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Some causes are more equal than others? The effect of similarity on substitution in charitable giving

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ABSTRACT

Donation matching and other directed interventions to encourage prosocial contributions may affect contributions through other channels. In an experimental dictator game where subjects may donate to two different real-world charities, we simulate activity-specific interventions by varying the relative productivity of those charities, and introduce several treatments to test whether (i) subjects substitute across charities, and (ii) whether substitution occurs even across (possibly very) dissimilar alternatives. We find that significant substitution occurs in all cases, but that the effect is weaker the more dissimilar the charity alternatives. In our most dissimilar treatment, substitution is only half as large as when alternatives are very similar.

1. Introduction

People who set out to champion some prosocial cause — be it with respect to their fellow man, their community, the environment, or some abstract ideal — are likely to find that there is more than one way to contribute to that cause. This is perhaps especially apparent in charitable giving, where a large number of charities typically engage with any given cause. Yet interventions to increase contributions may target a specific prosocial alternative. For example, charities commonly offer matched donations, where a wealthy donor matches incoming contributions dollar-for-dollar or by some other proportion. While there is much research on how such schemes affect donations to the charity being targeted (e.g. Karlan and List, 2007; Huck and Rasul, 2011), it is less well understood how interventions spill over to contributions made through *other* channels. The present paper contributes to filling this gap by presenting experimental evidence on productivity-driven substitution patterns across different charities. The main novelty of our experiment derives from an effort to chart the *reach* of such effects: that is, do they arise even across (very) dissimilar alternatives?

Despite the clear practical relevance of this issue, we are aware of no other study that addresses it directly. While there are several recent experiments on substitution in charitable giving, these focus mainly on identifying the effect itself and offer no systematic comparison of outcomes across different sets of charities. For example, Reinstein (2007), Null (2011) and Filiz-Ozbay and Uler (2016) run modified dictator games where subjects may donate to a fixed set of real charities under varying relative matching and donor rebate rates. All three studies find that when the productivity of one charity rises

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(price falls), subjects spend fewer resources on other charities. Note that such substitution can be viewed as another type of 'crowding-out': one that arises between different alternatives for private contributions rather than public and private contributions.[1]

The natural suspicion is probably that cross-price effects are less pronounced for dissimilar alternatives. Behavioral economists have long argued that much of human decision making is characterized by mental accounting (Tversky and Kahneman, 1981; Read et al., 1999; Thaler, 1999). This practice involves dividing expenditures into budgets or categories that are not fungible: people are reluctant to, for instance, move resources earmarked for food purchases to cover expenses on entertainment (Thaler, 1985, 1999; Heath and Soll, 1996). It then seems reasonable to expect that a price shift has greater impact within its relevant account than across accounts. In our case, suppose charities A and B are both available and the productivity of A rises. Donors will then be less inclined to shift resources from B to A if these charities contribute toward different mental accounts than if they contribute to the same one. Hence, substitution is more pronounced among 'similar' charities.[2]

Our experiment, which was conducted in Lund, Sweden, was a real-effort based version of the dictator game where subjects could donate money to two real-world charities by first earning 'points' in a real-effort task. The production-and-allocation decision was repeated over multiple rounds where, to mimic the effect of a charity-specific price shift, the rate of actually donated Swedish crowns (SEK) per point of each charity was systematically varied. A recurring theme in the literature on substitution is that the amount of 'good deeds' people are capable of within a given domain is either close to being fixed (so policies simply cause reallocation within that fixed budget), or can increase as a result of a price shift. Our design allowed for both possibilities: substitution follows from standard relative-price effects, but complementarities can also arise in principle if, as a result of increasing charity-specific exchange rates, subjects earn more points overall and allocate more to both charities.

Nevertheless, our theoretical prediction, derived from a multi-activity generalization (Ek, 2015) of a variant of the warm-glow model for public-goods contributions (Andreoni, 1990; Brekke et al., 2003), is one of partial crowding-out across alternatives: as the exchange rate of Charity A rises, fewer points are spent on Charity B, and if moreover Charity A is initially more productive than B, total donations received by both charities rise. Our experimental data is clearly consistent with this hypothesis.

Furthermore, to test whether people's categorization of alternatives may explain the magnitude of subsequent cross-price effects, we include four between-subject treatments, isolating two dimensions along which charities may differ: geographical scope, and the cause involved. In all treatments, one charity was UNICEF, a global organization concerned with the welfare of children. The other charity differed across treatments. In our baseline treatment, UNICEF was paired with another charity addressing children's needs globally. By contrast, our 'dissimilar' treatment paired UNICEF with the local office of a major Swedish environmental NGO. To fully isolate the effect of each dimension (local/global and cause involved), we also included two intermediate treatments. Results show that while crowding-out occurs significantly in all treatments, the effect is systematically weaker the more dissimilar the charity alternatives. The crowding-out effect in the dissimilar treatment is only half as large as in the similar treatment.

Our design required subjects to allocate all earned points to charity, implying that the cost of contributing was simply the purely non-monetary inconvenience cost of having to perform the task. By contrast, other real-effort based dictator games in the literature (Lilley and Slonim, 2014; Brown et al., 2016) retain a trade-off between money to self and money to charity by allowing subjects to divert output from the effort task to a private account. Thus, in relating our experiment to charitable donations, we implicitly assume that productivity shifts have similar effects under inconvenience costs as under monetary costs. On the other hand, this focus on inconvenience costs may also make our design highly applicable to other kinds of prosocial behavior. Just as donation matching is charity-specific, public policy to encourage other types of prosocial behavior may be activity-specific. For instance, it is common for local governments to promote household recycling in ways that increase the productivity of individuals' efforts, and this may drive an increase or a decrease in other environmental behaviors, such as buying organic products.

Existing field studies on policy-driven 'behavioral spillovers' (Dolan and Galizzi, 2015), while few in number, have also tended to find evidence of crowding-out. Jacobsen et al. (2012) studied a green-electricity program in Memphis, Tennessee, finding that households that participated at a minimal level (paying the smallest possible increment to fund alternative energy) increased consumption of (non-green) electricity after they joined the program. Tiefenbeck et al. (2013) similarly found that a campaign to conserve water at a housing complex in Massachusetts, while leading to decreased water use, also drove increased electricity consumption. Crowding-out, then, undermines a given policy, and any cost-benefit analysis that ignores spillovers will overestimate policy impacts. Our results on similarity suggest that crowding-out will be larger for more similar prosocial activities.

[1] In a similar approach, Brown et al. (2016) and Lilley and Slonim (2014) examine donor choices across different modes of contributing to a single charity (monetary donations and volunteering). They also find negative cross-price effects. Again however, neither study compares outcomes across different sets of prosocial alternatives.

[2] While economists have tended to consider mental accounting a bias, this type of behavior may be entirely consistent with the standard model of consumer choice, with mental accounts simply giving structure to the person's substitution patterns. For example, it may well be rational (though, we suspect, rare) to view the distinct physical processes underlying climate change and eutrophication as represented by different public goods (and hence put them in different accounts) rather than by some monolithic 'environmental good'.