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CHARITABLE GIVING AND "EXCESSIVE" FUNDRAISING*

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Recently, some charities have been attacked for spending an "excessive" portion of their resources on fundraising. This paper shows how competition for donations can push fundraising shares to high levels even when donors dislike charities that spend a large portion of receipts on fundraising. It also considers a case in which donors take account of the productivity of fundraising in generating gifts from others. In the light of the models developed in the paper, a variety of regulatory strategies are assessed from the dissemination of information to the establishment of a federated fund drive.

I. INTRODUCTION

Recently, some charities have been attacked for spending an "excessive" portion of their resources on fundraising. This concern has produced a variety of state laws regulating charitable solicitations.[1] Two private organizations that certify charities give heavy weight to fundraising practices,[2] and the United Way justifies its existence by noting the small proportion of its contributions used to conduct the annual campaign.[3] No one, however, has analyzed the problem of excessive fundraising with a model in which nonprofits

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1. A compilation of state laws is in American Association of Fundraising Counsel [1978].

2. The organizations are the Philanthropic Advisory Division of the National Council of Better Business Bureaus and the National Information Bureau, Inc. Their activities are described in "Rating Charities" [1977] and "Setting Standards for Charity" [1977].

3. A brochure of the United Way of Greater New Haven [1978] prominently displays a pie chart showing that only 5.3 percent of campaign dollars was spent on fundraising with another 5.2 percent for "management and services."

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design fundraising strategies to maximize net expected receipts. This paper develops a series of such models, and then uses them to assess various regulatory strategies from the dissemination of information to the establishment of a federated fund drive.

In my models, advertising messages are purely informative. They simply tell donors that the charity exists, has a particular ideological position, and spends a certain share of receipts on fundraising. My special concern is donors' attitudes toward solicitation costs. Donors can gain in two ways from fundraising expenses. First, they learn about the charity from the information it provides. Second, the fundraising campaign may cause *other* people to substitute gifts for private consumption or to substitute gifts to a charity the donor likes for gifts to one that he or she dislikes. A donor loses, however, when fundraising diverts funds from one charity the donor likes to another that is equally desirable. This substitution effect is similar to a commonly cited waste of some private advertising that convinces people to choose one of several otherwise identical products without expanding the size of the market (see Schmalensee [1972]).

In Section II, I introduce my basic assumptions about donors and charities. Then in III, IV, and V, I present models with different assumptions about the role of fundraising costs. In III, donors either do not know or do not care about fundraising expenses. In IV, they view all fundraising as wasteful, and in V, they calculate the "productivity" of fundraising in generating additional gifts. Finally, in VI, I develop the policy implications of the preceding analysis.

II. Basic Assumptions

Why do people give at all, especially when they can take a free ride off the gifts of others? By way of an answer, some analysts (e.g., Arrow [1974]) stress the benefits that a person obtains from the act of giving to a worthy cause even if he or she cannot measure the direct consequences of this act in higher service levels. Taken in its extreme form, this explanation converts charitable giving into a private good and avoids all free rider problems. This perspective seems too narrow. After all, many people give nothing, even though they say they benefit from charitable services, and the vast majority of givers donate small amounts relative to their income and to the charity's budget.[4] Private

4. See Morgan, Dye, and Hybels [1977, 161–64]. In their 1973 sample of households, the average gift was $459. Twelve percent of the households gave nothing, and another 67 percent gave less than $500. Giving was from 3 to 4 percent of after-tax income for households with income of $50,000 or less and rose to a high of 14 percent for households with $500,000 of income.

giving is such a small portion of national income that it seems implausible to eliminate the free rider problem entirely from a model of charitable giving.[5]

Lacking a more precise social-psychological model of altruism,[6] I shall assume that people have a "social conscience" that is rather unspecific and poorly informed. Their sense of "duty" may lead them to make philanthropic donations based on their income and an estimate of the benefits produced by their gifts. A donation provides two kinds of benefits to a donor. First, if the kth donor's gift to a particular charity is at least equal to some minimum z_k, the donor believes that he or she has "bought in" to the entire range of services provided by the charity. Although donors know about the services provided by all nonprofits that solicit their donations, the psychological benefits they obtain from a charity's total level of services are higher if they have given at least z_k. Second, donors also calculate the marginal benefits of their gifts in providing increases in charitable services. If these benefits are high enough, they may give more than z_k to a few charities. Some charities, however, may produce services that are disliked by some people. These people benefit if *fewer* donations are made to those charities. A donor gives to the charities with the most favorable combination of solicitation practices and philanthropic services. Some charities receive z_k. Others obtain larger gifts.

To characterize a donor's utility function, assume first that fundraising practices are irrelevant and that all donors automatically

5. Private giving has been 1.5 percent to 2 percent of GNP in recent years [Nelson, 1977, p. 121].

6. Unfortunately, work in social psychology is not very helpful in determining the empirical validity of my hypotheses about giving behavior. Most experimental work on altruism has studied helping behavior, not the donation of money. Even those experiments that did study gift giving concentrated on a single request for aid, not the person's overall donation pattern. The literature is reviewed in Gonzalez-Intal and Tetlock [1977], Krebs [1970], and Macauley and Berkowitz [1970]. These studies suggest that variations in advertising strategies may be a powerful determinant of both the level and distribution of total gifts. Unfortunately, this research provides little systematic evidence. For example, we do not know whether people who respond generously to emotional appeals for help give less to other charities or cut-back private consumption. However, Morgan, Dye, and Hybels [1977] in two national surveys of philanthropy found that donors did care about charities' fundraising and administrative costs, but that only higher income people appeared to develop conscious plans for charitable giving. Among the reasons given for giving to charity by frequency of mention were the following: (a) approves of the organization's goals; (b) respondent "belongs" to the organization; (c) respondent gets some benefit from the organization; and (d) pressure or a quota. Money donations are correlated with some sort of personal involvement with the charity or the purpose of the charity. Among the reasons for refusing charitable requests by frequency of mention were the following: (a) other charities were more important; (b) the fund does a poor job; (c) objectionable solicitation including high pressure; (d) dislikes goal of fund; (e) does not know about fund; (f) insufficient income, (g) fund does not need the money; and (h) fundraising and administrative costs are too high.

know about all charities. Suppose that there are n charities and that they can be placed along a single dimension b, which I call "ideology." Each person k has a most preferred ideology b_k, and tastes are single-peaked with respect to b_k.[7] The donor's b_k is independent of his or her income. Each charity j has a fixed level of b, b_j, and announces how many people it served in the last period s_j, as well as c_j, the cost of adding an additional client. Each donor k's utility depends on the levels of the b_j, s_j, and c_j for all j, as well as on k's donations to charity and spending on other goods. Since the charitable characteristics are parameters so far as k is concerned, we can write the utility function as

$$U_k[(y_k, z_1^k, \ldots, z_n^k)/\{b_j\},\{s_j\},\{c_j\}], \tag{1}$$

or k's utility depends on his or her choice of $y_k, z_1^k, \ldots, z_n^k$ conditional on the values of b_j, s_j, and c_j for all j, where

y_k = k's spending of private goods,
z_j^k = k's gift to charity j, $j = 1, \ldots, n$.

Individual k maximizes (1) subject to

$$\bar{y} = y_k + \sum z_j^k,$$

where

$$\bar{y}_k = \text{income of } k.$$

The marginal utility of giving to some charity "a" is zero for $z_a^k < z_k$ and then jumps discontinuously to some positive number at $z_a^k = z_k$. The utility gain depends upon the strength of the donor's "buying-in" mentality, the donor's gifts to other charities, and the levels of s_a and b_a relative to b_k and to the set of b_j and s_j provided by other charities. For gifts larger than z_k, the marginal utility of giving also depends on the marginal benefits of the donor's gifts as measured by c_a and by the number of clients already being served s_a. A donor who makes only a minimum donation prefers a charity with a larger client load to one with a smaller number of clients but the same b_j. In contrast, if marginal costs increase with s_j, then a donor concerned with the productivity of his or her own gift might give more to a small organization (see Rose-Ackerman [1981]). In allocating donations, each person trades off the marginal gain from "buying-in" to the total services provided by a charity with a relatively large $|b_k - b_j|$ versus giving

7. Single-peaked preferences fall off monotonically for $b > b_k$ and $b < b_k$. There are no local maxima. Tastes are separable in the sense that a charity's ideological ranking is independent of its size and marginal costs.

a larger donation to a more ideologically attractive charity to permit marginal increments in desirable services.[8]

Now suppose that donors only learn about a charity if it sends them a brochure in the mail. Brochures truthfully announce the charities' b_j, s_j, and c_j and provide information about the share of receipts used for fundraising w_j. The introduction of fundraising changes the specification of (1) in two ways. First, it restricts the individual's choice set to include only those charities that have sent brochures. Second, both the minimum gift required to "buy-in" to a charity, and the value to donors of gifts that are greater than the minimum may depend upon the share of gifts used for fundraising.

I consider three attitudes toward w_j. First, donors are indifferent to fundraising expenses. Second, donors believe that high levels of w_j are undesirable. They confuse marginal and average costs and assume that for every dollar they give, only $(1 - w_j)$ of these funds goes to purchase services.[9] Thus, ceteris paribus, donors favor charities with low w_j. Nevertheless, if the w_j of *all* charities increase, donors may give more if demand for charitable services is price inelastic.

Third, donors are somewhat more sophisticated and recognize that high levels of fundraising may be translated into higher donations from *others*. Donors benefit little if fundraising simply shifts funds between charities that they find ideologically attractive especially if they have given the minimum gift to each one. Therefore, they will want to know what portion of the extra giving comes from private consumption or from charities that are ideologically unattractive.

A final set of assumptions concerns the behavior of charity managers. I assume that each one is very rigid and has a most preferred level of b, b_j, that determines charity j's ideological position. In other words, b_j is not a choice variable for managers.[10] Given their b_j, managers are risk neutral and try to maximize expected revenues net of fundraising costs. Charities can rank donors in terms of the gift expected if they receive a brochure. This expected gift is only a best-guess, however, since the actual gift depends on the behavior of other charities. Given this ranking, charity j can estimate $x_j(\alpha_j, w_j)$.

8. The usual marginal conditions for a maximum may not be satisifed because of the discontinuous jump in utility that occurs when a person "buys-in" to a charity. This discontinuity does not, however, present any fundamental problems. Donors simply compare their utility levels with and without a gift of z_k to charity j.

9. This is a realistic assumption. Organizations that rate charities calculate the average fundraising share, not the share of the marginal gift ["Rating Charities," 1977; and "Setting Standards for Charity," 1977].

10. See Rose-Ackerman [1981] for a discussion of the more general case where managers may trade off the level of b_j against the level of expected receipts. I ignore this complication here in order to concentrate on fundraising choices.

This is the average expected gift from all solicited donors when α_j of the population is solicited and the fundraising share is w_j. It is the probability that charity j is chosen by the average solicited donor multiplied by the size of the average gift. Since donors can be ranked by their expected gift, charities send to the highest expected givers first and then move down the ranking. If the z_k are equal for all k, the highest ranked donors are expected to give more than the minimum gift. Next in line are people who are expected to do no more than "buy-in" to charity j, followed by those who dislike j's ideology or are poor and give nothing. Thus $dx/d\alpha \leq 0$. The total level of gross receipts is $\alpha_j m x_j$, where m is total population. The fundraising technology is very simple: Brochures cost v dollars apiece to all charities. Each charity assumes that the other charities will not change their behavior in response to its choice. The manager must then decide how many brochures to send in order to maximize expected net returns.

I assume that there are no technological or fundraising barriers to entry and that there are potential entrepreneurs willing and able to occupy any b—existing charities cannot monopolize a portion of "ideology space." Neither these conditions nor the assumption that brochures all cost v dollars is meant to be realistic. I have made these extreme assumptions to illustrate the special role of scale economies and entry barriers in a charity "market."

III. Donors Indifferent to Fundraising Expenses

In this model (Model I), the charities' fundraising practices determine only the number of brochures a person receives, not the marginal utility of giving. Donors are indifferent to fundraising expenses so that x_j is only a function of α_j.

Suppose that each charity j assumes that the number of other charities is fixed and that none of them changes its behavior to respond to j's choice. Then, the manager of j maximizes

$$R_j = \alpha_j m\,[x_j(\alpha_j) - v]. \tag{2}$$

Net revenue reaches an extreme value, where

$$0 = x_j - v + \alpha_j \frac{dx}{d\alpha}. \tag{3}$$

This is a maximum as long as the α that satisfies (3) is less than or equal to one and $2\,dx/d\alpha + \alpha_j d^2x/d\alpha^2 < 0$. The fundraising share is $w_j = v/x_j$ and is larger, the larger is α_j, i.e., the higher the proportion

of the population solicited by charity j. Then, (3) can be rewritten as

$$w_j = 1 + \eta_j^{\mathrm{I}}, \tag{4}$$

where η_j^{I} is the elasticity of x_j with respect to α_j, i.e., $\eta_j^{\mathrm{I}} = (dx/d\alpha_j)(\alpha_j/x_j) \leq 0$. The fundraising share in (4) is higher the more inelastic is x_j with respect to α_j.

Suppose that an equilibrium exists given any fixed number of charities n.[11] Then, we can study the relationship between the number of charities and the share of resources spent on fundraising. Although in a range of plausible cases the equilibrium level of w_j increases as the number of charities (n) increases, it is at least possible that, for some n, an increase in the number of charities *reduces* the share of resources that some charities spend on fundraising, thus encouraging even more entry. This could occur if the elasticity of x with respect to α falls by a large amount when entry occurs (this argument is developed further in Appendix A).

Entry will also affect *total* net charitable resources as well as the *share* of gross resources used for solicitation. Even if α_j falls and w_j increases for all j when n increases, net charitable resources may increase. The added resources generated by new entrants may more than make up for the fall in the net revenues of existing charities. Some donors like the level of b chosen by the new entrant better than that of existing firms and make larger donations. Eventually, however, when the marginal utility of free income is high enough, giving will fall as n increases. As the number of charities increases, the value of an additional brochure to donors falls because donors are already likely to have received brochures from charities with small $|b_k - b_j|$. There is some point where net charitable resources are maximized. Entry, however, will proceed beyond this point. If entry is costless, and if there is an adequate supply of potential charity entrepreneurs, charities will enter until the fundraising share of the marginal charity approaches one, subject to the breakeven condition in each charity.[12]

11. An equilibrium exists if no charity wants to change its behavior when it observes the behavior of other charities. Proving the existence and stability of equilibrium in a model of this kind is not a trivial matter, but it is not a problem I am prepared to solve in this paper. Nevertheless, the potential for instability is less here than in Models II and III discussed below. In those models, instability is possible even if only one charity exists.

12. This situation is analogous to the problem of highway congestion where each driver considers only his own driving time not the cost imposed on other drivers. It is also, of course, analogous to entry in a competitive market where profits are pushed to zero. Its normative interpretation is, however, quite different. When profits are zero, the market is efficient. When net charitable revenues are zero, sending brochures is a pure waste.

As long as new entrants can pick any point on the ideological spectrum, this also implies that the fundraising share of all charities approaches one. The "charity market" consists of a large number of very small charities. Thus, in a competitive charity market with free entry, the expected level of charitable services provided is very low and a high proportion of revenues will be used for fundraising.

IV. Donors Dislike High Fundraising Costs

In the second model (Model II), donors dislike high fundraising costs and are less likely to donate to charities that spend a high proportion of their resources on soliciting donations. Charities are required to tell donors the levels of b_j, s_j, and c_j and the fundraising share last period, w_j^{t-1}. Donors assume that the average share of resources spent on fundraising in $t-1$, equals the marginal share in period t. They believe that the larger is w_j^{t-1}, the fewer additional units of service are provided by a given donation. Thus, if the fundraising share differs across charities, donors must trade off this fact against other charitable characteristics. A marginal increase in α_j^t has two effects. First of all, more people receive brochures, and some will choose to give. Second, if the fundraising share of other charities remains constant, the increase in α_j^t will lower the expected gifts of individual donors in the *next* period because w_j^t increases when α_j^t increases.

With the subscript j ignored, expected returns in period t are

$$R^t = \alpha^t m[x(\alpha^t, w^{t-1}) - v]. \tag{5}$$

Suppose that charity managers are myopic and ignore the impact of w^t on x^{t+1}. Then, as long as the profit-maximizing α^t is ≤ 1, and the second-order conditions hold, managers maximize R with respect to α^t at

$$0 = x^t - v + \frac{\partial x^t}{\partial \alpha^t}\alpha^t \tag{6}$$

or

$$w^t = 1 + \eta_t^{\mathrm{II}},$$

where

$$\eta_t^{\mathrm{II}} = \frac{\partial x^t}{\partial \alpha^t}\frac{\alpha^t}{x^t} \leq 0. \tag{7}$$

The manager's myopia produces an R-maximizing condition similar to that in Model I. In fact, however, this second model is

considerably more complicated because the "price" of a unit of charitable services, or $c_j/(1 - w_j^{t-1})$, depends upon the level of gifts received by the charity in the previous period. Thus, an unstable result is possible. For example, suppose that the system is in equilibrium under the conditions of Model I, where donors ignore the level of w_j. Now suppose that donors learn that the price of giving is not c_j, but $c_j/(1 - w_j^{t-1})$. If overall demand is price inelastic, then for a given set of $[\alpha_j^t]$, donors give more than in Model I (see Fisher [1977]). The increased giving lowers the fundraising shares, i.e., $w_j^t < w_j^{t-1}$, and donors give less. This increases the w_j^{t-1}, and donors give more, etc. Although these oscillations may eventually lead to an equilibrium, it is also possible for the system to be unstable. Conversely, with price-elastic demand, giving is lower in period t, the higher are the w_j^{t-1}. The system may have multiple equilibria, at least one of which is unstable. For some initial conditions, giving may fall over time until the fundraising share equals one and the charity goes out of business. Thus, although stable equilibria are possible with either inelastic or elastic demand, the system can also either entirely unravel or continuously cycle. To illustrate these possibilities, Appendix B develops sufficient conditions for unstable or corner solutions in a simple model with a single charity.

Even if overall demand is inelastic, donors favor charities with low levels of w_j^{t-1} (i.e., those with high levels of giving relative to fundraising costs). Thus, once a charity begins to lose donations, this may create an unstable situation in which that charity continues to lose relative to others. Similarly, a charity that is successful in one period can build on its low level of w_j^{t-1} to generate more gifts and lower w_j^t still more. Some charities may have fundraising shares that are above those in Model I and may eventually go out of business. Others have lower fundraising shares and use this advantage to expand their "market shares."

Of course, charity managers are unlikely to be so extremely myopic that they fail to recognize that w_j^t affects donations in $t + 1$. A manager might instead look T periods into the future and solve a dynamic programming problem that takes account of the links between periods. Thus, first R^T is maximized given w^{T-1}. Then R^{T-1} is maximized given w^{T-2} and so forth. Even for the simple example developed in Appendix B, however, this is a complex mathematical exercise. If complete myopia makes managers seem a bit too stupid to be realistic, this second method assumes that they are unrealistically foresighted and technically trained. Thus, suppose instead that managers look only one period in advance and guess that (7) holds in

$t + 1$. They also assume that gifts in $t + 1$ relative to gifts in t depend on the level of w^t relative to w^{t-1} and estimate $\alpha^{t+1}x^{t+1}/\alpha^t x^t = \gamma(w^t)$. Ignoring discounting, they maximize

$$TR^t = \alpha^t m(x^t - v) + \alpha^{t+1} m(x^{t+1} - v). \tag{8}$$

Extreme values occur where

$$0 = x^t - v + \alpha^t \frac{\partial x^t}{\partial \alpha^t} + \frac{d\alpha^{t+1}}{d\alpha^t}\left(x^{t+1} - v + \alpha^{t+1}\frac{\partial x^{t+1}}{\partial \alpha^{t+1}}\right) + \alpha^{t+1}\frac{\partial x^{t+1}}{\partial w^t}\frac{dw^t}{d\alpha^t}.$$

But $dw^t/d\alpha^t = (-w^t/x^t)\,(\partial x^t/\partial \alpha^t)$, and the charity manager guesses that (7) holds in period $t + 1$, i.e.,

$$x^{t+1} - v + \alpha^{t+1}\frac{\partial x^{t+1}}{\partial \alpha^{t+1}} = 0.$$

Thus we have,

$$w^t = 1 + \eta_t^{\mathrm{II}}\,[1 - \gamma(w^t)\epsilon^{t+1}], \tag{9}$$

where

$$\epsilon^{t+1} = \frac{\partial x^{t+1}}{\partial w^t}\frac{w^t}{x^{t+1}}.$$

This is a maximum as long as the α^t and w^t that solve (9) are ≤ 1, and the second-order condition holds.

Given w^{t-1}, the level of w^t that solves (9) is greater than, equal to, or less than the level that solves (7) as $-\eta_t^{\mathrm{II}}\gamma(w^t)\epsilon^{t+1} \gtreqless 0$. We know that $\eta_t \leq 0$ and $\gamma(w^t) > 0$. In an atomistic market, the demand curve facing each charity is elastic whatever the elasticity of overall demand; thus, $\epsilon^{t+1} < 0$. Therefore, the above inequality is negative. The fundraising share is lower, and fewer brochures are sent when charity managers are not entirely myopic. Thus, if total market demand is also elastic, the managers' relative farsightedness may reduce the likelihood of a corner solution or at least cause the system to unravel more slowly. If overall demand is inelastic and every charity selects a lower w^t in (9) than in (7), then overall giving may fall in $t + 1$. Thus, w_j^{t+1} may increase for all j. There seems no reason to suppose a priori that these oscillations will necessarily converge to an equilibrium.[13]

13. Even in the two-period case, the actual solution of the dynamic programming problem is a complex exercise. Thus, using the simple example in Appendix B and substituting in (9) yields a complex expression in α^t. Finding the solution to this problem, however, would be only the first step toward examining the dynamic properties of this system. I leave the solution of this problem to my more mathematically sophisticated readers.

Instability appears to continue to be possible in spite of the managers' relative farsightedness.

Donors, however, care about ideology as well as w_j. Thus, entry can still occur at levels of b_j favored by donors but not provided by existing charities. Entry leads to more giving from people who received no brochures in the past or who prefer the ideology of the entrant. If potential entrants use the same decision-making calculus as existing charities, then entry occurs as long as net returns are positive over the relevant time horizon. This entry raises the w_j of existing charities at each α_j, and thus erodes their advantage.

To discuss entry more explicitly, we must specify the level of w_j that donors assign to a new charity with no experience in the market. If donors predict that a new charity will have a w_j that is higher than those of existing charities, this is a substantial entry barrier. Entrants can survive only if they pick points in ideology space favored by donors and opposed by existing charities. Entry may cease even though net receipts are large and positive. In contrast, donors may not penalize entrants, and might, instead, assign them the average w_j^{t-1} of the old charities that send brochures. Then, donors' dislike of fundraising pushes donations to a low level as entry proceeds but does not prevent charities as a group from making choices that generate high w_j. Just as in Model I, entry reduces the size of charities and continues beyond the point where net returns are maximized. Because of donors' sensitivity to the "price" of giving, however, entry may cease even though some existing charities have $w_j < 1$.

V. Donors Judge the Productivity of Fundraising

The last model (Model III) assumes the most sophisticated donors. Although they still confuse average and marginal fundraising shares and use w_j^{t-1} as an estimate of future levels of w_j, they realize that a dollar spent on fundraising may raise more than a dollar in new resources. They value these new gifts most highly if they reduce the private consumption of others or come from funds that would otherwise go to charities disliked by the donors. Let $NG_j^{kt}(z_j)$ be the expected net dollar gain in period t for donor k from a gift of z_j^k to j. Then,

$$NG_j^{kt} = z_j^k\,(1 - w_j^{t-1}) + \frac{w_j^{t-1} z_j^k}{v}\,\Theta_j^k\,(1 - w_j^{t-1}). \tag{10}$$

The first term, $z_j^k(1 - w_j^{t-1})$, is the amount of the donor's gift that the

donor believes is spent directly on charitable services by charity j. The term $w_j^{t-1}z_j^k/v$ is the donor's estimate of the number of brochures financed by his gift, and Θ_j^k is an estimate of the value to the donor of gifts generated. In general, this number is less than the total gifts generated because some of the additional giving comes from people who would have given to charities that are almost as good as j as far as the donor is concerned. This value is multiplied by $(1 - w_j^{t-1})$, since the donor estimates that w_j^{t-1} of these new gifts are also spent on fundraising. I assume that the donor does not, however, calculate the whole infinite series. He does not go beyond this second stage to calculate the gifts generated by the additional $(w_j^{t-1}z_j^k/v)\ \Theta_j^k w_j^{t-1}z_j^k$ dollars that he estimates will be spent on fundraising.

For the charity, however, all the gifts generated by fundraising are worthwhile. Thus, $x_j > \Theta_j^k$ for all k, but the x_j depend on the Θ_j^k. Depending upon our assumptions about managers' foresight, the charity maximizes an expression analogous to either (5) or (8) except that $\partial x^{t+1}/\partial w^t$ is smaller in absolute value. When w_j^{t-1} increases, the amount of a gift spent *directly* on services falls, but the amount used to generate additional giving increases. The "price" of charitable services is not $c_j/(1 - w_j^{t-1})$, but

$$\frac{c_j}{(1 - w_j^{t-1})}\left[\frac{v}{v + w_j^{t-1}\,\Theta_j^k}\right],$$

i.e., the "price" of giving is lower in Model III than in Model II.[14] The same potential for instability arises here as in Model II, but the problem is less severe the larger are the Θ_j^k, i.e., the more the donors benefit from fundraising.

A charity that appeals to a well-defined group of donors who all face the same set of close substitutes is in a very different position from one that tries to reach a broad spectrum of diverse people. Donors are likely to approve a much higher level of fundraising expenses in the latter case because additional gifts are likely to reduce donations to charities a donor does not value highly, i.e., Θ_j^k is large.

Entry is more likely to be worthwhile for new charities, the higher are the Θ_j^k of donors. Similarly, if new entrants can draw funds mainly from private consumption, then entry is more likely to occur, since the new charity does not siphon off many funds from other nonprofits that are valued by donors. It remains true, however, that the fundraising share of the marginal charity approaches one as entry occurs.

14. However, "price" in Model III can never be less than "price" in Model I, i.e., ignoring subscripts and superscripts, $c \leq cv/(1 - w)(v - w\theta)$. Let $\Theta = \beta x$, where $0 < \beta \leq 1$, then the inequality becomes $(1 - w) \leq 1/(1 - \beta)$ or $-\beta/(1 - \beta) \leq w$.

The overall level of charitable services provided depends on donors' attitudes toward entrants and toward fundraising in general. Suppose that donors value fundraising almost as much as charity managers (i.e., Θ_j^k is close to x_j). Then even if donors believe that new entrants have high levels of w_j, this will not deter giving very much and net revenues will be pushed toward zero. In contrast, if Θ_j^k is very small, then Model III is almost identical to Model II, and entry is sensitive to donors' beliefs about the w_j of entrants.

VI. Conclusions: Regulatory Policy and United Charities

This paper demonstrates that the competition for charitable dollars reduces the level of service provision relative to funds raised for all charities. In the absence of entry barriers, the number of charities increases until the fundraising share of the marginal charity approaches one. This result holds even if donors dislike high fundraising expenses.

Of course, in reality, net charitable resources are not close to zero. Entry barriers exist, the supply of charity entrepreneurs is limited, or existing firms monopolize a portion of "ideology space." In particular, donors probably have some "brand loyalty" to existing charities that makes it difficult for new charities to establish a foothold, or perhaps donors assume that new charities inevitably have high fundraising shares. There is no reason to think, however, that existing barriers to entry are in any way optimal. Although entry barriers permit positive levels of charitable services, they also reduce the ideological diversity of the nonprofit sector. The tradeoff between the variety and volume of services is a central policy dilemma.

Not only will advertising be "excessive" in the absence of entry barriers, but, when the fundraising share enters the donors' decision-making calculus, the system may be unstable. In addition, charities that are already large will grow larger, while those that have funding difficulties will contract. These instabilities may be less severe, however, if donors recognize that a portion of advertising expense is productive because it leads other people to give more to charities that they support. The more heterogeneous are donors' tastes, and the higher the marginal utility of giving relative to private consumption in the population as a whole, the more beneficial is advertising to donors and the closer Model III is to Model I, where donors are indifferent to fundraising costs.

Since a competitive charity market with no entry barriers does

not seem "optimal" in any sense of that word, I consider the efficacy of three different regulatory strategies. The first increases the information available to donors. The second imposes direct restrictions on charities. The third attempts to modify the structure of the charity "market."

A policy of information provision that requires charities to announce the level of w_j will be ineffective if entry barriers are low. The worst results of a system where entry pushes w_j toward one cannot be avoided by simply requiring charities to announce w_j. When donors know w_j, Models II and III prevail, the potential for instability and oligopoly control may be high, and the problem of "excessive" entry remains unless donors believe that new entrants have especially high levels of w_j.

Since this first strategy is inadequate, consider a more aggressive policy where the provision of information about w_j is combined with a limit on w_j. This would be difficult to enforce, however, because charities cannot choose w_j directly. Instead, w_j is determined by the number of brochures charities send and by the productivity of these brochures.[15] Thus, direct restrictions on the number of brochures sent (or α) would seem to be the more effective regulatory mechanism. If not combined with entry restrictions, however, this policy could still produce high levels of w_j. Irrespective of the level of α chosen by individual charities, entry could push the w_j to a high level.

Given the weaknesses of the other options, market structure regulation may be more effective. Although existing entry barriers impose ad hoc controls on market structure, systematic market structure regulation should also be analyzed. To take an extreme example, suppose that a monopoly united charities drive is established where the fund announces in advance the share of receipts that will go to each charity. The fund sends a single brochure to each person so total fundraising costs are mv. Members are not permitted to obtain gifts independently, and no charity can solicit funds unless it joins the united drive. The fund economizes on fundraising costs both by reducing competition between existing charities and by making entry more difficult.

The benefits of reductions in the w_j are not costless, however. A federated drive may make it difficult for ideologically disparate charities to survive and may induce donors to purchase a package of charitable services that does not suit their ideologies. Thus, if the

15. Compare a draft bill introduced in the New York State Legislature that attempts to limit fundraising shares to 50 percent of receipts, but does not require charities to tell donors the fundraising share [New York State, 1980].

member charities' b_j are very dissimilar and if donors' most preferred b_k are distributed broadly across the ideological range, then fundraising costs aside, the fund increases the price of giving to desirable charities. If donors do not affirmatively dislike some of the b_j, total gifts fall if demand is "price" elastic and increase if demand is inelastic (this is Fisher's result [1977]). If instead donors feel worse off the more money is given to charities with large $|b_k - b_j|$, then even if demand is inelastic, total gifts may fall.

The "price" of giving is pushed *up* by the united fund's "tie-in" sale and pushed *down* by the saving in solicitation costs. For a given set of charities, a monopoly united fund will increase net charitable resources either when demand is inelastic and charities have different (but not directly opposed) ideologies, or when demand is elastic, ideologies are similar, and the w_j are high in an atomistic charity market. Fisher [1977] stresses the first motivation and emphasizes the possibility that donors may be worse off with a united fund because they are being forced to make a tied purchase. This difficulty suggests that public policy should not be directed toward the establishment of monopoly united funds.

Actual united funds do not, however, have such extensive monopoly power. They cannot prevent the entry of independent charities, and people can donate to member charities without going through a fund. The funds' privileged access to the payroll deduction systems at many workplaces gives them some limited monopoly power but not enough to prevent disintegration if donors are very unhappy with the package of services provided by member agencies. Thus, if ideological differences are important, either dissatisfied donors can give to nonmembers whose better b_j's overcome their higher w_j's, or else they can make separate gifts to desirable member agencies. Funds survive by providing a low "cost," ideologically homogeneous package of charities [Rose-Ackerman, 1980]. The benefits of combining to reduce w_j appear to be fairly large if one accepts recent estimates showing that giving is "price" elastic [Feldstein, 1975; Feldstein and Clotfelter, 1976; and Feldstein and Taylor, 1976].

Given this paper's conclusion that high fundraising shares and instability can be expected in an atomistic market with free entry, the united funds' limited monopoly power can perhaps be justified as a realistic compromise between preserving ideological diversity and preventing the competition for gifts from absorbing a large share of charitable resources. This is not to say, however, that the admission procedures and solicitation practices of realistic united funds are entirely benign or that their monopoly power should be increased.

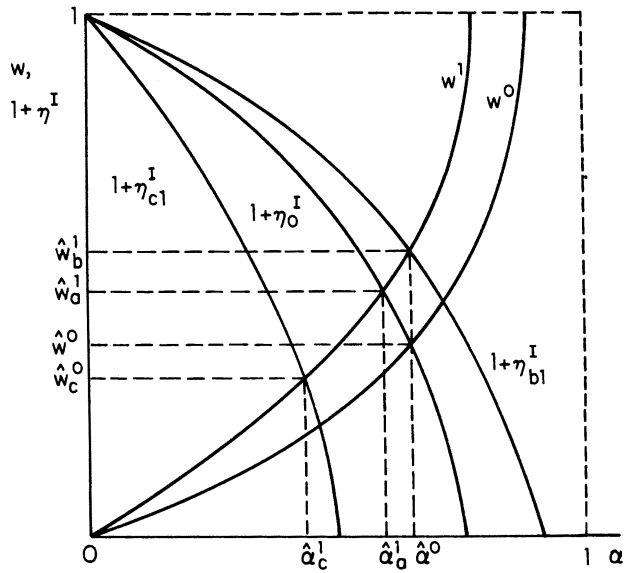

FIGURE I

United funds impose real costs on nonmember charities and on donors with minority preferences. Thus, the funds' procedures for admitting new charities deserve careful scrutiny to assure that savings in fundraising costs do not overly limit ideological diversity.[16]

APPENDIX A: ENTRY AND FUNDRAISING SHARES

This appendix illustrates how entry can lower the fundraising shares of some charities in a model where donors are indifferent to fundraising expenses. To see how a fall in w_j can occur, first notice that an increase in n increases the chance that donors will turn to other charities. Thus, the more other charities there are, the lower is x_j (and the higher is w_j) at *each* α_j. However, the equilibrium levels of w_j and α_j may rise or fall. Thus, consider Figure I, where the superscript 0 represents the situation before entry and superscript 1 is the post-entry situation. (Although I have drawn w_j and $1 + \eta^I$ as if they were defined for $\alpha_j = 0$, actually they originate at $\alpha_j = 1/m$. Similarly, I have assumed that m is a continuous variable. Actually, of course, people come in discrete units so each expression is a step function. These simplifying assumptions, however, do not importantly affect the analysis.) The function $w^0(\alpha)$ shows how w^0 increases as

16. For a fuller discussion, see Rose-Ackerman [1980]. See also National Committee for Responsive Philanthropy [1980]. This organization is committed to liberalizing United Way admissions practices and opening up the payroll deduction to more charities.

α increases in one charity when n^0 charities compete for donations. The function $1 + \eta_0^I(\alpha)$ falls when α increases as long as $d^2x_j/d\alpha_j^2 \leq 0$ (or is a sufficiently small positive number). The charity then chooses $\hat{\alpha}^0$ where (4) holds. (A caret ($\hat{}$) over a symbol indicates its value when R_j is maximized.)

Now, suppose that entry lowers total returns, but does not affect η^I, the elasticity of giving with respect to α_j. With entry, $w^0(\alpha)$ increases to $w^1(\alpha)$ but $1 + \eta_0^I$ is unaffected. Thus, $\hat{\alpha}_a^1 < \hat{\alpha}_0$ and $\hat{w}_a^1 > \hat{w}_0^1$. Next, suppose that η^I depends on the number of charities in the "market." If η^I increases with n (i.e., falls in absolute value), then $1 + \eta_{b1}^I > 1 + \eta_0^I$ at each α, and the equilibrium fundraising share is certain to increase, while $\hat{\alpha}^1$ may rise or fall. Expected gifts from solicited donors are lower overall, but they may not fall so rapidly as the number of brochures sent increases. Figure I illustrates the intermediate case where $\hat{\alpha}^0 = \hat{\alpha}^1$. In contrast, if η^I falls when n increases, $\hat{\alpha}^1$ is less than $\hat{\alpha}^0$ but the fundraising share may rise or fall. The case where the fundraising share falls is illustrated in Figure I, where $\hat{\alpha}_c^1 < \hat{\alpha}^0$ and $\hat{w}_c^1 < \hat{w}^0$. This second case, where $\eta_{c1}^I < \eta_0^I$, is probably the most plausible, since it implies that entry lowers the elasticity of giving with respect to extra fundraising. However, for large n, $\hat{w}$ will increase as n increases. As n approaches infinity, x equals v (i.e., $w = 1$) at very low α. In the limit $x = v$ when only one person is solicited. The charity is very small, sends very few brochures, and collects little money.

APPENDIX B: INSTABILITY AND OSCILLATION

To illustrate the possibility for unstable results, consider a simple case with a single charity. The charity manager can rank people so that a person with index α donates $\bar{g}(1 - \alpha)(1 - w_{t-1})^\rho$, where w_{t-1} is the fundraising share last period and $-\infty < \rho < \infty$. Thus, in Model I, $\rho = 0$. In the "price" inelastic case, $\rho < 0$, and in the "price" elastic case, $\rho > 0$. Then,

$$(11) \quad x_t^\alpha = \frac{\bar{g}(1 - w_{t-1})^\rho}{\alpha m} \int_0^{\alpha m} \left(1 - \frac{i}{m}\right) di = \bar{g}(1 - w_{t-1})^\rho \left(1 - \frac{\alpha}{2}\right).$$

In period t, if the second-order conditions hold, the charity manager maximizes

$$R_t = \alpha m(x_t^\alpha - v)$$

at

$$v = x_t^\alpha + \alpha \frac{dx}{d\alpha} = \bar{g}(1 - w_{t-1})^\rho(1 - \alpha).$$

Substituting for α from (11) yields

$$(12) \quad x_t = \frac{1}{2}\left[\bar{g}\left(1 - \frac{v}{x_{t-1}}\right)^\rho + v\right].$$

Thus,

$$(13)\qquad \frac{dx_t}{dx_{t-1}} = \frac{1}{2}\bar{g}\rho\left(\frac{v}{x_{t-1}^2}\right)\left(1-\frac{v}{x_{t-1}}\right)^{\rho-1} \gtrless 0, \quad \text{as } \rho \gtrless 0,$$

$$\text{for } x_{t-1} > v, \frac{dx_t}{dx_{t-1}} = 0, \quad \text{if } x_{t-1} = v.$$

The second derivative is

$$(14)\qquad \frac{d^2x_t}{dx_{t-1}^2} = \frac{dx_t}{dx_{t-1}}\frac{1}{x_{t-1}}\frac{(-2x_{t-1}+(\rho+1)v)}{(x_{t-1}-v)}, \quad \text{for } x_{t-1} > v.$$

If $\rho < 0$, then for $x_{t-1} > v$,

$$\frac{d^2x_t}{dx_{t-1}^2} > 0, \quad \text{since } (\rho+1) < \frac{2x_{t-1}}{v}.$$

If $\rho > 0$, then for $x_{t-1} > v$,

$$\frac{d^2x_t}{dx_{t-1}^2} \gtrless 0, \quad \text{as } (\rho+1) \gtrless \frac{2x_{t-1}}{v}.$$

In equilibrium,

$$(15)\qquad \hat{x} = \frac{1}{2}\left[\bar{g}\left(1-\frac{v}{\hat{x}}\right)^{\rho} + v\right],$$

or

$$2\hat{x} - v = \bar{g}\left(1-\frac{v}{\hat{x}}\right)^{\rho}.$$

Consider, first, the "price" inelastic case with $\rho < 0$. In (12), x_t approaches $+\infty$ as x_{t-1} approaches v from above. Thus, (12) falls at a decreasing rate approaching $(\bar{g}+v)/2$, as x_{t-1} approaches infinity. There will be one equilibrium point where (15) holds. This point is unstable if $dx_t/dx_{t-1} < -1$ [Baumol, 1970, p. 262].
Substituting (15) in (13) yields

$$\frac{dx_t}{dx_{t-1}} = \frac{\rho\hat{w}(2-\hat{w})}{2(1-\hat{w})}.$$

Thus,

$$\frac{dx_t}{dx_{t-1}} < -1$$

if

$$(16)\qquad \rho < \frac{-2(1-\hat{w})}{\hat{w}(2-\hat{w})}.$$

Therefore, if $\hat{w} = 1/2$, the equilibrium is unstable if $\rho < -4/3$.

In the "price" elastic case, with $\rho > 0$, the situation is more complex. If $\rho \leq +1$, $d^2x_t/dx_{t-1}^2 < 0$ for all $x_{t-1} > v$. If $\rho > +1$, $d^2x_t/dx_{t-1}^2 > 0$ for $x_{t-1} < v(\rho+1)/2$ and $d^2x_t/dx_{t-1}^2 < 0$ for $x_{t-1} > v(\rho+1)/2$. In both cases, x_t approaches $(\bar{g}+v)/2$ as x_{t-1} approaches infinity. This implies both that no interior equilibrium need exist and

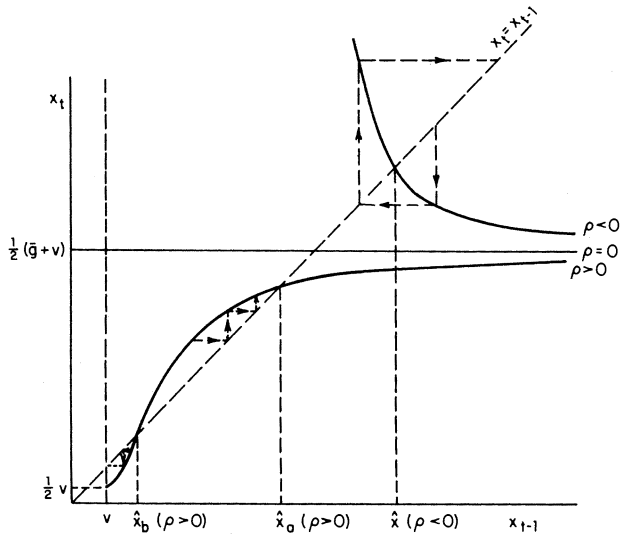

FIGURE II

that multiple equilibria are possible within the range of feasible solutions, where $x_t \geq v$, $x_{t-1} \geq v$. The largest equilibrium solution (call it $\hat{x}_a$) would be stable ($dx_t/dx_{t-1} < +1$) and the next largest ($\hat{x}_b$) would be unstable ($dx_t/dx_{t-1} > +1$) [Baumol, 1970, p. 261]. Two results are possible. If the system starts out at $x_{t-1} > \hat{x}_b$, then it will converge to $\hat{x}_a$. In contrast, if the system starts at $x_{t-1} < \hat{x}_b$, it will unravel until $x_t = v$ and charity goes out of business. Furthermore, if no feasible interior equilibrium exists with $\hat{x} > v$, the system unravels until the charity goes out of business.

Figure II illustrates an unstable situation for $\rho < 0$ and the multiple equilibria case for $\rho > 0$.

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