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# MICROECONOMICS AND ANTITRUST IN MBA PROGRAMS: WHAT'S THOUGHT, WHAT'S TAUGHT

LAWRENCE J. WHITE\*

## I. INTRODUCTION

Economics has become an important instructional discipline in business schools during the past three decades or so, alongside its more traditional base in faculties of arts and sciences. In any consideration of the actual and potential mutual interaction of antitrust and the disciplines taught in business schools, the economics — specifically, the microeconomics — taught in business schools should be included. The interaction of antitrust and business school economics will be the focus of this paper.

In Section II we briefly review the long history of the involvement of economics (broadly considered) and economists with antitrust. In Section III we ask whether business school economists are appreciably different from their colleagues who have appointments in faculties of arts and sciences; we argue that, with respect to antitrust perspectives, the differences are not important. In Section IV we examine the microeconomics that is taught in business schools; again, we argue that the doctrinal differences between the microeconomics taught in business school MBA programs and in arts and sciences programs are negligible. However, there are differences, mostly in terms of applications, with the consequence that antitrust receives less attention in MBA programs than in arts and sciences programs; some reasons for these differences are discussed. Section V addresses the question of what usefully can and

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should be taught about antitrust in MBA programs. Section VI offers a brief conclusion.

## II. ECONOMICS AND ANTITRUST

Economics — especially microeconomics, and specifically the field of “industrial organization” — has had a long history of involvement with antitrust.<sup>1</sup> The U.S. Bureau of Corporations, which was established in 1903 within the Department of Commerce and Labor, provided research support for some of the early antitrust prosecutions brought by the U.S. Department of Justice (DOJ), including the *Standard Oil*<sup>2</sup> and *American Tobacco*<sup>3</sup> cases. An early, and possibly the first, use of an economist’s testimony in an antitrust case was in the DOJ’s prosecution of U.S. Steel, which was filed in October 1911 and finally decided by the Supreme Court in 1920.<sup>4</sup>

The Bureau of Corporations was superseded and absorbed by the Federal Trade Commission (FTC) when that agency was created in 1914. Within the FTC the Economic Department (which later became the Economic Division and then the Bureau of Economics) specifically inherited the Bureau of Corporation’s research and investigative role.

At the DOJ, responsibility for antitrust prosecutions was placed in a separate division, the Antitrust Division, in 1933. Within three

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1. The discussion in this section draws on THOMAS C. BLAISDELL, *THE FEDERAL TRADE COMMISSION: AN EXPERIMENT IN THE CONTROL OF BUSINESS* (1922); GERARD C. HENDERSON, *THE FEDERAL TRADE COMMISSION: A STUDY IN ADMINISTRATIVE LAW AND PROCEDURE* (1924); W.H.S. Stevens, *The Federal Trade Commission’s Contribution to Industrial and Economic Analysis: The Work of the Economic Division*, 8 G. WASH. L. REV. 545 (1940); F.M. Scherer, *Sunlight and Sunset at the Federal Trade Commission*, 42 ADMIN. L. REV. 461 (1990); MARC A. EISNER, *ANTITRUST AND THE TRIUMPH OF ECONOMICS: INSTITUTIONS, EXPERTISE, AND POLICY CHANGE* (1991); Lawrence J. White, *Introduction to the Morning Session*, 29 ANTITRUST. BULL. 1 (1984); Lawrence J. White, *Economic Analysis in Antitrust Litigation Support: The Federal Trade Commission’s 1986 Challenge to the Proposed Merger of Coca-Cola and Dr Pepper*, in *THE ROLE OF THE ACADEMIC ECONOMIST IN LITIGATION SUPPORT* 11 (1999).

2. *United States v. Standard Oil of N.J.*, 221 U.S. 1 (1911).

3. *United States v. Am. Tobacco Co.*, 221 U.S. 106 (1911).

4. *United States v. United States Steel Corp.*, 223 F. 55 (1915); *United States v. United States Steel Corp.*, 251 U.S. 417 (1920). That case was ultimately lost by the DOJ. The Supreme Court decision disparagingly cited the testimony of “an author and teacher of economics whose philosophical deductions had, perhaps, fortification from experience as Deputy Commissioner of Corporations and as an employee in the Bureau of Corporations.” 251 U.S. at 448.

years the Division hired its first staff economist. As late as the 1960s, however, economists at both enforcement agencies were generally “second class citizens” and outside the mainstream of decision-making and policy influence.<sup>5</sup> Since then, however, economists’ roles and positions within both agencies have generally risen.<sup>6</sup>

More generally, economics, at least since the 1930s, has had an increasingly influential role in shaping the paradigms that underlie much of public and private antitrust enforcement. The areas to which economists, within and outside of the agencies, have contributed include:

- Structure-behavior-performance paradigm (Sherman Secs. 1 & 2; Clayton Sec. 7)
- Merger Guidelines (Clayton Sec. 7)
- Intellectual Property Guidelines (Sherman Sec. 2)
- Tying (Sherman Sec. 2; Clayton Sec. 3)
- Predatory behavior (Sherman Sec. 2)
- Vertical restraints (Sherman Secs. 1 & 2; Clayton Sec. 3)
- Price discrimination (Clayton Sec. 2)
- Network economics (Sherman Sec. 2)
- Raising rivals’ costs (Sherman Sec. 2; Clayton Sec. 3)
- Treble damages remedy (Clayton Sec. 4).

It is surely no exaggeration to state that antitrust policy and enforcement today (and for the past four decades) would be considerably different if economists’ contributions had somehow been excluded.

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5. See MARK J. GREEN, *THE CLOSED ENTERPRISE SYSTEM* (1972); SUZANNE WEAVER, *DECISION TO PROSECUTE: ORGANIZATION AND PUBLIC POLICY IN THE ANTITRUST DIVISION* (1977); see also EISNER, *supra* note 1, at 119-83.

6. For documentation of some of that “revolution” in economists’ status and importance, see *THE ANTITRUST REVOLUTION* (John E. Kwoka, Jr. & Lawrence J. White eds., 1989); *THE ANTITRUST REVOLUTION: THE ROLE OF ECONOMICS* (John E. Kwoka, Jr., & Lawrence J. White eds., 2d ed. 1994); *THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY* (John E. Kwoka, Jr., & Lawrence J. White, 3d ed. 1999); EISNER, *supra* note 1, at 119-217.

### III. ECONOMICS AND ECONOMISTS AT BUSINESS SCHOOLS: WHAT'S THOUGHT?

The previous section discussed the substantial interaction that microeconomics has had with antitrust. We now ask, are business school economists somehow different from their arts and sciences economist colleagues with respect to their views of and involvement with antitrust?

As a broad generalization, the answer to this question surely is "no": Economists teaching in business schools are (mostly) just like their economist colleagues who teach in arts and sciences programs. Almost all economists who teach in business schools received their Ph.D. degrees from arts and sciences graduate programs,<sup>7</sup> so their training has been largely similar to that of their arts and sciences colleagues. Further, in some universities the *only* economics department in the university is located in that university's business school, and that department's faculty teaches both business students and arts and sciences students.

One broad distinction that is valid, however, is that economists who teach in business schools tend (with some exceptions) to be more focused on applied topics, including applied theory, empirical estimation, policy applications, and business applications — either because of initial inclinations or because of interests developed as a consequence of teaching business economics courses (to be discussed below).<sup>8</sup>

The contributors to the theoretical and empirical economics literature that has been relevant for antitrust have come both from arts and sciences programs and from business schools (and from economists in law school programs as well). One indication of this mix of sources is the academic programs from which economists who have moved directly from academia to leadership positions at the DOJ and FTC have been drawn. Over the past three decades economists from both business schools and arts and sciences pro-

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7. Some business schools offer Ph.D.s in economics, and some of their graduates have faculty positions in other business schools. By contrast, more business schools offer Ph.D.s in finance (as well as in other business disciplines), and more finance Ph.D.s can be found in faculty positions in other business schools.

8. It must be emphasized that these are broad generalizations. There are pure theory economists who have appointments in business schools, and there are many applications-oriented economists who can be found in arts and sciences programs.

grams have been appointed to agency leadership positions, as follows:

*Business Schools:* Michael Katz (DOJ); Carl Shapiro (DOJ); Lawrence White (DOJ); Bruce Owen (DOJ); David Scheffman (FTC); Jeremy Bulow (FTC); Dennis Yao (FTC).

*Arts and Sciences:* Joseph Farrell (DOJ); Timothy Bresnahan (DOJ); Richard Gilbert (DOJ); Janusz Ordover (DOJ); Robert Willig (DOJ); Frederick Warren-Boulton (DOJ); George Hay (DOJ); Wendy Gramm (FTC); James Miller (FTC); Robert Tollison (FTC); William Comanor (FTC); Darius Gaskins (FTC); H. Michael Mann (FTC).<sup>9</sup>

At its base, the core of microeconomics — the importance of incentives; the concept of equilibrium; strategic reasoning; the effects (positive and negative) of scale; the consequences of the presence or absence of market power (and understanding how it arises); spillover effects (positive and negative); and the consequences of the presence or absence of information — is fundamentally the same, regardless of whether someone teaches it in a business school or in an arts and sciences program. Though it is clear that this same core can become the basis for the advocacy of substantially different policy agendas, the program in which someone teaches is far from determinative of the policy position that he or she is likely to advocate in the antitrust economics arena. There are “liberal” and “conservative” economists in arts and sciences programs; there are “liberal” and “conservative” economists in business school programs.

#### IV. ECONOMICS AT BUSINESS SCHOOLS: WHAT’S TAUGHT?

Though there may not be much difference in the broad characterization of economists in business school and in arts and sciences programs, might there be differences in the way that microeconomics is taught in business schools, and might those differences have some implications for antitrust?

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9. Economists appointed to agency leadership positions from outside the agency who are not on this list include Daniel Rubinfeld (DOJ), from a law school; George Douglas (FTC), from a consulting firm; and F.M. Scherer (FTC), from a research institute.

To address these questions, I conducted an informal survey of the 33 leading business schools that are in the "Top 30".<sup>10</sup> The list of these business schools can be found in Table 1. With the help of a research assistant, I collected the MBA<sup>11</sup> course listings for these 33 schools, looking for courses with microeconomics content (or courses in related areas that might touch on antitrust issues).

I will first discuss what I did *not* find among the MBA course listings: *None* of the 33 MBA programs offered a course that was specifically focused on antitrust economics, and only a few offered courses on industrial organization and related policy issues (which would include antitrust and regulation). This sparse landscape stands in substantial contrast to the offerings of arts and sciences programs, which almost always have an industrial organization course offered for undergraduates and often have a separate antitrust and regulation economics course as well. If an arts and sciences economics department has a sizable graduate program, then its graduate course offerings are likely to also include an advanced industrial organization course and possibly a separate antitrust and regulation course. The business school dearth also stands in sharp contrast to the offerings of virtually any law school, where one or more antitrust courses would be the standard and an antitrust economics course would also often be offered.

Why are business schools lacking in antitrust and related courses? There are at least two reasons. First, MBA education tends to be focused on practical, on-the-job skills. Antitrust issues, and government policies generally, are not sufficiently "practical" to hold most MBAs' interest. Second, the presence of related arts and sciences course offerings provides an outlet and opportunity for the few MBA students who may be interested in such topics.

Next, what I did find among the MBA course listings were courses in almost all MBA programs that do touch briefly on aspects of antitrust policy. These courses fall into three fairly well defined

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10. I compiled the "Top 30" lists from the 2001 rankings by *Business Week* and by *U.S. News & World Report*. There was a high degree of overlap in the identity of business schools on the two lists, such that only 33 schools were required to encompass the two "Top 30" lists.

11. MBA courses were selected because the MBA programs are typically the "flagship" programs for business school and the areas where there would be fewest overlaps with students from arts and sciences programs.

categories: (1) mergers and acquisitions; (2) business law and regulation; and (3) microeconomics for MBAs (sometimes dubbed “managerial economics”). The first category is usually taught by finance economists or by M&A practitioners, and the antitrust aspects of mergers (i.e., Clayton Act Sec. 7 issues) often receive a brief mention. The second category is usually taught by lawyers, with a brief discussion of antitrust law mixed in among broad discussions of contract law, labor law, environmental law, business regulation, etc. It is the third category, almost always taught by economists, that concerns us here.

Judging from the course descriptions of these microeconomics courses, as well as from discussions with friends and colleagues who have taught such courses (and having taught such courses for over two decades at Stern), I readily conclude that the microeconomics that is taught in these courses is “plain vanilla”; i.e., there is no special ideological “slant” that is specific to business school microeconomics pedagogy. There are, however, some differences in the emphases that are present in these courses. As compared with microeconomics courses that are taught in arts and sciences programs, the MBA microeconomics courses tend to de-emphasize abstract theory and public policy and to emphasize applications, especially business applications, and business strategy. These relative emphases and de-emphases are, of course, consistent with the on-the-job practicality orientation of MBA programs discussed above.

As one example of a typical business program microeconomics course description, I offer the following description of “Microeconomic Analysis,” a course for MBAs at the Mendoza College of Business, University of Notre Dame, the host institution for the preliminary presentation of this paper:

Microeconomic Analysis studies the role of prices and markets in allocating scarce resources. Topics include the analysis of consumer preference and demand, production and cost, market structure, externalities, uncertainty and information and game theory. Although

the emphasis is on applications, the analysis is carefully built upon basic principles.<sup>12</sup>

Except, perhaps, for “the emphasis is on applications”, this course description could readily be used to describe a microeconomics course in an arts and sciences program.

When antitrust issues are addressed in these business school microeconomics courses, the orientation again tends to be “plain vanilla”, as can be ascertained from the antitrust discussions that are referenced in the textbooks that are typically used in such courses.<sup>13</sup> But, for the reasons discussed above, antitrust issues usually receive only passing attention in such courses. One quantitative measure is the number of pages in a course textbook that is devoted to an explicit discussion of antitrust, as indicated by references in the textbook’s index. For the texts just cited, the antitrust reference page counts (out of total pages in the text) are as follows:

- Perloff (1999): 2 (out of 832)
- Besanko et al. (2000): 4 (out of 644)
- Nicholson (2000): 4 (out of 605)
- Brickley et al. (2001): 9 (out of 616)
- Pindyck and Rubinfeld (2001): 15 (out of 700)
- Truett and Truett (2001): 8 (out of 759)
- Mansfield et al. (2002): 12 (out of 806)
- Png (2002): 1 (out of 569)
- Samuelson and Marks (2003): 9 (out of 890).

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12. Course FIN510 Microeconomic Analysis, Mendoza College of Business, University of Notre Dame, available at <http://www.nd.edu/~finance/working/MBAcourses/fin510.htm>.

13. See e.g., JEFFREY M. PERLOFF, MICROECONOMICS (1999); DAVID BESANKO, ECONOMICS OF STRATEGY (2d ed. 2000); WALTER NICHOLSON, INTERMEDIATE MICROECONOMICS AND ITS APPLICATION (8th ed. 2000); JAMES A. BRICKLEY ET AL., MANAGERIAL ECONOMICS AND ORGANIZATIONAL ARCHITECTURE (2d ed. 2001); ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS (5th ed. 2001); LILA J. TRUETT & DALE B. TRUETT, MANAGERIAL ECONOMICS: ANALYSIS, PROBLEMS, CASES (7th ed. 2001); EDWIN MANSFIELD ET AL., MANAGERIAL ECONOMICS: THEORY, APPLICATIONS, AND CASES (5th ed. 2002); IVAN PNG, MANAGERIAL ECONOMICS (2002); WILLIAM F. SAMUELSON & STEPHEN G. MARKS, MANAGERIAL ECONOMICS (4th ed. 2002). Some of these texts are also used in arts and sciences programs, which reinforces the point of the basic similarity of approach in business school and arts and sciences microeconomics courses.

For all nine texts, there were 64 pages with explicit references to antitrust issues, out of 6,421 total pages, or just less than 1% of the total.

Again, the core of microeconomics (including how microeconomics views antitrust) is fundamentally the same, regardless of whether it is taught in a business school or in a liberal arts program.

#### V. ANTITRUST ECONOMICS AT BUSINESS SCHOOLS: WHAT COULD BE TAUGHT?

Not much about antitrust is currently taught in business school MBA microeconomics courses. To reprise, the reason for this relative absence is the intense on-the-job practicality focus of much of MBA education.

I will assume that this practicality orientation is a given and is unlikely to change over the next few years. Within this orientation, what could and should be taught to MBAs about antitrust?

Let me start by emphasizing what should *not* be taught: the fine points of antitrust law. Some examples of these to-be-avoided fine points would be:

- When is tying illegal?
- What constitutes illegal predation?
- What market share would be illegal in a Sherman Sec. 2 monopolization case?
- When is price discrimination illegal?
- Under what circumstances would a merger in, say, the widget industry be challenged by the enforcement agencies?
- When is price signaling among oligopolists illegal?

Though these issues are intellectually fascinating to specialists and suitable topics for extended law review treatises, applied microeconomics modeling, and policy discussions, they are not appropriate for MBA education. Any extended discussion of these detailed issues would quickly cause many — probably most — MBAs' eyes to glaze and their minds to wander toward writing a letter to the Dean asking for a refund. Hardly any MBAs will need to know such fine legal/illegal distinctions for their jobs (and few would be

likely to remember them in any event).<sup>14</sup> And besides, how many practitioners could successfully offer concise and definitive answers to their clients with respect to these questions?

Instead of these fine points, there are some essentials of anti-trust that are appropriate for inclusion in a business curriculum. Even within an on-the-job practicality orientation, MBAs ought to be reminded that antitrust policy does exist and that there are solid social reasons for it. First, as part of the monopoly/competition comparison paradigm that is a central part of any microeconomics course, MBAs should be made aware of the social losses (dead-weight loss triangles) and income redistribution (transfer of consumers' surplus rectangles) that accompany the exercise of market power (unilaterally and by cartels) and why American society has chosen antitrust and public utility regulation to deal with these consequences. This need not be a lengthy discussion; but it is an important one for their on-the-job social consciousness.

Second, and providing more direct on-the-job value, MBAs should be taught that "smoke filled room" collusive price fixing and market allocation communications and agreements are per se *felony* offenses, and that violators have been and continue to be sentenced to jail terms (which is usually considered to be a negative for one's resume). Often there are price-fixing cases that rise to headline levels, which can be used to illustrate this important point.<sup>15</sup> Further, the MBAs ought to be counseled that even solicitations may be illegal and bring the risk of jail terms,<sup>16</sup> and that an immediate consultation with their company's general counsel is the wisest course of action if, say, a friend or counterpart at another company were to begin a discussion that might be interpreted as a solicitation.

Third, current prominent antitrust cases — the Sotheby's/Christie's auctions commissions-fixing conspiracy, the *Microsoft*<sup>17</sup> litigation, the *American Airlines*<sup>18</sup> predation case, the government and

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14. Also, the significant fraction of foreign students at many American business schools would find such details largely uninteresting.

15. During the 2001-2002 academic year, for example, the Sotheby's-Christie's commissions-fixing conspiracy and Mr. A. Alfred Taubman's trial, conviction, and jail sentence were prominent news items.

16. See, e.g., *United States v. Am. Airlines, Inc.*, 743 F.2d 1114 (5th Cir. 1984).

17. *United States v. Microsoft*, 84 F. Supp. 2d 9 (D.C. Cir. 1999), *withdrawn by*, 87 F. Supp. 2d 30 (2000), *cited by* *United States v. Microsoft*, 253 F.3d 34 (D.C. Cir. 2001).

18. *United States v. AMR Corp.*, 140 F. Supp. 2d 1141 (C.D. Kan. 2001).

private Visa and MasterCard cases,<sup>19</sup> and the GE-Honeywell merger are good recent examples — can be the basis for brief discussions of the broad structure of U.S. antitrust law (e.g., that both government suits and private treble damages suits are possible under the Sherman Act; that pure size is not an antitrust violation; that the U.S. *and* other national jurisdictions can each have antitrust authority over mergers of firms with international operations, etc.) and for showing the continuing general relevance of antitrust for the American business environment. They can also serve as a platform for discussions that illustrate the basic logic of such cases and thus for indicating that government prosecutions of antitrust cases — though often controversial, with reasonable people disagreeing on the merits — are carefully considered actions and *not* the ill-considered decision of “bureaucratic bozos” or “political hacks.” With luck, the MBAs will carry these positive impressions and memories with them into the business world, thereby retaining and encouraging a generally greater respect for antitrust and its enforcement.<sup>20</sup>

## VI. CONCLUSION

Antitrust and microeconomics have a long and honorable history of mutual involvement. The prominence of economics in business schools is a more recent phenomenon, but business school economists nowadays play an active role in antitrust economics theory, research, policy, and enforcement, alongside their colleagues from arts and sciences programs.

This paper has argued that there are few distinguishing characteristics that separate business school economics or economists from their counterparts in liberal arts programs, except for a somewhat more applied focus in business programs, especially with respect to the MBA economics courses that are taught. As for specific antitrust economics courses, they are rarely to be found in business schools; but, as was argued earlier, this is primarily an issue of the absence of demand rather than of a willingness to supply. A num-

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19. See, e.g., *United States v. Visa U.S.A. Inc.* 163 F. Supp. 2d 322 (S.D.N.Y. 2001); *Wal-Mart Stores, Inc., v. Visa U.S.A. Inc.*, 280 F.3d 124 (2d Cir. 2001)

20. And, of course, if some MBAs begin to show greater interest in learning more about antitrust, they can be steered toward courses in the law school or in arts and sciences; or, with sufficient mass, a separate MBA course might be organized (or cross-listed with law or arts and sciences).

ber of MBA courses do touch briefly on antitrust issues; but antitrust is unlikely to become a major topic of study in business schools because of the strong on-the-job practicality focus of MBA education.

Nevertheless, there is a place — albeit limited — that the discussion of antitrust can and should properly have in the MBA curriculum, which would enhance MBAs' knowledge of antitrust in a way that would be useful to them and to society. Microeconomics courses in MBA programs are a natural place for such antitrust discussions. I urge my business school microeconomics colleagues to engage their MBAs in antitrust discussions along the lines that I have suggested above.

TABLE 1: BUSINESS SCHOOLS SURVEYED

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University of Arizona (Eller)
University of California, Berkeley (Haas)
University of California, Los Angeles (Anderson)
Carnegie Mellon University (GSIA)
University of Chicago (GSB)
Columbia University
Cornell University (Johnson)
Dartmouth College (Tuck)
Duke University (Fuqua)
Emory University (Goizeta)
Georgetown University (McDonough)
Georgia Institute of Technology (DuPree)
Harvard University (HBS)
Indiana University, Bloomington (Kelley)
University of Maryland (Smith)
Massachusetts Institute of Technology (Sloan)
University of Michigan, Ann Arbor
Michigan State University (Broad)
University of Minnesota, Twin Cities (Carlson)
New York University (Stern)
University of North Carolina (Kenan-Flagler)
Northwestern University (Kellogg)
Ohio State University (Fisher)
University of Pennsylvania (Wharton)
Purdue University, West Lafayette (Krannert)
University of Rochester (Simon)
University of Southern California (Marshall)
Stanford University (GSB)
University of Texas (McCombs)
Vanderbilt University (Owen)
University of Virginia (Darden)
Washington University, St. Louis (Olin)
Yale University (SOM)

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