

A THEORY OF THE DETERMINATION OF THE
MARK-UP UNDER OLIGOPOLY: A COMMENT

In a recent article in this JOURNAL,¹ A. S. Eichner rejects the Chamberlin-Robinson model of imperfect competition as irrelevant in explaining the current pricing behaviour of oligopolistic industries and attempts to supplant their paradigm with his own version of a cost-plus pricing model. It is the purpose of our comment to show that Eichner's methodology is based on a misinterpretation of the firm's behaviour and thus he cannot divorce himself or his model from the orthodox opportunity cost concept.

Eichner is not convincing in his initial assumption that firms in oligopolistic industries operate in the inelastic portion of their revenue functions. The only empirical evidence he cites² is from Houthakker and Taylor³ and Stone,⁴ and both of these studies were concerned with consumer behaviour regarding broad groups of commodities. One would expect these elasticities to be lower than for particular commodities produced by oligopolistic firms.

Even if Eichner's firm does operate on the short-run inelastic portion of its demand curve, his conclusions still are not warranted. He argues that his firm can raise its mark-up in the short-run and increase its revenue (which increase we refer to as G), but in the long-run, the "substitution effect" will cause the firm's revenue to fall below the current level⁵ (which decrease we denote as L). Eichner then treats the ratio $R = L/G$ as a discount rate.⁶ If the firm maximises profits and G and L are properly discounted, it will always operate at that point where G equals L , which is the only equilibrium position. Thus, if $G > L$, raising the mark-up will increase the present value of the firm's profits, and, if $G < L$, lowering the mark-up will increase this value.

This would suggest that for a profit maximising firm, R always equals 1, which makes R ineffectual as a discount rate. In terms of Eichner's graphical analysis, this implies that the diagram in part *c*, p. 1194, would always be

¹ Alfred S. Eichner, "A Theory of the Determination of the Mark-up Under Oligopoly," *Economic Journal*, December 1973.

² *Ibid.* p. 1189.

³ H. S. Houthakker and L. D. Taylor, *Consumer Demand in the United States, 1929-1970, Analysis and Projections*, Harvard University Press, 1966.

⁴ R. Stone, *The Measurement of Consumers' Expenditure and Behaviour in the United Kingdom, 1920-1938*, Cambridge University Press, 1954.

⁵ Thus, the firm operates on the elastic portion of the long-run demand curve (Eichner, pp. 1190-1); but, operating on the inelastic portion of the short-run demand curve and the elastic portion of the long-run curve is not inconsistent with profit maximisation. See F. M. Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally and Company, 1970, chapter 8.

⁶ There are some logical problems with this definition, since G and L are discounted at an interest rate equal to the marginal efficiency of capital (as is explained in Eichner's forthcoming book), which itself depends on G , the amount invested.

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It must first be noted and Rubin. It is instead ment funds internally fi into the equivalent of ar —equal to the present (obtained from the high likelihood of new firms: Hazledine in an earlier reduce the rate of cash refer to this denominator tor—this being the av beginning at the point turn negative, with a d denominator. DeLorm to the firm). Finally, th That is, in DeLorme al to one another, as DeL maximising firm" (th the growth of cash fl imply an implicit in hardly an attractive

relevant. In this case, the cost of internal financing would be the opportunity cost, i , which is the market rate of interest. Yet Eichner has specifically denied this orthodox concept because of a lack of clear economic discernment of the behaviour of the firm.

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A THEORY OF THE DETERMINATION OF THE MARK-UP UNDER OLIGOPOLY: A FURTHER REPLY

DELORME and Rubin raise two points, both based on misreadings of the original article. Their main point is that since "for a profit maximising firm, R always equals 1", it follows that R is "ineffectual as a discount rate". This means that the cost of internal financing is determined instead by the market rate of interest, i . DeLorme and Rubin's conclusion does not hold because the premise upon which it is based—that "for a profit maximising firm, R always equals 1"—can be shown to be a false one.

It must first be noted that R is not a discount rate as stated by DeLorme and Rubin. It is instead the cost to the firm of obtaining additional investment funds internally from a higher mark-up, with that cost transformed into the equivalent of an interest rate. This means that R has a denominator—equal to the present discounted value of all additional investment funds obtained from the higher mark-up before the substitution effect and the likelihood of new firms entering the industry (DeLorme and Rubin, like Hazledine in an earlier comment,¹ ignore this second constraint) promise to reduce the rate of cash flow below the initial level. DeLorme and Rubin refer to this denominator as G (for "gain" to the firm). R also has a numerator—this being the average decline in cash flow into the indefinite future beginning at the point where the net effect of the higher mark-up is likely to turn negative, with a discount factor applied to align it, temporally, with the denominator. DeLorme and Rubin refer to this numerator as L (for "loss" to the firm). Finally, the numerator of R is some fraction of the denominator. That is, in DeLorme and Rubin's notation, $L < G$. Were L and G to be equal to one another, as DeLorme and Rubin argue must be the case for a "profit-maximising firm" (the original article is based on a firm which maximises the growth of cash flow over time, a somewhat different model), it would imply an implicit interest rate on internally generated funds of 100%—hardly an attractive alternative when external funds are available, even

¹ Hazledine (1974).

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during tight money periods, at considerably less, and no marginal investment prospect is likely to offer anywhere near that rate of return. Clearly, a change in the mark-up to bring L and G in line with one another lies beyond the relevant range of any likely action by a firm, whether it be a profit-maximiser or a growth-maximiser. The optimal change in mark-up will fall far short of that mark.

The second, lesser point raised by DeLorme and Rubin is whether firms in oligopolistic industries are likely to be operating on the inelastic portion of their revenue functions. Here a careful reading of the original article, p. 1189, fn. 2, will indicate why, with price leadership assumed, the elasticity of the individual firm's revenue function will necessarily be equal to the elasticity of industry demand. As for not citing other empirical evidence, perhaps DeLorme and Rubin know of studies showing demand in oligopolistic industries to be elastic in the short run. I have not run across any.

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REFERENCES

- Eichner, A.S. (1973). "A Theory of the Determination of the Mark-up under Oligopoly," *ECONOMIC JOURNAL*, December, pp. 1184-1200.
 — (forthcoming). *The Megacorp and Oligopoly: Micro Foundations of Macro Dynamics*, Cambridge University Press.
 Hazledine, T. (1974). "Determination of the Mark-up under Oligopoly: A Comment," *ECONOMIC JOURNAL*, December, pp. 967-70.

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