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Efficiency in fundraising and distributions to cause-related social profit enterprises

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ABSTRACT

Managerial efficiency is as important in social profit enterprises (SPEs) as it is for more traditional financial-profit organizations. In this regard, both donors and SPE executives use efficiency information in making decisions. Here, we suggest a linked, two-stage Data Envelopment Analysis (DEA) methodology for assessing efficiency in both *charitable fundraising* and *cause delivery*, while empirically investigating results for international aid organizations. The model allows efficiency assessment for both the fundraising and utilization of generated funds when directed for cause-related purposes. This, in particular, allows for measurement of the organization's managerial efficiency relative to both multiple phased goals and peer organizations. Additionally, the approach provides benchmarks for identifying sources of improved performance in fundraising and program/cause service delivery. It can also project the results of changes in inputs on the amount of resources available for the charitable organization's cause.

The proposed model(s) allow the examiner to assess performance while, at the same time, identifying those instances wherein the simple ratio measures commonly used in non-profit assessment are (1) deficient, and/or (2) misleading because of the use of 'incorrect' variables, or the 'hiding' of inefficiency if/when tax form categories are filed by an SPE. Importantly, the suggested two-stage DEA methodology can be useful for any organization with multiple-linked goals.

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1. Purpose and contribution

'Non-profit' is a tax classification, which does *not* mean that a non-profit organization functions in a non-businesslike manner. In fact, the "business" of non-profits can best be described as "for social profit" (vs. "non-profit"). Social profit is: "The amount of social and humanitarian benefit gained as a result of investing in the well-being of others" [1]. With this perspective of social profit, all members of an affected community become stakeholders of any entity operating for social profit (SPEs). Further, social dividends earned through the accumulation of social profit are shared amongst the stakeholders (cf., [2] by Gilligan and Golden 2009). *A Glimmer of Hope Foundation* (Austin, TX), for example, is run like a business, and measures its success like a business. It is in operation to turn a profit – a *social profit* [1].

Since charities work for social profit as opposed to having "bottom line" profitability, there is no easily defined, commonly accepted metric for assessing their relative performance. (cf., [2,3]). While the social profit goals of charities are obvious, for-profit organizations can also have social profit goals in the context of a monetary profit. Within the context of latter type organizations, there is a large literature on corporate social responsibility (CSR) which addresses measurement, benefits, and social returns from expenditures on items resulting in social profit (cf., [4–6]). In fact, the objectives of CSR are often similar to those of social profit enterprises (SPEs). However, within the for-profit arena, CSR is not generally an end to itself but, rather, an *aspect* of corporate decision making, with financial-profit remaining the 'bottom line.'

The very desirability of CRS in the corporate arena is, in fact, still debated (cf. [7–9]); yet, it remains the principal outcome for SPEs.

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Maignan and Ferrell [10] present an excellent discussion of the marketing research underlying CSR, and, while the research is diverse, successful management of CSR activities can result in benefits to the enterprise; in particular, producing a social profit for the for-profit enterprise.

There is significant literature on charity rating systems that look at the "efficiency" of operations (e.g., [11–16]). There is even a "rating of charity raters" [17]. At the same time, however, there are criticisms of these systems (cf., [3,17,18]). To date, no uniformly rigorous method has been presented for assessing the degree of managerial efficiency in charitable SPEs. Many potential donors thus simply compare the amount of raised funds allocated to non-administrative costs to determine the degree to which their donation(s) actually help the cause. This "administrative cost heuristic" is a widespread decision rule used by consumers to allocate contributions across non-profit organizations.

While the stated goal of not-for-profit organizations is to generate revenues for their "causes," they vary in the "efficiency" of fundraising, and in effectively funneling raised resources toward their stated causes [19,20]. A charity may, in fact, be an efficient fundraiser without effectively directing resources to the causes it serves, or *vice versa*. Existing rating systems aggregate fundraising with the delivery of services, thus confounding the efficiency of two distinct functions. Inefficiency in fundraising could very easily dominate that of cause delivery, making a charity's "good work with donated funds" difficult, if not impossible to judge.

We offer a rigorous analysis of charitable efficiency based on a two-stage Data Envelopment Analysis (DEA) model yielding useful information for donors as well as SPEs as both a performance metric and benchmarking vehicle. The methodology allows an SPE to separately focus on different efficiencies (fundraising and service delivery), which are generally critical goals for such organizations.

2. Two-stage DEA

Fig. 1 presents a schematic representation of the two-stage process, in the context of SPEs, for incorporating a first stage intermediate economic good into an analysis of final outcomes. Here, f_1 represents the fundraising processes, and f_2 the service delivery process. Economically, the fundraising effort results in an intermediate product, i.e., an output of one process used as an input to the production of another product. The second stage incorporates "contributions" as an input into the production of program services delivered.

Separating fundraising from product delivery helps present a clearer analysis of efficiency. Importantly, an inefficient charity generally obtains information that permits determination of: 1) Related charities against which to benchmark; 2) what to benchmark; 3) input expenditures that have resulted in inefficiency; and 4) change in input values needed to obtain efficiency. Such information can also help in determining optimal creation of strategic alliances (cf., [21]).

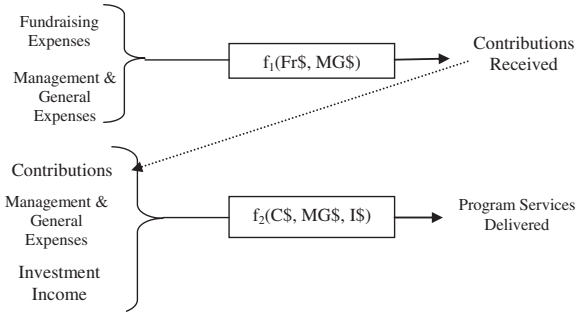

Fig. 1. Linked two-stage model for efficiency of non-profit organizations.

2.1. Formulation of charitable efficiency measures

Problems in developing and performing benchmarking in charity fundraising is a topic of ongoing research in non-profit entities (cf., [22]). However, the existence of multiple inputs and outputs presents a problem with respect to the usual "ratio" approach to evaluation of charitable efficiency[3]. DEA was designed to address this multiplicity of outputs issue in a non-profit setting. A benefit of DEA (as opposed to, say, stochastic frontier regressions) for determining efficiency is that DEA additionally yields information concerning the source of identified inefficiencies, and the changes in input values necessary to bring the examined SPE up to efficiency. For further background on DEA, together with software to implement its procedures, see [24]. Other useful sources include books by [25] and [26].

DEA uses mathematical programming to locate an "efficiency frontier" that enables an evaluation of the efficiency level for each SPE. An SPE (or any entity) that transforms inputs into outputs of some sort is referred to as a 'decision-making unit' (DMU). A DMU (SPE) which is not on the efficiency frontier is deemed inefficient. As a byproduct, DEA provides a relative efficiency measure for each unit by comparing its input/output performance to that of the other SPEs/DMUs. Additionally, the technique identifies sources and amounts of any inefficiency in the inputs and/or outputs.

Specifically, let $\{x_{ij}\}$, $i = 1, 2,\ldots,$ m denote m inputs used by DMU_j, $j = 1,\ldots,n$, to producing s outputs $\{y\}$, $r = 1, 2,\ldots,$ s. Select an SPE to be evaluated and denote it asDMU_o. In the current research, we use the well-known and universally accepted Banker–Charnes–Cooper (BCC) model [27] which consists of a ratio of weighted multiple inputs and outputs. In particular, BCC allows for variable returns-to-scale (VRS) without requiring the use of predetermined weights.

The BCC ratio form to be optimized, $(\sum_{r=1}^{s} u_r y_{r0} - u_0)/(\sum_{i=1}^{m} v_i x_{i0})$, is somewhat akin to the ratio often used to evaluate the efficiency of charity institutions. The only difference is that the weights or multipliers are determined anew for each SPE, and are "best possible" in that they are chosen to maximize the apparent efficiency of each entity. Economy of scale is allowed for by the inclusion of u_0. The u_r and v_i are nonnegative, while u_0 is unconstrained. There is an additional constraint that, using the optimal weights for DMU_0, does not allow another DMU to be "superefficient," i.e., with efficiency greater than 100%, i.e., $(\sum_{r=1}^{s} u_r y_{rj} - u_0)/(\sum_{i=1}^{m} v_i x_{ij}) \leq 1$, for all j.

Note that DEA differs from other charity rating approaches in that when others take a weighted aggregation of individual variables to determine overall efficiency, they use subjectively determined preassigned weights for combining variables. Using a fixed subjective weighting scheme can cause an SPE to appear inefficient because they may strategically value inputs or outputs differently than do the subjective weights imposed by the evaluator. It is thus important to repeat that, with DEA, the weights are *objectively* selected to allow potentially different strategies as a function of variable importance. Indeed, an inefficient SPE in DEA is actually dominated in a "Pareto" sense by other SPEs.

Maximization of the ratio $(\sum_{r=1}^{s} u_r y_{r0} - u_0)/(\sum_{i=1}^{m} v_i x_{i0})$ yields what is called the 'input-oriented' BCC model. One could also flip the ratio and minimize the quantity $(\sum_{i=1}^{m} v_i x_{i0} - v_0)/(\sum_{r=1}^{s} u_r y_{r0})$ subject to the constraint $((\sum_{i=1}^{m} v_i x_{ij} - v_0)/(\sum_{r=1}^{s} u_r y_{rj})) \geq 1$ for all j. One then gets the 'output-oriented' BCC model. These two models

[3] Examples of such ratio measures include the *Toronto Star*, which, during the week of November 11, 2002, ran a series on the efficiency of charities when using donations. They calculated efficiency as the ratio of total donor dollars raised to total dollars spent on charity work. Similarly, [23] uses a ratio of total expenses to expenses spent toward the "cause" in measuring efficiency.