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DOI:

[10.1016/j.socscimed.2023.115805](https://doi.org/10.1016/j.socscimed.2023.115805)

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Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Bowles, J, Clifford, D & Mohan, J 2023, 'The place of charity in a public health service: Inequality and persistence in charitable support for NHS trusts in England', *Social Science and Medicine*, vol. 322, 115805. <https://doi.org/10.1016/j.socscimed.2023.115805>

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The place of charity in a public health service: Inequality and persistence in charitable support for NHS trusts in England

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ARTICLE INFO

Handling Editor: S Susan J Elliott

Keywords:

National health service
NHS Trusts
Charitable fundraising
Spatial inequality
Inverse care law
Charitable endowments

ABSTRACT

The British National Health Service (NHS) relies for the great bulk of its funding on direct taxation, but the contribution of charitable sources of income to the NHS is not well-understood. The few studies of charitable giving to the NHS to date have concentrated on aggregate levels of income and expenditure. However, to date there has been limited collective understanding about the extent to which different kinds of NHS Trusts benefit from charitable funding and about the persistence of inequalities between trusts in their access to these resources. This paper presents novel analyses of the distribution of NHS Trusts in terms of the proportion of their income that comes from charitable sources. We build a unique linked longitudinal dataset which follows through time the population of NHS Trusts, and the population of associated NHS charities, in England since 2000. The analysis illustrates intermediate levels of charitable support for acute hospital trusts compared with the much lower levels of charitable support for ambulance, community and mental health Trusts and, conversely, much higher levels of charitable support for Trusts providing specialist care. These results represent rare quantitative evidence relevant to theoretical discussions about the uneven nature of the voluntary sector's response to healthcare need. They provide important evidence for a key feature (and arguably weakness) of voluntary initiative, namely *philanthropic particularism* - the tendency for charitable support to focus on a restricted range of causes. We also show that this 'philanthropic particularism' - reflected in the very sizeable differences in charitable income between different sectors of NHS trusts - is becoming more marked over time, while spatial disparities, notably between elite institutions in London and other locations, are also substantial. The paper reflects on the implications of these inequalities for policy and planning within a public health care system.

1. Introduction: the role of charitable funding in UK healthcare provision

Charitable fundraising for healthcare provision in the UK is long-established. Voluntary hospitals, initially funded by charitable donations, were the principal providers of nonpsychiatric healthcare for the acutely ill before the creation of the National Health Service (NHS) in 1948 and were centres for research and teaching (Mohan and Gorsky, 2001). A key feature of the pre-1948 system was that the "caprice of charity" determined the allocation of resources, leading to considerable variation between institutions and communities in hospital capacity, utilisation and expenditure. In this paper we explore whether, 75 years on from the establishment of the NHS, organisation-level variations in the availability of charitable resources persist.

The NHS is distinguishable from the majority of health care systems

by its emphasis on 'collectivism of funding and provision' (Ruane, 1997, 54). The great majority of NHS funding is derived from taxation, but Ruane's "collectivism of funding" was never total: revenues from prescription charges and private patient fees have always played a part in the funding mix, with further resources being generated from the 1980s onwards through the encouragement of more entrepreneurial approaches to management. While these sources of funds have attracted academic and practitioner commentary (Greenfield et al., 2019; Pollock, 2004; Ruane, 1997), the contribution of charity to the NHS has received limited attention even though the expenditures involved (several hundred million pounds a year) are substantial.

Charitable sources of funding for healthcare persisted under the NHS in various ways and a conventional understanding developed that such funds were not to be used to pay for direct provision of NHS services, since that was the Government's responsibility. Instead it was

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<https://doi.org/10.1016/j.socscimed.2023.115805>

Received 23 August 2022; Received in revised form 21 December 2022; Accepted 21 February 2023

Available online 25 February 2023

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anticipated that the future role of charity would be confined largely to medical research and to the promotion of staff and patient welfare (Fitzherbert, 1989; Meakin, 1998). Teaching hospitals were permitted to retain historic endowments; hospital authorities could not actively raise funds on their own account, but were able to accept private donations and legacies; the endowments of the non-teaching hospitals were pooled into a central fund which redistributed its proceeds on a formula basis; independent Leagues of Friends of hospitals were established, to support individual hospitals (Millward).

The post-1979 Conservative governments sought, by degrees, to expand the scope for non-statutory funding of health and welfare services (Davies, 1987; Mohan, 1995). From 1980, through the Health Services Act, health authorities were permitted to appeal for charitable funds directly, and some very high-profile individual fundraising campaigns were launched for the capital redevelopment of major institutions such as Great Ormond Street Children's Hospital, in London. Charitable funds are usually channelled to the NHS via what are now known as "NHS charities". These are independent charitable entities, not under the control of any government authority; they are registered with and regulated by the Charity Commission for England and Wales (see section 3 for a fuller account of these organisations). For the avoidance of doubt we do not, in this paper, investigate either hospital Leagues of Friends (see Millward, forthcoming) or the broad population of health charities raising funds for research into and treatment of those experiencing particular diseases or health conditions.

In an international context we may view the policies of post-1979 governments as being of a piece with a wider set of processes of restructuring of health care, in which systems have been disaggregated into competing units which compete against one another for resources. Our temporal focus is on the period after the reforms of the NHS introduced in 1991, whereby the service was separated into "purchasers" (entities charged with assessing population needs and placing contracts to deliver health care for defined populations) and "providers" (formally, NHS Trusts – the operational arms of the service). Particularly since the creation of NHS Foundation Trusts in 2003, which freed these bodies from a direct line of accountability to government, these entities are free to seek additional income and capital for investment from a wider range of sources (Pollock, 2004). The role of charitable fundraising in relation to hospital development has received some attention in other contexts in which developments similar to those in the NHS have taken place; there has, for instance, been a focus on the contribution of charitable fundraising and philanthropy, and of private patient income, in hospital capital development (Griffith et al., 1987; Salmon, 1995; Kearns and Barnett, 2003; Leys, 2001; Mohan, 2002; Brown and Barnett, 2004; Pollock, 2004; Exworthy and Lafond, 2021). The focus of the present paper is on charitable fundraising but elsewhere we develop a consideration of the balance between private patient and charitable income generation (Clifford and Mohan, under review). Though the sums involved may appear relatively small, compared to the totality of the NHS budget, the tight funding constraints on the service, especially since the 2010 election, mean that for individual NHS agencies, even apparently-marginal additions of resources may be of considerable value. Our paper provides, for the first time, large-scale quantitative evidence and analysis of the distribution of charitable funds across the population of NHS Trusts.

The specific concern we have here is with the relationship between the redistributive aims of a public service, on the one hand, and the somewhat capricious and idiosyncratic pattern of charitable fundraising on the other. The logics of these two systems are clearly at odds: a key element of the rationale for the NHS, after all, was the argument that resources for health care provision health services would, in future, be allocated in response to variations in population need rather than being a function of the "donations of the living and the legacies of the dead" (Abel-Smith, 1964, 405). We investigate variations in the distribution of charitable resources between NHS service providers and across geographical areas, and whether the patterns have persisted, widened or

converged over time. Charitable donations are a private matter for donors and recipients, and therefore not something that can readily be influenced by public policy. However, Reich (2006) has argued that in public services which aim to distribute resources in accordance with needs-based criteria, the persistence of charitable fundraising for particular institutions matters. The distribution of those funds potentially places some institutions at an advantage compared to others, and therefore contradicts the equity-oriented goals of public provision.

The structure of the paper is as follows. Firstly we explore the literature on the "logic of charity", a literature which leads us to anticipate unevenness in the distribution of charitable resources, and the small extant literature that deals with the subject of charitable support of the NHS. We then describe the sources of data that are available for the charting of trends in NHS charitable fundraising and in particular the steps we took to account for considerable organisation-level change in the distribution of those funds. The next section analyses the distribution of and trends in NHS charitable resources and the final section draws out some wider implications.

2. Theoretical and empirical background

2.1. Theory: voluntary sector failure and philanthropic particularism

The development of charitable fundraising in the NHS since health authorities were first permitted to engage in it after 1980 raises important substantive questions about the scale and distribution of these resources and, though this is something we consider in a separate paper (Abnett et al., 2023) the uses made of these charitable resources. The dedicated NHS charities 'support a wide range of programmes which benefit patients and staff in a specific location' (New Philanthropy Capital, 2019:6). Since they 'often work in isolation' (New Philanthropy Capital, 2019:8), there is limited collective understanding about the extent of variations in the charitable resources available to support different kinds of NHS Trusts, and Trusts in different geographical locations. Indeed the potential for unevenness in charitable sector activity was acknowledged in the influential Wolfenden Report, which in 1978 argued that 'some social and geographical contexts seem to provide a much more fertile soil for [charitable] action than others' (Wolfenden, 1978: 58). But considerable community-level inequalities in voluntary hospital provision in England were well-documented as a policy challenge from the late 19th century onwards (Mohan, 2002).

The theoretical basis for unevenness in charitable activity is most clearly outlined by Salamon (1987)'s theory of voluntary sector failure. He argues that the charitable sector has certain advantages over government in the provision of public goods or services, given the time and effort in mobilising government responses to social need. Charities are seen to respond to 'government failure', whereas government is responsive principally to the needs of the 'median voter', leaving an unsatisfied demand for collective goods (Weisbrod, 1975, 1988). Meanwhile charities are seen to respond to 'market failure', in situations in which markets are inappropriate given an asymmetric relationship between providers and users of services. A core characteristic of third sector organisations – non-distribution of surpluses to external stakeholders – serves as an important signal of trustworthiness (Hansmann, 1980). However Salamon argues that the charitable sector has its own weaknesses: *philanthropic insufficiency* (the (in)adequacy of funding levels in relation to the societal needs), *philanthropic particularism* (where resources flow to a restricted range of causes), *philanthropic amateurism* (where services do not always achieve high standards) and *philanthropic paternalism* (where services reflect the preferences and perceptions of donors and trustees as much as the needs of beneficiaries).

This paper lays particular emphasis on the extent of philanthropic particularism in healthcare. A focus on specific causes can be beneficial: charities provide a means through which discrete groups of the population can join together for common purposes. However, charitable

giving ‘also has its drawbacks’ as a means of matching provision with need; ‘serious gaps’ in charitable coverage may emerge where charitable donations target a particular, and perhaps restricted, range of causes (Salamon, 1987:40). This may not be compatible with broader social goals of ensuring responsiveness to the diversity of need and to the diversity of demand for public services and amenities (Smith and Gronbjerg, 2006). In the healthcare context, philanthropic particularism may be evident in an uneven distribution of charitable resources across different NHS trusts. This is potentially an issue of policy concern, given that a core aim of the NHS was to iron out disparities in resources between communities and institutions. The dominant source of resources for the NHS is taxation, and charitable fundraising has made a relatively modest financial contribution to the service. The details of the distribution of charitable resources across the NHS are not, however, well-known and a reappraisal of the contribution of charity is timely, in a context of significant resource constraints on the NHS’s budget since 2010. In this context, the availability of other resources to NHS trusts might be expected to assume greater significance. But what is the evidence that certain Trusts have benefited to a much greater extent than others from additional charitable funding?

2.2. Empirical evidence: existing literature on the pattern of charitable funding in the NHS

NHS charities have been neglected in empirical social science scholarship (Stewart and Dodworth, 2021). Published literature is limited to short quantitative overviews of the scale of NHS charitable fundraising in England (Holly, 1998), and a more detailed study of London (Pharoah and Mocroft, 2001), complemented by qualitative investigations which question whether it is appropriate to use charitable funds for purposes which are properly the responsibility of the government (Fitzherbert, 1989; Williams, 1989; Lattimer and Holly, 1992; Lattimer et al., 1996). Recent literature considers fundraising and/or volunteering for community hospitals and Scottish health trusts (Ellis Paine et al., 2019; Stewart and Dodworth, 2021), the activities of hospital Leagues of Friends (Millward, forthcoming), and crowdfunding for the NHS (Stewart et al., 2022).

The quantitative evidence in most of these studies is dated, and existing empirical work does not deal with issues such as the proportion of the total income of individual NHS Trusts that is derived from charitable sources, the evidence for ‘philanthropic particularism’ – in other words, how uneven is charitable funding across different NHS Trusts – or variations in the proportion of income from charitable sources according to characteristics of NHS Trusts such as the sector in which they operate (acute/ambulance/community/mental health/specialist), size (indexed by total revenues) and geographical location. Furthermore, to what extent has the charitable income of NHS Trusts changed over time and have disparities between Trusts in their level of charitable income become more marked over time?

3. Data and method

Our starting point is the mid-1990s, after the 1991 reforms of the NHS in England. These established a market for service provision in which NHS Trusts (which provide healthcare services in England) compete for contracts from purchasers of services (which went through various changes of nomenclature over time). Our temporal focus is therefore from the mid-1990s onwards, from which point we have a time series of data covering the charitable funds of NHS Trusts. Each NHS Trust (currently 217) – including acute trusts, ambulance trusts, mental health trusts, community health trusts, and specialist trusts – is associated with an NHS charity. These are defined as charities which are ‘established for charitable purposes relating to the NHS’; whose ‘trustee arrangements have been established by the Secretary of State for Health and Social Care’, while ‘the individuals responsible for ensuring that trustee duties are fulfilled are appointed by the NHS by one means or

another’ (Charity Commission, 2022).

Collectively NHS charities give £1 million every day to support the NHS (New Philanthropy Capital, 2019). There has been a degree of debate over the question of the NHS’s use of charitable funds to provide “core” NHS services. Specifically critics detected a growing reliance on charity to pay for buildings and items of capital which were properly the responsibility of the government (Lattimer and Holly, 1992). In practice there is no hard-and-fast rule, codified in law or administrative direction, which delimits the border between the province of charity and the responsibility of government. As a result the funds raised by NHS charities are used for a range of purposes: to support the immediate practical and emotional needs of staff and patients; to purchase medical equipment; to support research and development; and to brighten up hospital environments (NHS Charities Together, 2022).

The 1991 NHS reforms in England introduced a competitive internal market into the provision of health care and the response to this was a steady process of mergers of NHS Trusts. This posed a challenge for our ambition of analysing change over time. Since there was no previously existing source of information which detailed the process of formation, merger and dissolution of NHS Trusts over time, we constructed a unique linked longitudinal dataset which follows through time the population of NHS Trusts, and the population of associated NHS charities, that have existed in England since 2000. We identify NHS Trusts using the NHS Organisation Data Service (ODS code), assigned to any organisation that is part of or interacts with the NHS, and use this as the unique identifier (primary key) around which the linked dataset is built. We follow through time NHS Trusts from 2000 onwards, following Trusts which remain in existence, those that merge with other Trusts, and those which are dissolved and those that form over this period (Fig. 1). We tracked the formation, merger and dissolution of NHS Trusts through an ‘advanced search’ of www.legislation.gov.uk. NHS Trusts are formally constituted through Statutory Instruments, a form of secondary legislation. Therefore, Statutory Instruments which amend previous Statutory Instruments (such as a change in name, organisational merger, or dissolution) often provide a hyperlink which connects the two entities. They may also reference another Instrument; legislation which dissolves a Trust may say ‘See in conjunction with X which establishes X Trust’. Second, we also tracked NHS Trusts over time through the use of the NHS ODS Portal, which returns information on Trusts and NHS sites from an address, name and (unlike the legislation. gov.uk search) from the three-figure ODS code. Crucially, it shows the date of formation and dissolution for each Trust. Next we link together NHS Trusts with their associated charities through a crosswalk of NHS Trust codes and Charity Commission registration numbers. Again, since there was no existing source of information which systematically mapped NHS Trusts with their associated charities in this way, we collate this information ourselves. Firstly we searched the Charity Commission Register of Charities (RoC) for name matches to individual NHS Trusts. Second, to confirm a particular charity supported a particular NHS Trust, the charity’s dates of operation were checked with the dates of operation of the Trust and the aims and governing documents of the charity were checked for reference to the NHS Trust.

We then link to this longitudinal dataset, of NHS Trusts and associated NHS charities, relevant covariate data from various sources (Fig. 1): We obtained Department of Health data on the total annual income of individual NHS Trusts, and their annual charitable income, at the beginning of our analysis period in the early 2000s. These data were supplied for the period covering 1996–7 – 2003–4, at which point NHS Trusts reported such data to the Department of Health. Subsequently, NHS charitable funds were transferred to separate charitable organisations, which reported to the Charity Commission. This followed from further reforms of the NHS, establishing what are known as Foundation Trusts, which have greater autonomy than hitherto and, crucially, no longer report financial data to government. Hence the annual summaries of NHS charitable trust funds were not produced beyond 2004. We obtain NHS England and NHS Improvement Trust Accounts

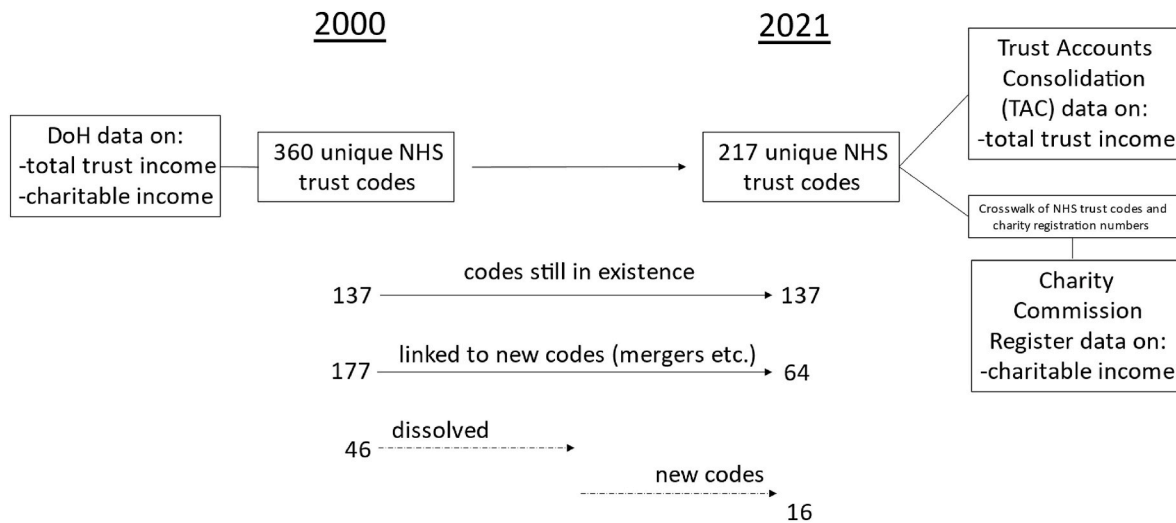


Fig. 1. Linking NHS Trust codes over time; linking NHS Trust codes to covariate data.

Consolidation (TAC) data, providing data on the total annual income of NHS Trusts for recent financial years. The TAC data also contain information on the sector of the Trust (acute/ambulance/community/mental health/specialist); this is a classification provided by the NHS which refers to the principal services provided by the Trust, though in practice many trusts will offer a combination of services. Finally, we obtain the Charity Commission's Register of Charities (RoC) data, providing data on NHS charities' income over recent years, drawn from the annual returns that charities are required to file with the Charity Commission.

The result is a dataset that – for the first time – provides insight into the extent of charitable funding of NHS Trusts, how the importance of charitable funding varies across different types of Trusts, and how that funding has changed over time. We prepare the data carefully before analysis. We identify 360 unique NHS Trusts in 2000, and 217 unique NHS Trusts in 2021 (Fig. 1). This substantial reduction reflects three decades of the impact of processes of competition into the NHS, in which providers of health care (NHS Trusts) compete for contracts to deliver NHS services. Competition has driven service rationalisation and led to an extensive number of mergers. Where NHS Trusts have merged over our analysis period, when considering change in the charitable income of Trusts over time, we compare the present-day charitable income of the NHS charity associated with the merged Trust with the total charitable income of the individual Trusts at the beginning of the analysis period. Where more than one NHS charity is linked to the same NHS Trust code (44 current NHS Trusts have two linked charities; five have three), we consider the overall charitable income for a particular Trust (the row total of the income for each charity linked to the Trust). Where more than one NHS Trust is linked to the same charity (there are eight charities which are each linked to two Trusts), for these eight pairs of Trusts, we sum the total Trust income for the two Trusts, to compare to the total charitable income for the charity that spans two Trusts. On a related issue, for these eight pairs of Trusts, we generate a new 'sector' category which combines the sector information from both of the pair of Trusts, generating a new 'Mental Health and Other' category (reflecting a combination of Mental Health and Community trusts/Mental Health and Acute trusts).

Since charitable income is likely to be affected by temporary fluctuations, where the data are available we use a three-year moving average of Trusts' charitable income (e.g. average annual charitable income for the financial years ending 2018, 2019 and 2020 at the end of the analysis period, and for the financial years ending 1999, 2000 and 2001 at the beginning). We did not apply this process to NHS Trusts: for these entities it is reasonable to assume that incomes do not fluctuate in

the same way. We accounted for inflation over time by deflating all income to 2020 prices using the Retail Price Index.

In our analysis we consider the dependent variable y , the proportion of total Trust income that comes from charitable sources. This is observed in the interval $[0, 1]$: it takes continuous values within this *bounded* range. Conventional least-squares estimation of a linear regression model is most helpful when the outcome variable is measured on an *unbounded* scale. Therefore instead of a least squares linear regression model we use a fractional regression model, a generalised linear model with a binomial distribution and a logit link function (Papke and Wooldridge, 1996), which is a well-developed alternative for modelling bounded dependent variables:

$$E(y|x) = \exp(x'\beta) / (1 + \exp(x'\beta))$$

where β is a vector of parameters and x is a vector of covariates for the sector of the Trust (acute/ambulance/community/mental health/specialist), the size of the Trust (measured by its income) and the geographical location of the Trust.

In our analysis we also consider relative income change g in Trust annual charitable income y , defined here as:

$$g = \frac{y_{2018-20}}{y_{1999-01}}$$

where $y_{2018-20}$ is average annual charitable income for the financial years ending 2018, 2019 and 2020 and $y_{1999-01}$ is average annual charitable income for the financial years ending 1999, 2000 and 2001. Thus if there is no real change in annual charitable income for a Trust over the analysis period, $g = 1$; for a real increase in income, $g > 1$; for a real decrease in income, $g < 1$. To summarise the relative growth distribution we consider the median value of g . This is considered a more helpful measure of average growth than the mean, because of the positively skewed nature of the relative growth distribution, and represents the relative growth in annual charitable income of the 'typical' Trust. Given this interest in *median* rather than *mean* relative growth in charitable income, we use quantile regression to examine how the median relative growth varies for different Trusts (see Koenker, 2005). Indeed, while conventional least-squares estimation of the linear regression model provides an estimation of how the conditional *mean* of an outcome variable varies according to covariates, quantile regression provides the basis for an estimate of the conditional *median*. The quantile regression model is defined as:

$$g_i = x_i' \beta(q) + e_i$$

where $q = 0.5$ in the case of the median. β is a vector of coefficients which, as with the least squares linear regression model, describe the relationship between the outcome and covariates. However - unlike least squares linear regression - here the quantile regression model describes how the conditional *median* (rather than mean) relative growth varies according to x_i , the sector of the Trust (acute/ambulance/community/mental health/specialist).

4. Results

4.1. Proportion of trust income from charitable sources

Fig. 2 illustrates the relationship between Trusts' total annual income (horizontal axis, log scale) and their average charitable income (vertical axis, log scale), disaggregated for different sectors of Trusts. Note the diagonal lines, which indicate where charitable income represents a certain percentage of total Trust income. Importantly the results show that there is considerable variety in the level of charitable income according to the sector of the Trust. For most acute trusts,

charitable income is equivalent to between 0.1% and 1% of total Trust income. Notably the level of charitable income tends to be much lower for ambulance, community and mental health Trusts; for most trusts in these sectors, charitable income is an order of magnitude lower than for the majority of acute trusts, being equivalent to only between 0.01% and 0.1% of total Trust income. (Differences in order of magnitude, on a base-10 logarithmic scale, are interpreted in factors of ten: if numbers differ by one order of magnitude, they differ by a factor of about 10; if numbers differ by two orders of magnitude, they differ by a factor of about 100.) In contrast, for the majority of specialist trusts, charitable income represents between 1% and 10% of total income – an order of magnitude higher than for the majority of ambulance, community and mental health Trusts. The association between the sector of the Trust and the percentage of total Trust income that comes from charitable sources, which is summarised in Table 1, is highly significant: there is strong evidence to reject the null hypothesis of no relationship between the sector of the Trust and the percentage of total Trust income that comes from charitable sources ($p < 0.001$).

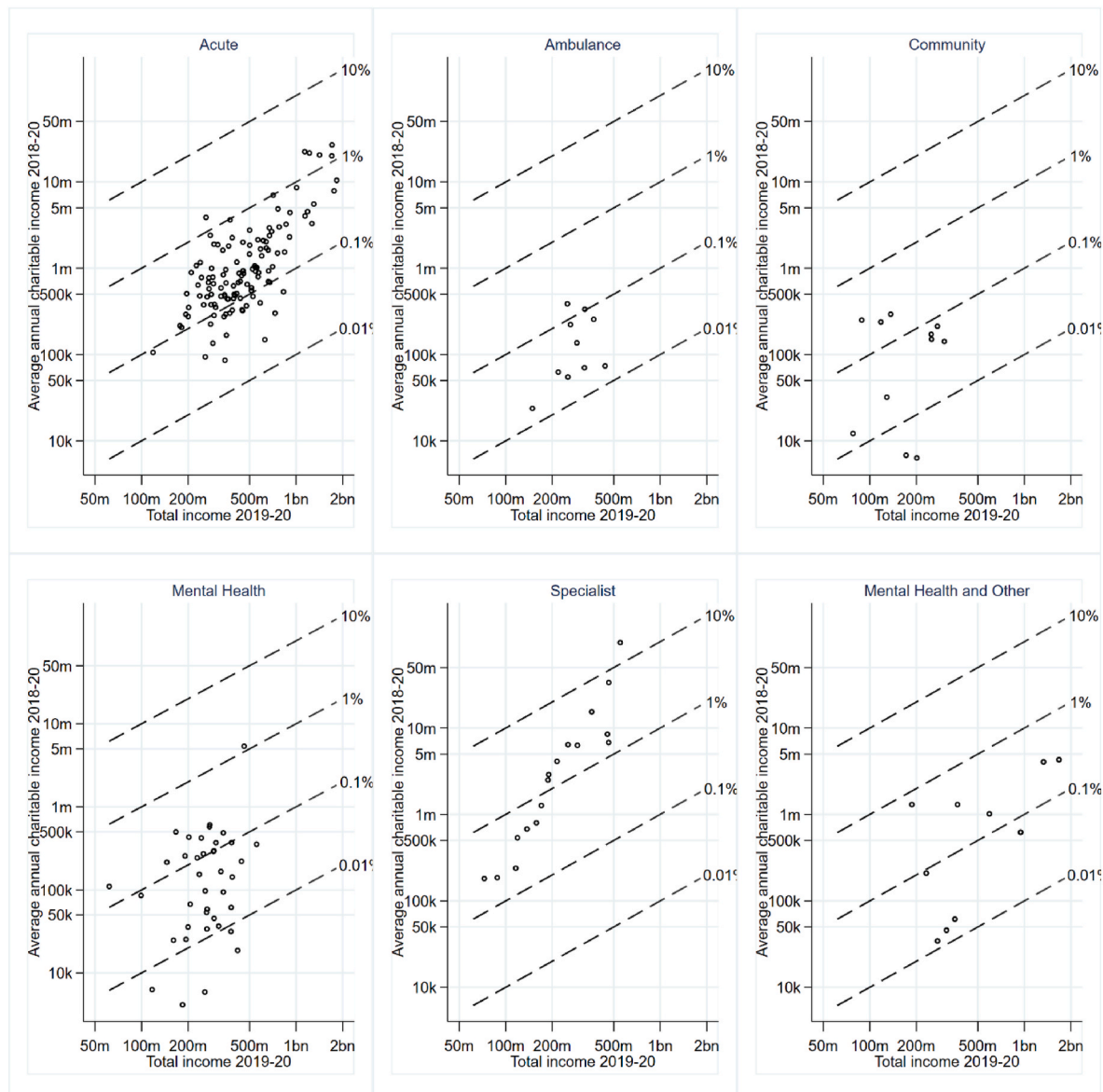


Fig. 2. Trust total annual income (2019–20) vs. Trust charitable annual income (average 2018–20), disaggregated by sector of trust. Note: axes presented on log scale. Figures in £. The diagonal lines indicate where charitable income represents a certain percentage of total income.

Table 1

Association between sector of Trust and percentage of total Trust income that comes from charitable sources.

| | | <0.01% | 0.01%– 0.1% | 0.1%– 1% | 1%– 10% | >10% | Total |
|----------------------|-----|--------|----------------|-------------|------------|------|-------|
| Acute | N | 0 | 19 | 97 | 6 | 0 | 122 |
| | (%) | (0) | (16) | (80) | (5) | (0) | (100) |
| Ambulance | N | 0 | 8 | 2 | 0 | 0 | 10 |
| | (%) | (0) | (80) | (20) | (0) | (0) | (100) |
| Community | N | 2 | 6 | 3 | 0 | 0 | 11 |
| | (%) | (18) | (55) | (27) | (0) | (0) | (100) |
| Mental health | N | 5 | 21 | 12 | 1 | 0 | 39 |
| | (%) | (13) | (54) | (31) | (3) | (0) | (100) |
| Specialist | N | 0 | 0 | 7 | 9 | 1 | 17 |
| | (%) | (0) | (0) | (41) | (53) | (6) | (100) |
| Mental health/ other | N | 0 | 10 | 8 | 0 | 0 | 18 |
| | (%) | (0) | (56) | (44) | (0) | (0) | (100) |
| Total | N | 7 | 64 | 129 | 16 | 1 | 217 |
| | (%) | (3) | (29) | (59) | (7) | (0) | (100) |

Note: Pearson $\chi^2(20) = 144.7107$; $Pr < 0.001$.

We also consider the relationship between the geographical location of the Trust and the percentage of total Trust income that comes from charitable sources (Table 2). We find that, for Trusts in London compared to Trusts outside the capital, a higher proportion of Trusts have a relatively high percentage of total Trust income from charitable sources. For Trusts located outside of London, 64% have charitable income equivalent to between 0.1% and 1% of total Trust income, while only 4% have charitable income that represents over 1% of total Trust income; in contrast, for Trusts located in London, 35% have charitable income that represents between 0.1% and 1% of total Trust income, while 26% have charitable income that represents over 1% of total Trust income. This relationship is statistically significant: there is strong evidence to reject the null hypothesis of no relationship between the location of the Trust and the percentage of total Trust income that comes from charitable sources ($p < 0.001$). We note too the heterogeneity within London: while – compared to outside the capital – a high proportion of Trusts in London have a relatively high percentage of total Trust income from charitable sources, 38% of London Trusts have a relatively low percentage (<0.1%) of total Trust income from charitable sources – a higher figure than the 32% of non-London trusts below this 0.1% threshold. However most – 9 out of 13 – of these London Trusts where charitable income comprises less than 0.1% of Total Trust income are non-acute (ambulance, community or mental health) Trusts. Where we consider acute Trusts specifically, there is no evidence that, compared to other areas, London has a more sizeable proportion of Trusts where charitable income comprises less than 0.1% of total Trust income. Nevertheless there is considerable scope for future research to examine the reasons underlying spatial variations *within* regions in the proportion of Trust income from charitable sources, to complement the regional analysis presented here. Indeed, considering acute Trusts in London specifically, there is considerable variation between (on the one hand) Trusts with a relatively high proportion (c.1% or more) of Trust income from charitable sources (for example, Royal Free London; University College London; Guy's and St Thomas'; Barts; Chelsea and

Table 2

Association between location of Trust (London/not London) and percentage of total Trust income that comes from charitable sources.

| | | <0.01% | 0.01%–0.1% | 0.1%–1% | 1%–10% | >10% | Total |
|------------|-----|--------|------------|---------|--------|------|-------|
| Not London | N | 5 | 53 | 117 | 8 | 0 | 183 |
| | (%) | (3) | (29) | (64) | (4) | (0) | (100) |
| London | N | 2 | 11 | 12 | 8 | 1 | 34 |
| | (%) | (6) | (32) | (35) | (23) | (3) | (100) |
| Total | N | 7 | 64 | 129 | 16 | 1 | 217 |
| | (%) | (3) | (29) | (59) | (7) | (0) | (100) |

Note: Pearson $\chi^2(4) = 24.6051$; $Pr < 0.001$.

Westminster) and (on the other) those with a relatively low (<0.1%) proportion (including certain Trusts in north and East London). Some of these differences arise because of the concentration in London of teaching hospitals. These institutions were permitted to retain their inherited endowments, as part of the compromises arrived at in the course of negotiations over the establishment of the NHS in 1948. In contrast, the endowments of non-teaching hospitals were pooled into a national Hospital Endowment Fund (Meakin, 1998, 19–22). As a result, there has been divergence between teaching hospitals and non-teaching hospitals in terms of their access to endowment funds over time.

We also consider the relationship between the size of the Trust and the ratio of income from charitable sources to the total income of their parent NHS Trust. (Table 3). A higher proportion of the largest Trusts receive charitable incomes that equate to a higher proportion of their total income: of the smallest trusts with an income of less than £250 m, 59% have charitable income equivalent to between 0.1% and 1% of total Trust income, while only 6% have charitable income that equates to over 1% of total Trust income. In contrast, of the largest Trusts with an income of more than £1Bn, 69% have charitable income equivalent to between 0.1% and 1% of total Trust income, while 31% have charitable income that represents over 1% of total Trust income. This relationship is statistically significant: there is strong evidence to reject the null hypothesis of no relationship between the size of the Trust and the percentage of total Trust income that comes from charitable sources ($p < 0.001$).

Table 4 reports the results of the fractional regression model which considers the association between each of our covariates - sector, location and size - and the proportion of total Trust income that comes from charitable sources, while controlling for other variables. Note that - compared to acute trusts - the distinctively low proportion of income from charitable sources for ambulance Trusts, and the distinctively high income from charitable sources for specialist Trusts, persists even when we control for the location and size of the Trust. In contrast, mental health Trusts no longer show a significantly lower proportion of income from charitable sources than acute trusts when controlling for location and size. This suggests that the lower proportion of income from charitable sources of mental health Trusts in the bivariate analyses (Fig. 2;

Table 3

Association between size of Trust (£ total annual income) and percentage of total Trust income that comes from charitable sources.

| | | <0.01% | 0.01%– 0.1% | 0.1%– 1% | 1%– 10% | >10% | Total |
|-------------|-----|--------|----------------|-------------|------------|------|-------|
| <250 m | N | 4 | 14 | 30 | 3 | 0 | 51 |
| | (%) | (8) | (28) | (59) | (6) | (0) | (100) |
| 250 m–500 m | N | 3 | 42 | 54 | 8 | 0 | 107 |
| | (%) | (3) | (39) | (50) | (7) | (0) | (100) |
| 500 m–1bn | N | 0 | 8 | 34 | 0 | 1 | 43 |
| | (%) | (0) | (19) | (79) | (0) | (2) | (100) |
| 1bn+ | N | 0 | 0 | 11 | 5 | 0 | 16 |
| | (%) | (0) | (0) | (69) | (31) | (0) | (100) |
| Total | N | 7 | 64 | 129 | 16 | 1 | 217 |
| | (%) | (3) | (29) | (59) | (7) | (0) | (100) |

Note: Pearson $\chi^2(12) = 39.5242$; $Pr < 0.001$.

Table 4

Fractional regression model coefficients [outcome: proportion of Trust income from charitable sources].

| Sector [Ref. Acute] | | |
|---|--------|-------------|
| Ambulance | -1.05 | (-2.81)** |
| Community | -0.19 | (-0.40) |
| Mental health | -0.42 | (-1.16) |
| Specialist | 2.82 | (8.11)*** |
| Mental health and other | -0.64 | (-2.08)* |
| Location [Ref. Not London] | | |
| London | 0.58 | (3.07)** |
| Size (£ total annual income; Ref. <250 m) | | |
| 250 m–500 m | 0.93 | (3.44)*** |
| 500 m–1bn | 1.76 | (3.59)*** |
| 1bn+ | 2.30 | (5.48)*** |
| Constant | -7.33 | (-19.37)*** |
| LR χ^2 | 251.98 | |
| Df | 9 | |

Notes: z statistics in parentheses* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 1) reflects compositional differences in their location and size: in particular, mental health Trusts tend to be smaller in size than acute Trusts and, given the association between size and level of charitable income, this accounts for their lower proportion of income from charitable sources. Note that the distinctiveness of Trusts in London persists even when controlling for sector and size (Table 4): the higher proportion of income from charitable sources does not simply reflect geographical compositional differences in sector and size. Similarly, larger Trusts have a higher proportion of income from charitable sources even when controlling for sector and location (Table 4).

4.2. Trends in trusts' charitable income

Fig. 3 illustrates the relationship between Trusts' charitable average annual income in 1999–2001 (horizontal axis, log scale) and their charitable average annual income in 2018–2020 (vertical axis, log scale), disaggregated for different sectors of Trusts. Note the diagonal line, which indicates where charitable income in 2018–2020 equals charitable income in 1999–2001 after adjusting for inflation.

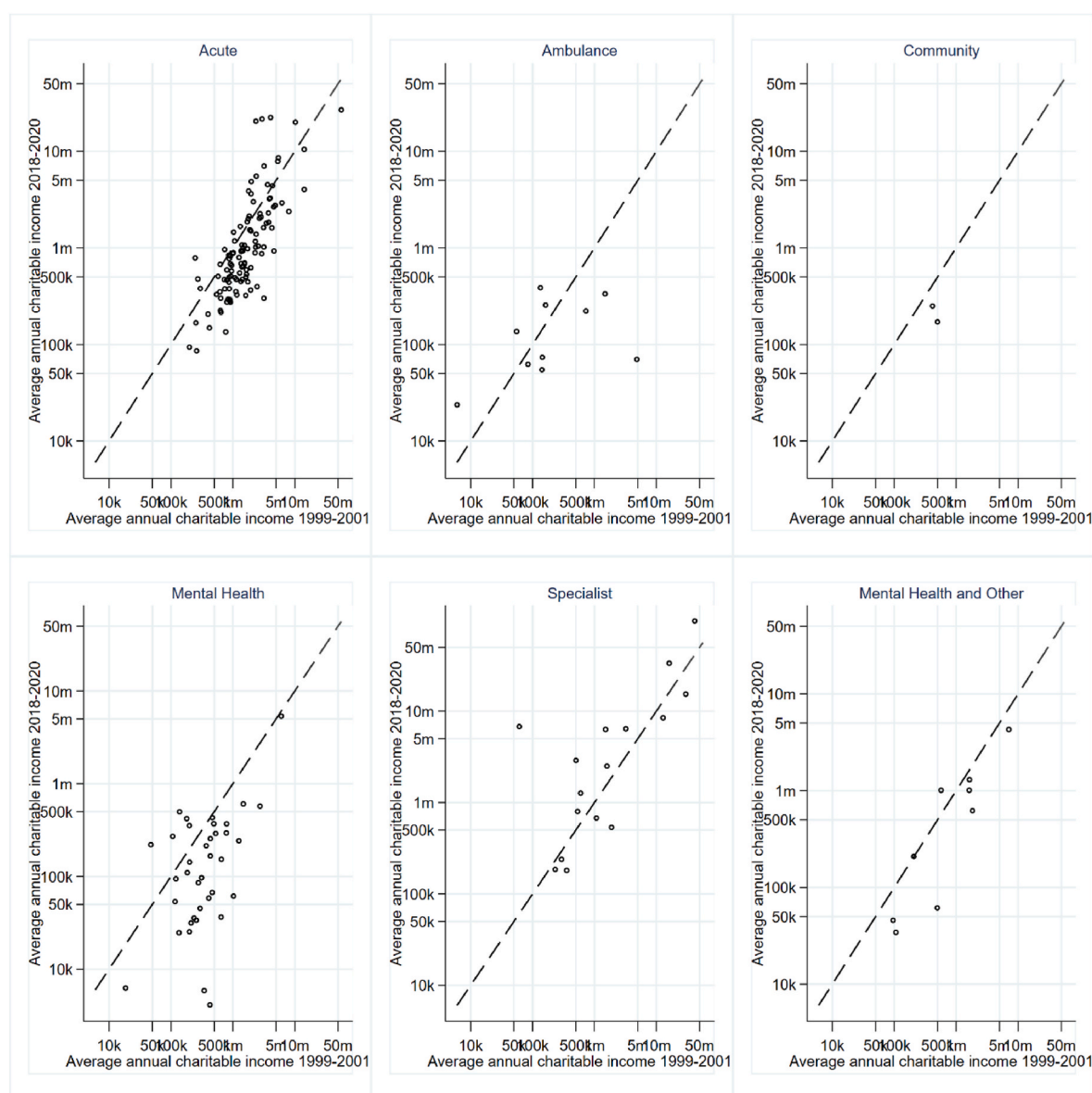


Fig. 3. Trust charitable average annual income 1999–2001 vs. Trust charitable average annual income 2018–2020, disaggregated by sector of trust. Note: axes presented on log scale. Figures in £. Deflated to 2020 prices using the RPI. The diagonal line indicates where charitable income in 2018–2020 equals charitable income in 1999–2001 after adjusting for inflation.

Importantly the results show that – across the different sectors – the majority of Trusts experienced negative real growth in charitable income over the analysis period, with a lower charitable income in 2018–2020 than in 1999–2001. Note that this contrasts with a growth in total resources: sustained investment in the NHS (at least by the Labour government (1997–2010) meant that the vast majority of Trusts saw a growth in their total Trust income over the analysis period. Therefore, across NHS Trusts as a whole, the growth in Trusts' charitable resources has not kept pace with the growth in their total income. However – as Fig. 3 shows – there is also considerable heterogeneity in the trend in Trusts' charitable income across different sectors: while the majority of acute Trusts experienced a decline in charitable income, this decline seems particularly marked for mental health Trusts, while the majority of specialist Trusts experienced an increase in charitable income over the analysis period. These results are summarised in the quantile regression model, which considers how the median relative growth in charitable income varies across different sectors (Table 5). The median relative growth in charitable income for acute Trusts (the reference category) is 0.57, indicating that the typical acute Trust experienced a 43% decline in charitable income over the analysis period. However this decline was even more marked for mental health Trusts, which experienced a median relative growth rate of 0.37, reflecting a 63% decline in charitable income. (For the quantile regression model, coefficients are added to the constant for the reference category (acute), such that median growth for mental health trusts is $0.57 - 0.20 = 0.37$.) In contrast the median relative growth rate of specialist Trusts is 1.56, reflecting a 56% increase in charitable income.

5. Discussion

The profile of charitable giving to the NHS has undoubtedly increased since the onset of the Covid pandemic and the associated vigorous efforts at fundraising. As yet, we are unable to trace the impacts of this at the level of individual NHS Trusts because of the timelag involved in the publication of open data on charity financial returns. Nevertheless this paper makes a highly original contribution by providing a robust analysis of variations in the growth and distribution of charitable resources across the population of NHS Trusts for a twenty-year period prior to 2020. This is based on a unique linked longitudinal dataset which follows through time the population of NHS Trusts, and the population of associated NHS charities, in England since 2000, and then linked that dataset to information about levels of charitable incomes for all these organisations. The variations between different Trusts are substantial (Fig. 2; Table 1): for the majority of specialist trusts, charitable income is equivalent to between 1% and 10% of total income – an order of magnitude higher than for the majority of acute Trusts, and two orders of magnitude (around 100 times) higher than for the majority of ambulance, community and mental health Trusts.

While these results relate specifically to the charitable funding of English NHS Trusts, they also have a wider international relevance. They represent rare quantitative evidence relevant to theoretical discussions about the uneven nature of the voluntary sector's response to healthcare need. According to the theory of voluntary sector failure, the voluntary

sector has important strengths as a provider of welfare but an important limitation is *philanthropic particularism*, the tendency for charitable support to be focused on a restricted range of causes (Salamon, 1987). This particularism is manifest in the highly uneven distribution of charitable resources across different sectors of NHS Trusts. Contrast the low levels of charitable support for ambulance, community and mental health trusts with the substantial and sustained charitable support for specialist Trusts (including cancer care, heart and chest care, and care for women and children). This is consistent with a wider literature on the logic of charity drawing attention to the appeal and fundraising potential of causes that directly affect donors or vulnerable members of their families (Mohan and Breeze, 2006). Note that, in highlighting the salience of philanthropic particularism, Salamon (1987) is not seeking to downplay the important role of voluntary action. On the contrary he argues that – given the effort required to mobilize government response to social need – the voluntary sector has certain advantages over government provision. Indeed the role of charities and voluntary work within the NHS can be regarded not only as an expression of the positive attitude of the general public towards the NHS but also as an important aspect of the NHS's resilience (Prato, 2022; Richards, 2020), a point brought home by the rapid mobilisation of volunteers during the pandemic (Hockley and Leary, 2021). Therefore particularism is a philanthropic 'weakness' in the sense not that it is a cause of health inequalities, but rather in the sense that the aggregate distribution of philanthropic resources may not be well spread across the range of healthcare needs, while those resources themselves need to be put in the context of the severe limits on NHS funding that adversely impacted on the NHS's readiness for the pandemic (Richards, 2020).

Our longitudinal data demonstrates persistent unevenness in charitable funding, and shows that there has been divergence over time, with specialist trusts experiencing strong real-terms growth in resources, which is in contrast to real-terms reductions in support for mental health trusts. More generally this paper also shows that across the population of Trusts the typical NHS Trust saw a sizeable decline in charitable income over the last two decades. Importantly this decline contrasts with a sizeable growth in aggregate income across the voluntary sector as a whole over the same period (see Martin et al., 2021). This runs counter to the concerns raised in the early 1980s that NHS fundraising, backed by the power of well-funded statutory bodies, would sequester resources away from voluntary organisations (Prochaska, 1992, 228).

The uneven distribution in charitable income across NHS Trusts not only extends to philanthropic particularism (differences between sectors): there are also clear differences according to size and geographical location. In terms of size, larger Trusts tend to have incomes from charitable sources that equate to a much higher proportion of their income than smaller Trusts. This may reflect the ability of large Trusts to invest in the infrastructure and costs that are associated with fundraising, including the employment of dedicated marketing professionals and the advice of fundraising consultants (Leat, 1995), capital-intensive media and marketing campaigns, and devoting attention and resources to the key tasks of donor identification, attraction and retention (see Backus and Clifford, 2013). Indeed Lattimer et al., 1996 argues that large teaching hospitals, that have an established public profile, are best placed to benefit from charitable donations from foundations, corporate donors and wealthy individuals.

In terms of geographical location, Trusts in London tend to have a higher proportion of their income from charitable sources, even after controlling for size and sector. This spatial unevenness focuses attention not just on the demand for public goods and services (Weisbrod, 1975) but also on the *supply* of financial resources for charitable activity and how this varies geographically (see also Clifford, 2012, 2018; Mohan, 2012). It underlines the particular ability of NHS Trusts in London to supplement their statutory income with charitable resources. At least part of the explanation for this, though one which is difficult to substantiate given the processes of organisational change in the NHS, must lie in the historic inheritance of unequal provision – in particular, of the

Table 5

Quantile regression model coefficients [outcome: median relative growth in Trust charitable income (average charitable annual income 2018–2020/average charitable annual income 1999–2001)].

| Sector [Ref. Acute] | | |
|-------------------------|-------|------------|
| Ambulance | 0.16 | (0.29) |
| Community | 0.03 | (0.09) |
| Mental health | −0.20 | (−2.00)* |
| Specialist | 0.99 | (2.11)* |
| Mental health and other | 0.03 | (0.12) |
| Constant. | 0.57 | (13.94)*** |

Notes: t statistics in parentheses* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

endowments of prominent London teaching hospitals, which were permitted to retain control of their endowments as part of the political compromises struck at the establishment of the NHS. Accumulated over centuries in some cases, some of these are now among the largest charitable endowments in England.

We acknowledge that there is considerable potential for further research on the distribution of charitable funds across geographical areas. First, one limitation of our analysis is that we do not consider Hospital Leagues of Friends. While these entities make a more modest financial contribution than do NHS charities – our calculations suggest that the aggregate expenditure of NHS charities is approximately nine times that of Leagues of Friends – it would be nevertheless interesting to compare the charitable income of Leagues of Friends in different parts of the country, and to explore how the distribution of NHS charities' funds varies according to socioeconomic conditions in the communities served by NHS Trusts. This would be a test of a further voluntary sector weakness – the spatial manifestations of 'resource insufficiency' – where philanthropic resources may not be available 'where the problems are most severe' (Salamon, 1987, p.40).

This paper's empirical analysis – illustrating the unevenness of charitable funding of healthcare – contributes to wider discussions about the role of charitable financing in welfare provision. Charitable donations are often motivated by emotional factors, personal ties or geographical proximity rather than being informed by an assessment of relative healthcare need (Lattimer et al., 1996; Mohan and Breeze, 2006). We ought therefore to have no expectation of equity in the distribution of charitable resources, and the unevenness of charitable funding is arguably a reason why charity should supplement, and not substitute for, state welfare provision (Bryson et al., 2002). In this respect Salamon's (1987) theoretical approach is helpful because it seeks to reformulate theories of the existence of the voluntary sector (and of the welfare state) to accommodate the reality of *partnership* between government and the voluntary sector in the provision of welfare. Previous theories, like Weisbrod (1975) and Hansmann (1980), had characterised welfare as a zero-sum game, in which voluntary organisations came into existence because of state and market failure. In contrast, under Salamon's theory of 'voluntary-sector failure', the voluntary-sector provides the 'first line of response' to market failures and government action is then needed to address certain voluntary-sector failures. Thus the 'failure' of philanthropic particularism – seen in this context as much lower levels of charitable support for ambulance, community and mental health Trusts compared to much higher levels of charitable support for Trusts providing specialist care – provides a theoretical rationale for voluntary provision to be supplementary to, rather than a substitute for, government provision, albeit a supplement that is not always available where it is most needed.

In the healthcare context, the uneven distribution of charitable resources across NHS Trusts would have implications for equity if it meant that Trusts 'had differential access to capital', and for planning 'if the availability of charitable funds were to influence the trajectory of [Trust] development' (Mohan, 2002:200). Therefore further empirical work is needed to advance our understanding of the implications of the 'philanthropic particularism' revealed by this paper's analysis. One strategy would be to complement the quantitative research presented here by using qualitative content analysis of expenditure records from charity accounts, to explore how specific NHS charities contribute to the services provided by NHS Trusts (Abnett et al., 2023). It may be argued that the scale of the funding described here is very limited relative to the totality of the NHS budget. In his work on the relationship between philanthropy and public service provision in the Californian secondary education system, Reich argued that unrestricted philanthropy might at best be indifferent to issues such as inequality and at worst "actively exacerbate inequalities" (Reich, 2006, 29, 40) with consequences for equality of educational opportunity. Given the limited aggregate contribution of charitable funds to the NHS it would be hard to argue that charitable funds are totally incompatible with the egalitarian aims

of the service. However, at the level of individual institutions, the contribution of charitable resources can be very significant indeed. Moreover, with some prominent charitable fundraising campaigns under way aimed at raising 8- or 9-digit sums for NHS capital developments (Cambridge Children's Hospital, 2022), the place of charity in the NHS, and its relationship to NHS priorities, seems likely to be an issue of growing significance in the coming years.

Credit author statement

JM: conceptualisation, funding acquisition, methodology, project administration, validation, supervision, Writing – original draft, writing – review and editing, JB: methodology, investigation, data curation, writing (original draft), review and editing, DC: conceptualisation, methodology, formal analysis, visualisation, writing - original draft, writing - review and editing.

Data availability

Data will be made available on request.

Acknowledgements

Funding from the Wellcome Trust, for a Collaborative Award on the topic of "Border crossings: charity and voluntarism in Britain's mixed economy of health care since 1948" (ref: 219901/D/19/Z), is gratefully acknowledged.

We would also like to acknowledge the helpful comments and suggestions made by investigators and researchers associated with that award and audiences at recent conferences of the Social Policy Association, the International Society for Third Sector Research, and the Association for Research on Nonprofit Organisations and Voluntary Action.

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