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Lohse, Johannes; Scharf, Kimberley

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INTER-CHARITY COMPETITION AND EFFICIENCY

Considerations beyond fundraising and tax incentives for giving

Johannes Lohse and Kimberley Scharf

Setting the scene: the non-profit sector in an uncertain economic environment

Recent national and global economic challenges have revived interest in understanding the extent to which market economies can rely on the non-profit sector's essential and complementary role in enabling economic stability and growth. The austerity measures put in place across many EU countries in the aftermath of the financial crisis of 2008 and post-pandemic government spending sprees have widened the scope and the role of some parts of the charitable sector in supplying vital public goods while narrowing the scope and role of other parts of the sector. At the same time, the economic burden of COVID-19 on household finances (Bhutta et al., 2020) has brought new challenges to the entire charitable sector by limiting fundraising opportunities, which again depend upon donor, charity and public-sector responses to a changing and uncertain sectoral landscape. Especially charities holding low financial reserves were negatively impacted by a sudden loss of funding opportunities due to COVID-19 (Mirae and Mason, 2020).

These financial strains have put additional pressure on charities to be innovative in their fundraising strategies. They have also renewed academic interest in the more general questions of whether the charitable sector is an efficient producer of charitable outputs and whether these outputs have the right characteristics, such as quality and composition. Questions about efficiency and characteristics are important because the charitable sector not only provides a significant proportion of public goods and services but also because substantial amounts of support from the public purse are directed towards it. For instance, in 2017/18, the charitable sector in the United Kingdom was composed of 166,592 voluntary organizations that contributed £18.2 billion (about 1.5% of GDP) to the economy and employed 909,088 people (UK Civil Society Almanac, 2020).

While we have reached a better understanding of how charities and donors interact on the input, or fundraising, side of the marketplace (see Andreoni and Payne, 2013), there are

fewer answers to questions relating to the output side of the market, specifically with respect to measuring overall efficiency and the optimal size and composition of the charitable sector. Issues of efficiency and composition in the charitable market tie in to the more general problem of measuring the efficiency of public goods production and its importance for social welfare (Atkinson, 2005; Simpson, 2009).

Coercive taxation has traditionally been interpreted as a means of overcoming the free-riding problem in public good provision and therefore underlies the central argument for government provision of such goods. Charities, on the other hand, lack the coercive power of the state. Instead, if they are to provide any output, they have to acquire resources from others (volunteer time or government handouts) or from devising fundraising strategies aimed at increase charitable income through altering donors' free-riding incentives. Whether fundraising strategies are successful depends on how donors respond to them. There is a large and growing evidence base about this "science of philanthropy", which mainly focuses on donor motives and on understanding how a charity can design the "perfect ask", that is, how individual charities can maximize the total amount of donations received (see, e.g., List, 2011; Andreoni and Payne, 2013; Vesterlund, 2016). However, while insights into optimal fundraising strategies provide useful answers to the question of whether fundraising is profitable to individual non-profits seeking to maximize their charitable income, they do not speak to questions related to production efficiency or the optimality of the size and shape of the sector. Those questions require an even broader perspective than that taken thus far (see Andreoni and Payne, 2013, for a discussion).

Here we explore this broader perspective. We do this through the lens of recent research that speaks to these questions in settings of inter-charity competition and donor responses when the following considerations are taken into account: (i) the distribution of donations across charitable causes, across time and in aggregate; (ii) the technological choices charities make when deciding on how to convert donations and other inputs in the production of charitable outputs; (iii) the structure of charitable markets. Using insights from (i)–(iii), we then briefly examine the role of government and tax incentives.

In devising their fundraising strategies, individual charities compete with other charities for soliciting funds from the same pool of potential donors. Yet it is donor responses to these fundraising drives that ultimately determines what happens to aggregate donations in the sector and the distribution of those donations across organizations within the sector. We are only beginning to understand how donor motivations interact with fundraising efforts when charities engage in fundraising competition. In particular, the successful fundraising drive of one charity could come at the expense of reducing donations received by other charities, as would be the case, if donors had a fixed budget for altruism. Whether donors' budget for altruism is indeed fixed (leading to 'fundraising cannibalism') is ultimately an empirical question that has not yet been fully settled (Ottoni-Wilhelm et al., 2021; Gee and Meer, 2019). Some stylized facts and findings support the fixed budget hypothesis, while others contradict it. For instance, from 2002–2017, improvements in fundraising technologies that are a direct result of the "science of philanthropy" have not significantly increased the total pot of donations in many countries. In the United States, giving to non-profits has been around 2% of GDP each year (Giving USA, 2018). Therefore, to assess how inter-charity competition affects the charitable sector's total income and the way it is distributed across its members, we need to understand exactly how fundraising competition drives specific patterns of donor responses not only in aggregate but also across charity space and time.

We have more to learn about how donors' motives for giving influence charitable donations and their distribution across causes, but we also need to develop a better understanding of how charities choose the production technologies that they use to convert funds and other inputs

into outputs. Fundraising competition between charities can result in one of three outcomes in terms of the charitable income of the sector ‘net of fundraising costs’, that is, the ‘income pie’ of the sector: this pie can become smaller, stay the same or increase due to competition. If and only if all charities are operating with the best production technology for transforming donations into charitable goods and fundraising competition does not influence these technology choices, one could safely argue that fundraising competition that results in a bigger income pie is also unambiguously welfare enhancing. However, this unambiguous link between welfare and the size of the income pie can easily be broken if engaging in fundraising competition redirects funding towards charities that do not choose the best technology for transforming donations into charitable goods. In other words, fundraising competition may well alter the incentives for charities to be efficient producers of charitable goods. If true, the reverse effect can equally materialize: fundraising competition that directly reduces the net income of the sector but at the same time results in better technology choices could still enhance the overall performance of the sector if the efficiency gains from better production technology choices outweigh income losses. In sum, the ‘size of the income pie’ is only an insufficient proxy for the ‘size of the output pie’, the thing that matters most for evaluating performance if charities are to be considered efficient producers of public goods.

Which of these cases occurs depends on how donors respond to fundraising competition and how charities respond to those donor responses in terms of the technology choices that they make. It may also be that donors are directly influenced by the technological choices of charities, and if their donations are directed towards inefficient producers, charities may compete with other charities by adopting inferior technologies.

There is not much research that looks at these issues, but there is some emerging evidence that, unlike in the private sector, inter-charity competition can lead to an inefficient selection of providers and/or adoption by charities of inefficient modes of production. There are two main reasons that have been proposed for this. First, even if donors are fully aware of charities’ performance, they could fail to coordinate their donations on the most efficient provider (Name-Correa and Yildirim, 2013; Perroni et al., 2019). Second, efficiency considerations may not be the foremost driver of their donation decisions (van Inwaarden, 2009; Ryazanov and Christenfeld, 2018). Such inefficiencies will be exacerbated if donors are not able to verify the quality of charities’ output, which can lead to a higher quantity of low-quality charities entering the market or remaining in operation (Scharf, 2014; Krasteva and Yildirim, 2016). These explanations suggest that there should be a refocusing of the discussion about fundraising itself towards a more holistic assessment of the determinants of economic performance (efficiency) and ways in which informed giving can be promoted.

There are a limited number of papers addressing the implications of inter-charity competition for the structure of markets in the charitable sector. Fundraising, donor responses, government incentives and societal needs all determine the size and shape of the charitable sector. The first question is whether fundraising competition has led to an excessive size of the charitable sector. Excessive size can be the direct result of lacking competition in other aspects of charitable markets, such as prices or product quality. Apart from size, spatial factors play a crucial role in determining the structure of the charitable market. Not only is there empirical evidence that donors display a preference for giving to local charities (Tremblay-Boire and Prakash, 2017; Kessler and Milkman, 2018; Gallier et al. 2019a, 2019b), but there are also theoretical reasons to expect charities to specialize and localize (Bilodeau and Slivinski, 1997).

The previous discussion not only raises important considerations that need to be taken into account when assessing the performance of the non-profit sector; it also highlights the need to re-evaluate the relationship between the charitable sector and the public sector (e.g., whether

privately provided charitable goods are substitutes or complements for public provision) and potential policy instruments for incentivizing efficiency in the sector as a whole (Atkinson, 1995). As we discuss more fully in the following, there is no sound efficiency-based rationale for government to be a provider of private goods. Yet such rationale exists for government to step in as a provider of public goods and services. What is less clear is whether government is better equipped to provide these in comparison to the charitable sector. Getting at the answer requires us to consider under what conditions government would provide the same varieties of charitable goods and services as the charitable sector and which form of provision, public or charitable, is best aligned with recipient preferences. It may be that fundraising competition in the charitable sector leads to more efficient outcomes than public provision. In this case, questions arise as to whether tax incentives or direct government grants are more effective at incentivizing charitable contributions, as well as questions about how social welfare calculations take into account measures of crowding-out effects and the cost of frictions of being a donor and/or claiming incentives. Besides tax incentives for giving and direct government grants, alternative forms of government intervention will also matter for welfare calculations. These could include subsidization of verifying output quality when there are information asymmetries between charities and donors.

As a starting point for considering the broader perspective we propose here, let us consider how the effects of competition differ between the non-profit sector and the for-profit sector of the economy. The standard mechanism through which positive selection is promoted in the provision of private goods is market competition. In the case of competition between for-profit firms producing private goods, the profit maximization objectives of firms are in structural opposition to those of consumers and to those of other firms. This opposition can nevertheless result in the selection of efficient firms when prices are allowed to play their role of coordinating demand and supply in different markets. Absent other market frictions (e.g., incomplete markets and incomplete information), perfect competition in the markets for private goods will result in exit by all firms that cannot profitably engage in marginal cost pricing. Competition limits entry and in the long run ensures that firms with an inefficient production technology (i.e., firms that are bad at converting capital and labour inputs into outputs) will incur losses until they are driven out of the market, customers get the products and quality they pay for, the number and size of firms is optimal and firms use a combination of labour and capital that allows them to produce goods in a cost-efficient manner (Arrow and Debreu, 1954).

Competition in the non-profit sector is rather different. By definition, charitable providers do not operate as for-profit entities with profit maximization objectives. Furthermore, the public goods and services they supply are characterized by non-rivalry and non-excludability in consumption, so the price mechanism does not work to clear markets. The lack of a price mechanism means that the selection of efficient charities through competition will be less powerful than the selection of efficient private firms through market competition: a charity that values its own activities comparatively more than those of similar charities may choose to operate even when it is comparatively inefficient, as long as the opportunity cost of continuing to operate, in terms of output lost relative to the potential output that could be achieved by other, more efficient charities, is not too large. In sum, competition in the non-profit sector does not put a brake on entry of charities that use inefficient production technologies. These can enter into a new market or continue operating as long as their funds are sufficient to cover their fixed costs. This lack of the disciplining effect of prices can easily result in a market structure where multiple charities of various sizes and geographical scope offer comparable goods and services yet differ in how efficient they are at converting the resources supplied by donors into these goods. Similarly, when quality is not readily observable, or the recipients of charitable goods

cannot choose between multiple locally differentiated charities, charities offering low-quality services can co-exist with higher-quality providers. In both settings, the overall level or quality of public good provision could be improved if charities with efficient production technologies prevail. However, such quality differences are not readily observable for potential donors or targeted by public sector interventions if outputs are hard to measure because they are intangible, non-homogenous or uncountable (Scharf, 2014). Competition between charities supplying such outputs hence mostly takes the form of competition for inputs in which charities try to convince donors to give. Similarly, with current government subsidies and tax policies as a second source of charitable income, it is difficult for government policies to differentiate between lower- and higher-quality providers. A more targeted approach of subsidizing the charitable activities of the most efficient providers would be needed to replace the disciplining role that market competition plays in the private sector.

In the remaining sections, we will elaborate on (i)–(iii) in greater detail first separately and then jointly before concluding with (iv) and an outlook on a research agenda that may help to better understand how competition between charities can but may not improve the quantity and quality of goods provided.

An overview of inter-charity fundraising competition

Charities' fundraising strategies aim at generating income, which is then used to fund the provision of cause-specific public goods and services. Fundraising strategies often involve using matches or rebate incentives to lower a donor's perceived price of giving.¹ Advertising is the private-sector analogue to fundraising in the charitable sector. In the private sector, advertising expenditures in a perfectly competitive market are a waste of resources. Products are homogenous, so advertising does not lead to higher product quality, more efficient methods of production or more income for the market. Nor does it lead to better information for consumers, since a perfectly competitive marketplace is characterized by complete information. Advertising serves only to influence a consumer's choice of which firm to buy from (Schmalensee, 1972). Whether advertising is also a waste of resources when private markets are characterized by imperfect competition is less clear. On the one hand, if advertising has no social value (e.g., providing better information to the consumer), it is wasteful, resulting in higher prices for consumers and/or barriers to entry for new firms. On the other hand, if advertising is informative, it could enhance competition (through lower prices or weaker barriers to entry for innovation on the part of competitors) and result in a positive social value.

Non-profit organizations are not the same as private firms. In particular, non-profit organizations do not have profit maximization as their objective and so, unlike for-profit firms, face a binding non-distribution constraint. They lack a residual claimant for surpluses or losses incurred. The jury is still out on what motivates charitable organizations instead, but the literature suggests that a mix of prosocial and self-interested motivations are at work. Rose-Ackerman (1982) was the first to link charity motives to fundraising behaviour by showing that competition in charity markets (as measured by the number of charities offering homogenous outputs) leads to excessive fundraising and does not generate an increase in total donations going to the sector. For any market size, inter-charity competition in fundraising efforts merely convinces donors to choose one of many otherwise identical charitable providers.²

Rose-Ackerman (1982) also showed that an increase in competition for donations in the sector leads to more entry by charities, which each increase their fundraising activities to the point where the marginal cost of fundraising approaches its marginal benefit. Although we are not aware of any evidence that speaks to this, from an empirical perspective, if charities are, at least

in part, driven by self-interested motives, we would expect increases in the number of charities in the market to be reflected in changes in fundraising efforts and vice-versa.

The baseline excessive fundraising result of Rose-Ackerman occurs in a world where charitable outputs are homogenous. In the real world, charitable markets do not offer up homogenous outputs. The sector is incredibly diverse in terms of the differentiation of its various outputs. This differentiation could be defined over the output itself or over the location of the output. If charitable outputs are not homogeneous, the conceptual relationship between the degree of competition as measured by an increase in the number of charities and the amount of fundraising that a charity engages in is not a priori clear: having to compete with more charities may prompt a charity to do more fundraising (as in Castaneda et al., 2008), but it may also reduce the effectiveness of any given fundraising drive, inducing a charity to reduce its fundraising efforts.

Distribution of donations across charitable causes, across time and in aggregate

In a differentiated charitable sector where charities' fundraising efforts drive competition for donations, how does fundraising influence donors' decisions about how much to give and which charities to give to? The theoretical concerns about the efficiency costs of excessive fundraising on the input side largely depend on what donors do in response to fundraising initiatives. Do donors respond to fundraising drives by simply shifting their donations to the charity with the more successful fundraising initiative, do they lift the amount they give to all charities, or do they shift and lift their donations? This is mainly an empirical question. However, its answer is crucial from a social welfare perspective. Only when fundraising activities lead to a net increase of giving to the sector as a whole (i.e., if there is a lift) can they be seen as a non-wasteful way of raising the level of public goods provided. If, instead, one charity loses what the other charity gains (i.e., a shift), fundraising is wasteful if charities are otherwise homogenous.

The empirical literature on fundraising and charitable inputs has recently turned to answering the question of how fundraising activities by one charity affect the income of other charities and thereby the overall sum of donations available to the charitable sector (Ottoni-Wilhelm et al., 2021; Gee and Meer, 2019). Understanding these effects is empirically challenging, as it is rarely possible for the researcher to observe the whole universe of giving (of time, money or in-kind donations) over the whole space of charities while being able to change the fundraising activities of one charity or cause randomly. Even if sufficiently detailed data were available, they would also need to be available over a long time period to understand how earlier giving to one charity affect giving to another charity later or vice versa (Ottoni-Wilhelm et al., 2021). Despite these challenges, there is now a growing number of experimental and empirical papers that try to understand these effects of competition on the total amount of donations flowing into the charitable sector (see Andreoni and Payne, 2013).

Due to the empirical challenges described previously, none of the existing studies can provide a full answer to this question. However, together, they indicate several regularities in the patterns of giving that may result when charities compete for a given pot of funds.

Several studies investigate how promoting giving to one charity reduces the amount given to another charity project at the same point in time (Meer, 2017) and whether the additional amount given to one charity is the same, larger or smaller than the amount lost by the other charity. Such spill-over effects are probably largest when charities offer a homogenous public good such that donors may not hold strong preferences over who provides the public good. Evidence on this question comes in three forms: lab experiments, field experiments and empirical studies.

While highly stylized in nature, laboratory experiments on the extent of spill-over effects offer a high level of control over the observed outcomes by holding constant any other shift parameters that may affect giving. The findings from the experimental laboratory are mixed, however. In line with the theoretical concerns raised in Rose-Ackerman (1982), showing a promotional video does not raise total donations while shifting donations to the charity conducting this fundraising activity (Harwell et al., 2015). Similarly, Deck and Murphy (2019) find that introducing a match for donations reduces the amounts received by other charities that do not offer a similar price incentive for giving. Finally, Schmitz (2019) exogenously varies the size of the charitable market for a homogenous charitable good in the presence or absence of a match. In line with the other studies, matching results in a negative spill-over: Giving to the matched charity increases, while donations to the unmatched charities decrease such that aggregate giving remains unchanged. Evidence for the observation that competition between charities simply leads to a redirection of funds is not univocal across all laboratory studies, however. Filiz-Ozbay and Uler (2019) introduce differentiated tax rebates in a multi-charity setting. Their findings suggest that the extent of negative spill-overs may depend on whether the outputs of competing charities are complements or substitutes. Negative spill-overs only occur for substitutes but not for complements. Moreover, in contrast to the other studies, they do not find that negative spill-overs are sufficiently strong to offset additional giving. In both cases, offering a tax rebate for one charity increases not only the share of donations going to subsidized charity but total donations.

Evidence on competition effects from the field is scarce. Several papers investigate the effect of multiple mail solicitations in which potential donors receive fundraising calls in temporal succession. This approach reveals how earlier fundraising efforts of one charity affect giving to the same charity or other charities at a later point in time. Donkers et al. (2017) find that additional mail solicitations by one charity reduce giving to other charities in the short term but not in the long term. There is also field evidence when charities compete for donations within a shorter time window. Gallier et al. (2019b) investigate spill-over effects in a setting where charities compete in a spatially differentiated market. They find little evidence that a matching grant offered by one charity significantly reduces giving to a second un-matched charity, in particular when the two charities operate in two different locations and donors can observe this local differentiation. This finding differs from Adena and Hager (2020), who provide evidence for substantial negative spill-overs in an online fundraising campaign on a social network platform. Thus, in parallel to lab experiments, the size and direction of spill-over effects in the field settings studied crucially depend on the context, type of fundraising and timeframe under investigation.

Finally, there are several empirical studies that investigate the extent to which fundraising competition affects aggregate giving. Van Diepen et al. (2009) show that fundraising drives immediately reduce giving to the same charity at a later point in time but increase giving to other charities. In the long run, these effects are negligible. Even in the short term, spill-overs may be small in some settings. For instance, offering a match for projects on a crowd-funding platform did not result in lower giving to other projects (Meer, 2017). Moving towards a causal interpretation, several studies exploit natural catastrophes or other sources of random variation to identify potential spill-over effects on other charities. Ottoni-Wilhelm et al. (2021) investigate the effect of a disaster appeal on donations to disaster relief and to other causes both immediately after the natural disaster and 20 weeks later. Immediately after the disaster, they find more giving not only to disaster relief but also to other causes. This short-term increase is, however, offset by a decrease in donations later. This observation is in line with Deryugina and Marx (2021), who find little evidence that giving to disaster relief immediately after a tornado

reduces giving to other causes in the short run. All in all, most empirical evidence suggests that negative spill-over effects of fundraising activities are minor and dissipate quickly.

Technology choices and performance

As charities mainly compete for funding, it is donors' understanding and perceptions of the usefulness of overhead costs, actual performance and indirect performance metrics that will influence whether funding is directed to the most efficient charities. In the longer run, donor preferences will factor into whether competing charities choose efficient modes of production and produce high-quality outputs. When charities rely on donors' perceptions of their productivity, this raises complications in their production decisions that are absent for private firms. If donors' understanding of efficient production modes, performance and indirect performance metrics does not coincide with objective efficiency indicators, charities will optimize along the wrong dimensions. Moreover, charity managers may be inclined to influence how donors perceive their organization. Their attempt to provide success metrics that aid their fundraising efforts could refocus measurement and communication of performance indicators from harder-to-measure but more meaningful outcomes to more accessible but less meaningful output metrics. Across the sector as a whole, a focus on quantifiable performance metrics may also influence the composition of charitable goods offered. For instance, donors interested in impact giving may redirect their giving towards charitable outputs that can readily be measured and reduce giving towards less tangible outcomes like promoting civil rights (Ebrahim and Rangan, 2010).

Among the various performance metrics commonly used, the overhead ratio of a charity (or more generally its fixed costs) have received the most attention. A low overhead ratio means that a large proportion of charitable income covers a charity's core program expenses, that is, the public goods they fund. Donors often perceive high overhead costs as wasteful and thus a negative indicator of a charity's performance (e.g., Charles et al., 2020). Other actors in the charitable sector share this negative perception of fixed costs, and there is considerable variation in cost structures across charities and charitable sectors, which is likely to reflect variation in technologies.³ However, this negative view ignores that sometimes, as in the private sector, using more efficient production technologies can require incurring higher fixed costs (Perroni et al., 2019). Moreover, charities may have more control over some parts of their overhead costs (e.g., salaries and administration) than others (e.g., the administrative costs of complying with government regulation or providing performance metrics) (Samahita and Lades, 2021).

In their paper, Perroni et al. (2019) discuss conditions for which government funding of fixed costs may be called for when charities compete. They show that if non-profit entrepreneurs are pro-socially motivated, but impurely so, they will have an incentive to misrepresent their technologies to donors and to enter the non-profit sector and compete with other charities even when the technology that they have access to is dominated by that of other charities. This gives rise to two kinds of inefficiencies relating to charity selection, with the result that output is not maximized for the given resources that donors and government allocate to the third sector.

The first type of inefficiency relates to entry by new providers. In the presence of a non-distribution constraint, any surplus or shortfall experienced by a charity is reflected in the level of its provision rather than in its residual profit claims. This makes it unattractive for individual donors to switch towards a start-up charity even if it is more efficient because such a switch would result in lower rather than higher provision unless the switch is coordinated across donors. As a result, when private contributions are directed towards charity providers

that face fixed costs, non-cooperative contribution equilibria – as characterized by Bergstrom et al. (1986) – can support an inefficient status quo. Thus, in the absence of a residual claimant, fixed costs can not only be used strategically by an individual charity to coordinate their own set of donors, as fundraising fixed costs do in Name-Correa and Yildirim (2013), but they can also translate into entry barriers when charities choose them strategically in order to capture donations from other charities, as in Perroni et al. (2019).

These results contrast with the case of for-profit firms, since coordination between donors towards efficient charities is more complex than achieving coordination of consumers towards efficient firms. In the case of for-profit firms, consumers can be ‘herded’ towards more efficient firms through price competition: a for-profit challenger can undercut the incumbent and induce all consumers to switch, and it can do so credibly because consumers need not concern themselves about whether the challenger will succeed in meeting its objectives.

The second type of inefficiency results from sub-optimal technology adoption by incumbents. Fixed costs bring a risk of zero provision if they cannot be covered. Therefore, individuals will face incentives to abandon charities that adopt technologies with fixed costs in favour of other charities that adopt inferior, variable-cost-only technologies. This donor response will induce incumbent charities to forgo opportunities for exploiting scale economies and will make them adopt inferior technologies instead. Adopting an inefficient technology can thwart entry by more efficient challengers. For example, it may be that an incumbent charity has flexibility in its choice of technology; in this case, the presence of a less inefficient challenger can induce the incumbent to switch to an inferior technology with no fixed costs to protect its position. The final result is the same.

In either of the two cases discussed, the presence of fixed costs can bring about inefficient entry and/or (equivalently) the adoption of inferior technologies by incumbents. These conclusions are consistent with the prominence given by charities to core funding strategies. Charities often lament that donors are unwilling to fund core costs – making it difficult for start-up charities to get off the ground and for more established charities to cover management and general administration costs – and consistently lobby government to step in with grants to cover their fixed operating costs.⁴

Other research has also contributed to the debate on conduct and performance in the charitable sector vis-à-vis the for-profit sector,⁵ but the implications of organizational form for inter-charity competition and industry structure have received less attention. An exception is Philipson and Posner (2009), who study competition between providers that pursue non-profit objectives. They consider markets that are not contestable, that is, where there are barriers to entry, concluding that, as in the case of for-profit firms, antitrust regulation may be called for. Their arguments hinge on the incentives that charities have to defend their incumbency position even when it is not socially efficient to do so. While antitrust measures are not well suited to tackle the specific kinds of coordination failures identified by Name-Correa and Yildirim (2013) and Perroni et al. (2019), public support of core funding needs may be able to alleviate them.

The previous discussion assumes that donors understand the role of fixed costs in capturing scale economies and that they have a good understanding of charities’ production functions. Suppose instead that a significant fraction of giving is uninformed or has to rely on imperfect performance metrics. Then most donors would need to infer whether a charity is efficient by being able to verify the quality of output produced or by resorting to performance metrics that third parties provide.

If both donors and charities cared only about the quantity and quality of charitable output, their interests would be aligned, and there would be no need for such performance metrics.

Problems arise either when donors are primarily motivated by warm glow, that is, the act of giving itself (Andreoni, 1988, 1990), and therefore pay less attention to charity performance or if donors are motivated by altruism (i.e., by the level of public good provided) but cannot rely on charities pursuing the same motive (i.e., they act like impure altruists with some warm glow motives present).

The ramifications of impure altruism on the production side of charitable activities have been largely ignored. Two exceptions are Scharf (2014) and Krasteva and Yildirim (2016), who explore the incentives of impurely motivated charities to enter and/or continue operations. Scharf (2014) explores the welfare effects of warm-glow charities for entry and efficient selection of providers in the charitable sector. They show that altruistic motives can be sufficient for the most ineffective charities to exit (or not to enter in the first place). However, the lack of a price-based mechanism means that the selection of charities through competition will be less powerful than the selection of private firms through market competition: a charity that values its activities comparatively more than those of similar charities might choose to stay active even when it is comparatively inefficient, so long as the opportunity cost of doing so, in terms of loss of output relative to the potential output that could be achieved by other, more efficient charities, is not too large.

This setting can also provide the basis for comparing the selection effects of private donations and direct government grants. Private donors can freely choose to give to one charity over another similar charity, and they can stop their contributions to a charity that they perceive (rightly or wrongly) to be unsuccessful or increase or decrease their donations to charities depending on a purely subjective performance assessment. In sum, private donors are not accountable to anyone for their choices. Because of legal and political constraints, on the other hand, public funding arrangements do not give government the same level of discretion. Government is accountable to the public for its funding choices and cannot arbitrarily discriminate amongst charities or arbitrarily terminate its grants. Thus, even if government can perfectly observe performance, legitimately conditioning public funding of individual charities on their observed performance requires reliance on verifiable third-party signals – a constraint private donors do not face.

If verification constraints make government relatively less flexible at conditioning funding on performance than private donors, the latter will be in a better position to promote positive selection of charities through their giving choices. To the extent that this is the case, diverting funding away from direct grants towards subsidizing private donations, such as via tax rebates, can improve efficiency, even when it leaves the level of total funding unchanged; and vice-versa, diverting funding away from subsidizing private donations towards direct grants can adversely affect provision. Thus, measuring the crowding effects of government grants in terms of their effects on the volume of funding can understate their true impact on the effective (productivity-adjusted) provision level.

For donors to contribute in this productive way to charity selection, they have to be reactive to various performance metrics in their giving decisions; that is, their giving needs to be informed. Nevertheless, how informed is giving, and what metrics do donors take into account? This is an empirical question mainly studied via experiments. Donors react to simple ratings by watchdog organizations like Charity Navigator (Gordon et al., 2009). However, presenting scientific evidence on a charity's effectiveness (i.e., its ability to improve outcomes for recipients) does not increase the average gift size, although it affects donors differently contingent on their donations in prior donation drives (Karlan and Wood, 2017). Similarly, Metzger and Günther (2019) find in a lab experiment that only a minority of potential donors is interested in purchasing information on charities' effectiveness and administrative costs. Information about

the former has no detectable effect on average gift size. It appears that a majority of donors takes an uninformed decision to give and hence cannot fulfil their essential role of directing funds to the highest-quality providers. As pointed out in Coffman (2017), this problem can even be exacerbated when donations are collected by intermediaries (like a workplace campaign, the girl scouts or a charity run) in lieu of charities, as donors are even less reactive to performance metrics in these circumstances.

Market structure

One aspect of charity performance is related to market size. We know that for private firms, larger and more competitive markets are more efficient. However, it is unclear if that conclusion carries over to not-for-profit markets. Two questions are of particular importance: First, what is the relationship between market size (e.g., population) and market entry of charitable organizations? Second, under which conditions does the market deliver efficient allocation (e.g., number of firms, size of firms)? The answers to these questions can have important implications on optimal policies regarding the charitable sector.

A recent paper by La Pointe et al. (2018) addresses both questions.⁶ They develop a simple oligopoly model of fundraising competition between charities offering differentiated products. Their model delivers theoretical predictions which can be tested and related to analyses of the same questions asked of competition and performance in the private sector (Bresnahan and Reiss, 1991; Bloom et al., 2013). They find evidence that charities make decisions based partly on prosocial motives. As for the private sector, this finding implies that increased competition can lead to a better allocation of resources. The mechanism, however, is a different one: for the charitable market, a larger market already serves more varieties, which makes it harder for a pro-socially motivated charity to justify entering an already crowded marketplace when that entry eats into donations going to existing varieties and thus results in the reduced provision of existing varieties.

Apart from market size, a second question pertains to the extent of spatial differentiation in the sector. For some types of charities, competition in spatially differentiated markets is common. As for private firms (Lederer and Hurter, 1986; Anderson and De Palma, 1988), this market structure implies that charities offering homogenous goods may compete for donations by using the location at which their goods or services are provided as a distinguishing feature. An alternative to spatial differentiation would be offering services via a larger umbrella organization that offers the same product or service at various locations without stressing this as a determining feature of their operation. Food banks, animal shelters, religious organizations, neighbourhood associations, safe houses, soup kitchens and other instances where the beneficiaries of the charitable good are concentrated in a well-defined geographical area are just a few charitable causes for which spatial differentiation of providers is a commonly encountered market form (Bilodeau and Slivinski, 1997). For instance, in the London metropolitan area alone, multiple food banks compete for funds or in-kind donations. The location of the different food banks is the distinguishing feature and is explicitly referenced in fundraising drives via their names, and gift aid forms of each provider specify their name even when they belong to a larger trust or organization.

Gallier et al. (2019a, 2019b) extend a standard model of impure altruism (Andreoni, 1990) to account for location-specific altruism. Their model suggest donor sorting, that is, a tendency to give locally in markets where donors and charities can share a location and donors receive additional (warm glow or altruistic) benefits from donations that flow to a charity that is located in their geographic proximity. The theoretical model is further supported by experiments that

provide strong evidence for donor sorting. This experimental finding gives one strong rationale why spatially differentiated competition may be one commonly encountered market structure in the charitable sector. Further evidence for location-specific altruism and the importance of identity considerations for giving is found in Kessler and Milkman (2018).

Gallier et al. (2019b) also explore how differences in the price of giving between two spatially differentiated charities affect the charity with the relatively higher price of giving. Reducing the price of giving – through offering a match – has a comparable effect in spatially differentiated settings compared to in settings without spatial differentiation; that is, it increases the amount given to the charity offering the match. Even more importantly, there are no negative spill-over effects (and some instances of positive spill-overs) on charities not offering the match and hence having a relatively higher price of giving. For a spatially differentiated non-profit, however, positive spill-over effects between separate branches within their network imply that subsidizing the giving of local donors to local branches is the most profitable strategy for raising their total charitable income.

Public policy

There are good reasons for why economists are sceptical of governments engaging in the production of private goods. Without the disciplining effects of market competition, governments will not be efficient in providing such goods in the quality, composition and quantity demanded by their citizens, and provision costs will be excessive. Government's role is more obvious when it comes to providing public goods and services. As is well understood, at least since Samuelson (1954), private markets will underprovide such goods. Underprovision justifies a government stepping in and funding the provision of public goods and services through coercive taxation as a means of trying to improve on the private market outcome (Bergstrom et al., 1986). The charitable sector can also privately provide public goods and services and fund their provision with donations as a substitute for government provision. Or it may be that government and the charitable sector act in a complementary fashion, both providing public goods and services that are financed with donations and government revenue (e.g., tax incentives for giving).

While there is an efficiency-based rationale for government intervention in the provision of public goods and services, we do not have clear evidence about whether public provision of public goods through a government results in outcomes that are closer to the social optimum than private provision of the same type of goods through charitable organizations. The outcomes of interest are the amounts of public goods provided, the composition of public goods and services (varieties, location) and the financing of provision (e.g., donations and/or public funding). This raises the general and age-old question about whether governments and/or charities are better able to efficiently produce public goods that correspond to what the public desires in terms of size, quality and composition and whether the public sector and/or charities are more efficient in transforming inputs into outputs.

Governments can employ coercive contributions to public goods through their power to tax, so they do not have to rely on potentially wasteful fundraising. The charitable sector does not have the same ability to raise income through taxes but instead has to rely on voluntary donations. Because donations are voluntary, causes contributed to and the distribution of amounts given to each charity reflect a donor's preferences for public goods and services, which depends on their motives for giving. If aggregate contributions across causes are also reflective of the population's preferences, then the private sector may be better poised than government to provide the 'right' composition and amount of public goods and services. This argument is even stronger if donors can identify a direct link between charities' fundraising activities and efficient

outcomes. However, extending political economy arguments to charitable giving (Horstmann et al., 2007; Horstmann and Scharf, 2008) suggests that rich or more numerous donor types can exert more influence on the variety of output that a charity provides and may even be able to, by the size of their donations, drag smaller donors away from their preferred varieties. The social welfare implications in these scenarios would be unclear: on the one hand, the charitable sector could be concentrated in few varieties that receive donations from rich and poor, even if the poor would prefer to provide something else, or the sector could be overly fragmented but with a composition more closely reflecting societal preferences (Sandford and Scharf, 2013).

If we see government's role primarily as supporting the third sector in their fundraising activities and regulating it, what policies are preferable from an efficiency perspective? Classically, governments have supported fundraising through tax incentives,⁷ which are based on inputs and so do not directly address the inefficiencies that we have discussed here. This prominence of tax incentives for giving raises the important and unresolved question of why tax incentives are used as a significant channel for delivering public support to charities instead of relying solely on direct government grants. This question has provoked much debate and still does, especially in light of the pandemic, the financial crisis and the steadily increasing size and importance of the charitable sector and the corresponding increase in the level of government support directed to not-for-profit enterprises.

Since tax relief lowers the price of giving for donors,⁸ there is a presumption that its rationale is to encourage private giving and boost charity funding – compared to direct government grants, tax incentives may result in a higher overall level of charity funding for the same amount of public funds.⁹ This rationale, however, does not seem to square with available empirical evidence: recent estimates of the effects of tax incentives for giving on gross donations by private donors find price elasticities of giving to be less than one in absolute value – implying that the cost to the government of raising gross donations by one dollar exceeds one dollar.¹⁰ In other words, there is empirical evidence for crowding-out effects of tax incentives.

In itself, this need not imply that subsidies are an ineffective way of delivering public funding to charities: as Roberts (1984) pointed out, even if tax incentives for giving leave net donations unchanged or reduce them, they may still dominate direct grants as a way of channelling government funds to charities if direct grants also crowd out private donations. It might also be argued that tax incentives result in giving that reflects donor preferences, whereas the use of grants breaks this link. This further muddies the waters as to draw conclusions about social welfare effects.

Empirical evidence suggests less-than-full crowding out of donations by direct government grants: Andreoni and Payne (2011) estimate crowding out of fundraising by direct grants to be around 25%.¹¹ When combining this with available estimates on price elasticities of giving, it would seem that there is not a strong *prima facie* case for tax incentives over direct grants.¹²

Recent research also shows the importance of taking into account extensive and intensive margin responses. A recent paper by Almunia et al. (2020) use administrative tax data around a 2010 tax reform and estimate an intensive-margin price elasticity of giving of -0.2 . They model the extensive-margin response through a fixed cost of declaring donations, which is estimated to be around £47. Building on Roberts' model, they show that the welfare effects of tax incentives for donations are modified when extensive-margin responses are allowed for. Based on that theoretical framework and empirical results, a case can be made for increasing the subsidy on charitable giving in the United Kingdom.

The previous discussion suggests that in order to assess the relative effectiveness of direct grants and tax expenditures, evidence on price elasticities must be combined with evidence on crowding out of private giving by direct grants and evidence about associated frictions.

Considering a broader sectoral perspective can provide an alternative, supply-side-based rationale for the use of tax incentives for private giving: relying on tax incentives as alternatives to direct government grants may improve charity selection and performance. This effect would remain unmeasured in empirical estimates that focus on effects on the cost of provision by charities as measured by their overall budgets (their inputs) rather than the provision itself (their output). As well as being relevant for evaluations of third-sector performance, this selection effect can have important implications for public policy – not just in terms of rationalizing existing policies but also for designing new ones.

Finally, it is important to keep in mind that this positive selection effect of taxes over direct grants hinges on how informed donors are in their decision making (relative to a bureaucrat administering government grants). If information on charity performance is highly localized and widely distributed across the population, then it may well be that donors' decentralized information status is superior to the centralized knowledge of a government. If centralized knowledge is available, a government official may still be unsure how this knowledge translates into individual preferences. Yet here oversight and information sharing might be a policy that promotes the positive selection effect of tax incentives over direct grants.

Conclusion

We started out with the basic observation that competition for funding in the non-profit sectors differs from competition in the for-profit sector because prices cannot fulfil their usual coordination function. Absent this coordination function of prices, fundraising competition will not automatically lead to an efficient size of the charitable sector, an efficient selection of production technologies or an efficient market structure. Instead, we pointed out several inefficiencies that may prevail despite inter-charity competition or may even be exacerbated by it. Government policy needs to consider these potential sources of inefficiency when thinking about subsidies to the charitable sector in the form of tax rebates or direct grants. It also needs to consider limiting cases where direct government provision can be superior to the private provision of public goods and services through the charitable sector. Answering these questions requires the “science of philanthropy” to move beyond questions of designing the perfect ask and focus on questions about inter-charity competition and production efficiency. Answering this new set of questions requires theoretical models and experimental and empirical evidence that facilitate a better understanding of (i) whether the budget of altruism is fixed, (ii) what motivates charities (instead of donors), (iii) how much donors take charities' production functions into account when distributing funds and (iv) how the answers to these questions vary with government interventions and tax policies.

Notes

- 1 There is a large body of literature that compares the effectiveness of different kinds of fundraising strategies. These strategies include the use of match and rebate subsidies (Karlan and List, 2007; Eckel and Grossman, 2008), door-to-door fundraising (Landry et al., 2006; Landry, 2010; DellaVigna et al., 2012; Andreoni et al., 2017), lotteries (Morgan, 2000; Morgan and Sefton, 2000; Lange et al., 2007; Carpenter and Matthews, 2017), lead donations (Huck and Rasul, 2011), gifts (Falk, 2007; Alpizar et al., 2008), social information (Meier, 2007; Shang and Croson, 2009) and recognition (Harbaugh, 1998). For reviews, see Andreoni and Payne (2013), List (2011).
- 2 See also Weisbrod (1991), Andreoni and McQuire (1993), Andreoni (1998) and Name-Correa and Yildirim (2013).

- 3 We observe considerable variation in the composition of the funding sources of different charities: for some, the bulk of funding is represented by government grants, whereas for others, government grants are a relatively minor component of funding. There also appears to be some correlation between charities' funding from public sources and cost structures. La Pointe et al. (2018) find evidence for a positive correlation between fixed costs and the level of government funding received by charities relative to the total funding received for Canadian charities' revenues and costs across different sectors of activities.
- 4 The difficulties that charities face in persuading donors (especially small ones) to make donations that are not earmarked towards project costs and can be used to fund core costs leads charities to formulate specific core funding strategies. See, for example, Scott (2003). Government funding choices do appear to be sensitive to charities' core funding needs, but what is not clear is whether this is motivated by the need to promote entry by new charities – overcoming the implicit entry barriers that fixed costs induce in the presence of a non-distribution constraint – or by the need to support efficient technology adoption by incumbents.
- 5 This has focused mainly on the implications of organizational form for internal performance along various dimensions – information and agency costs (Alchian and Demsetz, 1972; Hansmann, 1980; Easley and O'Hara, 1983; Glaeser and Schleifer, 2001), differential regulatory and tax regimes (Lakdawalla and Philipson, 2006) and access to pro-socially motivated workforce (Ghatak and Mueller, 2011).
- 6 Papers that study not-for-profit competition have mostly focused on the health care sector (e.g., Proppe et al., 2008; Gaynor and Vogt, 2003; Gaynor and Town, 2011; Capps et al., 2010).
- 7 See the 2020 OECD Report on Taxation and Philanthropy (OECD, 2020).
- 8 Tax relief can take various forms: deductions of donations from taxable income as in the United States; tax credits at the marginal rate of income taxation, a system similar to the one used in Canada; a proportional match claimed directly by charities on donations received as used in the United Kingdom. All of these methods result in a lower price of giving for donors.
- 9 The question of why governments would want to encourage private giving has been the source of much debate in the economics literature and in the policy debate. Research that has focused attention on this question includes that of Feldstein and Clotfelter (1976), Warr (1982) and Scharf (2000). In the United Kingdom, tax incentives for giving are the result of the normalization of a late 19C fundraising scheme offering donors the chance to avoid paying tax on donations made by Deed of Covenant.
- 10 In early studies, price elasticities of giving were found to be negative and greater than one in absolute value (these results are summarized by Clotfelter, 1985, and Triest, 1998), but more recent studies have shown that estimates are highly sensitive to the empirical strategy and to whether there are corrections for short-term price effects. For example, Randolph (1995) uses panel data to find a long-run price elasticity of giving of -0.51 . Using a longer but similar panel to that used by Randolph but a different estimation technique, Auten et al. (2002) arrive at the significantly higher estimate of -1.26 . More recently, Bakija and Heim (2011) find a long-run value of -0.7 – close to Randolph's estimate. See also Fack and Landais, (2010) and Scharf and Smith (2015). In sum, it is difficult to exactly estimate the price elasticity of giving and results may reflect the availability of data and the econometric methods used.
- 11 When changes in fundraising costs are taken into account, this estimate has been shown to be even higher (up to 60% in Andreoni and Payne, 2011).
- 12 On the basis of the aforementioned elasticity estimates, incorporating second-best optimal tax considerations in the presence of endogenous labour supply decisions (Saez, 2004; Diamond, 2006) does not substantially affect the conclusions. Yet another rationale could be preference revelation (see Horstmann and Scharf, 2008, who look at the implications for segregation outcomes when donations are positively correlated to income inequality): by donating to certain charities, individuals reveal their preferences towards alternative forms of collective consumption; government support of private giving then results in government funds being directed where individuals ostensibly wish them to be directed.

References

- Adena, Maja, and Anselm Hager. 2020. "Does Online Fundraising Increase Charitable Giving? A Nation-Wide Field Experiment on Facebook." WZB Discussion Paper No. SP II 2020–302.
- Alchian, Armen A., and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization." *American Economic Review* 62(5): 777–795.

- Almunia, Miguel, Irem Guceri, Ben Lockwood, and Kimberley Scharf. 2020. "More Giving or More Givers? The Effects of Tax Incentives on Charitable Donations in the UK." *Journal of Public Economics* **183**: 104114.
- Alpizar, Francisco, Fredrik Carlsson, and Olof Johansson-Stenman. 2008. "Anonymity, Reciprocity, and Conformity: Evidence from Voluntary Contributions to a National Park in Costa Rica." *Journal of Public Economics* **92**(5): 1047–1060.
- Anderson, S.P. and A. De Palma. 1988. "Spatial Price Discrimination with Heterogeneous Products." *The Review of Economic Studies* **55**(4): 573–592.
- Andreoni, J. 1988. "Privately Provided Public Goods in a Large Economy: The Limits of Altruism." *Journal of Public Economics* **35**(1): 57–73.
- Andreoni, J. 1990. "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving." *The Economic Journal* **100**(401): 464–477.
- Andreoni, James. 1998. "Toward a Theory of Charitable Fundraising." *Journal of Political Economy* **106**(6): 1186–1213.
- Andreoni, James, and A. Abigail Payne. 2013. "Charitable Giving." In *Handbook of Public Economics*, Vol. 5, ed. Alan Auerbach, Raj Chetty, Martin Feldstein, and Emmanuel Saez: 1–50. Amsterdam: North Holland.
- Andreoni, J., and A.A. Payne. 2011. "Is Crowding Out Due Entirely to Fundraising? Evidence from a Panel of Charities." *Journal of Public Economics* **95**(5–6): 334–343.
- Andreoni, James, Justin M. Rao, and Hannah Trachtman. 2017. "Avoiding the Ask: A Field Experiment on Altruism, Empathy, and Charitable Giving." *Journal of Political Economy* **125**(3): 625–653.
- Andreoni, James, and Martin C. McQuire. 1993. "Identifying the Free-Riders. A Simple Algorithm for Determining Who Will Contribute to a Public Good." *Journal of Public Economics* **51**: 447–454.
- Arrow, Kenneth, and Gerard Debreu. 1954. "Existence of an Equilibrium for a Competitive Economy." *Econometrica* **22**(3): 265–290.
- Atkinson, A.B. 1995. "The Welfare State and Economic Performance." *National Tax Journal* **48**(2): 171–198.
- Atkinson, Anthony. 2005. *The Atkinson Review Final Report: Measurement of Government Output and Productivity for the National Accounts*. London: Palgrave MacMillan.
- Auten, Gerald, Holger Sieg, and Charles Clotfelter. 2002. "Charitable Giving, Income, and Taxes: An Analysis of Panel Data." *American Economic Review* **92**(1): 371–382.
- Bakija, Jon, and Bradley Heim. 2011. "How Does Charitable Giving Respond to Incentives and Income? New Estimates from Panel Data." *National Tax Journal* **64**(2): 615–750.
- Bergstrom, Theodore, Lawrence Blume, and Hal Varian. 1986. "On the Private Provision of Public Goods." *Journal of Public Economics* **29**: 25–49.
- Bhutta, Neil, Jacqueline Blair, Lisa Dettling, and Kevin Moore. 2020. "COVID-19, the CARES Act, and Families Financial Security." *National Tax Journal* **73**(3): 645–672.
- Bilodeau, Marc, and Al Slivinski. 1997. "Rival Charities." *Journal of Public Economics* **66**(3): 449–467.
- Bloom, Nicholas, Mark Schankerman, and John Van Reenen. 2013. "Identifying Technology Spillovers and Product Market Rivalry." *Econometrica* **81**(4): 1347–1393.
- Bresnahan, Timothy F., and Peter C. Reiss. 1991. "Entry and Competition in Concentrated Markets." *Journal of Political Economy* **99**(5): 977–1009.
- Capps, C., D. Dranove, and R.C. Lindrooth. 2010. "Hospital Closure and Economic Efficiency." *Journal of Health Economics* **29**(1): 87–109.
- Carpenter, Jeffrey, and Peter Hans Matthews. 2017. "Using Raffles to Fund Public Goods: Lessons from a Field Experiment." *Journal of Public Economics* **150**: 30–38.
- Castaneda, Marco, John Garen, and Jeremy Thornton. 2008. "Competition, Contractibility, and the Market for Donors to Non-Profits." *Journal of Law, Economics & Organization* **24**: 215–246.
- Charles, C., Sloan, M.F., and Schubert, P. 2020. "If Someone Else Pays for Overhead, Do Donors Still Care?" *The American Review of Public Administration* **50**(4–5): 415–427.
- Clotfelter, Charles. 1985. *Federal Tax Policy and Charitable Giving*. National Bureau of Economic Research Monologue. Chicago: University of Chicago Press.
- Coffman, Lucas. 2017. "Fundraising Intermediaries Inhibit Quality-Driven Charitable Donations." *Economic Inquiry* **55**(1): 409–424.
- Deck, Cary, and James J. Murphy. 2019. "Donors Change Both their Level and Pattern of Giving in Response to Contests Among Charities." *European Economic Review* **112**: 91–106.
- DellaVigna, Stefano, John A. List, and Ulrike Malmendier. 2012. "Testing for Altruism and Social Pressure in Charitable Giving." *Quarterly Journal of Economics* **127**(1): 1–56.

- Deryugina, Tatyana, and Benjamin Marx. 2021. "Is the Supply of Charitable Donations Fixed? Evidence from Deadly Tornadoes." *American Economic Review: Insights*, 3(3): 383–398.
- Diamond, Peter. 2006. "Optimal Tax Treatment of Private Contributions for Public Goods with and Without Warm Glow Preferences." *Journal of Public Economics* 90(4–5): 897–919.
- Donkers, Bas, Merel van Diepen, and Philip Hans Franses. 2017. "Do Charities Get More When They Ask More Often? Evidence from a Unique Field Experiment." *Journal of Behavioral and Experimental Economics* 66: 58–65.
- Easley, David, and Maureen O'Hara. 1983. "The Economic Role of the Non-Profit Firm." *The Bell Journal of Economics* 14(2): 531–38.
- Ebrahim, Alnoor, and V. Kasturi Rangan. 2010. "The Limits of Non-Profit Impact: A Contingency Framework for Measuring Social Performance." Harvard Business School Working Paper No. 10–099.
- Eckel, Catherine, and Philip Grossman. 2008. "Subsidizing Charitable Contributions: A Natural Field Experiment Comparing Matching and Rebate Subsidies." *Experimental Economics* 11(3): 234–252.
- Fack, Gabrielle, and Camille Landais. 2010. "Are Tax Incentives for Charitable Giving Efficient? Evidence from France." *American Economic Journal: Economic Policy* 2(2): 117–141.
- Falk, Armin. 2007. "Gift Exchange in the Field." *Econometrica* 75(5): 1501–1511.
- Feldstein, Martin, and Charles Clotfelter. 1976. "Tax Incentives and Charitable Contributions in the United States: A Microeconomic Analysis." *Journal of Public Economics* 5: 1–26.
- Filiz-Ozbay, Emel, and Neslihan Uler. 2019. "Demand for Giving to Multiple Charities: An Experimental Study." *Journal of the European Economic Association* 17(3): 725–753.
- Gallier, Carlo, Timo Goeschl, Martin Kesternich, Johannes Lohse, Christiane Reif, and Daniel Röme. 2019a. "Leveling Up? An Inter-Neighborhood Experiment on Parochialism and the Efficiency of Multi-Level Public Goods Provision." *Journal of Economic Behavior & Organization* 164: 500–517.
- Gallier, Carlo, Timo Goeschl, Martin Kesternich, Johannes Lohse, Christiane Reif, and Daniel Röme. 2019b. "Inter-Charity Competition Under Spatial Differentiation: Sorting, Crowding, and Spill-Overs." ZEW-Centre for European Economic Research Discussion Paper 19–039.
- Gaynor, M., and R.J. Town. 2011. "Competition in Health Care Markets." *Handbook of Health Economics*, 2: 499–637.
- Gaynor, Martin, and William B. Vogt. 2003. "Competition Among Hospitals." *The RAND Journal of Economics* 34(4): 764–785.
- Gee, Laura K., and Jonathan Meer. 2019. "The Altruism Budget: Measuring and Encouraging Charitable Giving." NBER Working Paper w25938.
- Ghatak, Maitreesh, and Hannes Mueller. 2011. "Thanks for Nothing? Not-for-Profits and Motivated Agents." *Journal of Public Economics* 95(1–2): 94–105.
- Giving USA Foundation. 2018. "Giving USA 2018." <https://givingusa.org>.
- Glaeser, Edward L., and Andrei Schleifer. 2001. "Not-for-Profit Entrepreneurs." *Journal of Public Economics* 81(1): 99–115.
- Gordon, Teresa P., Cathryn L. Knock, and Daniel G. Neely. 2009. "The Role of Rating Agencies in the Market for Charitable Contributions: An Empirical Test." *Journal of Accounting and Public Policy* 28(6): 469–484.
- Hansmann, Henry. 1980. "The Role of the Non-Profit Enterprise." *Yale Law Journal* 89(5): 835–901.
- Harbaugh, William. 1998. "The Prestige Motive for Making Charitable Transfers." *American Economic Review* 88(2): 277–282.
- Harwell, Haley, Daniel Meneses, Chris Moceri, Marc Rauckhorst, Adam Zindler, and Catherine Eckel. 2015. "Did the Ice Bucket Challenge Drain the Philanthropic Reservoir? Economic Research Laboratory, Texas A&M University, Working Paper.
- Horstmann, Ignatius, and Kimberley Scharf. 2008. "A Theory of Distributional Conflict, Voluntarism and Segregation." *Economic Journal* 118: 427–453.
- Horstmann, Ignatius, Kimberley Scharf, and Al Slivinski. 2007. "Can Private Giving Promote Economic Segregation?" *Journal of Public Economics* 91: 1095–1118.
- Huck, Steffen, and Imran Rasul. 2011. "Matched Fundraising: Evidence from a Natural Field Experiment." *Journal of Public Economics* 95: 351–362.
- Karlan, Dean, and John A. List. 2007. "Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment." *American Economic Review* 97(5): 1774–1793.
- Karlan, Dean, and Daniel H. Wood. 2017. "The Effect of Effectiveness: Donor Response to Aid Effectiveness in a Direct Mail Fundraising Experiment." *Journal of Behavioral and Experimental Economics* 66: 1–8.

- Kessler, Judd B., and Katherine L. Milkman. 2018. "Identity in Charitable Giving." *Management Science* **64**(2): 845–859.
- Kim, Mirae, and Dyana P. Mason. 2020. "Are You Ready: Financial Management, Operating Reserves, and the Immediate Impact of COVID-19 on Nonprofits." *Nonprofit and Voluntary Sector Quarterly* **49**(6): 1191–1209.
- Krasteva, Silvana, and Huseyin Yildirim. 2016. "Information, Competition, and the Quality of Charities." *Journal of Public Economics* **144**: 64–77.
- La Pointe, Simon, Janne Tukiainen, Carlo Perroni, and Kimberley Scharf. 2018. "Does Market Size Matter Also for Charities?" *Journal of Public Economics* **168**: 127–145.
- Lakdawalla, Darius, and Tomas Philipson. 2006. "The Nonprofit Sector and Industry Performance." *Journal of Public Economics* **90**(8–9): 1681–1698.
- Landry, Craig E., Andreas Lange, John A. List, Michael K. Price, and Nicholas G. Rupp. 2006. "Toward an Understanding of the Economics of Charity: Evidence from a Field Experiment." *Quarterly Journal of Economics* **121**(2): 747–782.
- Landry, Craig E., Andreas Lange, John A. List, Michael K. Price, and Nicholas G. Rupp. 2010. "Is a Donor in Hand Better Than Two in the Bush? Evidence from a Natural Field Experiment." *American Economic Review* **100**(2): 958–983.
- Lange, Andreas, John A. List, and Michael K. Price. 2007. "Using Lotteries to Finance Public Goods: Theory and Experimental Evidence." *International Economic Review* **48**(3): 901–927.
- Lederer, P.J. and A.P. Hurter Jr. 1986. "Competition of Firms: Discriminatory Pricing and Location." *Econometrica: Journal of the Econometric Society* **54**(3): 623–640.
- List, John. 2011. "The Market for Charitable Giving." *Journal of Economic Perspectives* **25**(2): 157–180.
- Meer, Jonathan. 2017. "Does Fundraising Create New Giving?" *Journal of Public Economics* **145**: 82–93.
- Meier, Stephan. 2007. "Do Subsidies Increase Charitable Giving in the Long Run? Matching Donations in a Field Experiment." *Journal of the European Economic Association* **5**(6): 1203–1222.
- Metzger, Laura, and Isabel Günther. 2019. "Making An Impact? The Relevance of Information on Aid Effectiveness for Charitable Giving. A Laboratory Experiment." *Journal of Development Economics* **136**: 18–33.
- Morgan, John. 2000. "Financing Public Goods by Means of Lotteries." *Review of Economic Studies* **67**(4): 761–784.
- Morgan, John, and Martin Sefton. 2000. "Funding Public Goods with Lotteries: Experimental Evidence." *Review of Economic Studies* **67**(4): 785–810.
- Name-Correa, Alvero J., and Huseyin Yildirim. 2013. "A Theory of Charitable Fundraising with Costly Solicitations." *American Economic Review* **103**(2): 1091–1107.
- OECD. 2020. *Taxation and Philanthropy*, OECD Tax Policy Studies, No. 27. Paris: OECD Publishing.
- Ottoni-Wilhelm, Mark, and Sarah Smith. Forthcoming. "Lift and Shift: The Effect of Fundraising Interventions in Charity Space and Time," forthcoming in the *American Economic Journal: Economic Policy*, 2021; CEPR Discussion Paper 12338, September 2017.
- Perroni, Carlo, Ganna Pogrebna, Sarah Sanders, and Kimberley Scharf. 2019. "Are Donors Afraid of Core Costs? Economies of Scale and Contestability in Charity Markets." *Economic Journal* **129**: 2608–2636.
- Philipson, T.J. and R.A. Posner. 2009. "Antitrust in the Not-for-Profit Sector." *The Journal of Law and Economics* **52**(1), 1–18.
- Propper, Carol, Simon Burgess, and Denise Gossage. 2008. "Competition and Quality: Evidence from the NHS Internal Market 1991–9." *The Economic Journal* **118**(525): 138–170.
- Randolph, W.C. 1995. "Dynamic Income, Progressive Taxes, and the Timing of Charitable Contributions." *Journal of Political Economy* **103**(4): 709–738.
- Roberts, Russell. 1984. "A Positive Model of Private Charity and Public Transfers." *Journal of Political Economy* **92**(10): 136–148.
- Rose-Ackerman, Susan. 1982. "Charitable Giving and 'Excessive' Fundraising." *Quarterly Journal of Economics* **97**(2): 193–212.
- Ryazanov, Arseny, and Nicholas Christenfeld. 2018. "On the Limited Role of Efficiency in Charitable Giving." *Non-profit and Voluntary Sector Quarterly* **47**(5): 939–959.
- Saez, Emmanuel. 2004. "The Optimal Treatment of Tax Expenditures." *Journal of Public Economics* **88**(12): 2657–2684.
- Samahita, Margaret, and Leonhard K. Lades. 2021 "The Unintended Side Effects of Regulating Charities: Donors Penalise Administrative Burden Almost as Much as Overheads." University College Dublin Working Paper WP21/06.

- Samuelson, Paul. 1954. "The Pure Theory of Public Expenditure." *The Review of Economics and Statistics* **36**(4): 387–389.
- Sandford, Sarah, and Kimberley Scharf. 2013. "Mission Impossible? Inequality and Inefficient Fragmentation in the Charitable Sector." London School of Economics, Unpublished Manuscript.
- Scharf, Kimberley. 2000. "Why Are Tax Expenditures for Giving Embodied in Fiscal Constitutions?" *Journal of Public Economics* **75**(3): 365–387.
- Scharf, Kimberley. 2014. "Impure Prosocial Motivation in Charity Provision: Warm-Glow Charities and Implications for Public Funding." *Journal of Public Economics* **114**: 50–57.
- Scharf, Kimberley, and Sarah Smith. 2015. "The Price Elasticity of Charitable Giving: Does the Form of Tax Relief Matter?" *International Tax and Public Finance* **22**(2): 330–352.
- Schmalensee, Richard. 1972. *The Economics of Advertising, Contributions to Economic Analysis* 80. Amsterdam: North-Holland Publishing Company.
- Schmitz, Jan. 2019. "Temporal Dynamics of Pro-Social Behavior: An Experimental Analysis." *Experimental Economics* **22**: 1–23.
- Scott, Katherine. 2003. *Funding Matters: The Impact of Canada's New Funding Regime on Non-Profit and Voluntary Organizations*. Ottawa: Canadian Council on Social Development.
- Shang, Jen, and Rachel Croson. 2009. "A Field Experiment in Charitable Contribution: The Impact of Social Information on the Voluntary Provision of Public Goods." *Economic Journal* **119**: 1422–1439.
- Simpson, Helen. 2009. "Productivity in Public Services." *Journal of Economic Surveys* **23**(2): 250–276.
- Tremblay-Boire, Joannie, and Aseem Prakash. 2017. "Will You Trust Me? How Individual American Donors Respond to Informational Signals Regarding Local and Global Humanitarian Charities." *Voluntas: International Journal of Voluntary and Non-Profit Organizations* **28**(2): 621–647.
- Triest, R.K. 1998. "Econometric Issues in Estimating the Behavioral Response to Taxation: A Nontechnical Introduction." *National Tax Journal* **51**(4): 761–772.
- UK Civil Society Almanac. 2020. *National Council on Voluntary Organisations*. London. <https://data.ncvo.org.uk/>.
- Van Diepen, Merel, Bas Donkers, and Philip Hans Franses. 2009. "Dynamic and Competitive Effects of Direct Mailings: A Charitable Giving Application." *Journal of Marketing Research* **46**(1): 120–133.
- van Iwaarden, Jos, Ton van der Wiele, Roger Williams, and Claire Moxham. 2009. "Charities: How Important Is Performance to Donors?" *International Journal of Quality & Reliability Management* **26**(1): 5–22.
- Vesterlund, Lise. 2016. "Using Experimental Methods to Understand Why and How We Give to Charity." *The Handbook of Experimental Economics* **2**: 91–151. Elsevier, Holland.
- Warr, Peter. 1982. "Pareto Optimal Redistribution and Private Charity." *Journal of Public Economics* **19**: 131–138.
- Weisbrod, Burton. 1991. *The Nonprofit Economy*. Cambridge, MA: Harvard University Press.