enforcement of economic agreements, regulation of product safety and environmental protection, educational development, and social and ethical mores that support each of these elements. In my most recent Commentary (*Moving Toward Growth in a Market Economy,* 9/29/08), I concur with the view of the Commission on Growth and Development that government support for the development of a market economy is necessary and where properly promoted can speed economic growth in a market economy. Competition law is only one of many elements that play a role in achieving the benefits of what we often describe as a free market.

The multitude of benefits named by the Supreme Court in *Northern Pacific* listed criteria by which we can define a role for antitrust or competition laws. Those benefits provide guidance and support for enforcement

agencies actions to prevent price fixing agreements, market allocation agreements, creating impediments for new businesses, forcing rivals out of business, etc. where those actions will deny consumers the benefits of a competitive market. But the role of competition law and the enforcement agencies is but one of the many and varied forces that give us the benefits of the market. These forces also include the talents and determination of individuals to succeed on their own, the physical infrastructure of the economy, the legal infrastructure of the economy, the ethical structure of the society, and many more.

Is it possible then to identify or isolate the impact or effectiveness of antitrust or competition law, or more particularly of agencies that enforce those laws? Is there a data set that would allow us to deduce the optimal dollar amount to spend on enforcement? I do not think so.

Two examples of Operational Data

This broad ranging discussion may be relevant but it probably seems too general or abstract for people who have tried to measure the effectiveness of antitrust enforcement. Unfortunately, I don't think the problems of deducing solutions necessarily become easy with data that is directly drawn from enforcement activity. It is possible to use such data to improve effectiveness but only if those drawing implications from data do not overly rely on what they do know and overly discount what they do not know. That is, they place the data in context and avoid the Flynn "Fallacy."

<u>AAI Cartel Penalty Recommendations</u>

I have chosen as one example of possibly distorting effects of data the AAI Transition Report recommendations about cartel enforcement. This choice was made because I have reservations about some of the specific recommendations but mostly because I have questions about explicit and implicit assumptions about the context that leads to a conclusion that higher cartel penalties are likely to eliminate or dramatically reduce cartel violations.

My views on cartel enforcement are heavily influenced by my personal experiences. Although I have not worked on criminal cartel cases, which are the province of the Department of Justice, I worked for many years in the

Compliance Division at the FTC and was concerned with formulating and enforcing remedies for violations of the Federal Trade Commission Act and the HSR premerger notification act. In the course of this work, which on occasions included drafting proposed penalty legislation, I looked at the effectiveness of remedies available to the FTC and alternatives that have been used by other enforcement agencies. I have also been influenced by my work competition agencies in transitional economies. Working with their new laws required me step back and reexamine the purposes and effects of enforcing competition law in ways that may not be considered when evaluating modifications of an existing system.

In raising these questions, I hope it is understood that I admire the difficult work that went into developing the information in the AAI report. It relies largely on data calculated by my AAI colleague John Connor (Professor of Industrial Economics at Purdue). He has developed a persuasive picture of cartel enforcement from the very incomplete information that is released by the Antitrust Division of the Department of Justice about its resolution of cartel cases. Presenting a convincing portrait or map was made more difficult by the fragmentary information that exists about the prevalence of cartels, about the resolution of private antitrust cases against cartels, and the prosecutions of cartels by foreign competition agencies. This is a kind of cartography that is indispensible to thinking about the where enforcement problems lie, a prerequisite to considering what kinds of solutions might work, and a tool for evaluating whether the enforcement tools have been effective.

Briefly stated, the AAI recommends higher penalties for cartel offenders (both punishments to corporations and their executives) on the following grounds. Cartels are bad. The purpose of the antitrust penalties is to deter cartels. The number of cartels seems to be increasing. Even the number of recidivist cartels seems to be increasing. Accordingly, the penalties should be raised to a level that will deter cartels. This might be the correct answer, or the best answer that is available given the existing enforcement system and the current political, economic and scholarly consensus, but the correctness of the answer does not strike me as self evident from the enforcement data.

The conclusion that higher penalties/punishments are needed or warranted seems to arise from the criminal categorization of cartels. Cartels are bad (or as the lawyers might say they are *mala in se*) and therefore ought to be

eliminated. Recognizing that cartels are often bad, I think the easy condemnation of cartels leads us too quickly into an unfortunate mode of analysis that views criminal penalties as the sole (or primary) means of deterrence.

My concerns with the criminal fine deterrence model, as represented in the existing sentencing guidelines or the AAI recommendations to modify them, include the following. First, is it possible to set fines that are unlikely to be either too high or too low? Second, even if fines could be set at an appropriate level, are fines likely to be as effective as the model imagines and does the discovery that there are a (growing?) number of recidivist cartels raise further questions about the deterrence model? Third, are existing fines, which are paid to the government, going to the most appropriate recipient?[1]

Calculating the correct fine

The Sentencing Guidelines are designed to impose a fine that will remove the gain cartel members may have enjoyed from unlawful price fixing, bid rigging or market allocation. The guidelines assume that the gain is a price increase of 10 percent over the competitive price and calculate the fine to eliminate that gain. AAI would increase the assumed overcharge to 20 percent for domestic cartels and 30 percent for international cartels. Neither the guidelines nor AAI provide an explanation why these percentages might reflect actual overcharges or why the use of an average amount would be likely to achieve the deterrence objective. My very limited experience with cartels suggests that the amount of anticompetitive overcharge may be much higher. In *Mylan*, the FTC alleged that Mylan and Profarmaco raised prices 2000 percent on one drug and even more on another.

In any case, "optimal deterrence theory" which appears to be the inspiration for the fining approach to deterrence would require that the actual gain be multiplied by the unlikelihood of discovery. Absent such a multiplier, the economically rational cartel members would calculate that either they get away with the extra profit or, if caught, they give it back and just earn their

[1] Maurice E. Stucke has written an insightful and exhaustive law review article about cartel enforcement that questions the effectiveness of the existing deterrence model because it relies on price theory models of rationality. *Morality and Antitrust*, 3 Colum. Bus. L. Rev. 443 (2006). I retrace much of his analysis here for the purpose of illustrating the limited usefulness of enforcement data and the need to explore more broadly the context of the data to formulate effective enforcement policies.

competitive profit. Given AAI's assumption that only 10 and 20 percent of cartels are discovered, that suggests that the cartel's monopoly gain should be multiplied by five or ten to obtain optimal deterrence. Notwithstanding the economic logic, no one seems to be pushing the multiplier.

The reason for reticence about the multiplier can be illustrated by my experiences with HSR premerger notification violations. There is good reason to believe that only a small percentage of such violations are discovered because most violations are discovered as a result of antitrust investigations, which include a tiny percentage of the notifications that are filed, or especially unique circumstances, such as referral by another agency that learned of a possible violation in the course of its investigation. I might guess that the chance of detection of a notification violation is 1 in a 100, but 1 in 50 or 1 in 20 might be equally good guesses. There is no data so I will use my 1 in 100 figure for purposes of this illustration. I was working on a case where the violation, that is, the failure to notify the antitrust agencies, resulted in a $30 million gain. The FTC learned of the transaction by a fluke. An individual testified during an investigation by another agency that his suspicious transaction was motivated solely by a desire to avoid the HSR filing requirements.

If the logic of the multiplier approach were followed, a $3 billion penalty ought to be levied to adequately deter this kind of premerger violation. A $3 billion penalty might have put the firm out of business, and thereby reduce competition, or at least damage the competitive ability of the firm. This strikes me as an irrational as a means to preserve competition, which is after all the reason for requiring the premerger filing. Moreover, if the penalty were high enough to cover the exceptional case, I would worry that judges might have insufficient guidance to determine appropriate penalties where the antitrust violations are egregious but the monetary damages are small.

If this seems farfetched, consider the speculation following the prosecution of the notorious price fixing case between Christies and Sotheby's auction houses. The initiator of the conspiracy escaped all criminal penalties under the leniency program because it reported the violation. There was speculation in the press that because only the coconspirator was required to pay the very large fine, there was a possibility that it would go out of business and leave the cartel initiator with a monopoly that would be able to maintain the supra competitive rates. Happily, despite the additional

payment of hundreds of millions as a result of a private antitrust action, both firms continue to exist and hopefully they compete

Perhaps to avoid the potential of lessening competition, AAI does not advocate the multiplier. However, it does suggest other steps that would increase the fines, such as, raising the assumed monopoly profit to try to assure that the fine will deprive cartel members of the full amount of their unlawful profits. In addition, AAI advocates using global sales rather than sales in the United States and adding interest from the date of the violation to raise judgments closer to the actual harm from the cartel pricing. Although the interest addition seems unexceptionable, the use of global sales appears to be more questionable in view of the fact that other countries may also assess penalties for sales in their jurisdiction. It may be impossible to pay all such judgments if double counting is prevalent.

In at least one respect, AAI notes the possibility that there can be negative consequences if criminal penalties are too high. It advises that penalties should not be so high as to deprive private antitrust actions of their ability to secure compensatory monetary relief. I am unclear how this is to be done since private actions are usually filed following the entry of judgment in criminal cases. The AAI determination to secure judgments that include all actual damages seems to be the basis for supporting the treble damage remedy provided by the Sherman Act. Such damage awards appear to be supported less on the grounds that they might provide deterrence if they were collected and more on the grounds that the availability of treble damages has the effect of securing single damages.

Enforcement policies that result in the collection of only the monopoly overcharge seem unlikely to succeed if we use a price theory assumption about how businesses act, that is the cartels have perfect knowledge of their costs, consumers preferences, the odds of being detected, etc. Even worse, the use of a presumption about the size of the overcharge is as likely to underestimate the overcharge or overestimate it. The economic deterrence of fining, if any, seems more likely to come from other sources, like additional payments resulting from private antitrust actions or parallel actions by foreign competition agencies. Of course, AAI also stresses the importance of holding individual executives liable for monetary penalties and imprisonment to create deterrence.

However, as the next section indicates, I am not persuaded that the assumptions that business executives can and do calculate accurately their economic interests; rather it seems to me more realistic to assume that at least some cartels are formed for other reasons and are unlikely to be deterred by the fining approach to cartels.

Are fines likely to deter cartels?

Deterrence theory suggests that very high penalties will be imposed only rarely because the optimal level will deter violations that will be unprofitable because of the fine. I have doubts that businesses use such a mechanical calculus when planning violations or have the information to calculate the effects of their behavior. Moreover, if the odds are 1 in a 100 that the agency will find a violation, it seems likely that few people will believe they will be the unlucky 1. Consider the number of people who buy lottery tickets despite the fact that they know for certain that their odds of winning are less than 1 in a 100. Why should we assume that persons joining secret cartels will expect to be unlucky even if the odds of discovery are 1 in 10?

Whatever the "correct" penalty might be for a cartel violation, my concerns about the fining approach are most acute when applied to recidivist cartels. Inadequate deterrence is certainly *a* possible explanation for recidivist cartels, but it is hardly the only one. We should remember that cutting off hands and hanging did not stop stealing bread when those penalties were employed. Why did people steal when there were such draconian penalties? One answer is that sometimes the people were starving so it was balancing sure death from starvation against possible death if caught. Other answers abound. Some people, groups like the Italian Mafia or Japanese Yacuza, have no trade other than stealing and crime. Some people are silly optimists like the lottery players. Some people, like Oliver Twist, are forced into stealing. Ignoring these other possibilities risks committing the Flynn Fallacy.

These "other" explanations may seem far afield from cartel behavior, but history shows parallels. Antitrust history is replete with recidivist violators. In the early 20th century, *Addyston Pipe, Trenton Potteries, Maple Flooring, Socony Oil* were all in industries that were repeatedly argued that there was an economic need for "reasonable" price fixing. Although usually rejected by the courts, the movie distribution industry, the container industry, the cigarette industry, and others continued to conspire despite repeated

prosecutions. There has been what used to be referred to as an annual harvest by the Antitrust Division of cartels among state highway paving contractors. Why in the face of constant prosecutions did they continue to conspire?

Is it possible that firms in some of the recidivist industries have an Oliver Twistian choice between collusive price fixing and extinction? Is it plausible that the flatter world (prior to the rise in oil prices) has upset regionally dominant firms and cartels are but a way station to global competition? Is it at least possible that for industries that sell commodities, a free market will tend to force prices down to the point where marginal revenue equals marginal cost because cost is the seller's only basis for competing? In such a situation, if imput costs rise or demand falls, all firms are likely to lose money and some/most are likely to go bankrupt over time.

I am not suggesting that the market for such a commodity quickly be abandoned in favor of "reasonable" rate regulation. Rather I think it is important to look carefully at the behavior of repeat offenders to try to understand why they engage in such behavior and whether there are ways that permit competition that is vigorous but not inherently so risky as to eliminate most competitors. For example, firms that sell commodity products can often obtain some protection from cost variations by hedging in commodity markets. That will lessen the risk, but not eliminate it. Timeliness of service, credit terms and purity of quality are all possible avenues that may permit producers to build customer loyalty and garner a sustainable margin of profit.

If we conclude that tactics such as these do not result in sustainable competition, perhaps we should reexamine the use of antitrust as the regulator of this market. That is, I think, the lesson of the Chicago Board of Trade. Regulation of some aspects of some industries, in some circumstances, makes some industries more competitively efficient. BMI and the ASCAP decree were clearly price fixing agreements, but they made possible the sale of entertainment programming through an efficient marketing technique that made available a huge amount of material. These decisions gave consumers more choice (more competition!) between entertainment works and provided compensation to owners/performers/composers of copyrighted works. Is it possible to create a bidding process for highway contracts that makes it more difficult for contractors to form bidding conspiracies? When asked this question while I

was a resident advisor to the Indonesian Competition Commission, I suggested that requiring design bids might help detect conspiracies because these can require contractors to show how their costs arise. Such explanations, like requiring a math student to show how he calculates his answer, makes it more obvious that a student is cheating than simply writing down an answer.

Or, consider a finding of the FTC's 1999 *Study of the Commission's Merger Remedies.* The Study found pervasive instances in which corporations that were ordered to divest lines of business failed to fully comply with the requirements of divestiture orders. They often either did not sell all the assets needed by the acquiring firm to get into business and/or did not fully assist the acquirer in entering the business by supplying them with supplies and technical assistance. For those working on the Study, this was a surprising finding because the FTC had received very few complaints from buyers of divested assets. The Study concluded that there were systemic causes for the underreporting that were not realistically remediable through penalties. It appeared that firms acquiring divested assets often did not understand why they were having problems getting into business (some assumed the problem was their incompetence), or if they thought the divesting firm was providing inadequate assistance, they doubted their ability to prove intentionally harmful behavior to the FTC. Moreover, some seem to have assumed if they complained the divesting firm would provide even worse assistance.

The primary recommendations in the Study were not to raise penalties because detection of the violations was likely to be low. Instead, the Study recommended that the Commission divestiture orders insist on two provisions. First, it suggested the appointment of independent trustees to monitor the implementation of the divestitures (because they could have full access to information of the divesting and divested firms and would not be subject to fears that complaints might worsen compliance). Second, it suggested that buyers of assets that were being transferred be given access to those assets before they were transferred so they could see them in operation and be in a better position to judge whether their failures were a result of their own shortcomings or the inadequate compliance of the divesting firm with its obligations. These provisions which increase detection of violations seem to have worked well without the increase of penalties.

Although the "trustee" solution has no application to cartels (because they are secret), it does suggest that getting the size of the penalty "right" may not be the most important element for reducing violations. Over the longer run, if we are convinced that the market does not work for a product, the solution to a market failure may be regulation rather than antitrust competition policy. The complexities of litigating a least regulatory antitrust solution may be too great and the process too slow to provide efficient solutions. Maurice Stucke, another AAI colleague, has a forthcoming article, *Does the Rule of Reason Violate the Rule of Law?* 42 U.C. Davis L. Rev. (forthcoming May 2009) available at http://ssrn.com/abstract=126359 that suggests limits on what antitrust can or should do to remedy certain kinds of anticompetitive behavior.

I am not suggesting that, by itself, the fact of recidivism proves there is a market failure problem rather than a deterrence problem. Neither may be true. Or, it may be that some cartels fall into each category and others have other explanations. As the AAI report speculates, the increased reports of cartels and recidivism may be temporary effects of the new detection technique afforded by leniency and that a substantial number of cartel conspirators have not yet incorporated the risk that they will be discovered. When they do, cartel conspiracies may be abandoned and recidivism may decline even under the current penalty structure. Firms may find that they can compete effectively in selling their commodity product without price fixing agreements. They may even find, as Levi Strauss did when forced to abandon resale price maintenance by the FTC, that their profits increase or that greater rivalry forces innovation that increases the overall demand for the product and opens the opportunity for the development of more stable niche versions that were not pursued because of the quiet life enjoyed under the cartel. (Of course, it is also possible that the rate of discovering cartels may decline simply because conspirators find more sophisticated ways of hiding their illegal activities in the ever escalating game of cat and mouse that enforcers and violators play.)

The Transition Report is openly agnostic on the answers to many of these questions and advocates more study. I wholeheartedly support those recommendations.

Who should receive the ill gotten gains of cartels?

I believe that the primary effort in public and private cartel cases ought to be to compensate victims of cartels and prevent cartels from engaging in such exploitation in the future. As explained below, there are existing adequate means to pursue such a policy. Such a consumer oriented policy also has the desirable potential to eliminate some of the problems with overdependence on a fine based cartel enforcement system.

For reasons explained above, I think the structure of criminal fines under the Sentencing Guidelines, even if modified in the ways suggested by AAI, has serious problems. It is perhaps relevant to note that I have a bias against very high financial penalties for antitrust violations because the effects may be perverse. As noted above, AAI points out a very high penalty could eliminate a competitor and thus lessen competition. High penalties could also preclude private recovery.

In some circumstances, high total annual penalties could lead the government to rely on the amounts collected to fund government activities and thus prosecute cases more for the purpose of getting revenue than for getting compliance. Antitrust penalties go to the Treasury rather than the Department of Justice, but we should recognize how revenue can skew decision making. Consider that in agreeing to changes in the fee structure and reporting requirements for premerger notification, the Justice Department and the FTC each insisted that any changes be revenue neutral. Each agency supports much more than its merger program with those fees. That mischaracterized "user fee" should not dictate notification requirements or the division merger work between the two agencies. Similarly, there should be no appearance that yearly amount of antitrust fines have any effect on the number of cartel cases resolved or the trade-off between fines and prison sentences. There should be no sense that the sketchy descriptions of settled cases and the meager support for private follow on actions by the Justice Department do not appear to be influenced by the greater prospect of fines. We should not have to speculate whether large "unearmarked" criminal penalties paid to the Treasury are completely different from jurisdictions in the United States that were alleged to have created speed traps in order to fund their local police forces and courts?

Very high maximum penalties also can create fairness dilemmas for those imposing fines. Does a blatant violation warrant a maximum penalty or should inability to pay mitigate such a fine? Does a minor, but significant and avoidable, violation warrant a very high penalty on the grounds that

lower penalties would be lost in the billions of dollars of a corporation's revenues? These fairness problems are magnified where the maximum fine is large enough to cover the highest possible gains in some conceivable situation.

Greater reliance on holding individuals personally liable (for penalties or for prison) and greater reliance on corporate disgorgement of ill-gotten gains that resulted from the violation appear to be a better option than fines paid to the government. The Supreme Court held in *Porter v. Warner Holding Co*., 328 US 395 (1946) that federal courts have inherent equitable powers, unless barred by statute, to order monetary remedies. Thus, the Justice Department, the FTC or any federal agency has the right to seek disgorgement in every case. The SEC has frequently used this power to provide restitution in securities cases and over the last decade the FTC has used it to seek compensation for some harmed by antitrust violations. Disgorgement to those harmed by the violation redresses legitimate grievances without the potential of warping the incentives of government prosecutors and is measured by the particular harm caused by the violation. Indeed, I think that, if disgorgement were made a routine part of remedies in cartel prosecutions, it might be sensible to reduce penalties to make them more manageable and more easily related to the nature and circumstances of the violation and to the deterrence of future violations.

To be sure, the calculation of disgorgement amounts (the monopoly overcharges) can be difficult. For the Justice Department's criminal cases it would add an element of proof that is not currently required. However, the DC Circuit held in *SEC v. First City Financial Corporation*, that the government's burden of demonstrating the amount of the overcharge is a relatively light one (but rebuttable by the defendant). In any case, there is a value to estimating the extent of the harm of violations. Such estimates are more likely to render more accurate descriptions of the accomplishments of the cartel enforcement program than presumptions.

The FTC issued a statement in 2001 that disgorgement should be used rarely in antitrust cases principally because it feared that disgorgement could lead to quadruple damages for violations. I think its fears were misplaced. Quadruple damages are much more likely where a criminal fine is equal to the monopoly overcharge and a follow on private suit actually obtains treble damages for buyers. The Commission proved, in *Alpharma and Perrigo*, that it could design and implement a restitution remedy that would not

increase the potential liability of violators above the treble damages provided for in the Sherman Act.

Most important, the use of disgorgement to compensate individuals and corporations harmed by cartel and other antitrust violations reaffirms the basic purpose of the antitrust laws. Antitrust and its common law ancestors, forestalling, regrating and engrossing, were crimes against the public akin to theft. In my work with competition agencies in transitional economies, I find there is no clearer way to explain what competition law is intended to do than to focus on the way in which consumers, whether individuals or businesses, have been deprived of the benefit that a competitive market should give them. When the benefit denied is a lower competitive price, the justification for returning the money to consumers is easy to explain and understand. Restitution provides guidance to new competition agencies about their purpose and an intelligible reason to consumers here and abroad why the public is served by a competition law.

In any case, we may be in the midst of a natural experiment on antitrust penalties as a result of those imposed by European Union on Microsoft and others. With over a 100 competition agencies (most of which have been formed since 1990), we are likely to see more actions like those of the Korean agency that add to the detection and the penalties assessed against illegal cartels and other violators of competition law. Whether we will discover from this experiment that penalties alone can eliminate cartels remains to be seen. My guess is that the decision of the EU to encourage private competition actions suggests that disgorgement and restitution will be a vital part.

Although many of my policy preferences are evident in this section, my purpose here is not to advocate for disgorgement or against deterrence by fining, nor to advocate for regulation instead of antitrust. Rather I am trying to illustrate that the estimated number of cartels and the results in cartel cases -- the amounts of fines and the lengths of prison sentences -- are not a sufficient basis on which to evaluate how the cartel enforcement program might be improved.

The lesson I draw from this consideration of reports on antitrust and competition law cartel enforcement activity is that numbers matter, but that more context is needed to use those numbers effectively. The inclination to increase reliance on criminal enforcement against cartels is perhaps natural

given the plaudits it has been given as the most important and successful antitrust program of the Justice Department. Those kudos are not inconsistent with a conclusion that parts of the cartel enforcement program have conflicting incentives. Leniency programs that diminish fines will not diminish deterrence if the fines are not viewed as the primary vehicle for eliminating the ill gotten gains of cartels. Whistleblower bounties would not interfere with such a program.

There is a lot of excellent analysis and recommendations in the Cartel section of AAI's transition report and elsewhere in the report. For examples, the report recommends that an antitrust whistleblower bounty program be established and that more staff should be given to the Division to investigate in order to litigate more cartel violations. The case for an increased staff seems especially well supported by the context. The number of cartels (or at least suspected cartels) is increasing. The increased focus on international cartels makes the investigation and prosecution of cases more complex. The ability of the Antitrust Division to investigate and prosecute criminal cases has declined because the number of FBI agents that used to assist the Division seems to have dwindled since 9/11. In these circumstances it would be extraordinary if more staff were not needed. Indeed one explanation of why recidivism is increasing in the face of higher penalties and longer prison sentences could be that business are in fact less worried about cartel prosecutions because of the reduced number of cartel cases that are being brought by the Division.

My inclination to seek a context in which to understand numbers has long been influenced by the following excerpt from Peter Drucker, who was writing about the relevance of numbers in business reports:

> I do not believe one can manage a business by reports. I am a numbers man . . . one of those people to whom numbers talk . . . . That is all right if we have the understanding, the meaning and the perception. One must spend a great deal of time outside where the results are . . . . One has to look at markets, at customers, at society and at knowledge, all of which are outside the business, to see what is really happening. That, reports will never tell you.

<u>Incomplete Premerger Notification Filings</u>

Let me turn to a different numbers example that I discussed in an earlier Commentary (Right Regulation: The Due Burden of Premerger Notification, 8/30/05). This is an example of an action that was not taken despite the existence of numbers and a context that could have supported action. I periodically recommended to various persons at the FTC that the antitrust agencies conduct an enforcement program to increase compliance with Item 4(c) of the premerger notification form. The language of Item 4(c) requires the submission of all "documents"[2] created by or for an officer or director in the course of considering the proposed merger or acquisition. My recommendation was based on numbers of notification that appeared to be deficient and the importance of information that was not being included in the required notification.

Item 4(c) is the only item that requires the production of analyses of the effects, competitive and otherwise, of a proposed merger. The other items require submission of routine annual reports, lists of subsidiaries, summaries of annual revenues of very general product categories, etc. This other information is often useful and might even provide hints of potential anticompetitive problems but they rarely state in so many words that the parties are competitors or what share of particular markets the parties have. Such information is not usually relevant to those other documents that are routinely prepared for other purposes. Whereas documents prepared in connection with an acquisition or merger are generally prepared to answer the question, why do we want to buy or merge with this company? The answer may be that the company has a product that will complement our product or a product that is taking away our market share or our profit, or it may be an unrelated product that the acquiring firm thinks will grow rapidly. Such documents frequently estimate the revenues expected from acquisition/merger to show that the proposed transaction will be profitable.

The numbers that were relevant to my recommendation were contained in reports the FTC Premerger Notification Office circulated each week to the divisions of the FTC's Bureau of Competition that review premerger filings or notifications. The circulations are referred to as "short sheets" because they typically summarize the contents of the filing in a couple of pages.

[2] In fact the definition of documents that are required is not entirely clear because the drafters of the requirement wanted all competitively significant documents and not all details of health insurance plans or names and addresses of all employees, but they did not want to allow those filing notification forms to choose what would be significant documents. I think the language chosen by the drafters was adequate for their purpose given that all actions brought against persons who have withheld documents that the agencies thought were significant have resulted in penalties.

They do not attempt to assess the lawfulness of the proposed transactions but they do list the contents of the filing and the titles of the 4(c) documents, if any. The circulations are prepared weekly to alert the Bureau about the 50-100 filings that were received that week. At various times, I looked through 3 or 4 sets of weekly circulations and wrote down the number of 4(c) documents that were submitted. I focused mostly on corporations known to me to be large corporate entities. I found that these notifications frequently contained one or two 4(c) documents, sometimes as many as three or four but rarely more, and in numerous cases no such documents were submitted. I could see from the titles that many of these documents were the request to the board of the corporation to approve the transaction. From experience, I knew that these requests to the board generally described the company being bought briefly and presented numbers predicting that the acquisition would be profitable.

Although I am not a statistician, I was greatly surprised by the consistently small number of 4(c) documents that were attached to the notifications. Despite my mathematical limitations, it seemed clear that my review constituted a satisfactorily random sample that was also large enough to conclude that a large number of firms, including most large firms, were not filing all of the documents required by Item 4(c). The premerger data I used had one advantage over the data used to evaluate cartels. The premerger filings contained the universe of potentially incomplete filings whereas Professor Connor could only estimate the number of cartels that were in existence and being formed.

Why was I convinced? I had learned about the kinds of 4(c) documents that are generally created by corporations considering acquisitions in the course of looking at the documents of a dozen or so companies that I investigated for having failed to file 4(c) documents. The documents we found in those investigations were consistent with the business literature that I had read. That literature maintained that large businesses, especially diversified businesses, could not operate effectively without detailed justifications for capital expenditures and calculations of projected earnings based on those expenditures. The need for such documents was not only to persuade the relevant corporate officials or bodies that the capital expenditure was justified but also to hold the officials recommending the expenditure accountable for their recommendations. As a result, such documents were not only likely to be created, but they were almost certain to be retained in some form.

Our investigations of possible 4(c) violations had confirmed that such documents were typically created. I recommended on several occasions that the FTC, which has primary responsibility for administration of the premerger notification program, announce that it believed, based on its investigations and prosecutions that firms appeared to be submitting notifications without all required 4(c) documents. On that basis, the FTC would in the future issue a number of requests for additional information to companies whose filings appeared to be incomplete. My argument was that submission of more complete 4(c) documents would make it easier to both (1) identify transactions that might violate the merger prohibitions of the antitrust laws and (2) identify transaction that were unlikely to violate the laws. The idea was that better information would improve the speed and accuracy of premerger review by the antitrust agencies and thereby benefit both parties filing notifications and the government's interest in deterring and stopping anticompetitive mergers.

The Bureau of Competition did not support my repeated recommendation. The reasons were never entirely clear. Part of the problem rested on the potential that wording of Item 4(c) would be construed as unclear. Part was the idea that the defense bar and business community would object if firms were asked for supplemental information on their filings in the absence of any suspicion that their proposed transaction would violate the antitrust laws. Part of the institutional resistance may have rested on the fact that FTC Commissioners and Bureau officials, who frequently have been and/or will be part of the Washington defense bar community, are reluctant to "increase" the burden on persons making premerger filings.

I include this example to illustrate the kind of numbers and context that might be an appropriate basis for evaluating enforcement numbers. The initiative I suggested might not have made a huge improvement in the premerger screening program. It is likely that businesses that actively seek to hide or avoid revealing information would continue to do so. It is also possible that the business community might successfully avoid providing additional information by obtaining Congressional support to narrow the information submitted in premerger notifications. Such outcomes are possible.

Observations

These two examples do not suggest that antitrust agencies can or should abandon efforts to formulate budgets or initiate new enforcement programs. Indeed the questions I raise do not demonstrate that the cartel recommendations made by AAI are not the best that might be adopted under the current circumstances. Nor do the examples provide any reason that agencies should eliminate the collection of numbers for annual reports; although it would be helpful if such reports were not expected to celebrate each year as the best performance ever. Such celebratory claims tend to obscure the process of learning from that year's experience.

Proposed budgets and enforcement programs are necessary for any bureaucratic organization even though they are, at best, approximations of what is expected. The best use of these projections is probably as tools for evaluation with the benefit of hindsight. We begin by budgeting on the basis of past experience and if we look closely enough at results we may be able to learn how resources were used and identify where resources were inadequate, misdirected or simply wasted. If we learn, our projections of needs, priorities and programs may be better in the following year even though we know that the next year will be different than the previous year.

Some learning takes years to achieve. Training programs for attorneys, pay initiatives that include student loan forgiveness or higher salaries may not show results for five or ten years. Only over time might we establish that more talented staff will stay longer with the government if pay and opportunity is improved. This should not discourage us from undertaking such programs. The government is in operation for the long term benefit of the public and should monitor and develop its programs with those long term objectives in mind. The statistics of annual reports of agency activity have their place, but for many purposes an annual report is too soon and too late. Evaluation of agency actions should be an ongoing process that monitors and/or corrects programs as they operate and a longer term examination of the effects of the agency actions within the agency and on the community.