ANTITRUST IN THE NOT-FOR-PROFIT SECTOR

Tomas J. Philipson and Richard A. Posner

This Presentation: Siavash Mohammadpour

INTRODUCTION

Conventional economic analysis of the not-for-profit (NFP) sector sharply distinguishes between the for-profit (FP) and NFP forms.

The fact that NFP firms cannot distribute profits to their "owners" has persuaded some judges and scholars that such firms are not as interested in exploiting market power as FP firms are.

Others have questioned that analysis, concluded that there are no differences in the behavior of FP and NFP firms great enough to justify a difference in antitrust treatment.

INTRODUCTION

There are three major categories of antitrust activity in the NFP sector:

- The first involves trade and professional associations and cooperatives accused of collusive or exclusionary conduct.
- The second class of cases involves educational institutions accused for example of colluding on financial aid to students or on the grant of rights to broadcast intercollegiate sports events.
- The third major class involves challenges to mergers between NFP hospitals.

In the second and third classes, defendants will often argue that their NFP status entitles them either to an outright exemption from antitrust scrutiny or to a different, more permissive standard of liability.

These arguments generally fail. Should they?

INTRODUCTION

We argue, developing implications of the theory of the nonprofit sector that the main efficiency rationale for applying antitrust law to FP firms is equally applicable to NFP firms

- it reduces or eliminates the deadweight loss associated with market power

Even when producers care about the welfare of consumers rather than just about their own profits

- and even though as a result the quantity and quality of output may be greater for an NFP firm than for an FP firm
- the effects of competition and the incentive to change that behavior through collusion, and the adverse social consequences that flow from that change, are similar for the two types of firms

RESTRAINT OF TRADE BY MONOPOLISTS THAT DO NOT MAXIMIZE PROFITS

For a given level of output y, let $\pi(y) \equiv p(y)y - c(y)$ denote profits $p(y)$ denotes the inverse demand function and $c(y)$ the total cost of production.

The nonprofit producer chooses his output subject to the constraint that his consumption and costs cannot exceed his income, m_0, that is unrelated to the firm, and the revenues generated by the firm's output:

$$m + c(y) = m_0 + p(y)y.$$

$$u(m, y)$$

$$v(y) = u(m_0 + \pi(y), y)$$

RESTRAINT OF TRADE BY MONOPOLISTS THAT DO NOT MAXIMIZE PROFITS

Donors forgo some of their own consumption in order to fund the activities of a nonprofit firm; costs of the firm not picked up by sales are funded by donations. Donations are thus the equivalent to negative profits

$$\frac{dv}{dy} = u_c \pi_y + u_y = 0 \Leftrightarrow -\frac{u_y}{u_c} = \pi_y.$$

The feasible range for the consumption-output trade-off is determined by the downward-sloping segment of the profit function. An output-preferring firm will always operate in that region and thus outproduce a profit-maximizing firm.

because if it did not, it would make itself better off by expanding both consumption and output.

RESTRAINT OF TRADE BY MONOPOLISTS THAT DO NOT MAXIMIZE PROFITS

Rewriting the optimality condition, one obtains a generalized markup condition:

$$p(1 - |\varepsilon|) = c_y - \frac{u_y}{u_c},$$

But although price will be lower with such altruism, markups above competitive prices may be higher.

Indeed, optimal price may involve a markdown below, as opposed to a markup above, costs but at the same time be reduced by competition more than in the case of profit maximization.

RESTRAINT OF TRADE BY MONOPOLISTS THAT DO NOT MAXIMIZE PROFITS

An illustrative special case is where the producer's preferences are quasi-linear and the producer cares about the consumers' welfare

$$u(m, y) = m + z(s(y)),$$

$$s(y) \equiv \int_0^y [p(q) - p(y)]dq.$$

$$p[1 - |\varepsilon|(1 - z_s)] = c_y.$$

SOCIALLY OPTIMAL PRICING

The classic efficiency rationale for antitrust policy under profit maximization is that antitrust eliminates the deadweight loss associated with monopoly power.

$$w(y) \equiv v(y) + s(y)$$

$$\frac{dw}{dy} = \frac{dv}{dy} + \frac{ds}{dy} = 0.$$

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$$v = m_0 + \pi + u(y).$$

$$w = v + s.$$

$$p(1 - |\varepsilon|) = c_y - \frac{w_y}{w_c} = c_y - (u_y + s_y).$$

$$s_y = p|\varepsilon|,$$

$$p = c_y - u_y.$$

SOCIALLY OPTIMAL PRICING

The socially optimal price discounts the optimal price for the monopolist even though the monopolist is altruistic. Contrary to marginal-cost pricing being efficient in the FP industry, the socially optimal price will often be below cost. This implies the counterintuitive but fundamental proposition that an efficient antitrust policy in the NFP sector should not seek merely to equate price to marginal cost, because output may be restricted (from a social standpoint) even at that level; the goal of antitrust in such a case is to force price below marginal cost.

COMPETITION AND SOCIALLY OPTIMAL PRICING

We consider a homogeneous model of Cournot competition with an inverse demand curve $p(Y)$ for the total quantity of $i = 1, 2, \ldots, n$ firms; $Y = \sum y_i$. Given the output levels represented by the vector $y \equiv (y_1, \ldots, y_n)$, the n producers are assumed to have utility functions $(v_1(y), \ldots, v_n(y))$ over profits and output, as in

$$v_i(y) = u(\pi_i(y), y_i),$$

where $\pi_i(y) \equiv p(Y)y_i - c(y_i)$ are the profits of the ith firm under a given vector of output. It is straightforward to show that the necessary first-order conditions are

$$p(1 - m_i|\varepsilon|) = c_y - \frac{u_y}{u_\pi}, \qquad i = 1, 2, \ldots, n,$$

COMPETITION AND SOCIALLY OPTIMAL PRICING

If increased competition is approximated by an increase in the number of producers, n, the socially optimal price converges to the efficient price as n goes to infinity by making the market share, m, of each firm go to zero.

This analysis suggests a general efficiency rationale for promoting competition regardless of producer preferences. Competition, whether with profit maximizers or just with other NFP firms, might drive the price of the altruistic firm's output to a level so far below cost that the personal utility loss of the donors exceeds their utility gain from the benefit of the low price to the firm's customers. If that were the case, the firm would have an incentive to collude with its competitors to raise price, albeit not all the way to its costs.

THE CASE IN WHICH COLLUSION BY ALTRUISTIC PRODUCERS PROMOTES SOCIAL WELFARE

It may be true that collusion expands output and raises welfare, rather than the traditional argument of restricting output and lowering welfare, among altruistic producers. To illustrate, given output levels $y \equiv (y_1, \ldots , y_n)$ among n producers with utility functions $(v_1(y), \ldots , v_n(y))$, let their joint utility be denoted

$$V(y) \equiv \sum v_i(y) = \sum u_i(\pi_i(y), y).$$

if some producers cared about aggregate output or consumer surplus. The output levels that are optimal with respect to the industry satisfy the necessary firstorder conditions

$$\frac{dV}{dy_j} = \sum \frac{dv_i(y)}{dy_j} = \left[\left(\frac{du_j}{d\pi}\right)\left(\frac{d\pi_j}{dy_j}\right) + \frac{du_j}{dy_j}\right] + \sum_{i \neq j} \left[\left(\frac{du_i}{d\pi}\right)\left(\frac{d\pi_i}{dy_j}\right) + \frac{du_i}{dy_j}\right] = 0.$$

THE CASE IN WHICH COLLUSION BY ALTRUISTIC PRODUCERS PROMOTES SOCIAL WELFARE

To illustrate, consider a homogeneous constant-returns industry with a constant elasticity of demand in which aggregate output is valued according to

$$u_i = \pi_i + \alpha Y.$$

$$\ln\left(\frac{Y_s}{Y_p}\right) = -\left(\frac{1}{|\varepsilon|}\right)\left[\frac{(c-\alpha)(1-|\varepsilon|/n)}{(c-n\alpha)(1-|\varepsilon|)}\right].$$

suppose each NFP hospital cares about the output of the entire health sector rather than about just its own output. There will then be the standard free-riding problem of charitable giving: the donor benefits from the donations of other donors, and this causes him to curtail his own donations. Collusion to eliminate this free riding may be welfare enhancing.

THE WELFARE LOSS FROM ALTRUISTIC RESTRAINTS OF TRADE

Although we have argued that the standard rationale for antitrust—the avoidance of deadweight loss—generalizes to NFPs (with the exception just noted), one might suspect that the deadweight loss created by them would be small compared to that created by firms interested only in higher profits.

After all, if a producer cares about the welfare of consumers, the loss he imposes on them should be smaller than if he does not care about their welfare.

But our analysis produces the counterintuitive result that monopolization is often more harmful when done by altruistic producers than when done by profit-maximizing firms.

THE WELFARE LOSS FROM ALTRUISTIC RESTRAINTS OF TRADE

Consider an altruistic producer with preferences $u(m_0 + \pi(y), y; \alpha)$ parameterized by the degree of output preference α. If we denote the monopolistic and competitive outputs by $y_M(\alpha)$ and $y_C(\alpha)$ respectively, then the welfare loss is

$$L(\alpha) \equiv \int_{y_M(\alpha)}^{y_C(\alpha)} [p(q) - p(y_C(\alpha))]dq.$$

THE WELFARE LOSS FROM ALTRUISTIC RESTRAINTS OF TRADE

To illustrate, consider the case in which demand curves are linear, $p(y) = a - by$, marginal costs are constant, $c(y) = cy$, and the altruist has the quasi-linear preferences $u(\pi, y; \alpha) = \pi + \alpha y$. In this case, the monopoly output will be half the competitive output and the monopoly price halfway up the demand curve from the competitive price:

$$y_C - y_M = y_M = \frac{[a - (c - \alpha)]}{2b}$$

$$p_M - p_C = \frac{[a - (c - \alpha)]}{2}.$$

THE WELFARE LOSS FROM ALTRUISTIC RESTRAINTS OF TRADE

These price and quantity effects imply that the deadweight loss is

$$L(\alpha) = \frac{(y_C - y_M)(p_M - p_C)}{2} = \left(\frac{1}{8b}\right)[a - (c - \alpha)]^2.$$

In this case, both the output lost and the average surplus lost by excluded consumers increase with altruism, dL/da 1 0.13 The underlying reason is that altruistic firms have a larger output, and consumer surplus is positively related to output, so restricting the altruistic firm's output tends to produce a greater loss of consumer surplus.

CONCLUSION

Despite the economic differences between for-profit and nonprofit firms stressed in conventional analyses of the nonprofit sector, U.S. antitrust law generally does not distinguish between these two organizational forms.

This paper defends that approach by demonstrating that the same incentives to restrain trade exist in the nonprofit sector as in the for-profit sector.

Altruistic firms benefit from exploiting market power, just as nonaltruistic ones do, even when the altruistic firms would price below marginal cost without the spur of competition.

promoting competition is socially valuable regardless of the particular objectives of producers, and the fact that antitrust law does not distinguish between the two sectors is efficient