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Profitability of Monopolization by Vertical Integration

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It is generally accepted by economists concerned with merger policy that a monopolist does not have a profit incentive for integrating forward into a competitive industry unless there are cost savings to be gained.¹

A representative statement of this proposition is as follows. A monopolist of input A , where input B and final product X are produced under purely competitive conditions, has no economic incentive to integrate forward into industry X (in the absence of cost savings of the type described above). The monopolist of A has the ability to extract all the potential profit from industry X by its choice of the price of input A . However, because the underlying theoretical model assumes fixed-proportions production in industry X , an important source of increased profit has been overlooked.

Assume that variable-proportions production exists in industry X . Now, the monopolist, by monopolistic pricing, imposes a deadweight loss on industry X by inducing a distortion in factor utilization. In principle, industry X could always benefit by paying the monopolist a lump sum equal to his profit on the condition that it be allowed to buy at marginal cost. Industry X could then use the inputs efficiently and thereby increase its profit. Hence, the vertical merger permits the integrated firm to achieve efficiency in factor utilization *and* capture the additional profit.

The point is shown graphically in figure 1. Suppose that in premerger equilibrium the competitive industry produces output X^* . For simplicity, we represent the entire industry by isoquant X^* .

The ratio of the monopoly price of A to the price of B is given by the slope of PP^* . The ratio of the marginal cost of A to the price of B is given by MM^* (NN^* is parallel to MM^*). Measuring in units of B , the monop-

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¹ This proposition is proved in Needham (1969) and Singer (1968), and its policy implications are discussed by Bork and Mueller in Weston and Peltzman (1969). Typical examples of the type of cost savings referred to are the elimination of sales promotion expenditures, inventory reduction, and reduced reheating in the successive stages of the steelmaking process.

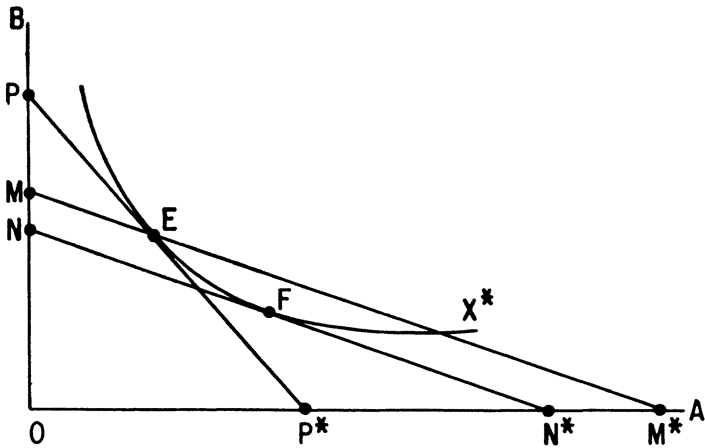


FIG. 1

olist's premerger profit is PM . After merging and shifting production from point E to point F , the integrated firm could increase its profit by at least MN .² Clearly, the increment MN would not exist if the isoquant were of the fixed-proportions type.

References

- Needham, Douglas. *Economic Analysis and Industrial Structure*. New York: Holt, Rinehart & Winston, 1969.
- Singer, Eugene M. *Antitrust Economics*. Englewood Cliffs, N.J.: Prentice-Hall, 1968.
- Weston, J. Fred, and Peltzman, Sam, eds. *Public Policy toward Mergers*. Pacific Palisades, Calif.: Goodyear, 1969.

² Increment MN is the minimum increment to profit because we have assumed that the output X^* is unchanged after the merger. The profit-maximizing postmerger output will probably differ from X^* , and therefore the increment to profit may be still larger.