CGAP Centre for Charitable Giving and Philanthropy

CGAP Working Paper 1

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September 2011

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## Acknowledgements and disclaimer

The authors are grateful to the Office for National Statistics (ONS) and the Charity Commission for providing the data. These organisations bear no responsibility for the further analysis and interpretation presented in this paper. All existing errors remain those of the current authors.

# The market for charity in England and Wales

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13th September 2011

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Combining household survey data with information from charity accounts, we analyse both sides of the market for charitable donations in England and Wales. On the demand side, we find evidence of a strong positive relationship between regional wealth and household donor behaviour. On the supply side, we find that charity income is concentrated in southern England and metropolitan areas, while the number of local charities per household is similar across regions outside London. Although there is significant positive correlation between a household's propensity to donate and the number of charities in the region, this disappears as soon as we account for total household expenditure, suggesting that households donate when budgets allow rather than because of a high charity presence in their region. We thus conjecture that charities locate to wealthier regions so as to profit from higher rates of donating.

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# 1 Introduction

Philanthropic activities can be described as a market exchange involving two participants: donors, who contribute money, and charitable organisations, supplying services to the cause.[1] While each side of the market for charity has been studied extensively on its own, little work has sought to bring the two together to understand the economic interactions of donors and charities. This study combines data on household giving and on the incomes and expenditures of charities to consider both sides of the market at a regional level. As Andreoni (2006) makes clear, "the interaction between supply and demand for philanthropy has been largely neglected in both theoretical and empirical analysis." This study combines household and charity-level data to consider both sides of the market for philanthropy and the geography thereof.

Following Weisbrod and Dominguez (1986) and Posnett and Sandler (1989) we treat donors as the demand side of the market, contributing towards those charities and causes of which they "demand" more.[2] Charities are the supply side of the market as they provide the public good demanded by their donors. We are interested in mapping out the geographical distribution of philanthropic activities in terms of households' willingness to donate (and how much they donate) as well as the presence of charitable organisations.

Beyond this simple mapping exercise, many questions remain about the interaction of the two sides of the market for philanthropy. However, analysing the market for philanthropy is complicated by the fact that it differs from traditional markets: there is no obvious price mechanism through which an equilibrium is achieved. We therefore take a more descriptive approach to the analysis, focusing on questions about the size and presence of the sector in England and Wales rather than on the conditions necessary for a market equilibrium to be achieved. Do different measures of philanthropy (e.g. number of charities, typical donation) produce the same conclusions with respect to which regions are the most philanthropic? Do more opportunities to give in the form of the presence of more or larger charities lead to more giving? Do charities locate in areas where households are particularly charitable?

The paper proceeds as follows. Section 2 summarises the existing literature about the market for charity. In section 3, we introduce our data, which stem from two sources. We describe the demand side of the market (households) in section 4, followed by the supply side (charities) in section 5. In section 6, we consider demand and supply together, presenting correlations between the donor and charity variables and then a regression analysis of the propensity to donate. We conclude in section 7.

# 2 Literature review

Studying the interaction of demand and supply in the market for charity is challenging due to a lack of published data linking donors to charities. There are numerous theoretical treatments of donor behaviour (Becker, 1974; Bergstrom, Blume, and Varian, 1986; Duncan, 2004) and a multitude of

[1] List (2011) refers to a triangle of interaction between individuals, charities and government. To keep things simple, we do not consider the role of government in our analysis.

[2] These earlier studies base their analyses on data from charity accounts while we operationalise data from both charity accounts and household spending diaries.

empirical studies of the determinants of individual or household donations (Lankford and Wyckoff, 1991; Banks and Tanner, 1999; Andreoni, Brown, and Rischall, 2003; Peloza and Steel, 2005; Backus, 2010; Yörük, 2010; Cowley, McKenzie, Pharoah, and Smith, 2011). Theoretical treatments of the supply side are rarer (Rose-Ackerman, 1982; Aldashev and Verdier, 2010) and empirical studies tend to involve estimating the impact of fundraising on donation income (Steinberg, 1986; Weisbrod and Dominguez, 1986; Posnett and Sandler, 1989; Khanna, Posnett, and Sandler, 1995; Tinkelman, 2004). Such models are useful, though they neglect the fact that many charities report no income from donations and fundraising activities.[3] The aim of Arulampalam, Backus, and Micklewright (2011) is similar though the authors introduce donor characteristics such as donor income and the distribution of donor income into the charities' donations function. They demonstrate some of the difficulties in analysing both sides of the market for charity together, combining charity-level panel data with macro-level donor characteristics that vary over time only. Such empirical studies may be subject to severe omitted-variable bias as data on household donations tend not to include descriptions of the recipient charities while charity accounts tend to exclude any details about the donors. Not knowing the income or age of a donor limits the ability to control for key factors when seeking to explain the size or frequency of donations to a particular charity. On the other hand, the motivation for a particular household to make a charitable donation can depend heavily on a personal affinity to the cause.

McKenzie and Pharoah (2010) present the proportion of households donating in the different regions of the United Kingdom, reconciling participation with differences in household income between the regions. Among the regions of England and Wales, the authors report participation to be lowest in Wales, North East England and the West Midlands (25.1%) and highest in South West England (31.7%). However, their discussion of amounts donated is restricted to London. Havens and Schervish (2005) use tax-return data to develop an index of generosity based on donations, income and the cost of living by state in the USA.

Some studies have considered the geographical distribution of charities and other third-sector organisations too. Buckingham, Pinch, and Sunley (2010) report that social enterprise organisations are quite evenly distributed among the regions of the UK but that in London and North East England they tend to be concentrated in more deprived areas compared with social enterprise organisations in the other regions. The authors also note the importance of accounting for the urban-rural spectrum in geographical analysis. Card, Hallock, and Moretti (2010) consider relationships between the presence of large corporate headquarters in cities in the USA and donations to charities in these cities. They find that each publicly listed firm in a city is associated with between \$3 and \$10 million of contributions to local charities in the form of donations from the firm's executives.

These studies consider the geographical distribution of philanthropy from one side of the market in isolation. Some recent work has begun to bring both sides of the market together (e.g., List, 2011; Atkinson, Backus, Micklewright, Pharoah, and Schnepf, 2011) and we seek to extend the literature in this area by examining both the behaviour of households and charities in the same region together.

[3]Calculations using the 2008 National Survey of Third Sector Organisations dataset reveal that 32 percent of charities in the UK reported no income from donations or fundraising activities.

# 3 Data

We obtain information on household spending and the characteristics of donor households from the Office for National Statistics Living Costs and Food Survey (LCF).[4] This survey is conducted annually with a representative sample of roughly 6,500 UK households. Each household keeps a detailed spending diary for two weeks which includes donations to charity. Our subsample pools the LCF cross-sectional data for England and Wales from 2002 to 2008, constituting 38,474 households, or an average of 5,496 households per year. We are able to locate these households within one of 21 regions in England and Wales.[5]

Charity-level data are obtained from the Charity Commission and represent the population of registered charities between 2002 and 2008 in England and Wales. These data are for charities only. Non-charitable civil-society organisations, such as social enterprises, are not required to register with the Charity Commission and so are excluded from our analysis. We further exclude independent schools, NHS-administered charities and independent hospitals, government quangos, places of worship, mutual organisations, benevolent institutions, trade and housing associations. From this subsample we also exclude charities which are exclusively grant-making trusts to avoid double counting income in the aggregate.[6] Charities are classified by the cause they serve according to the International Classification of Non-profit Organisations (ICNPO) classification system. The ICNPO is a typology of charities and nonprofits used internationally in which charities are assigned to one of twelve classifications. The National Council of Voluntary Organisations (NCVO) undertook a rigorous classification of all registered UK charities according to the ICNPO (for details, see Kane, 2009). We assume that classifications are constant over the period. An administrative address is available for each charity and we are therefore able to locate the charities within one of the 21 regions as well. In addition to where the charities are located, we know where the charities work. When registering with the Charity Commission, a charity must declare its "area of benefit" and is required to work within that declared area. We exploit this information to identify "local" charities. We define a charity as "local" if it is located in the same region as its area of benefit. For example, a charity located in London that states London as its "area of benefit" is defined as "local" whereas a charity located in London which lists "Surrey, Kent and Essex" or "Great Britain" or "Uganda" as its area of benefit would not be classified as local. This concept of "localness" may be more revealing about the presence of the charitable sector in a particular area than considering all charities together.

It is important to note that we are not necessarily comparing like with like in the donor and charity data as the two datasets do not reflect two sides of the market precisely. The household-level data on giving are very general, amounting to whether or not households made a donation and if so how much they gave away. We do not know the charity or cause to which the donation was made. Households may give to charities located outside the UK, or charities not registered

[4]The LCF is the successor to the Family Expenditure Survey and the Expenditure and Food Survey.

[5]These are North East Metropolitan, North East Non-Metropolitan, North West Metropolitan, North West Non-Metropolitan, Merseyside, Yorks & Humberside Metropolitan, Yorks & Humberside Non-Metropolitan, East Midlands, West Midlands Metropolitan, West Midlands Non-Metropolitan, Eastern Outer Metropolitan, Eastern Other, London North East, London North West, London South East, London South West, South East Outer Metropolitan, South East Other, South West, Glamorgan and Gwent, and Clwyd, Gwynedd, Dyfed, and Powys.

[6]Some double counting will remain (e.g. a grant made by a national charity to a local charity).

with the Charity Commission.[7] The data on charities are more detailed insofar as we can classify the charities in a number of ways (i.e. cause served, localness). However, the household data are much richer in terms of the characteristics of the individual units. Data on charities' expenditures tend to be sparse and heterogeneous and are often of questionable use (Morgan, 2010).

Even with these shortcomings in mind, the constructed dataset provides an unique opportunity to examine simultaneously the two sides of the market for charity: donors and charities. The household level data allow us to map the giving behaviour of households across England and Wales and the charity-level data allow us to explore the intensity of the charitable sector across England and Wales. Aggregating up to a regional level allows us to examine the interactions of demand and supply in the market for philanthropy.

# 4 Household giving in England and Wales

Table 1 presents estimates of the average budgets of households (total weekly expenditure on all goods and services, a proxy for wealth), the share of households observed to donate, as well as the median and mean estimates for the size of a gift by donor households in different regions of England and Wales. Nominal figures have been converted to 2005 prices using the Consumer Prices Index[8] and the estimates have been weighted to account for differences between the sample and the population. The table also includes standard errors which indicate the level of variation in the sample and hence the precision of the mean estimates relative to the population.

Households in England and Wales spent an average of £436.63 per week, with those in the North East, Wales and metropolitan areas in the North West on lower budgets and those in London (particularly West London) and the South East on higher ones. The larger standard errors for expenditure levels in London reflect greater variation and inequality between rich and poor in the capital.

28.8% of households were observed to donate in England and Wales as a whole but the estimates for participation vary by region and particularly in London, from a low of 23.4% in North East London up to 34.1% in South West London.[9] A typical donor household in England and Wales gave £2.26 per week to charity (the median donation), though again the estimates vary significantly by region, with the median donor household in North West London donating more than twice that given by the median donor households in some parts of northern England and in northern and western Wales.

The participation rate, the median and the mean donation are all significantly positively correlated with average total expenditure ($p = 0.01$). That is, more households donate and donor households tend to give higher amounts to charity in wealthier regions. Moreover, the distribution of amounts given by donor households is highly skewed as the mean gift for all of England and Wales is three times the size of the median donation. The high mean value is driven by a few large donations while half of the amounts donated are each less than £2.26. This skewness is most

[7] Smaller charities and certain types of organisations are exempt from registration. See http://www.charity-commission.gov.uk for details.

[8] See http://www.statistics.gov.uk/statbase/tsdataset.asp?vlnk=7174&More=Y

[9] These estimates are based on spending diaries over a period of two weeks and will tend to be lower than donation rates estimated over longer time periods.

acute in East and South West London where the ratio of the mean to the median donation exceeds four and there is generally more variation (the standard errors are higher), again reflecting higher diversity and inequality there.

Table 1: Households by region

| Region | mean budget | s.e. of budget | % donating | median gift | mean gift | s.e. of gift |
|---|---|---|---|---|---|---|
| NE Metro | £362.44 | 23.83 | 26.46 | £1.83 | £4.47 | 0.66 |
| NE Non-Met | £362.19 | 20.89 | 24.20 | £2.03 | £4.77 | 0.79 |
| NW Metro | £392.17 | 16.01 | 25.99 | £1.99 | £6.02 | 0.85 |
| NW Non-Met | £430.82 | 16.58 | 29.90 | £2.18 | £5.80 | 0.46 |
| Merseyside | £372.14 | 16.15 | 29.68 | £2.06 | £4.45 | 0.44 |
| Yorks/H. Metro | £395.26 | 12.97 | 27.63 | £1.88 | £5.92 | 0.58 |
| Yorks/H. Non-Met | £402.64 | 17.78 | 29.05 | £2.09 | £6.83 | 1.06 |
| E Midlands | £407.52 | 10.38 | 27.10 | £2.00 | £4.78 | 0.39 |
| W Midlands Metro | £385.22 | 14.81 | 24.65 | £2.21 | £6.83 | 0.95 |
| W Midlands Non-Met | £428.76 | 15.26 | 26.02 | £2.01 | £5.43 | 0.59 |
| Eastern Outer Metro | £498.23 | 15.99 | 31.44 | £2.01 | £5.88 | 0.64 |
| Eastern Other | £446.64 | 12.89 | 30.02 | £2.33 | £7.04 | 0.63 |
| London NE | £473.66 | 23.00 | 23.41 | £2.68 | £11.27 | 4.59 |
| London NW | £522.19 | 33.60 | 27.63 | £3.78 | £10.63 | 1.42 |
| London SE | £488.79 | 24.97 | 30.66 | £2.63 | £11.78 | 4.54 |
| London SW | £559.39 | 23.48 | 34.13 | £2.68 | £12.38 | 3.05 |
| SE Outer Metro | £539.55 | 14.90 | 32.92 | £2.46 | £8.03 | 0.86 |
| South East Other | £455.64 | 10.72 | 31.20 | £1.99 | £5.82 | 0.36 |
| South West | £433.39 | 8.02 | 32.21 | £2.38 | £6.65 | 0.47 |
| Wales 1 | £373.58 | 16.88 | 24.17 | £2.31 | £5.90 | 0.84 |
| Wales 2 | £367.79 | 17.38 | 26.36 | £1.72 | £6.38 | 1.22 |
| All England & Wales | £436.63 | 3.48 | 28.79 | £2.26 | £6.83 | 0.28 |

Notes: Wales 1: Glamorgan, Gwent; Wales 2: Clwyd/Gwynedd/Dyfed/Powys;
weighted averages 2002-2008, s.e. = (linearised) standard error;
all money in weekly amounts, converted to May 2005 £;
participation rates based on two-week spending diary;
gift averages are for donor households only.

# 5 Charities in England and Wales

The charitable sector in England and Wales is large with more than 125,000 registered general charities bringing in more than £30 billion of income in 2008. Neither the charities nor the income is distributed evenly across England and Wales, however. There are regions where the sector is large and ubiquitous and other areas where charities and charitable income are relatively sparse, as measured on a per-household basis. Moreover, an area may appear to have a large charitable sector when considering all charities together, but a much humbler sector when local organisations are considered. Table 2 presents averages over the period 2002 to 2008 for the total income of charities, the number of charities, the share of the total income going to local charities and the share of all charities that are local by region. The table is sorted by total income of all charities (column (3)).

Table 2: The "Geography of Generosity", averages over 2002-2008

| (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|
| | Households | All charities | | Local charities | |
| Region | ('000) | Income (£m) | Charities | Income (£m) | Charities |
| London NW | 698 | 7,127 | 9,024 | 812 | 2,885 |
| South West | 2,233 | 2,063 | 15,795 | 938 | 12,812 |
| London NE | 871 | 1,992 | 3,777 | 363 | 1,589 |
| South East Other | 2,033 | 1,826 | 10,820 | 633 | 7,918 |
| London SW | 712 | 1,713 | 2,917 | 360 | 1,180 |
| SE Outer Metro | 1,340 | 1,616 | 11,059 | 691 | 8,291 |
| London SE | 660 | 1,164 | 2,142 | 242 | 1,000 |
| E Midlands | 1,798 | 1,006 | 9,784 | 519 | 7,984 |
| Yorks/H. Metro | 1,476 | 808 | 4,620 | 565 | 3,660 |
| Eastern Other | 1,393 | 787 | 8,726 | 381 | 7,245 |
| W Midlands Non-Met | 1,095 | 772 | 6,997 | 360 | 5,463 |
| NW Non-Met | 1,200 | 684 | 6,234 | 481 | 5,155 |
| W Midlands Metro | 1,052 | 678 | 3,287 | 441 | 2,487 |
| NW Metro | 1,068 | 643 | 3,227 | 382 | 2,394 |
| Eastern Outer Metro | 886 | 633 | 6,165 | 304 | 4,634 |
| Wales 1 | 777 | 559 | 2,742 | 422 | 2,287 |
| Merseyside | 579 | 447 | 1,979 | 332 | 1,542 |
| Yorks/H. Non-Met | 651 | 408 | 4,544 | 251 | 3,547 |
| NE Metro | 471 | 364 | 1,395 | 203 | 1,059 |
| Wales 2 | 480 | 256 | 3,792 | 195 | 3,206 |
| NE Non-Met | 608 | 245 | 2,496 | 161 | 2,052 |

Note: Wales 1: Glamorgan, Gwent; Wales 2: Clwyd/Gwynedd/Dyfed/Powys

There is substantial heterogeneity in terms of both total income and numbers of charities across

England and Wales. Column (3) shows the average total income of all charities located in each region over the period and column (4) shows the average number of registered general charities in each region over the period. The general geographic pattern is one of a large charitable sector in the South and a much smaller sector in the North. London North West is by far the largest in this respect with total income in excess of £7.1 billion, more than three times the income of the next largest region and 29 times that of the smallest region, North East Non-Metropolitan, which also had fewer than a third of the charities in London North West.

Measuring the size of the regional charitable sector neglects the fact that many charities, while headquartered in one place, may in fact be working elsewhere. Results for London will be skewed by the presence of large, and large numbers of national and international charities. Columns (5) and (6) present the total income from local charities and the total number of local charities in each region, respectively. Considering local charities changes some of the conclusions drawn about the charitable sector in different regions.

London North West remains one of the largest regions when considering total income of local charities. However, it is only the 12th largest in terms of the number of local charities. Failure to account for charities working locally clearly exaggerates the size of the sector in London. Only 11 percent of total income in London North West is captured by local charities and only 32 percent of the charities in London North West are local. Compare this to 66 percent of income and 82 percent of charities being local in North East Non-Metropolitan.

The disparity between the regions is also diminished and the stark contrast between the North and South reduced when considering local charities. The highest local income (South West) is only six times the lowest (North East Non-Metropolitan). The comparison of regional charitable sectors changes even more dramatically when adjusting for the number of households in each region (column (2)). The average number of local charities per thousand households in the South (London North West, London South West, London North East, London South East, South East Outer Metropolitan, South West and South East Other), 3.6, is not significantly different from the number of local charities per thousand households in the North (North East Metropolitan, Yorkshire/Humberside Non-Metropolitan, North West Metropolitan, North West Non-Metropolitan, Merseyside, Yorkshire/Humberside Metropolitan and North East Non-Metropolitan) at 3.2. There is more of a difference in per-household regional income of local charities with those in the South bringing in £528 per household compared to only £400 per household in the North. Metropolitan areas have more local charity income per household (£498) than non-metropolitan areas (£363) but fewer charities per thousand households (4.7 for Metropolitan versus 3.0 for Non-Metropolitan).

The evidence suggests that regions in the South and metropolitan regions have larger charitable sectors in terms of money amounts. However, when measuring the charitable sector in terms of the number of charities working locally, the North and non-metropolitan areas are as large, if not larger.

# 6 Two sides of the market for philanthropy

We have considered each side of the market separately above. Many questions remain about the interaction between donors and charities and there is little theoretical work providing testable hypotheses. Therefore, rather than impose a theoretical framework or assume a particular market

structure, we take a general approach to describing the interaction between donors and charities. We first consider simple unconditional correlations among regional-level aggregates of the household and charity-level variables. We then test the robustness of any correlations to regions outside London and then control for the influence of other factors. Building on the work of Banks and Tanner (1999), we model the donation behaviour of households as a function of household characteristics and the characteristics of the charitable sector in the donor's region. However, such modelling assumes that changes in donor behaviour are caused by changes to the sector in the region (e.g. the more charities per capita, the more likely people are to give).

## 6.1 Correlations

We first consider correlations between the household giving variables (participation and average amounts donated) and the charity variables (income and number of charities per household). Our unit of analysis here is the region and we have seven observations per region (one for each year). We do this for all charities, local charities and local social-service charities (as defined by the ICNPO). We focus on social-service charities as their activities tend to be of more obvious local benefit and thus fit in with our regional analysis of supply more easily than, say, a charity specialising in a niche cause with few beneficiaries. Social services are also sometimes considered a particular manifestation of values such as altruism and generosity (Corbin, 1999), thus possibly indicating the philanthropic profile of an area more accurately.[10]

Table 3 presents the correlation coefficients between the the donor side of the market (share of households donating and mean donation) and the charitable sector (per-household number of charities of each subpopulation and per-household size of the charitable sector of each subpopulation) in each region.

Table 3: Correlations by type of charity, whole sample

| charity type: | all | | local | | local soc services | |
|---|---|---|---|---|---|---|
| | corr | $p$-value | corr | $p$-value | corr | $p$-value |
| $Corr\,(participation, charity\_income)$ | $-0.006$ | 0.939 | $-0.061$ | 0.461 | $-0.074$ | 0.375 |
| $Corr\,(mean\_donation, charity\_income)$ | **0.317** | 0.000 | **0.248** | 0.002 | 0.111 | 0.179 |
| $Corr\,(participation, charity\_count)$ | 0.129 | 0.119 | **0.137** | 0.099 | **0.143** | 0.084 |
| $Corr\,(mean\_donation, charity\_count)$ | 0.135 | 0.104 | $-0.129$ | 0.119 | **$-$0.142** | 0.087 |

There is no correlation between the share of households donating and total charitable income per household. Correlation between the mean donation and total charitable income per household is positive and highly significant for all charities taken together and for local charities. This correlation is not significant, however, for local social-service charities. The remaining correlations are either insignificant or only weakly significant (at the 10 percent level).

[10] See also Lynn Jr (2002) for a discussion of charities as providers of social services in the USA and Blomqvist (2004) for the Swedish case.

Table 4 presents the correlation coefficients excluding London.

Table 4: Correlations by type of charity, excluding London

| charity type: | all | | local | | local soc services | |
|---|---|---|---|---|---|---|
| | corr | $p$-value | corr | $p$-value | corr | $p$-value |
| $Corr\,(participation, charity\_income)$ | **0.198** | 0.031 | −0.115 | 0.215 | −0.049 | 0.598 |
| $Corr\,(mean\_donation, charity\_income)$ | **0.233** | 0.011 | 0.144 | 0.119 | −0.025 | 0.787 |
| $Corr\,(participation, charity\_count)$ | **0.322** | 0.000 | **0.287** | 0.002 | **0.307** | 0.001 |
| $Corr\,(mean\_donation, charity\_count)$ | **0.225** | 0.014 | **0.215** | 0.019 | **0.211** | 0.021 |

When we exclude London, many of the correlations become stronger. When considering all types of charity together, each of the correlations is positive and significant to at least the 5 percent level. Correlations between the number of charities per household and donor behaviour are also significant for local charities and local social service charities to at least the 5 percent level. All the significant correlations are positive indicating that regions with a larger charitable sector are also regions with more household giving.

## 6.2 Linear probability model

Since we have a panel of regions in England and Wales, the correlation coefficients may be driven by regional effects, household income or some other relevant household or sector characteristic. Therefore, we test the robustness of these relationships using regression analysis.

To do so, we use the sample of households from the LCF following the work of McKenzie and Pharoah (2010). We simplify the model of household giving behaviour, specifiying the probability that a household contributes first as a function of the number of charities per thousand households in that household's region only. We then add total household expenditure (as a proxy for household wealth) and reestimate the model. Estimation is done via a linear probability model. Results are presented in Table 5.

Table 5: Propensity to donate and charity presence (LPM)

| charity type: | all types | | | | local | | | | local social-services | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | | (3) | | (4) | | (5) | | (6) | |
| | *donor* | | *donor* | | *donor* | | *donor* | | *donor* | | *donor* | |
| *charities pth* | **.006**$^{*}$ | (.003) | .001 | (.002) | **.009**$^{**}$ | (.004) | .003 | (.003) | **.041**$^{**}$ | (.017) | .014 | (.012) |
| *log budget* | | | **.161**$^{***}$ | (.004) | | | **.160**$^{***}$ | (.004) | | | **.160**$^{***}$ | (.004) |
| *constant* | **.258**$^{***}$ | (.018) | $-$**.581**$^{***}$ | (.022) | **.252**$^{***}$ | (.017) | $-$**.589**$^{***}$ | (.021) | **.247**$^{***}$ | (.020) | $-$**.590**$^{***}$ | (.022) |
| $N$ | 38,474 | | 38,445 | | 38,474 | | 38,445 | | 38,474 | | 38,445 | |
| $R^2$ | 0.001 | | 0.053 | | 0.001 | | 0.053 | | 0.001 | | 0.053 | |

Notes: Linear probability model where dependent variable *donor* = 1 if household donates; 0 otherwise.
*charities pth* = number of charities per thousand households.
*log budget* = natural logarithm of equivalised weekly household budget, OECD modified scale.
Robust standard errors in parentheses.
*, ** & *** denote statistically significant difference from zero at the 10%, 5% and 1% levels.

The relationship between the size of the charitable sector and the probability that a household gives is insignificant when controlling for total household expenditure. This indicates that there is a positive relationship between household wealth and the number of charities per thousand households in the region. It also suggests that the interaction between household giving behaviour and the regional charitable sector is rather weak. This may be due to the fact that a few large charities dominate the market (Clifford and Backus, 2010) rendering the presence of charities near a household less of a determining factor. We must, however, take care when interpreting these results as the insignificance may be driven, at least in part, by the large size of the geographies we use. Given more granular data on the location of households, we would be better able to estimate the size of the charitable sector surrounding the households.

# 7 Conclusions

In this paper we investigate both sides of the market for charitable donations in England and Wales. On the demand side, we consider household participation in donating, donation size and the distribution of donations in relation to household budgets. We find evidence of a strong positive relationship between regional wealth and household donor behaviour, echoing the results of previous studies (Banks and Tanner, 1999; Peloza and Steel, 2005; Backus, 2010; Cowley, McKenzie, Pharoah, and Smith, 2011). On the supply side, we look at the number of charities as well as their income, first for the whole sample of all charitable organisations and then restricting the analysis to those charities that operate locally. Within the local charity sample, we uncover a regional asymmetry between charity income and the presence of charities: income is concentrated in southern England and metropolitan areas whereas the number of local charities per household is quite similar in regions outside London.

When combining our aggregated data on household donations with the corresponding figures for the number and income of charities in each region, we find positive correlation between the mean donation and the income of charities in general (all types of charity), though this correlation does not hold when income is restricted to local or social-services charities. Excluding London from the sample leads to the additional result of strong positive correlation between the number of charities and both household participation in donating and the size of donations. This correlation holds for local charities and those providing social services too.

However, while our analysis of households' propensity to donate reiterates the correlation between participation and charity presence (number of charities, across all types: all, local only and local social-services), adding a control for general household spending renders the relationship insignificant for all types of charity. This result suggests that households donate when they can afford it rather than because of a high charity presence in their region. On the other hand, the results would be consistent with charities locating to wealthier regions so as to profit from higher rates of donating. Although this is plausible for large national charities, it is less so for smaller ones; indeed our analysis shows that the regional distribution of charities operating at the local level is remarkably uniform in relation to the local population. In order to test whether charities do locate to affluent areas, it would be necessary to have more reliable estimates of participation rates and donation levels as well as charity presence in each region over a longer time period. Information on which charities receive the donations made by households would provide for a

more refined analysis too. Given such data, we could further our understanding of the interaction between demand and supply in the market for charity.

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## About CGAP

The ESRC Centre for Charitable Giving and Philanthropy (CGAP) is the first academic centre in the UK dedicated to research on charitable giving and philanthropy. Three main research strands focus on individual and business giving, social redistribution and charitable activity, and the institutions of giving. CGAP is a consortium including the Universities of Strathclyde, Southampton and Kent, University of Edinburgh Business School, Cass Business School and NCVO. CGAP's coordinating 'hub' is based at Cass Business School. CGAP is funded by the ESRC, the Office for Civil Society, the Scottish Government and Carnegie UK Trust.

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