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SOME PRINCIPLES FOR POST-CHICAGO ANTITRUST ANALYSIS

F. M. Scherer[†]

When Bert Foer asked me to articulate principles for post-Chicago antitrust analysis, he was unaware that he had engaged a “ringer.” My first two decades were spent as a resident of what Colonel McCormick, publisher of the *Chicago Tribune*, used to call “Chicagoland,” and I was thoroughly indoctrinated in the values of the place. One of those values was “agin-ism”—that is, whatever the conventional wisdom was, we Chicagolanders tended to be ag’in’ it, or for the great unwashed, against it.

Knowing this and knowing also that the University of Chicago was founded thanks to the largesse of John D. Rockefeller, who at the time was not exactly Americans’ favorite business leader, goes a long way toward explaining Chicago’s contributions to the debate over monopoly, competition, and antitrust.

I. CHICAGO ECONOMISTS’ CONTRIBUTIONS

Among the three great Chicago economists who wrote on those themes in the early decades of the 20th century, two, Thorstein Veblen and Henry Simons, were clearly ag’in’ers. Only Frank Knight tended to produce dry theoretical pieces that drew few direct implications for policy.

Thorstein Veblen’s *Theory of the Leisure Class*¹ rejected the then-ascendant theories emphasizing economic equilibrium based upon consumers’ maximization of their own utility, oblivious to the consumption of others. Veblen stressed instead that “conspicuous consumption” was all about keeping up with and preferably surpassing

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¹ THORSTEIN VEBLER, *THEORY OF THE LEISURE CLASS* (The Macmillan Company ed., 1899).

the Joneses. His *Theory of Business Enterprise*² ridiculed the emphasis of business leaders on financial shenanigans that undermined the productivity and stability of capitalism. Veblen could have been patron saint of the FTC's efforts in the breakfast cereal shared monopoly case and "Kid Vid" during the late 1970s, but his works were too radical to be cited safely. My own experience in that era taught me two lessons: (1) Never sue firms whose rivalry is based mainly on big consumer advertising expenditures, because you will draw unremittingly bad press; and (2) Never threaten the funeral directors, each of whom sees a congressman nearly every week.

Henry Simons' most remembered work, *A Positive Program for Laissez Faire*,³ appeared in 1934, when the world economy struggled in the depths of depression and a newly-inaugurated Franklin D. Roosevelt thought that through NRA-backed cartelization combined with unionization, he could reflate the economy into prosperity. Simons opposed cartels and monopolies as vehemently as he opposed governmental regulation, in part because he believed the accepted political solution to monopoly would be regulation. To ensure that the economy remained self-regulating, he proposed a program of structural fragmentation so that "in major industries no ownership unit should produce or control more than 5 percent of total output."⁴ Needless to say, a monopolization policy as tough as the one Simons proposed has never been accepted.

Among the next generation of Chicago writers on matters relevant to antitrust, the most prominent are George Stigler, Ronald Coase, and the little-published but enormously influential Aaron Director. Stigler began his career as a hard-liner on antitrust policy but apparently had a vision somewhere on the road to Hyde Park. I will not attempt to trace how his views changed, but will simply assert that interaction with his colleague Aaron Director had something to do with the changes. Director was an ag'in'er in the best midwestern sense of the word. He and the associates he inspired systematically subjected the corpus of antitrust economics, as it had come to be accepted by the 1950s, to critical scrutiny and highlighted numerous logical and factual shortcomings.⁵ This is the way science progresses, and we should acknowledge a heavy debt to the critical analysis Director and associates contributed.

² THORSTEIN VEBLÉN, *THEORY OF BUSINESS ENTERPRISE* (C. Scribner's Sons ed., 1904).

³ HENRY C. SIMONS, *PUBLIC POLICY PAMPHLET NO. 15, A POSITIVE PROGRAM FOR LAISSEZ FAIRE: SOME PROPOSALS FOR A LIBERAL ECONOMIC POLICY* (Harry D. Gideonse ed., 1934).

⁴ *Id.* at 319.

⁵ On the role of Director (and also Ronald Coase), see *The Fire of Truth: A Remembrance of Law and Economics at Chicago, 1932-1970*, 26 *J.L. & ECON.* 163 (1983).

Coase, Director, and Stigler interacted in another important way. The essence of Coase's approach to economic problems is revealed in a few sentences from his Nobel Prize-winning paper on social costs:

All solutions have costs and there is no reason to suppose that government regulation is called for simply because the problem is not well handled by the market or the firm. Satisfactory views on policy can only come from a patient study of how, in practice, the market, firms and governments handle the problem of harmful effects.⁶

The key here is making a "patient study." One of the great Chicago traditions for students seeking the Ph.D. in industrial organization was to carry out careful, price theory-based empirical studies of specific real-world industries and institutions. This too is the way science progresses. The case study methodology was by no means unique to Chicago; it was pursued during the Edward Mason, Carl Kaysen, and Richard Caves eras at Harvard. And perhaps therein lay its greatest problem, for, as George Stigler observed in an early paper:

To determine whether any industry is workably competitive, therefore, simply have a good graduate student write his dissertation on the industry and render a verdict. It is crucial to this test, of course, that no second graduate student be allowed to study the industry.⁷

What is unfortunate, as Stigler was saying with characteristic sarcasm, is that we conduct far too few careful empirical studies. Therefore, we end up making judgments about the state of the world on the basis of empirical studies into which methodological or ideological biases have intruded without a proper corrective in the marketplace of ideas. That is the best case. The situation has worsened as young scholars find their careers advanced most rapidly by doing theory for its own sake, with an occasional anecdote thrown in to convey the flavor if not the actuality of concern for realism, instead of undertaking the painstaking labor required to study an industry's functioning empirically. Then we make our judgments on the basis of empirically unsupported theory or, worse yet, poorly supported ideology.

⁶ Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 18 (1960).

⁷ George J. Stigler et al., *Report on Antitrust Policy – Discussion*, 46 AM. ECON. REV. 496, 505 (1956).

II. TWO IMPORTANT "CHICAGO" POSTULATES

Work in every school of thought is subject to biases. At Chicago, two particularly important prior beliefs have tended to pervade both its theoretical and empirical work in this audience's field of interest:

(1) Chiseling erodes cartels, and entry erodes monopoly, quickly unless the government intervenes to create barriers to entry and the expansion of fringe firms.

(2) What exists in the marketplace exists because it is efficient unless it has been put there by government fiat.

The roots of these beliefs can be found in the writings of Henry Simons and Frank Knight, with important contributions thereafter from Stigler, Director, and Coase. The key question is, are the beliefs valid? Only a careful examination of real-world evidence can provide a satisfactory answer.

In this short Article I can by no means undertake the kind of comprehensive analysis required to accept or refute those beliefs. I compromise by making a few observations on two facets and then turn to a third—the question of how mergers affect economic efficiency—for a more careful investigation.

III. THE EROSION OF CARTELS

First, on the erosion of cartels, in recent years the Department of Justice has achieved extraordinary success in uncovering and penalizing cartels, many of them international. From the results of that effort, it is self-evident that cartels continue to exist, and that they have not been eroded away into oblivion by chiseling tendencies. I would hope, no doubt much too optimistically, that scholars will be given access to the underlying case materials so they can conduct careful studies of why those cartels were formed and how they managed to overcome the problems of chiseling.⁸

From personal experience as a consultant in connection with two alleged international cartels, one subjected to antitrust fines and one not, I can offer at least partial support for the Chicago view. In both cases, the behavior that gave rise to allegations of price-fixing was strongly influenced by a governmental intervention: the anti-dumping laws. In

⁸ Remarkably, little insight is provided on these questions in KURT EICHENWALD, *THE INFORMANT* (2000) (commenting on the lysine and citric acid cases).

the potash case, sudden increases in the price of potash from Saskatchewan were triggered by anti-dumping complaints from inefficient U.S. potash producers, preliminary determinations that substantial anti-dumping tariffs would be levied, and a negotiated settlement under which in effect the companies agreed to raise their prices to non-dumping levels.⁹ In the vitamin case my client, who must remain anonymous, was lured into being a reluctant and at best imperfectly compliant member of the cartel by threats that if it did not participate, it would be driven out of the U.S. and European markets by anti-dumping complaints—a threat that was credible, given my client's status as a newcomer to the industry still moving down its learning-by-doing cost curve. Something needs to be done to fix this conflict between our competition laws and our trade laws.

In view of the massive fines imposed by U.S. and foreign antitrust authorities when price-fixing schemes have been detected, I believe it is inevitable that in the future such activities will be driven deep underground. The study of history forces us to expect no less. After it was recognized in the 1890s that the Sherman Act was going to be an effective restraint against overt price-fixing and market-sharing agreements, U.S. companies reacted by carrying out a massive merger wave that in some industries created dominant firms with substantial autonomous price-setting power. When looser market structures resulted, there were vigorous efforts to elicit cooperative oligopolistic pricing through the cultivation of price leadership and "open price" practices.¹⁰ When Section I of the Sherman Act was found through the electrical equipment cases of the 1950s to have sufficient teeth to put violating business executives into prison, General Electric responded with new price leadership and "most favored customer" schemes that successfully encouraged cooperation among the turbogenerator oligopolists.¹¹ It follows that carving notches into one's baton for successful price-fixing prosecutions is going to be harder for antitrust agency heads in the future. The agencies are going to have to undertake the much more difficult task of combating oligopolistic facilitating practices—a task to which they have been unequal in the past.

⁹ For a more detailed analysis of this and other international cartel cases, see Frederic M. Scherer, *International Trade and Competition Policy*, in *COMPETITION AND TRADE POLICIES: COHERENCE OR CONFLICT?* 20-23 (Einar Hope & Per Maeleng eds., 1998).

¹⁰ See F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE*, 153-56, 160, 248-61, 347-59 (3d. ed. 1990) (discussing price leadership in steel, automobile, cigarette and gasoline industries and open pricing strategies through trade associations).

¹¹ See *id.* at 212, 258-259.

IV. SHORT-LIVED MONOPOLIES?

It is undoubtedly true that some monopoly positions erode quickly. But there are many counter-examples. It took seventy-five years for the pricing power of the United States Steel Corporation, exercised first from a position of dominance and then through price leadership, to erode sufficiently that independent pricing could be seen in the steel industry.¹² It took roughly fifty-five years for Japanese entry to undermine the price and product leadership of General Motors.¹³ Intel and Microsoft enjoyed near-monopoly positions for two decades in personal computer microprocessors and operating systems respectively. There is no indication that a serious challenge to Microsoft's position has materialized. In micro-processors, Intel's position was first challenged seriously when Advanced Micro Devices ("AMD") leaped ahead technologically with its Athlon processor in the year 2000. Whether AMD will be able to sustain its competitive challenge remains to be seen.

V. MERGERS AND EFFICIENCY

In what follows, I want to dwell in much more detail on a theme where the gap between Chicago and other parts of the world is widest: the question of the extent to which mergers lead to efficiency gains.¹⁴ The "Chicago" with which I deal here is not the Chicago of Stigler, Coase, Director, and their mainstream economist successors. Rather, the view that mergers are on average efficiency-enhancing stems from the corporate finance specialists at Chicago, their University of Rochester farm club compatriots, and a considerable number of younger finance specialists who have been brought up in the tradition they created.

No one will be surprised to read that the United States and indeed the wider world around us are experiencing the largest merger wave in history. The average annual value of merger and acquisition transactions tracked by a leading U.S. statistical source (alas, the Federal Trade Commission has abandoned the role it once occupied in providing such information) over four recent five-year periods is as follows:

¹² See F.M. SCHERER, *INDUSTRY STRUCTURE, STRATEGY, AND PUBLIC POLICY* 150-99 (1996).

¹³ See *id.* at 299-319.

¹⁴ Substantial parts of the analysis that follows are drawn from F. M. Scherer, *The Merger Puzzle*, Prepared Remarks Before the Ottobeuren Seminar on Economic Science in Germany (Sept. 2001) (on file with author).

1980-84	\$ 81.2 billion
1985-89	196.2 billion
1990-94	135.8 billion
1995-99	\$825.2 billion ¹⁵

In 1999, a record-breaking 9,278 recorded transactions brought the value of such transactions to a record-breaking level of \$1.43 trillion.

VI. THE FINANCIAL ECONOMICS VIEW

Adherents to the “finance school” of merger analysis (I will call them that rather than a “Chicago school” because they are now diversified geographically) advance a rather simple argument to show that mergers enhance efficiency. The argument is based upon what has become an axiom of corporate finance theory: that securities markets are “efficient” in the sense that at any moment in time, they impound and hence are driven to daily equilibrium by all the information on individual corporation performance, past, present, and expected future, that is legally available. From this axiom follows the conclusion that the best insight into the merger’s likely effects can be derived by observing how common stock prices respond to the first announcement of an impending merger. One analyzes how stock prices change during a short time “window”—e.g., five trading days before and after—around the announcement date. What most such studies have shown is that the price of the target firm’s stock rises sharply, e.g., from fifteen to forty percent, reflecting whatever premium the acquiring firm is offering over the pre-announcement value of the target company’s stock price. For the acquiring company, the most typical (but less uniform) experience is that the company’s share price neither falls nor rises by an amount that lies outside the range of statistical error. Thus, a plus is added to a zero, yielding an over-all plus. Dismissing the possibility that stock price increases are attributable to increased monopoly power—a question addressed in other studies using a similar methodology that I shall not attempt to review here—one concludes that the merger adds to economic value, as measured by the stock market, and hence must be efficient. Q.E.D.

Nevertheless, study after study has shown that, although the acquiring company’s common stock prices experience on average zero cumulative abnormal change in short time “windows” around merger

¹⁵ See W.T. GRIMM & CO., MERGERSTAT REVIEW Table 1-4 (2000). See also Andrew Smith, *Fasten Your Seatbelts*, FORBES, Apr. 19, 1999, at 260, 260 (“Last year [1998] merger and acquisition activity in the United States came to \$1.6 trillion, which happens to be 20% of the gross domestic product.”).

announcements, they tend, relative to market movements generally, to decline by impressive and statistically significant magnitudes in the one to three years that follow substantial merger activity.¹⁶ Thus, the stockholders of target companies gain unambiguously from having their companies acquired, but the stockholders of acquiring companies lose. Whether over-all market value is reduced or enhanced by the merger depends upon the relative size weights applied to the “plus” for targets as against the “minus” for acquirers. Since acquirers are usually much larger than targets, it is easy enough for the sum to be negative. Some studies that have applied the appropriate weights have indeed found a negative sum.

Those who defend mergers as value enhancing tend to dismiss these results as an anomaly, non-causal, or (in a startling non sequitur) as inconsistent with the axioms of market efficiency combined with the assurance that mergers are value enhancing. The defenders tend therefore to ignore them. I do not believe they can be ignored. But let me advance into a different evidentiary realm that leads to quite different conclusions.

VII. OTHER EVIDENCE

For one, numerous attempts have been made by management consulting firms and similarly inclined investigators to determine, without invoking efficient market axioms, how the mergers of recent years have turned out. Let me quote some representative examples, sometimes paraphrased, from popular business journals rather than from the original sources:

A survey of more than 300 big mergers over the past ten years by Mercer Management Consulting, a consultancy based in New York, found that, in the three years following the transactions, 57% of the merged firms lagged behind their industries in terms of total returns to shareholders. The long-run failure rate appears to be even higher.¹⁷

In a study of 100 large deals completed between 1994 and 1997, Mr. Sirower [a professor at the Stern School of Business, New York University] found that two-thirds resulted in

¹⁶ This point is thoroughly documented in DENNIS C. MUELLER, *THE FINANCE LITERATURE ON MERGERS: A CRITICAL SURVEY* (Universität Wien, Working Paper, 2001).

¹⁷ *Why Too Many Mergers Miss the Mark*, *ECONOMIST*, Jan. 4, 1997, at 57.

immediate and outright losses to shareholders and wound up underperforming their industry peers over the long haul.¹⁸

[A]s Andrew Campbell of Britain's Ashridge Strategic Management Centre puts it, "it's like betting on the reds at roulette: the odds of winning are a bit worse than 50%." Some find it is more like what American roulette players call "double street:" only 20% of bets win.¹⁹

So what's to show for the dealmania? Sure, some deals pay off—but far too often, they don't Indeed, just one in five deals lives up to its promise, according to research by consultants at KPMG [a prominent accounting and consulting firm].²⁰

Repeated studies have shown that, in most mergers, the shareholders of the acquiring company suffer, and that their loss is often greater than the gain for the shareholders of the acquired company. Indeed, many empire-building managers now indulge in takeovers in spite of, rather than because of, pressure from shareholders.²¹

Other evidence can be adduced to show that mergers have less than a sterling record. In a study of mergers made during the preponderantly "conglomerate" merger wave of the 1960s and 1970s, David Ravenscraft and I tapped extraordinarily rich Federal Trade Commission Line of Business data and found that approximately thirty-three percent of all U.S. acquisitions made during that period were subsequently divested.²² Other scholars have published estimates as high as fifty to sixty percent.²³

Ravenscraft and I found also that the profitability of acquired units tended systematically to decline after acquisition, the more so, the more unrelated were the businesses of the acquired firm and its acquirer.²⁴ This was true both for voluntary mergers and tender offer takeovers. Sell-off was preceded on average by a disastrous fall in the profitability of an acquired unit into the range of negative profits, i.e., losses. Case

¹⁸ Gretchen Morgenson, *A Cautionary Note on Mergers*, N.Y. TIMES, Dec. 8, 1998, at C1, C12.

¹⁹ *Faites vos jeux*, ECONOMIST, Dec. 4, 1999, at 63.

²⁰ *Let's Talk Turkeys*, BUSINESS WEEK, Dec. 11, 2000, at 44-45 (listing ten of the worst mergers from recent experience).

²¹ *Governing the Modern Corporation*, ECONOMIST, May 5, 2001, at 30.

²² See DAVID J. RAVENSCRAFT & F.M. SCHERER, *MERGERS, SELL-OFFS, AND ECONOMIC EFFICIENCY* 166 (1987).

²³ See, e.g., Michael E. Porter, *From Competitive Advantage to Corporate Strategy*, HARV. BUS. REV., May-June 1987, at 43. Porter's sample, showing sell-off rates of 53 to 62 percent, was narrower than ours.

²⁴ RAVENSCRAFT & SCHERER, *supra* note 22, at 193-94.

studies revealed that the acquiring organizations were unable to provide effective motivation and control of the acquired unit's activities when adversities were encountered—as they almost always are, sooner or later, in business.²⁵

Conducting studies of how profitability changes after as compared to before a merger poses significant methodological difficulties. When a merger occurs, the asset values in the surviving company's books are usually revised as a direct consequence of the merger. Most commonly, under what we call “purchase accounting” in the United States, the acquired company's assets are “written up” to reflect any premium paid by the acquirer over the pre-merger accounting value of those assets.²⁶ This can occur because of the premium over pre-merger stock prices needed to persuade shareholders to surrender their shares, or because the aggregate financial market value of the acquired company is greater than the accounting value (especially likely in times of high Tobin's “q” values), or both. The increases in physical asset values or “good will” written into the surviving enterprise's books may (or may not) be depreciated annually in the post-merger period. When a premium over book value is paid, the perceived post-merger profitability of the company is reduced in two ways: asset or stockholders' equity values are increased by the writeups, reducing calculated returns on any measure of invested capital; and profits themselves may be reduced due to the depreciation of written-up asset values. I know of only two pre-1990 studies that have tried to compensate for these adjustments so that comparably measured pre- and post-merger values are analyzed—mine with David Ravenscraft, and one by Geoffrey Meeks.²⁷ Both found that appropriately adjusted profits of the merged enterprises tended on average to decline, not increase, relative to pre-merger values, although Ravenscraft and I identified some exceptions to this conclusion. Among others, mergers of equals—i.e., firms differing in size by no more than a factor of two—experienced modest profit gains on average after their merger.²⁸ Reviewing our regression analysis results after fourteen years of neglect, I find one of the most striking features to be the huge amount of profit variation not systematically associated with merger effects—a point to which I turn in a moment.

In a new survey article, three Harvard Business School faculty members report two more recent studies suggesting positive financial

²⁵ *Id.* at 135-39, 152-56.

²⁶ New accounting rules effective July 1, 2001, will require all mergers to be treated using the purchase method.

²⁷ GEOFFREY MEEKS, DISAPPOINTING MARRIAGE: A STUDY OF THE GAINS FROM MERGER (1977); RAVENSCRAFT & SCHERER, *supra* note 22, at 75-122.

²⁸ RAVENSCRAFT & SCHERER, *supra* note 22, at 194.

performance changes following mergers.²⁹ Both studies emphasize mergers made in the post-conglomerate era, for which the plausibility of financial performance gains through merger is greater than for conglomerate mergers. In the earlier of the two contributions,³⁰ there are serious methodological problems. The authors take as their index of post-merger performance cash flow, which was also used by Ravenscraft and myself. However, they deflate it by a market-based asset variable which, if acquiring company stock values fall relative to the general market in the years following merger, can imply cash flow / asset performance indicator *gains* relative to the market even when cash flows are deteriorating relative to those of peer companies (as the Healy et al. article shows to have happened).³¹ Their controls for peer industry performance are extremely crude, e.g., “household products” for a jewelry producer, “recreation” for a motion picture producer, and “building” for a firm manufacturing beds and other furniture.³² Their sample was the fifty largest U.S. mergers consummated between 1979 and 1984.³³ Target firm assets were on average forty-two percent of acquirer assets, which makes their sample approximate the “mergers of equals” subset found by Ravenscraft and me to have the most favorable post-merger performance.

In their survey article, Andrade et al. discuss briefly their own statistical analysis of some 2,000 U.S. mergers made between 1973 and 1998.³⁴ Their performance measure is cash flow divided by sales, which is the same as a measure used by Ravenscraft and me and which is much more defensible than the index used by Healy et al. The derivation of their industry controls is not described in sufficient detail to know whether the problems in the Healy et al. approach are avoided. The gain in average post- vs. pre-merger cash flow performance indices amounted to between 0.23 and 0.35 percentage points relative to an unreported base,³⁵ which was ten percent in the comparable analysis by Ravenscraft and me. The reported statistical significance test is only against the null hypothesis of no differences between the merger sample and the peer industry control group, not of pre- vs. post-merger changes. From a regression analysis, the authors report a mean post-merger

²⁹ Gregor Andrade et al., *New Evidence and Perspectives on Mergers*, J. ECON. PERSP., Spring 2001, at 103, 112 (concluding that mergers generate value on behalf of the shareholders of the combined firms).

³⁰ Paul M. Healy et al., *Does Corporate Performance Improve After Mergers?* 31 J. FIN. ECON. 135, 135 (1992) (concluding that merged firms show “significant improvements in asset productivity relative to their industries”).

³¹ *Id.* at 139.

³² *Id.* at 165-74.

³³ *Id.* at 135.

³⁴ Andrade et al., *supra* note 29, at 115-16.

³⁵ *Id.* at 116.

performance gain of 1.07 percentage points,³⁶ but fail to note that a second coefficient from the same regression implies significant mean reversion. It is possible that a more detailed report on the authors' research will resolve these apparent shortcomings, but for the moment, a verdict of "not proven" must be handed down.

VIII. THE DISTRIBUTION OF MERGER OUTCOMES

A different but useful perspective is provided from research nearly seven decades ago by Shaw Livermore.³⁷ Livermore painstakingly tracked the large number of companies resulting from the first great United States merger wave, which occurred between 1888 and 1905. Among his "primary" group, covering enterprises formed in efforts to dominate some industry, he counted in total 156 resultant companies. Of these, 40.4 percent were found to be "failures," most of which were drawn into bankruptcy or were otherwise dissolved or broken up.³⁸ Another 10.9 percent were classified as "limping;" that is, they continued to exist, but did not amount to much as of 1923.³⁹ (Several of the "limping" group still exist.) The remaining 48.7 percent were viewed as successes—6.4 percent of the total being outstanding successes. The outstanding successes as of 1923 were as follows:

American Can (d. 1986)
American Tobacco (d. 1988)
Corn Products Refining (now Best Foods)
DuPont
Eastman Kodak
General Electric
National Biscuit (Nabisco) (d. 1985)
Otis Elevator (d. 1974)
Quaker Oats (d. 2001)
United Fruit (now Chiquita Brands)⁴⁰

Five of the ten survived as independent enterprises in 2001; the most successful of the five was General Electric. The dates at which the others lost their independence, in all cases through mergers, are shown in parentheses, preceded by a "d."

³⁶ *Id.*

³⁷ Shaw Livermore, *The Success of Industrial Mergers*, 50 Q.J. ECON. 68 (1935).

³⁸ *Id.* at 75.

³⁹ *Id.*

⁴⁰ *Id.* at 93-94.

In a paper written during the 1980s, I referred to the Livermore study and emphasized the high fraction of failures among consolidations that were pursued with the avowed intention of dominating their industries. Mr. Livermore wrote me a note thanking me for resurrecting his work, but commenting that I had missed his main point: that so many of the mergers were successes. For the years 1919 through 1932, forty-nine “successful” mergers earned an average return on their capital value of 9.07 percent, compared to 8.43 percent for a wider benchmark sample of U.S. manufacturing corporations. (The difference was not statistically significant at customary confidence levels, with $t = 0.49$.) The companies emerging from successful mergers did not perform spectacularly well on average, but they did by and large achieve a substantial modicum of industrial and financial success. And that, said Livermore, was the important point I had neglected.

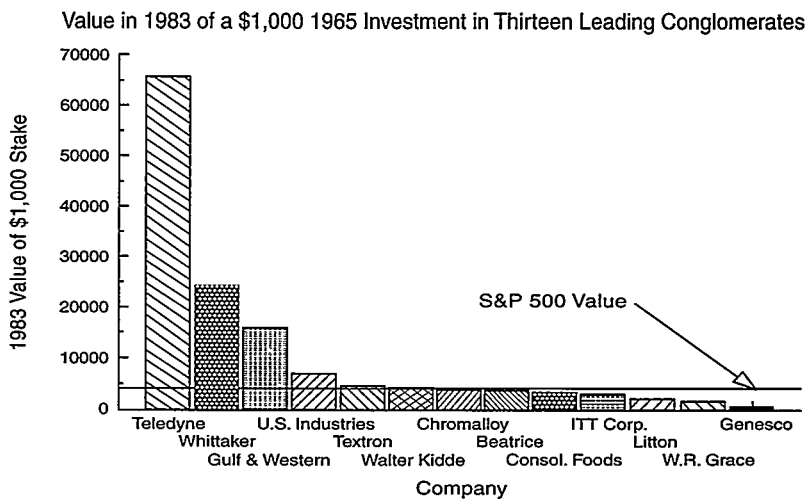
For conglomerate mergers of the 1960s and 1970s, Ravenscraft and I carried out a related analysis.⁴¹ We focused on thirteen companies that had made at least ninety-nine acquisitions between 1950 and 1978, most of which were of a conglomerate character, and among which at least 20 were in the manufacturing sector.⁴² These were success cases, at least in the sense that the stock market and company boards of directors permitted managers to persist in their merger-intensive strategies. We performed a hypothetical experiment, investing in each of the thirteen companies \$1,000 as of June 1965, before the conglomerate merger boom entered its phase of rapid growth. We then calculated, reinvesting any dividends as they were paid out, how much the stock market value of our investments would be as of June 1983, by which time conglomerate merger-making had fallen into disfavor. We also determined the value of the same \$1,000 investment in the Standard & Poors index of 500 widely-traded stocks. Our \$1,000 investment in the S&P portfolio would have been worth \$4,106 in 1983. The results are summarized in Figure 1 on the following page.

Six of the thirteen “successful” conglomerates yielded 1983 values lower than this benchmark. But seven did better, and three —Teledyne, Whittaker, and Gulf & Western—did spectacularly better.⁴³ Largely on the strength of these few outstanding successes, the average value of our \$1,000 investments in 13 conglomerates would have been \$11,114 in 1983, or 2.7 times the value of similar investments in the S&P portfolio. Or if the extreme value for Teledyne is excluded, the average 1983 value from investing in conglomerates would have been \$6,585, or 1.6 times the S&P benchmark.

⁴¹ RAVENSCRAFT & SCHERER, *supra* note 22, at 38-45.

⁴² *Id.* at 38.

⁴³ *Id.* at 43.



What the combination of this evidence seems to reveal is that making mergers is a risky proposition. Many mergers, and perhaps the majority, fail to live up to expectations and may indeed make matters worse rather than better. Many muddle through. A fair number succeed, and a few succeed spectacularly. It is difficult to be certain where the average lies. It is a well-known property of highly skewed outcome distributions that the average outcome depends critically on how many spectacular successes one achieves and how extreme those successes are. With good luck, merger-making over-all is a positive-sum game, with bad luck, perhaps not.

This conclusion has probable implications for a theory of managerial merger motives. Making mergers is a form of gambling; skill matters, but there is an important chance component. Nevertheless, it is a quite different kind of gambling than what goes on at Las Vegas and Atlantic City. In those locales, one knows at the end of the evening how one has fared, and the house will insist that the losers pay their debts promptly—or see to it that their kneecaps are broken. But the returns from merger-making take many years to materialize. In the interim, managers are well paid for what they are doing, and they probably enjoy doing it. If they succeed after a sufficient number of years have elapsed to tally the score, they will be even more handsomely rewarded for the minority of big successes, whereas the failures will be penalized at worst by dismissal with generous severance pay. To this scholar who has never met a payroll, it seems an extremely attractive form of gambling.

IX. MERGER POLICY IMPLICATIONS

For public policy, the standard question is whether a merger creates undesirable monopoly power. This is an appropriate goal, however difficult it may be to implement. But efficiency questions cannot be avoided. Mergers that reduce efficiency are bad for the economy. For mergers that increase efficiency but also increase monopoly power, a well-known tradeoff must be faced.⁴⁴ One ought to be willing to accept some price-raising and allocative inefficiency due to monopolistic pricing if substantial resource savings will be achieved in the bargain. I do not believe that governmental agencies have, or could under any circumstances have, sufficient competence and information to screen *all* mergers and approve only those that have good prospects of enhancing efficiency, or at least not undermining efficiency. But when governmental bodies are entrusted with vetting potentially anticompetitive mergers and preventing the undesirable ones, I do not know how they can fail responsibly to consider the possibility that substantial efficiencies could result from a merger they are evaluating. After a long debate and various intermediate reversals, this is the approach the United States government eventually embraced when the two antitrust agencies published their revised Merger Guidelines in 1984.⁴⁵

One of the first merger cases litigated under the 1984 Guidelines concerned the acquisition of Clinton Corn Processing Division of Nabisco Brands (“Clinton”) by Archer-Daniels-Midland Company (“ADM”). As one who had advocated accepting efficiency defenses at the Federal Trade Commission (“FTC”) while I was chief economist during the mid-1970s, I responded enthusiastically when Owen Johnson, my former FTC colleague, approached me and asked me to mount a formal efficiencies defense in the ADM-Clinton case. The case was unusual in the sense that the merger had already been consummated when it was challenged, and because of technical disputes and procedural skirmishing, the lag from merger to ADM’s day in court was eight years. Among other things, the Department of Justice filed a motion in limine attempting to restrict severely the scope of our defense.⁴⁶ We won the battle; Judge Viator rejected the motion and allowed us to present a full-fledged defense. We also won the

⁴⁴ See Oliver Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18, 18-19 (1968) (arguing that a rational treatment of the merger question requires an effort “to establish the allocative implications of the scale economy and market power effects associated with the merger”).

⁴⁵ DEP’T OF JUSTICE, MERGER GUIDELINES (1984).

⁴⁶ For my reply to the motion, see my Affidavit on Efficiency Defenses in *United States v. Archer-Daniels-Midland Co.*, 781 F. Supp. 1400 (S.D. Iowa 1999), reprinted in F.M. SCHERER, COMPETITION POLICY, DOMESTIC AND INTERNATIONAL 259-69 (2000).

immediate war; the merger was allowed to go through.⁴⁷ But for me the victory was intellectually disappointing, since Judge Viator decided the case on other grounds and therefore found it unnecessary to create new precedents by considering in detail the efficiencies defense.

Six years later, the substantive thrust of the Department's 1987 motion in *limine* resurfaced as Holy Writ in the 1997 *Horizontal Merger Guidelines*.⁴⁸ Three main facets of those revised guidelines warrant discussion.

One states that the "only efficiencies considered are those likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects."⁴⁹ This, I believe, is a correct approach. In the ADM case, we presented evidence showing that ADM had lower costs than other corn wet millers and that its unique approach to plant operation made it likely to wring the largest possible efficiencies out of Clinton's operations.

In my later work for the government on the proposed merger between Lockheed/Martin and Northrop/Grumman, I applied the test and found that most of the product and research laboratory reassignments proposed as a means of reducing costs involved work transfers *within* one of the would-be merger partners, not *between* the partners. Given this, it was far from clear why the changes could not have been made without merger. It is possible that the approach taken by the two aerospace companies was an anomaly resulting from the special procurement regulations applying to defense industry mergers.⁵⁰ Under the applicable rules, the government will reimburse severance and other reorganization costs if they are incurred within the context of a merger. Thus, defense companies have perverse incentives to delay perceived cost-saving measures until they can be effected within the framework of a merger and hence receive compensation that would never be attainable outside the defense sphere (except in the sense that the Internal Revenue Service is a 34 percent partner in any profit-reducing activity). I nevertheless wonder whether such behavior may be more widespread. For most managers, cost-cutting is an unpleasant task, especially when it entails throwing workers into the ranks of the unemployed. It may be preferable to wait for a merger and justify the

⁴⁷ See *United States v. Archer-Daniels-Midland Co.*, 781 F. Supp. 1400, 1423 (S.D. Iowa 1991) (granting judgment for defendants, Archer-Daniels-Midland, and dismissing U.S. Clayton Act § 7 claim, as defendants presented adequate evidence of post-acquisition efficiencies).

⁴⁸ DEP'T OF JUSTICE & FED. TRADE COMM'N, 1992 HORIZONTAL MERGER GUIDELINES (rev. ed. 1997) [hereinafter 1992 MERGER GUIDELINES].

⁴⁹ *Id.* § 4.

⁵⁰ National Defense Authorization Act, Pub. L. 103-337, 108 Stat. 2821 (1994) (codified as a note to 10 U.S.C. § 2324).

layoffs as one of the inevitable consequences of post-merger restructuring. To the extent that this is true, scrupulously critical application of the “no defense for efficiencies that could be achieved anyway” criterion is warranted.

Second, the 1997 *Horizontal Merger Guidelines* state that cognizable efficiencies must be “sufficient to reverse the merger’s potential to harm consumers in any relevant market”⁵¹ In other words, the cost savings must be sufficient, in the framework of a model of how the merged company will set its prices after merger, to reverse any tendency toward price increases. This approach in effect says that the agencies reject the notion of a “tradeoff,” whose compelling rationale was articulated in a pioneering article by Oliver Williamson.⁵² I believe refusal to consider possible tradeoffs, however difficult they may be to make, sacrifices the benefits consumers derive from the efficient use of resources. In this I confess to being an unredeemed Chicagoan.

Third, the Guidelines state that certain proposed efficiencies “such as those relating to procurement, management, or capital cost are less likely to be merger-specific or may not be cognizable for other purposes.”⁵³ In the ADM–Clinton case we vigorously contested the rejection of such efficiencies, as proposed by the motion in limine. It is a fact of life that some managements are better at reducing costs than others. To ignore efficiencies that result from superior management is to close one’s eyes on an important component of reality. On capital cost savings, the Department of Justice wanted us to review each individual capital investment project and show how it contributed to the reduction of costs. Since there were hundreds of such proposals, considering each separately would have been a huge waste of the court’s valuable time. It was enough, we argued, to show that ADM made capital investments far in excess of those planned by Clinton’s previous owners and that those investments in the aggregate expanded output relative to earlier plans and led to substantial efficiency gains.

The ADM case was unusual, because the merger had already occurred and one could look backward and see that substantial cost savings had actually been realized and examine how they were achieved. For most mergers, the analysis is prospective, not retrospective. And although economic historians sometimes joke that prediction is difficult, especially with respect to the past, we all know

⁵¹ 1992 MERGER GUIDELINES, *supra* note 48, § 4.

⁵² See Williamson, *supra* note 44, at 18.

⁵³ 1992 MERGER GUIDELINES, *supra* note 48, § 4.

that predicting the future is much more difficult. There are at least three ways of dealing with the prediction problem.

First, if efficiency evaluations must be made before the merger is consummated, an extraordinary level of competence must be brought to bear to analyze the predictions, especially on the side of those who would dispute management's claims. There was a time when the antitrust agencies would have been incapable of marshalling such expertise. Thanks to the budgetary flexibility they enjoy through the merger filing fees required by amendments to the Hart-Scott-Rodino pre-merger notification act,⁵⁴ they can often retain expert talent as able as that of the merger-making respondents. To do the job right, however, they will have to seek new kinds of expertise—e.g., the kind possessed by high-priced management consulting firms. Wassily Leontief remarked in an economic theory lecture at Harvard in 1960 that an industrial organization economist is a person who has never been inside a factory. Even though the statement may have been an exaggeration then, it is less so now as young economists focus more and more on theory and less on the real world. If efficiency defenses are to be taken seriously, new talent will be needed. I might note that there is a kind of Heisenberg paradox here. If the antitrust agencies were to strengthen their merger prevention efforts greatly, there would probably be a reduction in the overall volume of merger activity, *ceteris paribus*, and hence a decrease in Hart-Scott-Rodino fees. That in turn would lessen the ability of the agencies to scrutinize efficiency claims expertly.

Second, for cases in which the would-be merger partners present a strong efficiencies defense, it might be desirable to allow the merger to go forward provisionally for a certain period, e.g., three years, after which a careful review would be conducted to determine whether the promised efficiencies were in fact achieved. To be sure, there are instances in which this would not work. If plants are to be closed or product lines scrambled, it might be difficult to undo the merger if the promised efficiencies fail to materialize. But when such major structural reorganizations occur, it is probable (not certain) that they will be accompanied by appreciable cost savings, and so the merged company should have less to fear from such post-hoc evaluations.

Finally, there will be many cases in which the evidence of both efficiency effects and anti-competitive effects is uncertain and inconclusive. In such cases, one needs presumptions as to the side on which the risks of error are less severe. At Harvard's John F. Kennedy

⁵⁴ Department of Commerce, Justice, and State Appropriations Act of 1995, Pub. L. No. 103-317, 108 Stat. 1724, 1739 (1994) (codified as a note to 15 U.S.C. § 18(a) (1994)) (amended Pub. L. 106-553, § 1(a)(2), 114 Stat. 2762 (2000)).

School of Government, we called such presumptions “tie-breaking” rules. Recognizing that many and perhaps most mergers fail to enhance efficiency, the proper tie-breaking rule would be to resolve the burden of doubt on the side of stopping questionable mergers. This appears to have been what the Court of Appeals did in preliminarily enjoining a proposed merger between the Heinz and Beech-Nut baby foods operations.⁵⁵ Finding that “the district court never explained why Heinz could not achieve the kind of efficiencies urged without merger,”⁵⁶ it ruled that the “public equities weigh in favor of injunctive relief.”⁵⁷ As I read the case facts, the court was appropriately skeptical.

⁵⁵ See *FTC v. H. J. Heinz Co.*, 246 F.3d 708 (D.C. Cir. 2001).

⁵⁶ *Id.* at 722.

⁵⁷ *Id.* at 727.

