Fundraising Design: Key Issues, Unifying Framework, and Open Puzzles

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Abstract.

We offer a unified conceptual, behavioral, and econometric framework for optimal fundraising that deals with both synergies and discrepancies between approaches from economics, consumer behavior and sociology. The purpose is to offer a framework that can bridge differences and open a dialogue between disciplines in order to facilitate optimal fundraising design. The literature is extensive, and our purpose is to offer a brief background and perspective on each of the approaches, provide an integrated framework leading to new insights, and discuss areas of future research.

Keywords: Charity; Fundraising; Incentives; Appeals; Integrative Framework

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1. Introduction: Three Frameworks—One Goal

The charitable sector has evolved from a set of fragmented pieces into a cohesive market that now represents one of the most vibrant parts of modern economies. Alongside this growth, the science of charitable giving has developed within distinct traditions. Indeed, extant investigations of charitable giving and fundraising span unique perspectives using different sets of foundational principles and assumptions. Some focus primarily on a micro donor-centric view whereas others involve a broader society-based view. Some invoke strict rationality while others invoke models that are not grounded in economic exchange. Rather than viewing these approaches as contradictory, we view them as complementary, and outline an integrative framework that leverages the combined insights from the literatures. In doing so, we first define them by dividing the literature into three approaches: (1) *Utility-based*, (2) *Appeal-based*, and (3) *Societal-based.*

The *utility-based approach* views donations in the context of utility maximization, wherein a donor considers marginal costs and benefits to determine the optimum donation amount. Motives for giving include benefit to others, "warm glow" from giving, wealth signaling, moral identity, social pressure, social approval and norms (Andreoni 1989; Ariely et al. 2009; Dellavigna et al., 2012).

This literature stream is grounded in two principles: (i) donors' choices can be described by a utility function, and therefore (ii) donors respond to incentives. As a result, it is critical to identify motives and design incentives. Research has investigated subsidies (Karlan and List, 2007; Karlan et al. 2011), seed money (List and Lucking-Reiley 2002), donor premiums and gifts (Eckel et al. 2017; Li et al. 2015; Newman and Shen 2012). Results of lab and field studies illustrate that matching incentives work better than rebates (Eckel and Grossman 2003, 2008). However, the utility-based approach ignores donations made for non-utilitarian reasons (Bowles 2016).

The *appeal-based approach* views donors as consumers to be appealed to. Different from the utility-based approach donors need not be maximizing utility, nor have consistent preferences over time or situations. Its goal is to recognize and satisfy the donor in an attempt to generate a 'purchase'

Scott (2017). Consumers make the choice to donate or volunteer, based on behavioral consumer appeals—like empathy, charitability, or morality-- rather than maximizing utility. One of the most prominent findings in the literature on fundraising is that an appeal on behalf of a victim identified by name or through a picture generates greater willingness to donate compared to an appeal on behalf of statistical victims (Fisher et al., 2008; Small et al., 2007). Sudhir et al. (2016) randomized advertising content to Indian new donors, and found evidence of sympathy biases such as the identifiable victim and in-group effects.

Donor appeals can focus on benefits to the recipient, or to the donor himself. A Red Cross advertisement might use a self-benefit appeal, like feelings of pride, happiness, or empowerment; or use other-benefit appeal (saving lives). Both appeals are effective in different circumstances related to the emotional valence of the appeal (Fisher et al. 2008) and the degree to which impression management concerns are salient (White and Peloza 2008).

One important behavioral motivator for individuals to give to charities involves one's social identity—a person's sense of self derived from perceived memberships in social groups (Fisher and Wakefield, 1998). Akerlof and Kranton (2000) use "alumni giving" as an example of how one's social identity may motivate charitable giving. A few studies show that people's contributions to charities are influenced by the strength of their identifications with the charities or with the local communities that the charities serve (e.g., Edwards and List, 2014, Li et al. 2017).

Research on in-group status also suggests an evolutionary basis for helping others because we tend to share more genetic material with in-group than out-group members (Pennisi 2005). Some research has proposed that perceived similarity on the basis of demographic characteristics, social distance or even shared attitudes and perceptions can motivate helping (Candelo et al. 2018). The human tendency to favor in-group versus out-group members may be adaptive because it increases the likelihood of both direct reciprocity (i.e., if I help someone they will help me later) and indirect reciprocity (i.e.,

helping someone will establish a reputation that increases the likelihood that others will help me later). Accordingly, research has revealed a strong in-group bias in helping (e.g., Lee et al., 2014).

Appealing to cues that identify social acceptability or disapproval (e.g., unwillingness to help the stigmatized, Fisher et al. 2019) can be an effective mechanism that relies on social pressure. The perceived worthiness of the recipient of a donation substantially affects giving (Candelo et al. 2019).

These findings suggest that effective fundraising appeals should focus on characteristics or circumstances that evoke empathy, social norms, and group affiliation via text, vivid images and a request for donations that is very personal and emotionally engaging, to trigger empathy (Fisher et al. 2008). There is an underlying basis for why these features influence giving, and this is where the first two approaches are related. The utility-based approach ostensibly provides an underlying model for why the appeal-based approach works in the manner that it does.

The *societal-based approach* is about factors that affect a social system rather than the individual donor. In contrast to the other two approaches, mechanisms in the societal-based approach can affect the average level of donations in the system without any explicit change to either incentives or appeals to the donor. These changes affect charitable behaviors perhaps as a by-product of other changes, but overall might have the greatest impact on these behaviors.

For example, rather than approaches based on individual choices and market-embedded economies, many historical analyses have analyzed the moral economy (e.g., Lind 2010). In these approaches, the welfare of the community is stressed rather than the welfare of the individual. This has often resulted in a sharing economy in which the strong and rich support the weak and poor (Fiske 1991; Widlok 2018). While it is sometimes imagined that the sharing economy is wholly different from the market economy, is an anachronistic form, or is restricted to hunter-gatherer societies today, sharing persists in contemporary cultures and many argue that the market is socially embedded and always has been (Belk 2010; Lind 2010). This should not be confused with the so-called “sharing economy” which is based on short-term rental and has nothing to do with sharing (Belk 2014).

According to one approach, pro-social behavior contributes to a social production function with the collective as the relevant agent. This social production function is the basis for a large literature that examines choice as a societal construct (Belk, 2007, 2010). Hence, analyzing donors in isolation ignores the most fundamental aspects of an eco-system involving interactions between people, charities, stakeholders, governments, with the codification of social norms, laws, and codes of conduct as a consequence. Continuing along the lines of a system-based view, there are also changing macroeconomic factors like economic growth, unemployment, and taxation. Due to space constraints, we do not cover these, but they are included in Figure 1.

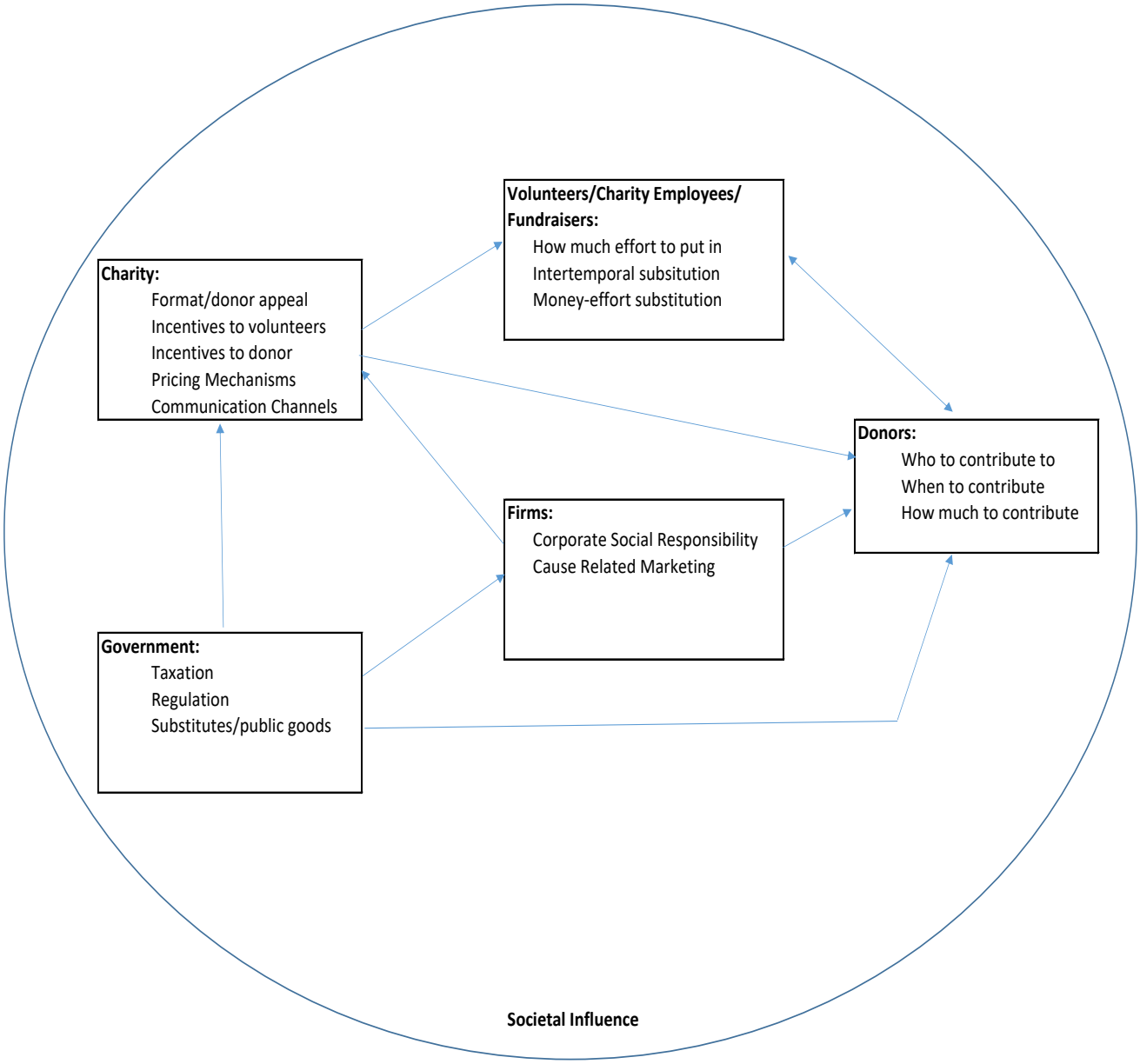
2. An Integrative Framework

While the outlined approaches are not inherently contradictory, and potentially complementary, they come from disciplines that may or may not see eye-to-eye on methodology and assumptions. Our purpose is to offer a framework that bridges these differences, and to open a dialogue between disciplines to facilitate the best fundraising design. The latter is consistent with calls by thought leaders in the fundraising community, who caution against the mainstream "donor-centric" approach to fundraising design in favor of placing 'donor behavior in the context of social-psychological theory' (Scott 2017). We argue that there are two components to an integrative framework: (1) Systems Integration, and (2) Data Integration. Systems integration refers to identifying the relevant systems that are at play and identifying the linkages between them. Data integration refers to different data sets from the different approaches, and proposing a way to integrating them.

2.1. Systems Integration

From the societal framework of donation, we must treat the choice of donations as an interaction between a broader set of actors. We start with a conceptual framework that considers the relevant actors that interact in the charity/fundraising space.

Figure 1 . The Integrated Framework



* Figure 1 distinguishes between volunteers and donors , even though many donors engage in volunteer work and vice versa. The distinction is that donors donate money and volunteers donate time and effort. As such, donors are often conceptually treated as buyers, and volunteers as labor. In reality, the distinction is far more nuanced. Because volunteers are treated as labor with mixed motives, we include charity employees in that group. Likewise, fundraisers may be volunteers or employees. Subcontractors and third-party fundraisers who are neither employees nor volunteers are subsumed in that cell as well.

**Firms are defined as companies whose primary motive is to make a profit (e.g., Ford Motor Company), who give to charity as part of a Corporate Social Responsibility (CSR) strategy. This includes Cause Related Marketing (CRM) where part of the proceeds of sales of products are donated to charity.

(1) Charity-to-donor/volunteers: This entails the interaction between charities and donors/volunteers, where donors/volunteers are driven by personal motives, and charities maximize its fundraising anticipating these motives and response functions. The works we discussed in the front end under the utility-based approach describe these relationships. Likewise, the appeal-based approach is concerned with the appeals delivered by charity's communications to potential donors/volunteers.

(2) Government-to-charity and government-to-donor: The government sector provides grants to eligible charities, and charitable giving and fundraising are driven by tax laws and regulations, and more generally by economic conditions such as employment and economic growth.

(3) Firms-to-charity: Firms contributed more than twenty billion USD to charitable organizations in 2017, accounting for roughly 5% of all private giving in the United States. This is a partially funded by cause related marketing (CM), which has proliferated in recent years.

(4) Firms-to-donors. In CM, the company will often raise donations directly, either by asking for them (e.g., at the checkout counter) or by making them conditional on consumers' purchase (e.g., Ethos donates 5 cents for each bottle of water sold). Corporate charitable giving may entail government regulation and oversight, change consumers' outside options and greatly impact the practice and dynamics in the fundraising landscape.

(5) Government-to-firms: Governments regulate social and charitable activities of for-profit firms in many ways that directly affect corporate efforts. These regulations include Commercial Coventurer (CCV) laws that regulate companies' charitable sales promotions.[2]

2.2. Data Integration

We argue that a comprehensive econometric model of charitable giving ought to take advantage of all three frameworks. The econometric framework involves (1) identifying data sources that capture

[2] Currently, 24 U.S. states have CCV laws that regulate companies' charitable sales promotions, enforcing higher levels of transparency.

multiple agents (preferably corresponding to the agent types in Figure 1), and (2) estimating the models using all data sources in an integrated manner.

Key in identifying the system is the choice of *mechanism.* The space of actions (directly and deliberately affecting charitable donations) by government, firms and charities can be referred to as "mechanisms." Experimental manipulations can influence the following mechanism choices: **(1) Choice of Fundraiser Incentives.** To stimulate fundraising, organizations often incentivize fundraisers, like tournament incentives for top fundraisers or piece-rate incentives, where rewards increase with donation levels. Little is known about the effectiveness of such incentives. It is even feared that some incentives may adversely affect outcomes by crowding out intrinsic preferences (e.g., Bowles 2016). **(2) Choice of Donor Incentives** influence the choice of charity and donation amounts through matching and rebates, but also in terms of donor recognition and material rewards (discussed above). **(3) Choice of Donor Communication** entails the choice of communication channel and fundraising appeals. Recent focus has been on usage of social networks, including peer-to-peer communication (Haruvy and Popkowski Leszczyc 2019). Different message appeals focusing on empathy have been studied by Fisher and Ma (2014) and Fisher et al. (2008), while a body of work (e.g., List and Lucking-Reiley, 2002; Karlan and List, 2007; Edwards and List 2014, Kamdar et al. 2015) focuses on quality signals and solicitation methods and finds strong sensitivity to quality signals and to direct asks. Allowing donors to direct their donations to a specific cause also results in larger donations (Eckel et al. 2017; Li et al. 2015). **(4) Choice of Pricing Mechanism.** Adding a donation into a product price is an effective way of fundraising. Participative pricing methods such as auctions and 'pay what you want' are common in charitable settings. Auctions studies can 1) measure the premium bidders are willing to pay when money goes to charity (Popkowski Leszczyc and Rothkopf, 2010), 2) examine the effectiveness of different auction formats such as winner-pay and all-pay (Haruvy and Popkowski Leszczyc 2018), and 3) measure the impact of social media in fundraising (Haruvy and Popkowski Leszczyc 2019). **(5) Choice of Channel** charities select to ask for

contributions. Sudhir and Fong (2019) consider three types of asks, all in the context of a thank you letter following a donation, and find that an explicit donation request is more effective than a Facebook like request. However, Facebook provides a low-cost channel for attracting attention and disseminating information and an opportunity for nonprofits to demonstrate their stewardship. **(6) Government Choice.** For government choice, we refer to the seminal work of Andreoni (1989) that highlighted the phenomenon of crowding out of altruism through government intervention.

2.3. Model Integration[3]

Our integrated econometric framework considers data from three distinct approaches. The integrated econometric framework is intended for choice data (choice between charities or donation amounts, etc.) that is accompanied by scales (indicating motives and orientations) and unstructured data (indicating the same). Table A1 provides an overview of different motivation and orientation scales derived from these approaches. While we integrate all types of data in the proposed framework, the starting point is the utility-based approach. We incorporate both donors and volunteers. Hierarchical Bayesian estimation can be used to allows for different realizations of time/money choices and different relationships between orientations and decisions (Satomura et al. 2011).

A challenge in implementing the *appeal-based* approach is the number of potential covariates that can be used to describe a donor. Constructs such a moral identity, empathy and charitability are often measured on scales involving multiple questionnaire items, and their direct inclusion in the heterogeneity distribution leads to a coefficient matrix of high dimension. To reduce the dimensionality of the coefficient matrix observed covariates can be replaced with model-based summaries of much lower dimension.

Kim and Allenby (2019) propose an integrated model of choice, scaled response and text data that has the potential to provide a more complete picture of donor preferences than available in existing

[3]For a more complete and more technical exposition, see Online Appendix A.

models. Model integration is achieved through the shared parameters that effect the interpretation of each data element. They model text and scaled response data from a respondent as a mixture of archetypical responses, similar to that encountered in traditional market segmentation analysis that posits exemplar, or typical respondents. The grade of membership probabilities for each respondent serve as covariates that are linked to the heterogeneity distribution of the choice models as in Dotson et al. (2019) or could be incorporated as covariates describing the text of an appeal. The ability to incorporate scaled responses and text data into a general model of giving is useful for understanding the effects of consumer motivations and charitable appeals.

The *societal-based* approach examines how consumers derive benefit from the aggregated giving to a specific cause. The utility function can be expanded to include giving by others, or aggregate giving may affect the marginal utility of specific offers by incorporating this information in the vector of covariates. The covariates in the heterogeneity distribution and marginal utility allow for personal characteristics and charitable appeals to interact. Some of these covariates may originate from government and firm initiatives as illustrated in Figure 1, as well as social norms and cultural influences (Fiske 1991; Widlok 2018).

3. Future Research Directions

As List (2011) points out, the tools in the utility-based approach are insufficient for addressing many critical queries. We summarize a few of the critical queries raised in our investigation as they pertain to future research directions.

Context. An important direction for future research is to systematically integrate the study of fundraising effectiveness with context – that is, depending on the target audience, the appeal, the cause, organization, platform, and scope.

Substitutes (and complements) to donation. Donation is one aspect of social actions. We identified others. We find that one substitute (which is possibly a complement in some settings) to

charitable donation is volunteering effort (as it relates to social capital, Ma 2019). Other substitutes include socially responsible purchasing via CM campaigns (Krishna 2011). There is real concern that firms may strategically use CM to siphon away social goodwill (Krishna et al., 2019). Along the same lines, there is some evidence that bidders in auctions are willing to pay a premium when money goes to charity (Haruvy and Popkowski Leszczyc, 2018; Popkowski Leszczyc and Rothkopf, 2010). In summary, little is known whether other activities, such as recruiting volunteers or selling merchandise, might interact to increase or decrease overall donations.

Intertemporal substitution. Does greater giving now come at the cost of lower giving later, or might it lead to greater commitment and giving in the future (Kamdar et al, 2015)?

Competition between charities. Little is known about whether successful campaigns by one organization might help or hurt other charities' fundraising efforts. We do not have a clear idea when a campaign will "lift" or merely "shift" giving among charities. For example, giving to natural disasters do not seem to come at the expense of other donations (Scharf et al. 2017). Charities may increase total giving by coordinating their campaigns, so that the decision to give across multiple charities is made simultaneously instead of sequentially, as requests arrive (Eckel et al. 2019).

Past experimental research on fundraising that we reviewed in this work demonstrated many effective mechanisms, but each only within a specific setting, at a single point in time in a particular culture. As a result, there is only piecemeal understanding of fundraising effectiveness and how it interacts with specific contexts. The challenge we face is how to best use the multiple methodologies at our disposal – experiments in the lab and in the field, observational studies, use of "big data" techniques, formal theory – to address these important remaining questions. The integrated approach presented here is intended to address these gaps in a way that can be applied across settings, across cultures, and over time.

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Supplementary Materials

Online Appendix A. **Model Integration. The complete setup**

The utility-based framework implies choices, subject to constraints, in response to incentives. In the utility-based approach, we gauge donor reactions through a focus on donor choices (e.g., who to contribute to, the amount and the timing/frequency of contributions). From the appeal-based approach, we must recognize that context, language, and images matter. This means that the structure of a utility function can be interacted with text and image appeals – allowing for unstructured data, such as open text, to be incorporated in the analysis. Table A1 provides an overview of different concepts/constructs derived from the different approaches.

The proposed method incorporates both incentives and motivations. Incentives affect the budgetary constraint in various ways, such as offering matching funds that affect the price vector, or possibly an incentive that applies after a certain amount of giving. This later incentive produces a kink in the budgetary allotment (see Howell et al. 2016). Incentives may also increase the desirability of an offering, and so it is useful to consider extending the model to allow the marginal utility parameter to be a function of covariates, where a logarithmic specification is used to ensure the positivity of marginal utility, and the covariates describe aspects of the offer. These aspects can interact with the covariates in the distribution of heterogeneity to identify personal characteristics, such as an adhering to social norms, that are responsive to a particular mechanism.

So now that we identified these important multiple sources, the question remains: How do we integrate them together? The starting point for an integrated model of charitable giving is the utility-based approach with utility function $u(x, z)$ to be maximized subject to a budget constraint $p'x < E$where x is a vector of donation amounts to various alternatives, z is an outside good, p is the cost of donating, and E is the budget. Donors maximize their utility when the ratio of marginal utility for a

donation, $u_i = \partial u / \partial x_i$, divided by price of donation p_i is equal across alternatives with positive demand, and greater than the corresponding ratio for alternatives with zero demand:

$$\frac{u_i}{p_i} = \frac{u_j}{p_j} \text{ for } x_i > 0 \; and \; x_j > 0$$

$$\frac{u_i}{p_i} > \frac{u_j}{p_j} \text{ for } x_i > 0 \; and \; x_j = 0$$

The direct utility model can incorporate volunteers who donate their time in addition to money by assuming volunteer derive utility from donations of both time and money:

$$Max \; u(x,t,z) \; s.t. \; p'x < E \; and \; q't < T$$

where *t* is a vector of donated time and *T* is time-based budget limit. The "units" of monetary and price donations in this framework are often equal to the corresponding allocation, and when this occurs we have $p = q = \iota$, a vector of ones.

The choice options *i* and *j* are characterized by parameters that reflect marginal utility (ψ) and aspects of satiation (γ) in a manner consistent with a valid utility function, and the model parameters can be heterogeneously specified for consumers using a random-effects model:

$$\beta_h = (\psi_h, \gamma_h, E_h, T_h)' = \Gamma z_h + \xi_h$$

where z_h is a vector of covariates that describe consumer *h*, and ξ_h is a random-effect error term, often assumed to be distributed multivariate normal. Hierarchical Bayesian estimation algorithms for these types of models can be found in Allenby, Kim and Rossi (2017) and Satomura, Kim and Allenby (2011).

The *utility-based* approach to donations investigates incentives and motivations to donation. Incentives affect the budgetary constraint in various ways, such as offering matching funds that affect the price vector *p*, or possibly an incentive that applies after a certain amount of giving. This later incentive produces a kink in the budgetary allotment (see Howell, Lee and Allenby 2016). Incentives may also increase the desirability of an offering, and so it is useful to consider extending the model to allow the marginal utility parameter to be a function of covariates:

$$\ln \psi_{ih} = x_i' \delta_h + \varepsilon_{ih}$$

where a logarithmic specification is used to ensure the positivity of marginal utility, and the covariates x_i describe aspects of the offer. These aspects can interact with the z_h covariates in the distribution of heterogeneity to identify personal characteristics, such as an adhering to social norms, that are responsive to a particular mechanism.

The *appeal-based* approach identifies product characteristics x_i that are attractive to specific groups of potential donors. A challenge in implementing this approach is the number of potential covariates z_h that can be used to describe a donor. Constructs such a moral identity, empathy and charitability are often measured on scales involving multiple questionnaire items, and their direct inclusion in the distribution of heterogeneity leads to a coefficient matrix Γ of high dimension. One approach to reducing the dimensionality of the Γ matrix is to replace observed covariates z_h with model-based summaries g_h of much lower dimension.

Kim and Allenby (2019) propose an integrated model of choice, scaled response and text data that has the potential to provide a more complete picture of donor preferences than available in existing models. Model integration is achieved through the shared parameters that effect the interpretation of each data element. Their integrated model is an extension to a grade of membership (GoM) model (Erosheva et al. 2007) that models text and scaled response data from a respondent as a mixture of archetypical responses, similar to that encountered in traditional market segmentation analysis that posits exemplar, or typical respondents. The grade of membership probabilities for each respondent serve as covariates that are linked to the heterogeneity distribution of the choice models as in Dotson et al. (2019) or could be incorporated as covariates x_i describing the text of an appeal. The ability to incorporate scaled responses and text data into a general model of giving is useful for understanding the effects of consumer motivations and charitable appeals.

The *societal-based* approach examines how consumers derive benefit from the aggregated giving to a specific cause. The utility function can be expanded to include giving by others as in Andreoni (1989), or aggregate giving may affect the marginal utility of specific offers by incorporating this information in the vector of covariates x_i. The introduction of covariates into the distribution of heterogeneity and model for marginal utility facilitates the study of how personal characteristics and characteristics of the charitable appeal interact and can be optimized. Some of these covariates may originate from government and firm initiatives as shown in Figure 1. Social norms and cultural influences are other important factors that would need to be considered (Fiske 1991; Widlok 2018).

Table A1 – Overview of different scales for constructs related to Utility-based, Appeal-based and Relationship-based[4] Approaches.

Scale/Author	**Description**
The *utility-based approach (measuring motives)*	
Altruism- Eckel and Grossman, 1996, 1998)	11-point dictator giving scale - dictator transfers an amount to another individual/entity. One problem, the tradeoff between self and other is always one-to-one, so the choice of the amount to give may be a preference for equitable distribution rather than for altruism.
Altruism- Iriberri and Rey-Biel (2011)	Choices between payoff alternatives, such that the tradeoff between own and other payoffs is increasing or decreasing, so that the choice of one alternative can identify the weight one assigns to another individual.
Social preferences - (Charness and Rabin, 2002)	Charness and Rabin (2002) develop a sequence of binary choices intended to measure and separate three classes of social preferences including social welfare maximization, fairness, and reciprocity.
Appeal-based approach (measuring reaction to a particular message, content, or stimuli)	
Strength of emotional attachment - Thomson, MacInnis and Park (2005)	Thompson et al. (2005) developed a well-known multiple emotional attachment scales to evaluate brand messages, including affectionate, friendly, loved, peaceful, passionate, delighted, captivated, connected, bonded, and attached.
Information cues - Resnik and Stern (1977)	Resnik and Stern (1977) developed a classification system for advertising information based on fourteen "cues" or categories that represent types of information potentially useful to consumers.
Emotional Appeal –Weinberger and Spotts (1989), Biswas et al. (1992)	Raters are asked to evaluate whether a message used an emotional appeal (humor, sex, fear, and guilt), based on the perceived intent of the message sender.
Reactance - Dillard and Shen (2005)	When a message is perceived as restricting the receiver's choices, reactance *is the unpleasant motivational arousal that results. Dillard and Shen (2005) offer a composite of self-report indices of anger and negative cognitions.*
Relationship-based approach (measuring perceived relationships with others and society)	
Relationship with charity - Hon and Grunig (1999)	Likert scale with questions pertaining to the relationship between donor and charity, such as "This charity can be relied on to keep its promises," and "This charity is about substance and not show."
Social orientation - Lee and Robbins (1995)	Individual's sense of belonging, such as "I feel disconnected from the world around me," and "I feel so distant from people."
Societal Charitable orientation -Webb et al. (2000)	Likert scale questions on perception of a charitable societal norms ("People should be more charitable toward others in society") and own preference ("Helping troubled people with their problems is very important to me").
Social Identity - Nario-Redmond et al. (2004)	Likert scale from: ''not at all important to who I am'' to ''extremely important to who I am'' on measures of social identity ("the membership I have in various groups," "the places where I have lived," "the similarity I share with others in my groups") and personal identity ("my need to be completely distinct and unique from everyone else"; "my complete individuality").
Peer pressure - Berndt (1979)	The **Peer Pressure Inventory** was designed to assess the perception of **peer pressure** in a number of domains, including **peer** social activities, misconduct, conformity to **peer** norms, and others via Likert scale items.

[4] Relationship-based approach offers scales that are related to both societal-based and appeals-based approaches.

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