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MONOPOLY, THE EMERGENCE OF OLIGOPOLY AND THE CASE OF SUGAR REFINING: A REPLY

ALFRED S. EICHNER
State University of New York at Purchase

In an extended review[1] of my monograph on the sugar refining industry,[2] Richard Zerbe has acknowledged the "richness of detail" and the "careful cultivation of sources" which characterizes that work,[3] yet has rejected with scorn the explanation of the emergence of oligopoly during the first two decades of the 20th century which the monograph offers. At issue here, I would like to suggest, is not simply a question of historical interpretation. It is rather a matter that touches on the validity of much of contemporary economics.

Zerbe has correctly stated the monograph's major thesis which he wishes to dispute—the inevitable decline of competition under modern conditions of production. To refute the proposition I have advanced, at least with respect to the sugar refining industry, two separate lines of argument are possible. One is to assert that competition has, in fact, not declined in sugar refining. As a sally in this direction, Zerbe notes that "there are now at least 90 plants owned by no less than 27 firms. . . ."[4] This is a curious piece of evidence to offer. As anyone familiar with the literature should be aware, it is largely

[1] Richard O. Zerbe, Monopoly, the Emergence of Oligopoly and the Case of Sugar Refining, 13 J. Law & Econ. 501 (1970).

[2] Alfred S. Eichner, The Emergence of Oligopoly: Sugar Refining as a Case Study (1969).

[3] Zerbe attributes only one factual error to me, involving the question of the par value of the American Beet Sugar Company's stock. Zerbe, *supra* note 1, at 513. It should be noted that he relies entirely on the Hardwick Committee's hearings for his information (Hearings held before the Spec. Comm. on the Investigation of the American Sugar Refining Company and Others, 62nd Cong., 2d Sess. (1911)), a source which, based on the far more extensive unpublished testimony taken in the 1911 antitrust suit against the American Sugar Refining Company (United States v. American Sugar Refining Co. *et al.*: Testimony Before William B. Brice, Spec. Examiner, a typewritten copy of which is located at the National Archives under District Court for the Southern District of New York, File Equity 7-8), I found not to be always reliable. Indeed, on this particular point, I cite the testimony in the antitrust suit (Eichner, *supra* note 2, at 247), while Zerbe cites the Hardwick Committee hearings.

[4] Zerbe, *supra* note 1, at 505.

irrelevant. What is needed to assess the degree of competition in sugar refining today, if that is the purpose, is not simply the number of firms, together with the number of plants they operate, but rather, a correctly computed concentration ratio showing the percentage of the relevant geographical and product market accounted for by the leading firms. Indeed, Kaysen-Turner and Shepherd, who have relied on precisely that type of evidence in their respective studies of concentration in the American economy, have both found sugar refining to be still oligopolistic.[5] Since Zerbe's own earlier article on the industry[6] agreed that sugar refining had become monopolistic in 1887, it is hardly surprising that he does not rest his case on this first line of argument.

The second line of argument is to assert that the sugar refining industry was not really competitive before 1887, the year the sugar trust was organized. Again, Zerbe makes a feint in this direction, suggesting that with a new refinery costing between $500,000 and $700,000 or, as he pointedly notes, "in present, wholesale, dollars between $16 and $22 million,"[7] I may have been wrong to describe the barriers to entry as low. Admittedly, this is a point on which reasonable men may differ. As Zerbe himself indicates, it depends to a large extent on how smoothly the capital funds market then functioned. Fortunately, in this case, one need not simply speculate on what factors, such as capital requirements, may have impeded the entry of new firms into sugar refining before 1887. For the fact is that entry did occur—frequently. As the monograph reveals, in the period before 1887, "an average of from three to four new firms started business each year."[8] Zerbe is certainly aware of this fact, since he cities it in a later connection.[9] Why does he ignore it at this point? Indeed, it was simply to explain why firms had so little difficulty in entering the industry before 1887 that the figure on capital costs, along with other characteristics of sugar refining, was presented. This relative ease of entry, together with the large number of firms which then comprised the industry and the relative small share of the market which each firm supplied, clearly establishes, it seems to me, the proposition that sugar refining before 1887 was competitively structured. And for the most part, as the monograph records, it behaved competitively. Aside from questioning

[5] Carl Kaysen & Donald Turner, Antitrust Policy, An Economic and Legal Analysis, methodological app. table 2, at 318 (1959); William G. Shepherd, Market Power and Economic Welfare, app. 9, at 268 and app. 11, at 272 (1970). Shepherd, for example, based his judgment on an estimated four-firm concentration ratio for 1963 of 63%.

[6] Richard Zerbe, The American Sugar Refinery Company 1887-1914: The Story of a Monopoly, 12 J. Law & Econ. 339 (1969).

[7] Richard O. Zerbe, *supra* note 1, at 505.

[8] Alfred S. Eichner, *supra* note 2, at 44.

[9] Richard O. Zerbe, *supra* note 1, at 508.

whether the capital requirements were indeed low, Zerbe offers no refutation of that point.

Zerbe's objection to the monograph's major thesis must, then, relate to the suggestion that the decline of competition in sugar refining was "inevitable", that price competition within the industry was "inherently" unworkable. Of course, one cannot be sure, since here as throughout the review Zerbe's overall line of argument is not made explicit. He merely describes as "incorrect" my view that it was the growth of technology and the higher capital-output ratio which this led to that made price competition unviable. "Businesses with high fixed costs relative to average variable costs," he writes,[10] "will, to be sure, tend to remain in business at prices between average variable and average costs longer than other firms. . . ." And he goes on to add, ". . . but this has nothing to do with a destructive inability to adjust supply to demand nor does it say anything about the viability or desirability of competition. Costs fixed to businesses are fixed to society, and it is desirable that they be ignored in the production process."

What Zerbe does not realize is that he is here simply expressing a normative judgment. "I think it more advantageous to society," he in effect is saying, "if prices are allowed to fall below average total costs whenever the supply temporarily exceeds the demand, for resources will then be better allocated in the short run." It is a normative judgment because it expresses how, in Zerbe's opinion, an industry *ought* to behave. What this static perspective ignores is the effect that a price below average total costs is likely to have on the rate of growth and stability of investment. On these grounds the normative judgment itself can be questioned.[11] The more pertinent point, however, is that Zerbe's view of how an industry ought to behave does not necessarily explain what led businessmen, including those in sugar refining, to act as they did from 1887 on.

In truth, Zerbe has already conceded the essential point by acknowledging that firms with a high capital-output ratio "will, to be sure, tend to remain in business at prices between average variable and average [total] costs longer than other firms. . . ." For while they so remain in business, they must perforce be operating at an economic loss, failing to earn a satisfactory return on their investment and, if prices are sufficiently depressed, failing even to recover the principal sums invested in their businesses. Zerbe may applaud this situation, seeing it as part of the process by which the supply is eventually adjusted to the demand, but it should occasion no surprise that businessmen themselves might react differently. As far as they were con-

[10] *Id.* at 507.

[11] See *infra* note 19.

cerned, price competition simply led to the expropriation of their capital, with an attendant loss of social position. As the monograph points out:

> Realizing that technologically advanced methods of production and perfect competition were incompatible, businessmen were quite willing to discard the latter. Although not revolutionaries by nature, they were—at least some of them—prepared to overthrow the existing structure of markets when they could see no other alternative to their own eventual extinction. . . . In this sense they could see the truth of the Marxist prophecy, even though they were not prepared to accept Marx's ultimate conclusion.[12]

What Zerbe really means to say when he denies that competition was inherently unworkable is that it was not inherently unworkable on economic grounds alone. Supply could, if every businessman followed the rules, eventually be adjusted to the demand. But this implicit conceptualization simply perpetuates the myth of conventional economic theory that the owner-entrepreneur (conventional economic theory has not yet recognized the existence of the large bureaucratic corporation) is some sort of computerized automation registering signals from the market place and responding in a pre-programmed manner. It overlooks the fact that the businessmen of the late 19th century, certainly those in sugar refining, had flesh and guts—and were not above changing the rules of the game when they thought that the rules worked to their own personal destruction. More seriously, it makes the error of translating the theoretical principle that non-economic factors can be held constant into the historical proposition that non-economic factors do not count. Competition was unviable under late 19th century conditions precisely because its workings were unacceptable to those in a position to do something about it. What they did, at least in sugar refining, was to create the type of industry structure, first monopolistic and then oligopolistic, which served to keep price competition within manageable bounds—if not to eliminate it entirely.

The question of whether competition was viable under late 19th century conditions is an important one and deserves to be dealt with forthrightly. That is the reason I have responded to Zerbe's criticisms on their merits—to the extent his criticisms bear on that theme. But what in many ways is even more interesting is the nature of the article itself—especially its tone and its line of reasoning. To understand this aspect, I suspect, requires a broader context.

The fact is that the monograph's major thesis represents an attack upon one of the key articles of faith by which economists, at least in some quarters, are judged. It is the belief in the efficacy of the competitive model and the relevance of that model to the contemporary world. If the monograph is correct in arguing that the competitive model became more unviable the more closely it was approximated in the late 19th century, two separate yet equally disturbing implications must be faced up to. The first is that a significant portion of the American economy, particularly within the critical manufacturing sector, can no longer be described in terms of a competitive model.[13] Zerbe's insinuation that the sugar refining industry is today competitive—except for government intervention[14]—is a reflection of how difficult some economists find it to face up to that truth. They find it difficult for two reasons, one related to their own discipline and the other related to public policy.

To an extent not usually perceived by outsiders, many of the conclusions which economists reach and many of the implicit judgments incorporated into their empirical research are based on the assumption of perfect competition within product markets. Economists see themselves as having little choice, there being no other general model they can fall back on, certainly no other model which is consistent with the mathematical and statistical techniques that afford the profession such prestige in the eyes of other social scientists.[15] Indeed, if economists were not permitted to make that assumption, they would be able to teach the neophyte very little about pricing phenomena. This is the reason why beginning students with a sense of the real world are frequently "turned off" by economics when they come up against the inevitable price theory course. In other words, recognition that competitive conditions are not generally approximated except in certain back-

[12] Alfred S. Eichner, *supra* note 2, at 101-02.

[13] See the sources cited *supra* note 5. These sources belie Zerbe's claim that "the bulk of the evidence indicates that the economy is substantially competitive", Zerbe, *supra* note 1, at 504. For a critique of the studies which Zerbe cites in support of his view, see Alfred S. Eichner, Business Concentration and Its Significance, in The Business of America, at 165 (Ivar Berg, ed. 1968). The point is that while the extent of concentration has not grown significantly since the end of The Corporate Revolution at the turn of the century, it nonetheless remains high, especially in manufacturing.

[14] Though earlier suggesting that sugar refining might today be competitive, Zerbe remarks, "Since the beginning of World War I, the most obvious way in which the sugar refining industry has failed to be competitive has been through the intervention of government . . .", Zerbe, *supra* note 1, at 505-06. I assume Zerbe is here referring to the present system of import quotas on raw sugar. The question, of course, is why the import quotas have been sought by the industry and granted by the government. And the answer is that control over prices is not always possible through private means alone.

[15] This has been the response of Paul Samuelson and Robert Solow to the criticisms along these same lines advanced by Joan Robinson, Nicholas Kaldor *et al.* For a discussion of the controversy between the two Cambridge Schools, see G. C. Harcourt, Some Cambridge Controversies in the Theory of Capital, 7 J. Econ. Lit. 369 (1969). While the controversy has centered more on the question of whether marginal productivity theory is applicable, the appropriateness of assuming perfect competition is closely related.

water areas of the economy—or in the case of certain "satellite" industries such as automobile parts—would seriously deplete the economist's kit of analytical tools.

It would also, in the case of economists with a 19th century laissez-faire orientation, pose an excruciating policy dilemma. The absence of price competition, if widely accepted as being the case, would mean that market forces could no longer be assumed to provide adequate social control over business behavior. Some form of increased government intervention might have to be tried. But if the thesis about the unworkability of the competitive model is correct,[16] it will not suffice simply to rely on antitrust policy and other measures to strengthen latent market forces. More direct forms of regulation will be required. It is this second implication of the monograph's major thesis which is the most disturbing of all. What better way, then, of dealing with both implications than to deny the thesis from which they derive?

Again, Zerbe gives himself away. He writes, ". . . the argument that businessmen agreed to consolidation in order to avoid ruinous competition has much in common with the explanation that consolidation was fostered by the desire for monopoly profits . . . [it] is true. But those who talk of ruinous competition are apt to draw, as does Eichner, the conclusion that competition in such circumstances is bad, whereas I see competition operating as expected and normal with the emergence of a monopoly representing an undesirable deviation."[17] The truth is that I do not use the phrase "ruinous competition" in the monograph—except in quotation marks to indicate that the expression is not mine. This is but one of several phrases and positions that Zerbe falsely attributes to me.[18] I speak instead of competition that leads to prices which fail to cover average total costs over the long run. Nor do I regard this type of competition as being "bad." I see it instead as leading inevitably to efforts by businessmen to create some alternative form of market structure. Whether this development is good or bad depends on the implicit theoretical model

[16] The monograph merely asserts that competition was unworkable under 19th century conditions. Since pronounced cyclical fluctuations in aggregate demand were an important part of those conditions, it could be argued that now, with the business cycle becoming increasingly controllable, competition may once again be workable. This view, however, even if correct, ignores the effect that competition is likely to have on the cyclical stability of investment, an effect pointed out earlier.

[17] Richard O. Zerbe, *supra* note 1, at 509. It should be noted that the quotation has been slightly turned around, though not, it is hoped, in any way that distorts Zerbe's views.

[18] I, for example, do not use the term "predatory price cutting," which Zerbe discourses on at some length (*id.* at 511-14), nor do I think my monograph has much to do with Harold Faulkner's interpretation of the post-Civil War period, whether that be the "traditional" view of the trust movement or not (*id.* at 502-03).

within which it is evaluated. Because Zerbe depends on the conventional competitive model, he sees the development as "undesirable." Since I have an alternative model, articulated more fully in a forthcoming work on oligopoly,[19] I see the issue as being more open-ended. But unlike Zerbe I have no vested interest in maintaining that competition is "normal" or "good". In my monograph I sought simply to explain why it disappeared, at least in one industry, at the turn of the century.

[19] The Megacorp and Oligopoly, Micro Foundations of Macro Dynamics, forthcoming.