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THE STATE OF DONATION:
HOUSEHOLD GIFTS TO CHARITY, 1974-96

James Banks
Sarah Tanner

THE INSTITUTE FOR FISCAL STUDIES

Commentary 62

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Judith Payne (copy-editing)

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE

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Contents

Executive summary

In this report, we describe the charitable giving behaviour of UK households over the last two decades. In particular, we look at which types of households are most likely to give to charity, how much they give, the form in which they give and the way in which these have been changing since 1974. We go on to consider how household donations might have been affected by the introduction of the weekly National Lottery in November 1994. The main findings are that:

- On average, almost one-third of households give to charity in a two-week period. The average size of donations among givers is £4.11 a week. The majority of giving is through prompted gifts as opposed to planned methods such as deductions from pay or standing orders (although the latter two forms have become more important since 1974).

- Over the last twenty years, the percentage of households giving to charity has fallen by over 5 percentage points although the average donation has risen such that total household donations have gone up in real terms. This greater 'inequality of giving' has a generational aspect. Not only are today's young households less likely to give than today's middle-aged, but they are also less likely to give than today's middle-aged were when they were young. This suggests that the number of donors may fall in aggregate as generations age.

- Other things being equal, the likelihood of being a giver increases with age, income, education and wealth. These factors also affect positively the size of donations. Controlling for the effects of being a giver or not, charitable giving is a 'luxury'. That is, if income rises by a certain proportion, giving rises by a larger proportion.

- There is some evidence of misperception regarding the National Lottery. Most households think that a substantial part of the revenue from the Lottery goes to Camelot profits, although in reality much more goes to charity, sport or heritage. Also, almost half think that the Lottery reduces the donations of other households, whereas only 7 per cent think that playing the Lottery reduced their own donations.

- There is no evidence that the introduction of the National Lottery has had a negative effect on charitable giving. Households that play the Lottery give less to charity than those that do not, but this is not evidence that the Lottery has reduced giving. Rather, they were less likely to give to charity anyway. There is no significant change in the overall level of giving if we compare current giving with what it would have been in the absence of the Lottery.

1. Introduction

Donations from individuals and households represent a crucial part of the total income of many charities. A detailed survey by the Central Statistical Office in 1990–91 of the income and expenditure of UK charitable organisations found that the general public accounted for 41 per cent of total charitable income. Nearly half of this came from grants and donations; sales and earned income accounted for the rest.[1] This Commentary is about which types of households give money to charity and how much they choose to give. Using information from the Family Expenditure Survey (FES), we describe trends in charitable giving over the last twenty years and the particular factors — income, age, occupation and region, for example — that affect how much people give to charity and whether they give at all. To our knowledge, this is the first study using continuous years of UK household data, although in a study comparing data sources for charitable giving, Lee et al. (1995) used 1984 FES individual data and then looked at broad trends in the following years using published FES aggregates without breaking down the population by household type. In a related paper, Jones and Posnett (1991) estimated a model of giving using the 1984 FES.

In addition to providing information on an important source of charities' total income, there are several important policy issues for which this sort of analysis may help provide insights. For example, a large literature (predominantly in the US) has addressed the question of the degree to which individuals' donations are affected by their tax status.[2]

From the point of view of the voluntary sector in the UK, the single most important government policy reform in recent years has been the introduction of the National Lottery. In particular, there has been much debate regarding the possible effects of the Lottery on the incomes of voluntary organisations. Whilst we cannot consider the total incomes (including Lottery payments) of voluntary organisations, we can analyse the giving behaviour of households in recent years to see whether there have been any changes in the proportion of households giving to charity or in the level of donations following the introduction of the Lottery.

There are many advantages in using a survey such as the FES to analyse household giving behaviour. Most importantly, the use of microeconomic data sources facilitates a breakdown of information on giving by many household characteristics (such as age, sex, education and occupation) as well as by income and total expenditure levels. Also, in comparison with specialist surveys such as the Individual Giving Survey (IGS), the FES contains more information on households' other economic choices in addition to their

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[1] For further details, see Hems (1996).

[2] Two recent examples are Randolph (1995) and Ribar and Wilhelm (1995). Steinberg (1990) provides a useful summary.

decision to give to charity. This allows the information on the charitable giving of a household to be set in the context of its labour market decisions, its other spending decisions and also its saving choices. Finally, the FES is a reliable and consistent source of information on household incomes and expenditures. The data in the FES have been shown to match quite closely the information from National Accounts on household incomes and expenditures over the last fifteen to twenty years.[3] The reliability of the FES data on charitable giving is discussed in detail in Appendix A.

The plan of the Commentary is as follows. In the next section, we describe in detail the information on charitable giving available in the FES and document the main patterns observed in the household data. Donations are split by type, according to data availability, into prompted giving, standing orders and direct debits, and deductions from pay. This analysis concentrates initially on describing the cross-sectional patterns in both 'participation' (the decision to give any positive amount) and the level of donations among givers for one year of data, 1993–94. The analysis then sets the decision of whether to give in a broader economic context by looking at average spending patterns and labour supply and the extent to which they vary across givers and non-givers. In Section 3, successive years of FES data on giving are used to analyse longer-term trends in donations and, in particular, differences between successive generations. Section 4 presents a model of giving behaviour in order to estimate the marginal effects of changing particular demographic characteristics. The model is estimated using data from 10 years of the FES from 1984 to 1993–94. In Section 5, we extend the analysis to the period after the introduction of the National Lottery. We examine whether the National Lottery has affected whether or not households give to charity or how much they choose to give. In the context of a structural model of giving, we are able to control for changes in other factors that may also have affected charitable giving in our assessment of the effect of the Lottery. Section 6 concludes.

[3] See Atkinson and Micklewright (1983) or, more recently, Tanner (1996) and Johnson and McCrae (1996).

2. Who gives to charity?

In this section, we use data from the Family Expenditure Survey to analyse patterns of charitable giving across households. We begin by discussing what data are available in the FES on donations to charity and use data from one year (1993–94) to see whether particular factors — such as income, age, occupation and level of education — affect whether people give to charity and how much they choose to give. We also look at charitable donations in the context of other household economic choices, namely spending on other goods and services and labour supply decisions.

2.1. Information on charitable donations in the FES

The FES is an annual survey covering approximately 7,000 households (this represents a response rate of about 70 per cent of those approached).[4] All members of participating households aged over 16 years are asked to complete diaries detailing all their spending for a fortnight. Items in the individual diaries are aggregated across household members and across groups of goods and averaged across the two-week period to form household weekly spending totals for approximately 300 goods and services, including one entry for 'charitable gifts'. In the instructions to coders, the following spending items are listed to be included in this category:

> *animal charity, blind box, cancer league, candles (church), charity collection, donation to charity, Gold Heart (charity), Marie Curie memorial foundation, missionary box, mothers' union collection, poppy (charity), Red Cross donation, rugby life line, Salvation Army, school fund, sponsor money, Sunday school collection.*

What this definition does not include, therefore, is any charitable expenditure that yields something to the donor in return, such as expenditure on goods in charity shops and catalogues, payments for attending charity events or purchase of raffle tickets. In practice, this may constitute an important part of total charitable giving by individuals and households.

In addition to the spending diaries, further information on regular but infrequent expenditure items is obtained in household interviews. In particular, households are asked about charitable deductions from pay and payments to charities by bankers' standing order or direct debit. Hence, the final total for 'charitable gifts' will include not only the weekly value of all expenditure items on charities listed above, but also the

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[4] It is worth noting that the response rate reflects the stringency of information quality required by the FES. That is, households are only kept in the sample if all the information on income is complete and consistent. This compares with the Individual Giving Survey, for example, where, of the 1,000 respondents, about half record missing values for the income information.

weekly equivalent amount of charitable donations through standing orders or direct debits and deductions from pay.

2.2. How much do households give to charity?

Table 2.1 provides a summary of the information available in the FES on charitable giving in 1993–94. In total, 29 per cent of households gave money to charity during their two-week diary period. This implies a weekly participation rate of 16 per cent of households giving at least once a week.[5] Among those giving to charity, the mean weekly donation was £4.11[6] while the median donation was £1.23 a week. Further information on the size of donations is given in Figure 2.1, which groups the amounts given to charity into 50 pence bands. This shows that more than 20 per cent of those who gave to charity gave 50 pence or less a week, while 40 per cent gave £1 or less a week. At the other end of the distribution, however, more than 9 per cent of households gave more than £10 a week. The distribution of charitable giving is highly skewed, with the top 10 per cent of givers (defined in terms of size of weekly donations) accounting for 60 per cent of total donations.

The information on charitable donations can be broken down by type into prompted giving, charitable deductions from pay and regular donations by standing order or direct debit. This last group is most likely to cover covenanted giving: the Charities Aid Foundation estimates that two-thirds of covenants are paid by direct debit or standing order; the remainder are paid by cheque, credit card or debit card (see Lee et al. (1995)). Table 2.1 shows that just under 5 per cent of households made a donation by standing

Table 2.1. Charitable giving in the FES: summary

	Percentage of households donating	Mean donation (per week)	Median donation (per week)
Total giving	29.1	£4.11	£1.23
Prompted giving	23.2	£3.80	£1.17
Giving by standing order or direct debit	4.9	£4.84	£2.26
Giving by deductions from pay	5.7	£1.44	£0.30

[5] The implied weekly participation rates are calculated following Lee et al. (1995) as follows: implied weekly participation rate = $1 - \sqrt[n]{q}$ where q is the proportion of households observed *not* giving during the period and n is the number of weeks in the period.

[6] All values in the main body of the text are given in constant 1996 prices. This is to ensure consistency and to enable comparison with spending on the National Lottery in Section 5.

Figure 2.1. Size of donations per household

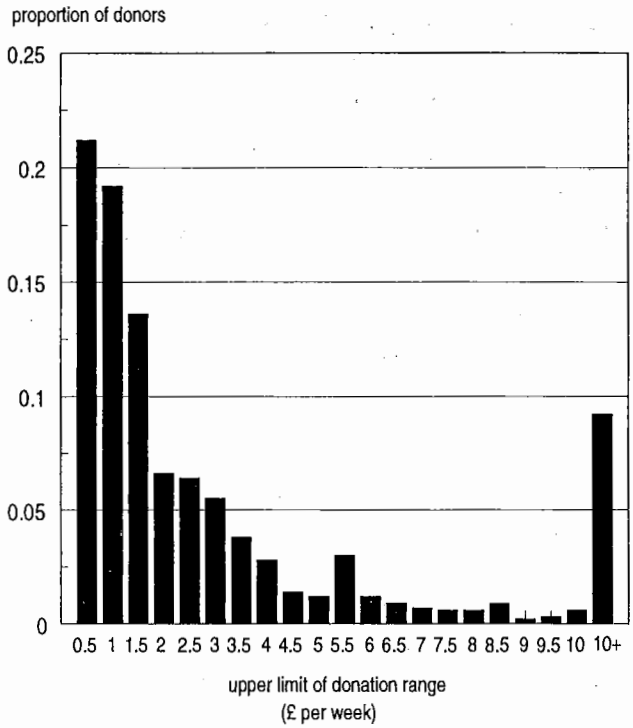
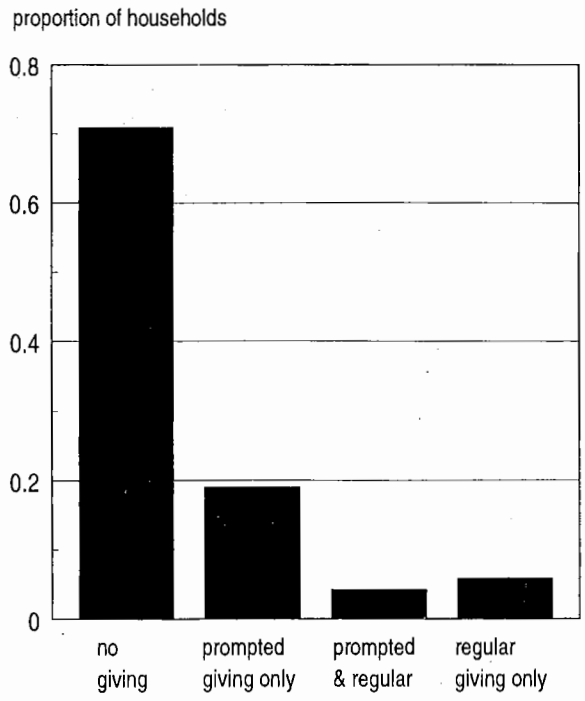


Figure 2.2. Type of giving



order or direct debit, while just over 5 per cent of households made donations by charitable deductions from pay. In the case of charitable deductions from pay, the size of donations is considerably smaller than giving by other methods.

In Figure 2.2, we break down households by type of giving, into those that gave nothing to charity (71 per cent of households), those that made only a 'prompted' donation (19 per cent), those that gave regularly to charity by standing order, direct debit or deductions from pay (6 per cent) and those that made both a prompted and a regular donation (4 per cent).

2.3. Patterns of giving in the FES

The FES contains a broad range of information on households' demographic characteristics, such as income, age, education and occupation. In this section, we describe patterns in charitable giving by a number of these characteristics. In particular, we look at differences in participation in charitable giving across demographic groups and at differences in the level of giving. We also look separately at prompted and regular giving.

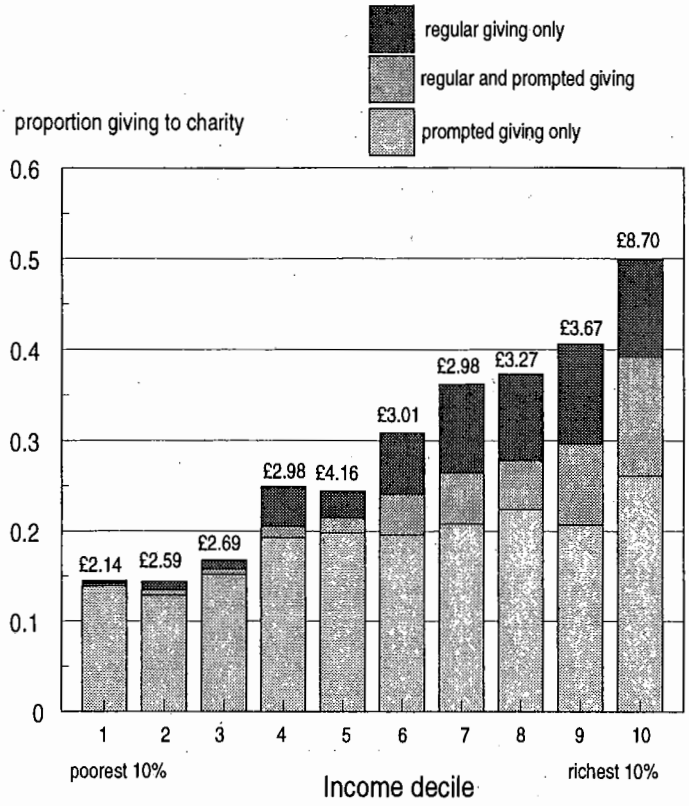
Ultimately, we want to identify those factors that determine whether or not households give to charity and how much they choose to give. Of course, simply observing variation in giving across a cross-section of households is not sufficient to identify a particular factor as a determinant of charitable giving, since several of the characteristics we look at (for example, age and income, and education and income) are likely to be highly correlated. In Section 4, we develop a more formal model that enables us to identify the effect of particular characteristics on giving by controlling for all other factors. However, cross-section profiles of charitable giving will enable us to identify those characteristics that are likely to be important.[7]

Patterns of giving by income

There is a very clear pattern of giving when we compare households with different incomes. This is shown in Figure 2.3. We rank all households by their total household income and divide them into 10 equal-sized groups or deciles. The average disposable household income of the bottom 10 per cent of households is approximately £60 a week, while the average for the households in the top 10 per cent is £860 a week. For each group, we show the proportion of households making a prompted donation to charity, the proportion making a prompted donation and giving through one of the regular forms of giving (standing order, direct debit or deduction from pay) and the proportion of

[7] Detailed figures for the breakdown of charitable giving by different demographic characteristics are presented in Appendix B.

Figure 2.3. Patterns of giving, by income



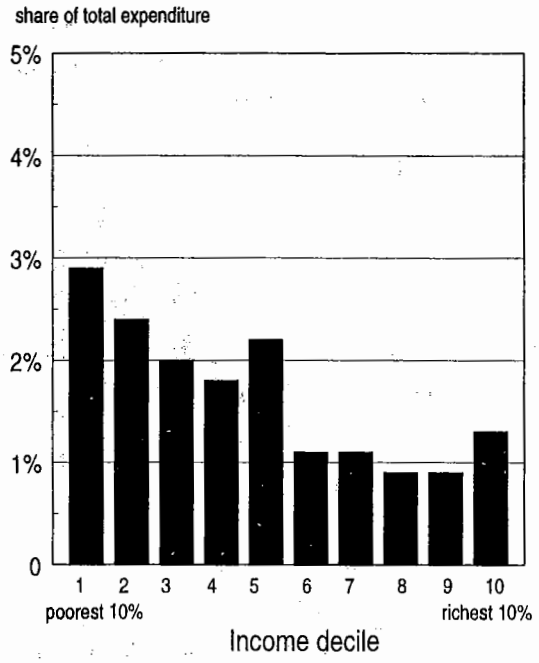
Note: The number reported at the top of each bar is the average (mean) weekly donation for all donating households within each group (in constant 1996 prices).

households making only a regular donation. The number reported at the top of each bar in Figure 2.3 is the average (mean) weekly donation for all donating households within each group (in constant 1996 prices).

The proportion of households giving to charity increases as household income rises. Among the poorest 10 per cent of households, only 14 per cent of households give to charity, while among the richest 10 per cent of households, the percentage is nearly 50 per cent. Most of this increase comes from a rise in the number of households making regular donations, which increases from practically zero among the poorest 10 per cent to nearly one-quarter of the richest 10 per cent of households.

The average size of donations also increases as household income rises — from an average donation of just over £2 a week among the poorest 10 per cent to nearly £9 a week among the richest tenth. However, as a proportion of their total spending, poor households give more to charity, as Figure 2.4 shows. For those households that give to charity, we calculate the size of their donations as a proportion of their total weekly spending. For the poorest 10 per cent of households, charitable donations represent nearly 3 per cent of total weekly spending. For households in the eighth and ninth deciles

Figure 2.4. Share of total spending on charitable donations by income



(with average weekly household income of £414 and £519 respectively), charitable donations represent less than 1 per cent of their total weekly spending.

Patterns of giving by age

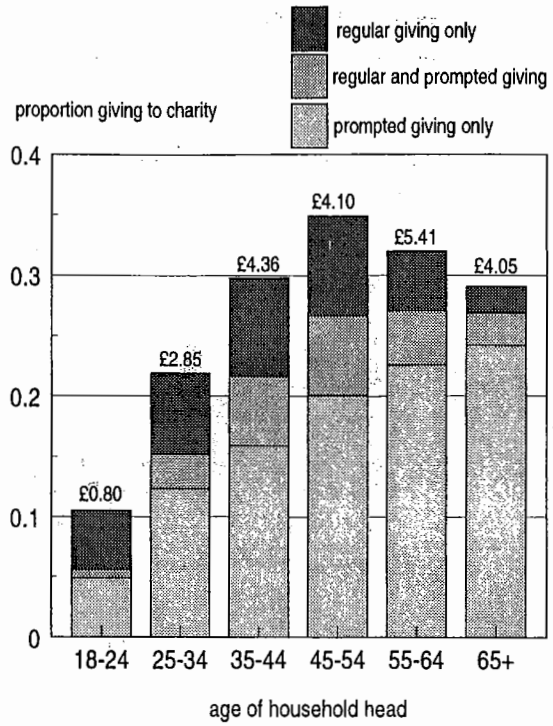
The age profile of giving to charity is humped, as can be seen from Figure 2.5: the proportion of households giving to charity increases as the age of the head rises, from just over 10 per cent of households with head aged 18–24 to nearly 35 per cent of households with head aged 45–54. Thereafter, however, the participation rate declines slightly. Looking at the proportion of households making prompted donations only, the participation rate rises uniformly with age. The decline in regular giving among older, retired households is to be expected, given the importance of deductions from pay as a form of regular giving.

The average size of donations is also hump-shaped, although the peak occurs at an older age — households with head aged 55–64 make the largest average donation to charity, of £5.41 a week.

One striking feature of the age profile of charitable giving is the very low rate of participation among the youngest households and the relatively small amounts given.[8]

[8] Of course, this does not imply that participation rates are very low among all young people. We look here only at heads of household who are aged 18–24. This group does not, for example, include those in this

Figure 2.5. Patterns of giving by age



The proportion of households in the bottom age-group that give to charity is only half that among the 25- to 34-year-olds and roughly one-third that among those aged over 35. The average amount donated is also smaller than for any other age-group — only 80 pence. An important question is whether giving to charity will increase among these young households as they grow older to the levels seen among the current group of 40- and 50-year-olds or whether we are witnessing a generational effect which will lead to lower rates of charitable giving in the future. This is something we will explore further in Section 3.

Patterns of giving by age and income

It is likely that age and income are correlated. Typically, both the very youngest and the very oldest households will tend to have lower incomes than middle-aged households. It is quite plausible, therefore, that the hump-shaped age profile of giving in Figure 2.5

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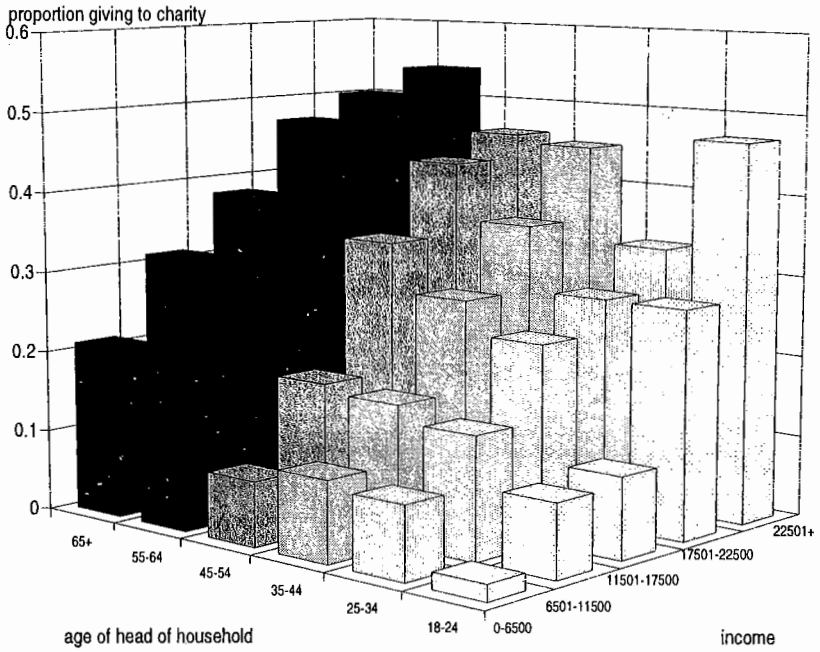
age-group who live with their parents. The most recent General Household Survey, for example, found that nearly one-half of all men in their early twenties and nearly one-third of all women in their early twenties still lived with their parents (*Social Trends*, 1997). The Individual Giving Survey shows a fairly high level of participation among younger individuals compared with other age-groups, suggesting that there may be an important difference between the charitable giving behaviour of young people in general and of those aged 18–24 who are heads of households.

could be driven by a positive effect of the level of household income on charitable giving, rather than by an age effect *per se*. In Section 4, we construct a formal model of giving that allows us to isolate the effects of particular factors by controlling for all other differences in households' characteristics. As a preliminary step, we look here at the profile of charitable giving in two dimensions — age and income — which allows us to compare households with the same income at different ages to look for separate age and income effects.

We allocate each household in the FES sample to one of six age bands and one of five income bands, and compute for each of the 30 cells the proportion of households giving to charity. The results are shown in Figure 2.6. The patterns revealed are very striking. The proportion of households giving to charity rises almost uniformly with both age and income. Hence, even when we control for households' incomes, age is shown to be an important factor; similarly, when we control for age, the level of income is important. What is interesting about this picture is that, for all levels of income, the hump-shaped profile of charitable giving disappears. Thus the hump-shaped profile that is observed when looking at charitable giving by age alone is the result of the changing income composition of middle-aged and retired households.

Figure 2.6. Patterns of giving by age and income



Patterns of giving by region and by season

Looking at charitable giving by region in Figure 2.7, households in Scotland are the most likely to give to charity (more than 30 per cent) and those in the Midlands the least (27 per cent). Quarterly variation in participation rates is also shown in Figure 2.7. There is evidence that participation rates do vary through the year — at least for prompted giving — and, in particular, that the proportion of households giving to charity during the first quarter of the year is significantly lower than the proportions of households making donations in the second and fourth quarters. Note that, because the data we are using here are drawn from the fiscal year 1993–94, this means that the participation rate in the first quarter of 1994 is lower than participation rates in the last three quarters of 1993. This may be evidence of a long-term trend in charitable giving if the overall trend is downwards, rather than a seasonal effect *per se*. The rate of giving is also 4 percentage points lower in the third quarter than in the second and fourth quarters. However, this difference is not significant. Average donations are higher in the fourth quarter than at other times of year, suggesting a possible Christmas effect. However, the differences in size of average donations are not significant between quarters.

Patterns of giving by education and by occupation

Figure 2.8 shows variation in giving by the education and occupation of the head. We define education groups according to whether the highest level of education of the head was compulsory schooling only, A levels or a college education. Higher levels of

Figure 2.7. Patterns of giving by region and by season

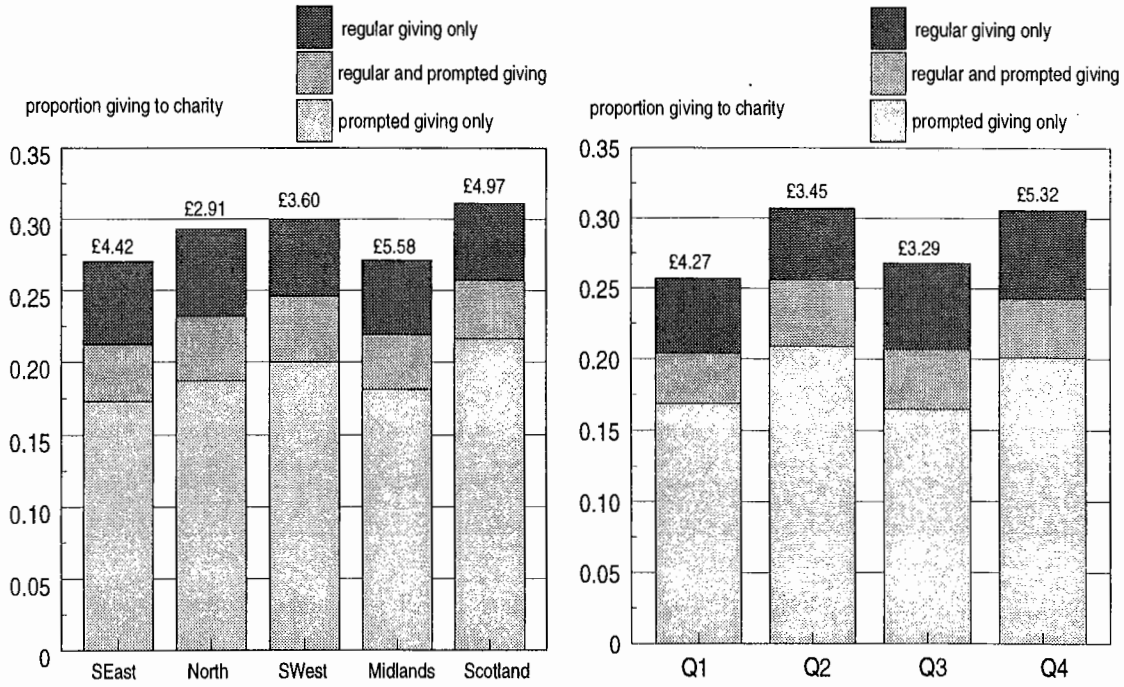
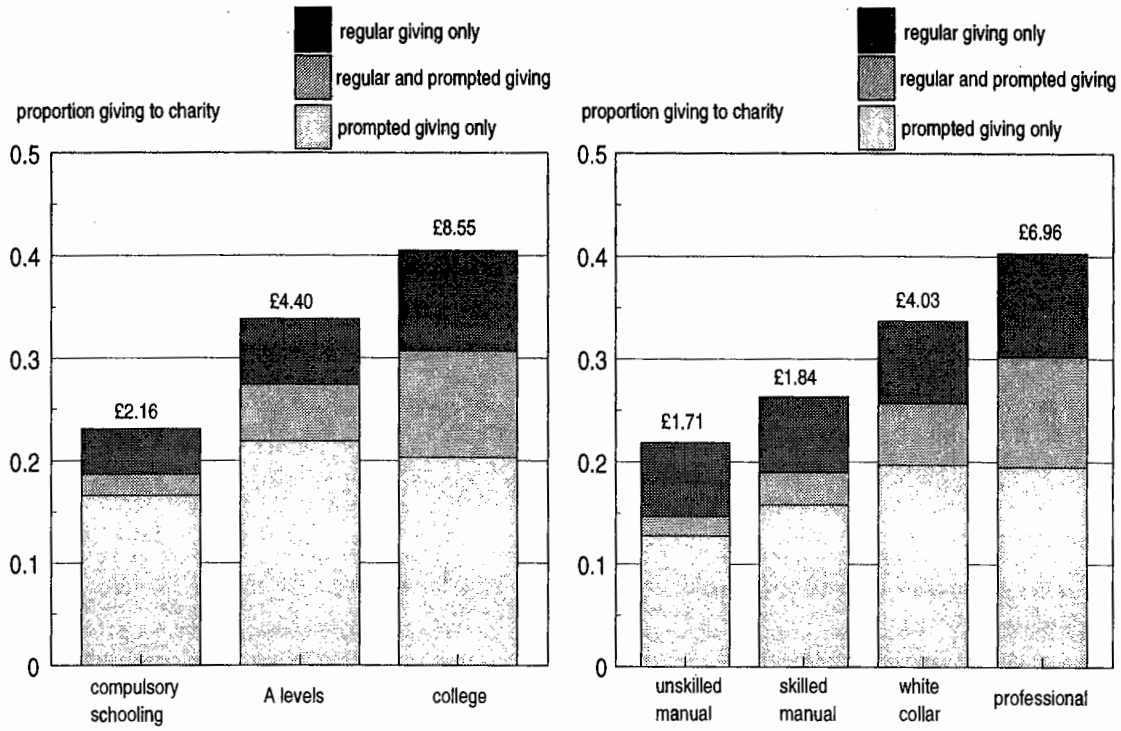


Figure 2.8. Patterns of giving by education and by occupation



education are associated with higher participation rates. Among households where the head received compulsory schooling only, just over 23 per cent give to charity and the average amount given is just over £2 a week. Where the head received college education, the proportion giving to charity rises to over 40 per cent and the average amount given rises to over £8 a week. Of course, income is likely to be positively correlated with educational qualifications. The structural model of giving in Section 4 will allow us to identify whether education has an effect on giving independent of its effect on income.

The occupation of the head of the household also makes a difference to participation rates and the level of donations. Households with the head in a professional occupation have the highest proportion giving to charity, and households with a head in an unskilled manual occupation have the lowest. Again, it should be noted that occupation is likely to be correlated with income (and, indeed, with education).

2.4. Charitable giving and household economic choices

As well as looking at how donations to charities vary according to a household's demographic status, it is interesting to examine the extent to which donations to charity are associated with other patterns in household spending. As a starting-point, it is interesting to compare the level of spending on charitable donations with the level of spending on other individual goods and services.

Table 2.2. Weekly household spending on leisure goods and services

	Percentage of households	Mean spending (per week)
Charitable donations	29.1	£4.11
Books	25.3	£4.91
Newspapers	82.5	£2.78
Cinema admissions	7.6	£3.59
Theatre admissions	5.5	£10.77
Sports goods and equipment	5.4	£13.43
Toys and hobbies	18.0	£7.21
Spectator sports	4.3	£8.20
Participant sports	32.9	£5.59
Subs to trade unions and professional organisations	24.3	£2.46

In its annual report on FES data, *Family Spending*, the Office for National Statistics includes expenditure information on charitable donations as a component of expenditure on leisure goods and services. We follow this categorisation here, and report information on household spending on other leisure goods and services. This is summarised in Table 2.2, which gives the proportion of households with positive spending on each good in the two-week diary period and, for the non-zero observations, the mean weekly level of spending.

Our main focus in this section, however, is to set charitable giving in the context of other household economic decisions over other expenditure items and over labour supply. In particular, we are interested in highlighting any differences between givers and non-givers in their spending and labour market behaviour. We consider household spending on six broad commodity groups — food, fuel, clothing, transport, services and the 'vices' (alcohol and tobacco) — a set of commodities that encompasses all household non-durable, non-housing expenditures. Table 2.3 shows how household spending is distributed across these six groups for both givers and non-givers. Small, but statistically significant, differences emerge, predominantly in food, alcohol and tobacco, and services. Households that are observed giving to charity tend to be observed spending less of their income on alcohol and tobacco, less on food and more on services.

Of course, these effects could simply be related to omitted covariates that determine both the expenditure shares and the probability of being a giver. By estimating a simple specification for household Engel curves (the relationship between the share of total spending allocated to a good and income), we can control for these effects. Despite controlling for income, age, education, family composition, tenure and time effects, it is

Table 2.3. Spending patterns by giving status, FES 1984–94

Proportion of non-durable, non-housing spending on:	Givers (20,404)	Non-givers (48,018)
Food	0.315	0.345
Fuel	0.094	0.119
Clothing	0.095	0.083
Transport	0.129	0.113
Services	0.219	0.175
Alcohol and tobacco	0.087	0.113

still the case that givers have significantly different expenditure shares from those of non-givers. The magnitude of the differences, however, is reduced to less than one percentage point for all goods apart from services and alcohol and tobacco. Other things being equal, the proportion of expenditure allocated to alcohol and tobacco is 30 per cent lower for households that have given to charity in the two-week period than for those that have not. The services share is approximately 15 per cent higher for givers than for non-givers.[9]

Table 2.4 looks further at the relationship between 'vice' and 'virtue' by cross-tabulating the probabilities of observing households giving and consuming alcohol or tobacco in the two-week survey period. It can be seen that households that give are less likely to contain smokers but more likely to consume alcohol. Looking at only those households that smoke or drink, however, those that give spend proportionally less of their total spending on tobacco and alcohol respectively.

Table 2.4. Smoking and drinking by giving status, FES 1984–94

	Givers (20,404)	Non-givers (48,018)
Percentage who smoke	37.7%	48.5%
Share of spending on tobacco, smokers only	7.8%	9.3%
Percentage who drink	77.4%	69.9%
Share of spending on alcohol, drinkers only	7.1%	10.0%

[9] The specification used for these Engel curves comes from Banks, Blundell and Lewbel (1997).

Table 2.5. Labour supply by giving status, FES 1984–94

	Givers (20,404)	Non-givers (48,018)
Percentage of households with head employed	59.4%	44.4%
Average number of full-time earners	1.45	1.08

Finally in this section, we consider the employment status and labour supply choices in conjunction with giving decisions. The raw cross-tabulations in Table 2.5 convey the essential information. Almost 60 per cent of households that give to charity have the head of household in full-time employment, compared with only 44 per cent of the non-givers. The average number of earners in giving households is also significantly higher, by more than one-third. Whilst it is beyond the scope of this Commentary to estimate a labour market participation model to control for other covariates, simple empirical specifications for labour market status that control for income, education and family composition do not change these conclusions.

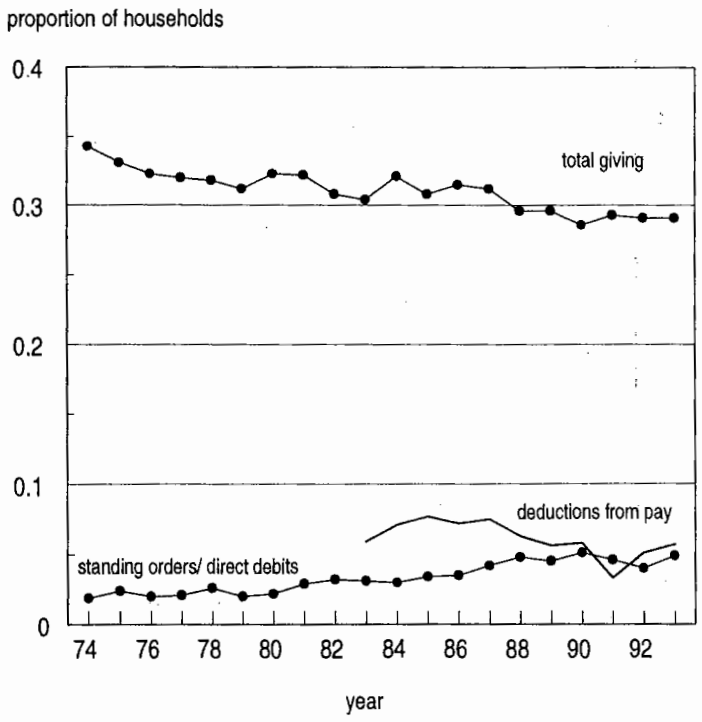
3. Trends in giving

The availability of several years of FES data enables us to look at long-term trends in charitable giving. In Figure 3.1, we plot the proportion of households observed giving to charity in each year from 1974 to 1993–94. We also show the proportion with a standing order or direct debit and the proportion making charitable deductions from their pay. However, charitable deductions from pay have only been separated from 'other deductions from pay' in the FES since 1983, and hence the time series is shorter. The numbers corresponding to this figure are given in Appendix B.

Over the period as a whole, the percentage of households giving to charity has fallen by over 5 percentage points — from just over 34 per cent in 1974 to just over 29 per cent in 1993–94. Although there are a few years that saw an increase in charitable giving — 1980, 1984, 1986 and 1991 — the overall picture is one of a significant downward trend. If we regress the percentage of households giving to charity in each year against a constant and an annual trend, the coefficient on the trend variable is negative, significant and equal to approximately 0.2, implying that — all other things being equal — the proportion of households giving to charity will fall by 0.2 percentage points each year.

Looking at charitable giving by standing order or direct debit, however, there has been an increase in participation over the twenty years. The percentage giving by this method has more than doubled — rising from just under 2 per cent in 1974 to nearly 5 per cent in 1993–94 (with a peak of 5.1 per cent in 1990). Regressing the percentage of households

Figure 3.1. Proportion of households giving to charity, 1974 to 1993–94



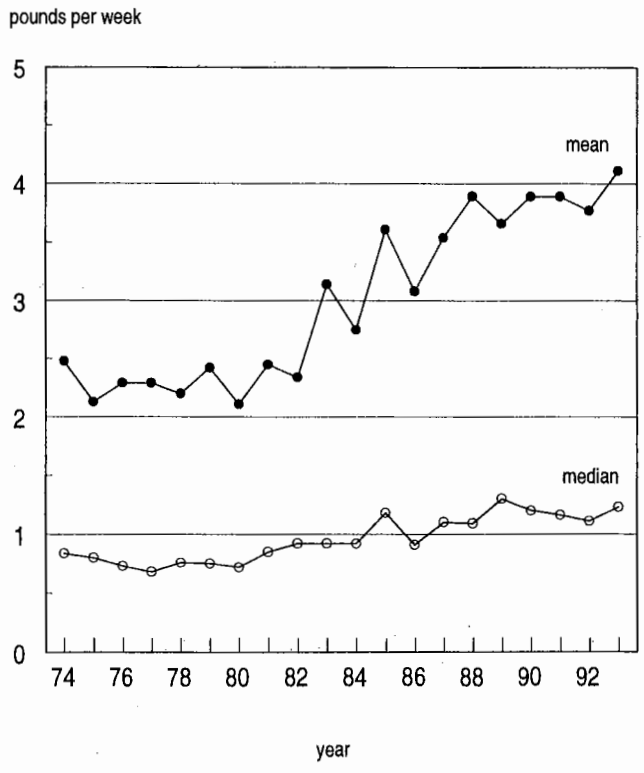
giving by standing order or direct debit against a constant and an annual trend, the coefficient on the trend variable is positive, significant and equal to 1.5 percentage points a year. This suggests that, in the context of an overall decline in the proportion of households giving to charity, the proportion of households making regular donations by covenant has increased.

Finally, we consider charitable deductions from pay. Regressing the proportion of households making charitable deductions from pay against a constant and a trend picks up a downward trend: the coefficient on the trend is negative and significant and approximately 0.2 percentage points each year.

Although the proportion of households giving to charity has fallen, the average size of donations increased in real terms between 1974 and 1993–94, as shown in Figure 3.2. This is the case for the mean and the median donation. In 1974, the mean amount given was £2.48 a week. By 1993–94, this had risen to £4.11. Similarly, the median donation increased over the period from 84 pence to £1.23. The increase in the real size of donations was particularly pronounced in the mid- to late 1980s.

To summarise, the last two decades have seen a steady decline in the proportion of households giving to charity but an increase in the average size of donations (in real terms). The increase in the average size of donations more than compensates for the decline in participation and, in real terms, total household donations to charity have

Figure 3.2. Average size of donations among givers, 1974 to 1993–94 (constant 1996 prices)



increased. We can see this by computing the mean level of donation across all households — both givers and non-givers. This has increased from 86 pence in 1974 to £1.18 in 1993–94.[10]

However, total giving is increasingly concentrated among fewer households. One possible explanation for this trend could be the increase in income inequality over the same period (see Goodman and Webb (1995) for detailed discussion). As we saw from our cross-section results, households with low incomes tend to have very low participation rates; a reduction in incomes at the bottom of the income distribution might tend to reduce participation further. At the top end of the income distribution, however, high incomes are associated with high levels of giving.

A further possibility is that the downward trend in charitable giving is driven by falling participation rates among successive generations of households. As we saw in the age profiles of giving in cross-section, households aged 18–24 are significantly less likely to give to charity than older households. If this is a pure age effect, we would expect to see the participation rate of today's younger households following that of today's older households as they grow older. However, it could be that today's younger households will have lower rates of giving at all ages than their older counterparts. In other words, the same hump-shaped cross-sectional profile could be driven by pure age effects, pure generational effects, or a mixture of the two. If there are generational effects in giving, causing younger households to be less likely to give at all ages than older generations, this could explain the observed long-term trends. If younger generations have lower levels of giving than older generations, this will cause the overall proportion of households giving to charity to decline over time. But, as giving is increasingly concentrated among a smaller number of older households, the average size of donations would tend to increase.

To explore these issues further, we look at generational patterns of giving. Rather than looking simply at the proportion of all households giving to charity each year, we analyse the behaviour of different date-of-birth cohorts in subsequent years. This will allow us to assess whether the observed decline in charitable giving over the last twenty years is coming equally from all age-groups, or whether it is particularly driven by younger cohorts with low participation rates replacing older generations with higher rates of giving. This will also enable us to assess whether the low rates of giving among the youngest households we observed in the cross-sectional analysis of the 1993–94 FES are driven by an age effect or a generation effect.

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[10] However, there has been substantial income growth over this period. While deflating donations by the RPI is appropriate in considering the total income of charities, an alternative series — donations deflated by nominal GDP — takes account of income as well as price increases. This series shows a slight fall over the period as a whole in total giving to charities, although the amount per giver still increases. This result is in accordance with the finding of Section 4 that charitable giving is a 'luxury' good.

Table 3.1. Cohort profiles: proportion giving to charity

Age	1974	1979	1984	1989	1993–94
18–22	17.0%	14.9%	14.6%	11.4%	5.9%
23–27	22.9%	22.3%	21.3%	18.1%	16.9%
28–32	30.8%	27.5%	27.1%	26.6%	21.9%
33–37	34.9%	32.8%	35.5%	29.7%	24.9%
38–42	39.0%	36.1%	39.8%	33.5%	31.9%
43–47	44.4%	45.2%	37.1%	38.8%	32.5%
48–52	39.8%	42.1%	50.1%	35.6%	38.5%
53–57	39.4%	33.0%	35.3%	35.0%	34.3%
58–62	39.1%	35.2%	30.6%	32.0%	31.9%
63–67	31.8%	29.9%	33.9%	30.6%	30.8%
68–72	32.1%	25.7%	28.1%	28.3%	31.3%
73–77	31.1%	26.3%	30.0%	28.1%	32.5%
78–82	26.2%	22.2%	30.8%	27.2%	29.6%

Table 3.1 summarises evidence on cohort patterns of giving. We present cross-sectional age profiles of charitable giving at five-yearly intervals — i.e. using data from 1974, 1979, 1984, 1989 and 1993–94. Within each year, we divide the sample into five-year age bands and we record the proportion donating to charity for each age-group. With the data presented in this way, it is relatively straightforward to analyse the behaviour of different date-of-birth cohorts. This can be done by starting with any age-group in 1974 and tracing their behaviour across the 20-year period through successive age-groups. Thus, for example, tracking the behaviour of the group aged 18–22 in 1974, 23–27 in 1979, 28–32 in 1984, 33–37 in 1989 and 38–42 in 1993–94 gives us a profile of the charitable giving of the cohort of those born between 1952 and 1956. As in cross-section, the proportion of households giving to charity increases as the age of the head of household increases. Aged 18–22, only 17 per cent of households give to charity. This increases to 32 per cent by the time the individuals in that cohort are aged 38–42. However, the age profile of giving is flatter by cohort than in cross-section. A participation rate of 32 per cent at age 38–42 for the cohort of households aged 18–22 in 1974 compares with a participation rate of 39 per cent for those aged 38–42 in 1974. This is evidence that generational or time effects as well as age effects affect the cross-section age profile of giving. The hump in cross-section is driven not only by the fact that the same households tend to give more when they are older than when they were younger, but also by the fact that older generations participate more than younger ones.

A comparison of the cross-section profiles in 1974 and 1993–94 shows that there has been a general decline in charitable giving over the 20-year period. For every age-group,

except the very oldest, the proportion of households donating to charity has fallen. Of course, giving in any particular year is likely to reflect the state of the business cycle. But the evidence on declining charitable giving across all age-groups in Table 3.1 is supported by the downward trend in the proportion of households giving to charity in Figure 3.1. Table 3.1 shows that the decline has not been felt equally across the age distribution, but is particularly marked among younger households. The largest proportional fall in giving between 1974 and 1993–94 occurs among households with head aged 18–22. The rates of giving are also substantially lower in 1993–94 than in 1974 for households with head aged under 40. Smaller falls are observed among those aged over 50.

In Table 3.2, we carry out a similar analysis for the levels of donations. It should be noted that, particularly among younger cohorts, the relatively small proportion of households with positive levels of giving reduces the number of observations used in calculating average levels of giving and, hence, increases the standard error. This makes it more difficult to pick out genuine trends in cohort behaviour from 'noise'. Bearing this in mind, the figures in Table 3.2 suggest that the generational patterns observed in the participation rates are not replicated in the levels of giving. Comparing levels of giving in 1974 with those in 1993–94, for example, there is a real increase in the average amount given for almost all age-groups.

Table 3.2. Cohort profiles: real levels of donations to charity

Age	1974	1979	1984	1989	1993–94
18–22	£0.65	£0.83	£1.67	£0.94	£0.63
23–27	£1.92	£1.17	£2.55	£2.85	£1.07
28–32	£1.48	£1.23	£2.58	£4.03	£2.57
33–37	£1.95	£2.29	£1.97	£3.53	£4.66
38–42	£2.62	£2.03	£2.21	£3.37	£4.79
43–47	£2.33	£3.63	£2.29	£3.75	£3.53
48–52	£2.59	£2.77	£2.73	£4.30	£3.88
53–57	£2.61	£2.02	£3.00	£3.78	£4.40
58–62	£3.65	£2.97	£2.64	£3.98	£7.43
63–67	£2.76	£3.09	£3.82	£3.68	£4.34
68–72	£2.49	£2.34	£2.78	£3.15	£4.66
73–77	£2.68	£2.47	£3.54	£2.66	£3.27
78–82	£3.07	£2.27	£2.50	£5.25	£2.87

4. Estimating a model of charitable giving

In this section, we present a formal model of charitable giving which will enable us to identify the particular effects of different factors (such as age, income, education and region) on whether or not households give to charity and how much they choose to give. The descriptive analysis in the previous sections has shown that both participation and the level of charitable donations are strongly linked to aspects of a household's composition and the level of household income. However, many of the household characteristics that we considered — for example, age and income, and education and income — are likely to be correlated. The observed increase in participation with higher levels of education, for example, could be caused by the fact that more-educated people are likely to have higher incomes rather than being an effect of the level of education *per se*. In order to pick out the effect of education on charitable giving, it is necessary to control for all other factors that might also have an effect.

4.1. 'Zeros': non-givers or infrequent givers?

Modelling charitable giving raises an important question about how to treat the large number of households that are not observed to give anything to charity in the FES sample. In principle, there are three possible reasons why a zero observation may arise.

The first possibility is that some households are non-givers. Given their current demographic characteristics and level of income, or because of a set of beliefs held — for example, that the work that charities do is the responsibility of the state, not of individuals — such households choose not to give anything to charity. These households may be termed genuine zeros, given their current circumstances and attitudes. However, a zero observation in a survey sample such as the FES is not necessarily an indication that the household is a non-giver. A second possibility may be infrequency of giving. If every household in the population gave to charity once a month, a survey such as the FES, which asks household members to keep an expenditure diary for two weeks, would pick up only half of all donations to charity and would understate the true participation rate accordingly.[11] Finally, a zero observation may arise from recording error: a household may in fact give to charity during the two-week period but forget to record the donation.

[11] In samples with longer reference periods, the distinction between infrequent givers and non-givers may become blurred. For example, individuals who are observed not to give to charity during a six-month period could reasonably be classified as non-givers even though a few may be (very) infrequent givers. However, with a two-week reference period in the FES the distinction is a meaningful one.

The treatment of zero observations has implications for the correct modelling of charitable giving.[12] If all zero observations arose because of infrequency, it might be appropriate to estimate a model of the level of donations on the sample of non-zero observations. To take the very simple example above: assume that all households give to charity once a month, but that in a sample with a two-week reference period such as the FES, only half of all households are observed to give to charity. But, since the non-zero observations will represent a random subsample from the total population of givers, the results of estimation on the subsample of non-zero observations should not be affected by excluding the zeros.[13]

However, if zero observations represent genuine non-givers, estimating a model of the level of donations for only the non-zero observations may produce biased results of the effects of characteristics such as age and income on the level of donations. If the participation decision is non-random with respect to the decision about how much to give, the set of givers is likely to be systematically different from the set of non-givers. We must take account of whether or not a household chooses to give to charity at all and the effect of different characteristics on that decision, before we can look at the effect of household characteristics on the amount given to charity.

In the FES, which has only a two-week reference period, it is almost certain that at least some of the zero observations will reflect infrequency of giving. However, it is also likely that there are genuine non-givers — i.e. people who choose not to give to charity, given their current demographic characteristics. We therefore model separately the decision about whether to give at all and the decision about how much to give and condition on the probability of giving in measuring the effects of different factors on the level of donations. This approach follows that of Heckman (1979). Further details are given in Appendix C.

4.2. Who gives to charity? ...

In this section, we present the results from estimating a model of whether households choose to give to charity. The model is estimated on a pooled sample of households drawn from 10 years of FES data from 1984 to 1993–94. In total, this gives us a sample of more than 70,000 households. As explanatory variables, we include on the right-hand side of the probit equation all the demographic characteristics by which giving was shown to vary in Section 2. These include continuous variables such as age of head of household and household income.

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[12] For a more detailed discussion, see Pudney (1989).

[13] This argument applies also to zeros that arise from under-recording. Assuming that the level of under-recording does not vary systematically by year or between different types of households, under-recording does not pose any problems for estimation.

However, many of the variables — such as level of education, occupation, region and season — are qualitative (non-continuous). In these cases, we include a set of zero–one 'dummy' variables that take the value one if the household falls in a particular group and zero otherwise. In the case of level of education, for example, we define three dummy variables for compulsory education, A levels and college education. We include two of the dummy variables in the regression (for A levels and college education) which measure the effect of each additional level of education relative to the control or excluded group (in this case, those who received compulsory schooling only).

In addition to the demographic characteristics that were looked at in Section 2, variables to proxy for household wealth are included (namely home-ownership and number of rooms in the household), as are household composition variables (number of adults, presence of children and proportion of females in the household) and a set of dummy variables for the employment status of the head of household. We also include a full set of year dummy variables.[14]

A full set of results is presented in Appendix C. Table 4.1 provides a summary of the effects of each variable on the probability of participation. Income and age have separate significant positive effects on the probability of participation. Higher levels of education also raise the probability of giving to charity, independent of their effects on the level of income, while those in employment are more likely to give than either the self-employed or those out of work. The presence of children in the household raises the probability of giving, as does a higher proportion of females. There is a regional dimension to giving — households in Scotland are more likely to give than those in any other region. Finally, controlling for all other factors, the probability of giving to charity fell significantly by 5 percentage points over the period, confirming the presence of a downward trend in giving.

4.3. ... and how much do they give?

In this section, we present the results from estimating a model of the (log) level of donations as a function of (log) total household expenditure[15] and household

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[14] In all specifications of demand, there should be some price element if the data have a time-series dimension, as ours do. However, it is not clear what this price should be in the case of charitable giving (although for tax-advantaged giving, the relevant price might be an individual's marginal rate of income tax). In all our specifications, we assume that the year dummies capture any time-series variation in the price of giving.

[15] We treat spending as endogenous by including the residual from the reduced form regression of ln(expenditure) in the right-hand side of the giving equations. This technique is equivalent to using instrumental variables (see, for example, Smith and Blundell (1986)) which can in this case be interpreted as controlling for transitory fluctuations in, or measurement of, household spending.

Table 4.1. Results of estimating whether households give to charity

Income	The effect of income on the probability of giving is positive and significant. A 10 per cent increase in income increases participation by 1.2 percentage points.
Age of household head	The effect of the age of the head of the household on the probability of giving is positive and significant. Increasing the age of the head by 10 years raises the probability of giving by 3 percentage points. This effect is greater among those with higher levels of education, as shown by the positive coefficient on the age–education interaction term.
Household composition	Both the presence of children in the household and a higher proportion of females raise the probability of participation. Compared with households without children, those with children are 3 per cent more likely to give to charity.
Wealth measures	Both wealth measures enter positively and significantly. The effect of home-ownership is to raise the probability of participation by 6 percentage points, while the effect of each additional room is to raise it by 1 percentage point.
Education	Compared with the control group (those with compulsory schooling only), the effect of A levels is to raise the probability of participation by 5 percentage points, while the effect of college education is to raise it by 11 percentage points. These effects are greater among older households.
Occupation	Only the coefficient on the dummy for skilled manual occupation enters significantly. Compared with the control group (those in an unskilled manual occupation), the probabilities of participation for professional and for white-collar workers are the same, conditional on their income. The effect of being in a skilled manual occupation is to raise the probability of participation by 2 percentage points.
Employment status	Compared with the control group (the employed), the effect of being self-employed is to reduce the probability of giving by 11 percentage points, while being out of work reduces it by 7 percentage points. Both these effects are significant.
Region	Compared with the control group (Scotland), all other regions have significantly lower rates of giving. The difference is nearly 12 percentage points in the South-East and around 6 percentage points for other regions.
Quarter	Compared with the first quarter of the year, the probability of giving is significantly higher in the second and fourth quarters (by 3 and 4 percentage points respectively) and 1 percentage point lower in the third quarter.
Year	Compared with the base year (1984), the probability of giving had fallen significantly by nearly 5 percentage points by the end of the period. The negative coefficients on all year dummies suggest a downward trend in charitable giving, controlling for all other factors.

Table 4.2. Results of estimating a model of the level of donations

Total spending	The effect of total spending on the level of charitable donations is positive, significant and greater than 1. A 1 per cent increase in total expenditure will cause a rise in the level of donations by 1.1 per cent, implying that charitable gifts are a 'luxury' good.
Age of household head	The effect of age on the level of donations is positive and significant. Adding 10 years to the age of the household head increases the level of donations by over 30 per cent.
Household composition	The amount given to charity falls with the number of adults in the household (conditional on total spending). The level of donations rises with the proportion of females in the household but, unlike for the probability of giving, the presence of children makes no significant difference.
Wealth measures	There is evidence of a positive wealth effect on the level of donations. The effect of home-ownership is to increase the level of giving significantly by 14 per cent, while the level of donations also increases with the number of rooms in the house.
Education	The effect of higher levels of education on the amount given to charity is positive and significant. Compared with the control group (those with compulsory schooling only), the effect of A levels is to raise the level of donations by 38 per cent, while the effect of college education is to raise it by nearly 80 per cent.
Occupation	Working in a professional or white-collar occupation has a positive and significant effect on the level of donations compared with the control group (those in an unskilled manual occupation). For both occupational groups, the effect is to increase the amount given by over 20 per cent.
Employment status	Those not in work are likely to give significantly more than those in employment — by 20 per cent (conditional on their total spending). There is no significant difference between the employed and the self-employed.
Region	The regional dummies have significant negative effects; not only are households in Scotland more likely to give, they are also likely to give more. The size of the regional effects is fairly large, with households outside Scotland giving 50 to 60 per cent less.
Quarter	Compared with the first quarter of the year, the level of donations is significantly higher in the fourth quarter (by 6 per cent) and significantly lower in the third quarter (by 9 per cent).
Year	Several of the year dummies have significant, negative effects. This suggests that the increase in the level of donation does not represent a general upward trend in giving, but is driven by particular factors, such as an increase in real incomes.

characteristics. A full set of results is presented in Appendix C. Table 4.2 provides a summary of the effects of key variables on the level of donations.

The effect of total household expenditure on the level of donations is positive, significant and greater than 1, implying that charitable giving is a 'luxury' good — i.e. a 1 per cent increase in total real spending would cause a rise in real charitable giving of more than 1 per cent. Other variables that have a positive effect on the level of giving as well as on participation are the age of the head of household, higher levels of education, the wealth indicators (number of rooms and home-ownership) and the proportion of females in a household. Households in Scotland are also likely to give more than those in other regions, as well as being more likely to give. Unlike in the case of participation, the presence of children has no significant effect on the level of donations. Being in a professional or white-collar occupation — which had no significant effect on the probability of giving to charity — does have an effect on the level of donations.

5. Has the National Lottery affected charitable giving?

Since the introduction of the National Lottery in November 1994, there has been considerable interest in the impact of the Lottery on individual donations to charities. There are several reasons why the National Lottery could have had a negative impact on individual charitable donations. First, the fact that a certain amount of the National Lottery stake was intended to be given to charities through the National Lottery Charities Board might have encouraged individuals to reallocate their planned charity spending from direct donations to charities to the purchase of a Lottery ticket which would have the additional bonus of a chance of winning the jackpot. Second, the Lottery was seen as competing for the loose change in people's pockets which may have been spent on unplanned giving. Finally, the National Lottery and scratch cards were seen as direct competitors for charities' own lotteries and scratch cards.

So far, the evidence on the impact of the National Lottery has been mixed. A recent report by the National Council for Voluntary Organisations adapted the Individual Giving Survey questions to monitor the impact of the National Lottery on individual giving. It found a fall in the proportion of individuals making prompted donations from 87 per cent in June 1993 to 73 per cent in June 1995.[16] In a survey of its members, on the other hand, the Institute for Charity Fund-raising Managers found that 70 per cent did not think that the Lottery had made any difference to the money that their charities had raised.

There is further mixed evidence on the impact of the National Lottery on charitable donations from the 1995 British Social Attitudes Survey. Individuals are asked to say how they think the money raised by the Lottery is distributed. Their responses are summarised in Table 5.1. The fact that charities benefit from the Lottery is widely recognised: only 5 per cent of those asked thought that none of the money raised by the Lottery went to charity. If individuals care only about the total level of money received by charity, the fact that charities receive money from the Lottery may cause them to reduce the level of their donations accordingly. But less than 4 per cent of those asked thought that charities received a great deal from the Lottery, compared with more than 10 per cent who thought that a great deal went to the arts. Interestingly, around 85 per cent thought that the amount that goes to profits for the organisation that runs the Lottery was 'a great deal' or 'quite a bit', although in fact Camelot's profits represent the smallest share of the money raised by the Lottery.

Individuals are also asked to say whether they think that buying National Lottery tickets will affect the amount people give to good causes in other ways. Their responses are summarised in Table 5.2. When asked about other people's behaviour, there is almost an

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[16] Pharoah, 1996.

Table 5.1. Perceptions of distribution of National Lottery money

How much goes to ... (actual percentages)	A great deal (%)	Quite a bit (%)	Not very much (%)	None at all (%)	Don't know/ refusal (%)
... prizes (50%)	22.9	50.3	22.2	0.2	4.5
... retailers (5%)	3.5	25.6	54.1	1.8	15.0
... Camelot profit (5%)[a]	41.3	43.4	8.2	0.5	6.6
... arts (5.6%)	10.2	35.2	42.6	2.3	9.5
... historic buildings (5.6%)	5.3	21.3	54.5	5.1	13.6
... sport (5.6%)	3.6	29.7	49.5	5.0	12.2
... millennium (5.6%)	2.8	21.6	27.9	22.8	25.0
... charities (5.6%)	3.8	31.1	53.2	4.5	7.4
... tax (12%)	9.5	33.7	17.8	18.5	20.6

[a] The figure of 5 per cent actually refers to the total share of Lottery money that goes to Camelot, including both operating costs and profit. The share that goes to Camelot profit is around 1 per cent.

Note: Figures for allocation of Lottery revenue are taken from FitzHerbert (1995).

equal division between those who think that buying Lottery tickets makes no difference to the amount given and those who think that people will give less to good causes in other ways. But when those who have played the Lottery are asked to say whether buying tickets affected their own donations to good causes, only 7 per cent thought that buying National Lottery tickets had meant they gave less to good causes in other ways. More than 92 per cent felt it had made no real difference.

Using FES data up to the end of March 1996, we can analyse whether the introduction of the National Lottery has had a significant impact on donations. Extending the structural model estimated in Section 4 using additional FES data from 1994–95 and

Table 5.2. Effect of the Lottery on charitable donations

Do you think that buying a Lottery ticket means ...	Behaviour of other people	Behaviour of self
... giving less money to good causes in other ways	48.6%	7.4%
... no difference to money given to good causes	48.8%	92.2%
Don't know	2.6%	0.4%

Table 5.3. Spending on the National Lottery and charitable donations

	Percentage of households participating	Mean weekly expenditure
National Lottery (Nov. 1994 – Oct. 1995)	68.7	£3.06
Charitable giving (Nov. 1994 – Oct. 1995)	32.5	£4.49
Charitable giving (Nov. 1993 - Oct. 1994)	31.7	£5.26

1995–96, we look at whether there are significant differences in the giving behaviour of Lottery players and non-players and whether there have been significant changes in giving behaviour since the introduction of the National Lottery, controlling for other household characteristics, such as income.

During the first year after the introduction of the Lottery (November 1994 to October 1995), the average proportion of households playing the Lottery during their two-week diary period was nearly 69 per cent, as shown in Table 5.3. Among Lottery players, the average (mean) amount spent on the Lottery each week was just over £3.[17] Over the same period, the proportion of households giving to charity was 32.5 per cent, while the average amount donated was around £4.50. At first sight, there is little evidence to suggest a fall in the proportion of households giving to charity. During the previous year (November 1993 to October 1994), the participation rate was 31.7 per cent. However, the level of donations was nearly 80 pence higher.

We also look at whether there are significant differences in patterns of giving between Lottery players and non-players. During the first year of the Lottery's introduction (November 1994 to October 1995), 32.3 per cent of households that played the Lottery gave to charity, compared with 32.9 per cent of non-Lottery players. There is, however, a considerable difference in the average amount given to charity: an average donation of £3.00 a week among Lottery players, compared with an average of £7.69 among those who did not play the Lottery.

We include in our estimation a dummy variable which takes the value one if the household records positive spending on the National Lottery. This will pick up systematic differences in the giving behaviour of Lottery players compared with non-players, controlling for their observed characteristics. The results, reported in the first

[17] This participation rate matches very closely evidence from other micro-data sources which suggests 63 per cent in 'normal' weeks and 73 per cent in roll-over weeks, although there is evidence of under-recording of the level of total spending on the Lottery (see Farrell and Walker (1997)).

Table 5.4. The effect of the National Lottery on charitable giving

	Effect on participation		Effect on contribution	
	Marginal effect	t ratio	Marginal effect	t ratio
Whether households play the Lottery	–0.022	–2.391	–0.478	–8.304
Whether the Lottery is available	0.010	0.687	–0.101	–1.296

row of Table 5.4, show that households that play the Lottery are less likely to give to charity than non-Lottery players — by 2 percentage points. Lottery players are also likely to give less to charity than non-players — by 48 per cent.

The observed differences in giving between Lottery players and non-players could arise as a result of Lottery players reducing their donations to charity — or stopping giving altogether — as a result of the introduction of the Lottery. But an alternative explanation is that Lottery players were always less likely to give to charity than non-players as a result of different tastes or preferences for giving. We have already seen, in Section 2, that there are differences in spending patterns between givers and non-givers — on alcohol and tobacco, for example.

To investigate this in more detail, we re-estimate the model, including a dummy variable if the Lottery was available — that is, it takes the value one if the observation is taken from the period after November 1994. This will pick up any significant change in giving behaviour since the introduction of the Lottery, controlling for changes in other factors such as income. The results, given in the second row of Table 5.4, indicate that giving behaviour is not significantly different from what it would have been in the absence of the Lottery. The sign on the Lottery dummy in the regression on the level of donations does indicate a fall in the amount given — by 10 per cent — but this effect is not significant. It is not possible to dismiss the hypothesis that the Lottery has had no effect on household giving behaviour. This suggests that the lower contributions amongst Lottery players can be explained by the fact that these households were always less likely to give to charity — and likely to give less — even before the Lottery's introduction.

6. Conclusions

There may be many reasons why households choose to give money to charity and only some of these reasons may relate to economic circumstances. The concept of treating charitable giving in the same way as other household consumption choices may be contentious. But setting households' charitable giving in the context of their economic decisions and constraints highlights many important aspects of the way in which giving patterns vary systematically by household type. The fact that systematic patterns emerge allows insight into the effects of policy decisions and of changes in household circumstances on decisions about whether or not to give to charity and about how much to give.

The charitable giving behaviour of UK households has been changing over the last 23 years. In particular, patterns emerge in the types of households that are most likely to give to charity and how much they give, as well as the form in which they give. Over the last 23 years, the percentage of households giving to charity has fallen by over 5 percentage points although the average donation has risen such that total household donations have gone up in real terms. The generational aspects of this greater 'inequality of giving' show up clearly in our analysis. Not only do today's young households give less frequently than today's middle-aged, but they give less frequently than today's middle-aged did when they were young.

There is no evidence of a significant change in giving behaviour following the introduction of the National Lottery. Households that play the Lottery give less to charity than those that do not, but the evidence suggests that they were less likely to give to charity anyway. A simple comparison of giving before and after the introduction of the Lottery shows no decline in the proportion of households giving to charity, but a slight fall in the average level of donations. A more robust analysis, which compares giving with what it would have been in the absence of the Lottery, taking into account other factors that may also have changed, shows that there has been no significant change either in the number of givers or in the average level of donations.

Appendix A. The reliability of FES data on charitable giving

The Family Expenditure Survey (FES) has been used as a source of data on household expenditures in a wide range of studies (see Baker, McKay and Symons (1990), for example). It benefits from a large annual sample size and a long time series of consistent data on which to draw. In addition, it contains a large number of demographic control variables including detailed information on household and individual income. In general, the FES expenditure information has been shown to be reliable across time and grosses up well to estimates of total spending in the National Accounts for most goods and services (see Tanner (1996)).

However, comparisons of information on charitable giving in the FES with another source of micro-data — the Individual Giving Survey (IGS) — reveal significant differences in the proportion of households (in the FES) or individuals (in the IGS) giving to charity. In the 1993–94 IGS, for example, over 70 per cent of individuals say that they have made a prompted donation to charity in the past month — giving an implied weekly participation rate over twice that in the FES. Here we discuss some of the features of the two surveys' designs which may account for this difference. For a more detailed comparison of the two data sources, see Lee et al. (1995).

The IGS has been conducted annually since 1985. It covers approximately 1,000 individuals each year selected as a quota sample, with quotas based on region, occupation, age and sex. The IGS provides more detailed information than the FES about charitable donations. Individuals are prompted about different ways they may have given to charity over the previous month, and for each different method they are asked to say how many times they were *approached* to give to charity, how many times they have *given* to charity and how much they have given, in the last month. All individuals are asked a further set of questions about charitable deductions from their pay and giving to charity by covenant. In addition, the IGS contains questions on individuals' attitudes towards charities and charitable giving, which may be important in explaining whether or not people choose to give to charity. However, the IGS contains far less detailed information than the FES on the socio-economic characteristics of its respondents and no continuous information on their income.

Table A.1 provides a summary of individual giving in the 1993–94 IGS. Overall, nearly 80 per cent of individuals had given to charity at least once over the last month and the average amount donated was £9.06 (in 1993 prices). But this measure of charitable giving includes spending in charity shops, the cost of attending charity events and the purchase of charity raffle tickets which are not included in the FES. In order to make the two surveys comparable, we calculate a measure of prompted giving in the IGS that includes only the methods of giving starred in Table A.1. We also need to correct for the difference in the reference period in the two surveys. We calculate weekly participation

rates for prompted giving following Lee et al. (1995) and show them in Table A.2.[18] The implied weekly rate in the FES is 12 per cent, while the implied weekly participation rate in the IGS is over twice as high, at 28 per cent (or 22 per cent if a month is assumed to have five weeks).

Table A.1. Charitable giving, IGS 1993–94

	Percentage of individuals	Mean donation per individual per month (1993 prices)
Door-to-door collection*	37.4%	£1.81
Street collection*	31.8%	£1.19
Buying raffle tickets	31.4%	£2.27
Church collection*	14.0%	£8.24
Sponsoring*	23.3%	£2.79
Appeal advertisement*	1.2%	£35.55
Appeal letter*	2.0%	£13.41
Buying goods — jumble sale	11.0%	£5.11
Buying goods — shop	14.3%	£7.59
Buying goods — catalogue	5.5%	£19.47
Buying goods — for a charity	3.0%	£14.26
Attending event	6.9%	£8.44
TV appeals*	3.9%	£9.53
Pub collection*	11.1%	£1.97
Shop counter collection*	10.7%	£0.89
Charity collection at work*	5.1%	£3.45
Telephone appeal*	0.2%	£20.00
Subscriptions / membership	4.9%	£12.20
Affinity / care card	0.8%	£5.79
Other	1.3%	£8.02
Total	*79.8%*	*£9.06*

[18] Implied weekly participation rate = $1 - \sqrt[n]{q}$ where q is the proportion of households observed *not* giving during the period and n is the number of weeks in the period.

Table A.2. Donations to charity, FES and IGS

	FES		IGS	
	Percentage of individuals	Mean donation per individual per week (1993 prices)	Percentage of individuals	Mean donation per individual per week (1993 prices)
Prompted giving (weekly participation rate)	12%[a]	£1.42	28%	£1.43
Deductions from pay				
— *total sample*	3.5%	£1.29	2.4%	£2.69
— *those with PAYE*	9.2%	£1.29	7.3%	£2.69
Giving by standing order or direct debit (FES) / covenant (IGS)	3%	£4.23	7%	£8.08

[a] This figure is for percentage of households.

However, even if the participation rates are different between the FES and IGS, the average amount donated is similar. The average size of prompted donations in the FES is £3.54 per household per week. Since the average number of people in a household is 2.5, this translates into an average weekly amount per person of £1.42, as shown in Table A.2. The average amount in the IGS donated by prompted giving in the last month is £5.72. The weekly equivalent is £1.43 assuming four weeks in a month, or £1.14 assuming five weeks.

The participation rates in charitable deductions from pay are also broadly similar in the IGS and FES. For the other form of regular giving in the FES — giving by standing order or direct debit — no direct comparison with the IGS is possible. There is a more general question in the IGS about covenanted giving, of which approximately two-thirds is paid by direct debit or standing order; the remainder is paid by cheque, credit card or debit card. The proportion of individuals giving by covenant in the IGS is greater than the proportion of individuals making regular payments by standing order or direct debit in the FES and this difference is significant. We also report the average amount donated by each of these methods. For both, the average amount in the IGS is almost twice as large as in the FES (once the different time period is taken into account). However, in neither case is the difference between the amounts significant since the very small number of non-zero observations for both these types of giving in the IGS produces very large standard errors on the mean donation.

There may be a case that the FES will tend to under-record spending on charitable donations (particularly prompted donations) because of individual forgetfulness. There is evidence to suggest that forgetfulness is more common for expenditure items that are small and often unpremeditated, as is the case for prompted donations (see Kemsley, Redpath and Holmes (1980)). This problem is almost certain to be avoided in the IGS. Since the focus of the IGS is charitable donations and volunteering, individuals are asked more detailed questions about their level of charitable donations and prompted about different ways in which they might have given to charity during the past month. However, this is likely to lead to a problem of 'telescoping' — that is, individuals are likely to report donations they may have made outside the reference period, including, for example, donations they may have made in the last six weeks. This is particularly the case since the reference period is defined quite imprecisely as 'the past month' and, since individuals are being asked only about their charitable donations, they may be tempted to report donations made quite a long time ago so as not to appear uncharitable. Given the designs of the two surveys, it is therefore perhaps not too surprising that the participation rate is higher in the IGS than in the FES.

As a further check on the accuracy of the FES as a source of information on charitable giving, we can use the information in the sample to construct estimates of total giving among the population as a whole and compare these with figures for total income from individual giving from the Charities Aid Foundation (CAF).[19] In fact, the FES grosses up fairly well to estimates of total population giving. The grossed-up FES total for 1992, for example, was £1.3 billion. This compares to a CAF estimate of total income from voluntary giving among the top 500 charities of just over £1.1 billion. The FES figure is slightly higher, possibly because it includes money given in church collections as well as donations to smaller charities and informal donations (including giving to homeless individuals, for example). Given the much higher participation rate in the IGS, it is likely that the grossed-up total would give a much higher figure for voluntary giving than the CAF figures.

[19] To obtain estimates of the level of charitable giving for the population as a whole, we need to multiply each observation by a factor that takes account of the ratio of the number of households in the population to the number of households in the sample. In addition, we weight each observation according to its demographic characteristics to correct for the known under- or over-representation of particular types of households in the FES sample relative to the population. This means giving greater weight, for example, to older households, which are known to be under-represented in the FES, and less weight to households with children, which are over-represented.

Appendix B. Patterns of giving in the FES

	All giving		Prompted giving		Standing orders and direct debits		Deductions from pay	
	% of hholds	Mean (>0)	% of hholds	Mean (>0)	% of hholds	Mean (>0)	% of hholds	Mean (>0)
Income decile								
£64 a week	14.3	£2.14	14.0	£2.10	0.6	£2.12	0.0	£0.00
£98 a week	14.3	£2.59	13.6	£2.49	1.3	£2.27	0.0	£0.00
£137 a week	17.3	£2.69	16.2	£2.76	1.0	£1.37	0.6	£0.39
£181 a week	24.5	£2.98	20.5	£2.74	2.4	£6.46	2.8	£0.43
£230 a week	24.1	£4.16	20.2	£3.37	3.1	£9.76	2.5	£0.26
£285 a week	29.8	£3.01	23.8	£3.27	3.7	£1.60	6.6	£0.91
£345 a week	35.9	£2.98	26.4	£3.12	5.9	£2.80	10.0	£0.70
£414 a week	35.7	£3.27	25.6	£3.45	6.1	£3.63	10.3	£0.60
£519 a week	41.0	£3.67	30.1	£3.47	7.5	£4.20	12.1	£0.98
£860 a week	48.7	£8.70	36.3	£7.33	17.0	£6.34	11.2	£4.27
Age of head								
18–24	10.5	£0.80	5.6	£1.03	0.7	£0.33	4.9	£0.49
25–34	22.0	£2.85	15.3	£2.67	2.4	£6.76	7.6	£0.69
35–44	30.0	£4.36	21.6	£3.72	6.2	£4.04	8.9	£2.70
45–54	34.9	£4.10	26.6	£3.85	6.3	£4.58	9.3	£1.28
55–64	32.2	£5.41	26.9	£5.09	5.7	£5.62	4.7	£0.69
65+	29.4	£4.05	26.9	£3.52	5.0	£4.67	0.3	£0.51
Quarter								
1	26.0	£4.27	20.3	£4.29	4.3	£4.15	5.3	£0.77
2	30.8	£3.45	25.5	£2.74	5.1	£6.11	5.4	£0.95
3	26.7	£3.29	20.6	£2.67	4.4	£6.12	6.2	£0.71
4	30.7	£5.32	24.2	£5.22	5.6	£3.28	5.7	£3.07
Region								
North	27.1	£4.42	21.2	£3.66	6.3	£5.84	4.1	£1.34
South-East	29.5	£2.91	23.1	£2.71	4.2	£4.50	7.3	£0.51
South-West	30.2	£3.60	24.5	£3.38	5.4	£3.80	5.1	£0.86
Midlands	27.1	£5.58	21.9	£6.16	3.4	£3.53	5.8	£0.79
Scotland	31.1	£4.97	25.6	£3.82	3.5	£4.10	6.9	£6.02
Education								
Compulsory	23.1	£2.16	18.7	£2.30	1.6	£2.43	5.1	£0.57
A levels	34.0	£4.40	27.4	£4.11	6.7	£4.29	6.0	£1.23
College	40.9	£8.55	30.5	£6.99	15.1	£6.55	7.3	£4.55
Occupation								
Professional	40.5	£6.96	30.1	£4.99	12.8	£6.90	10.0	£4.11
White collar	34.1	£4.03	25.6	£3.64	7.1	£4.83	8.3	£0.94
Skill manual	36.3	£1.84	18.9	£2.08	1.4	£1.90	9.2	£0.70
Unskilled	22.0	£1.71	14.6	£2.29	0.8	£0.89	8.6	£0.35

	All charitable giving				Standing orders and direct debits	Deductions from pay
	% of hholds	Mean (>0)	Median (>0)	Mean (all hholds)	(% of hholds)	(% of hholds)
1974	34.3	£2.48	£0.84	£0.86	1.9	—
1975	33.1	£2.13	£0.80	£0.73	2.4	—
1976	32.3	£2.29	£0.73	£0.76	2.0	—
1977	32.0	£2.29	£0.68	£0.75	2.1	—
1978	31.8	£2.20	£0.76	£0.72	2.6	—
1979	31.2	£2.42	£0.75	£0.77	2.0	—
1980	32.3	£2.11	£0.72	£0.70	2.2	—
1981	32.2	£2.45	£0.75	£0.82	2.9	—
1982	30.8	£2.34	£0.92	£0.75	3.2	—
1983	30.4	£3.14	£0.92	£0.96	3.1	5.9
1984	32.1	£2.75	£1.18	£0.88	3.0	7.1
1985	30.8	£3.61	£0.91	£1.11	3.4	7.7
1986	31.5	£3.08	£1.10	£0.97	3.5	7.2
1987	31.2	£3.54	£1.09	£1.10	4.2	7.5
1988	29.6	£3.89	£1.09	£1.15	4.8	6.3
1989	29.6	£3.66	£1.30	£1.08	4.5	5.6
1990	28.6	£3.87	£1.20	£1.11	5.1	5.8
1991	29.3	£3.74	£1.16	£1.09	4.6	3.3
1992	29.1	£3.77	£1.11	£1.10	4.0	5.1
1993–94	29.1	£4.11	£1.23	£1.18	4.9	5.7

Appendix C. Estimating a model of charitable giving

The model we estimate follows that of Heckman (1979). The estimation proceeds in two stages. At the first stage, we estimate a model of whether or not households give to charity as a function of their income and demographic characteristics. More precisely, we assume that households give to charity when their (unobserved) underlying 'desire' to give to charity is greater than a given threshold level. The observed variable is a zero–one 'dummy' variable which takes the value one if a household gives to charity and zero otherwise. Assuming that the underlying errors are normally distributed, we can estimate a probit model (see Greene (1993)).

At the second stage, we estimate an ordinary least squares (OLS) model for only those households with non-zero levels of giving. We model the (log) level of donations as a function of total household spending and demographic characteristics, conditional on the fact that the household has decided to give to charity at all. We include in the regression a sample selection correction term (the Mills ratio) to control for the fact that givers may be systematically different from non-givers. This is computed from the probit model at the first stage.[20]

One of the main advantages in estimating a Heckman model is that it keeps the decision about whether or not to give to charity separate from the decision about the level of donations. The same demographic variables — income, for example — can enter both decisions but have different effects on the decision about whether to give to charity and on the decision about how much to give.

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[20] In order to identify the separate effects of participation and donation, the Heckman model requires the adoption of an exclusion restriction — a variable assumed to affect contributions only to the extent that it affects the participation decision. In our model, the variables we choose to use are the interaction terms in age–income and in age–education. This is equivalent to saying that we assume a household's income or education relative to others their age will affect the participation decision but not the contribution decision of participants (conditional on actual income or education).

Heckman model: first stage — results of probit estimation, 1984 to 1993–94
Dependent variable: 0–1 dummy taking the value 1 if household gives to charity

Variable	Coefficient *(s.e.)*	t ratio	Marginal effect
ln(income)	0.374 *(0.014)*	26.179	0.125
Age of head ÷ 10	0.080 *(0.026)*	3.110	0.029
No. of adults	0.012 *(0.003)*	1.352	0.004
Proportion of females	0.276 *(0.020)*	13.522	0.092
Dummy for presence of children	0.086 *(0.013)*	6.402	0.029
Home-owner	0.191 *(0.013)*	14.196	0.063
No. of rooms	0.039 *(0.004)*	8.864	0.013
A levels	0.161 *(0.015)*	10.892	0.055
College	0.313 *(0.020)*	15.783	0.111
Professional	0.044 *(0.023)*	1.920	0.015
White collar	0.020 *(0.020)*	1.011	0.007
Skilled manual	0.053 *(0.018)*	2.888	0.018
Self-employed	–0.386 *(0.020)*	–19.320	–0.115
Not in work	–0.230 *(0.019)*	–12.236	–0.076
Age × income	0.008 *(0.005)*	1.652	0.003
Age × higher education dummy	0.053 *(0.007)*	7.883	0.018
South-East	–0.372 *(0.019)*	–19.143	–0.120
North	–0.184 *(0.020)*	–9.237	–0.060
South-West	–0.200 *(0.022)*	–9.023	–0.064
Midlands	–0.220 *(0.021)*	–10.309	–0.070
Quarter 2	0.084 *(0.015)*	5.703	0.028
Quarter 3	–0.029 *(0.015)*	–1.932	–0.010
Quarter 4	0.119 *(0.015)*	8.113	0.041
1985	–0.035 *(0.023)*	–1.512	–0.012
1986	–0.032 *(0.023)*	–1.396	–0.011
1987	–0.063 *(0.023)*	–2.733	–0.021
1988	–0.138 *(0.023)*	–5.955	–0.045
1989	–0.130 *(0.023)*	–5.603	–0.042
1990	–0.167 *(0.024)*	–7.075	–0.053
1991	–0.167 *(0.024)*	–7.086	–0.054
1992	–0.122 *(0.023)*	–5.278	–0.040
1993–94	–0.141 *(0.024)*	–5.864	–0.046
Constant	–2.986 *(0.077)*	–38.853	

Heckman model: second stage — results of instrumental variable estimation
Dependent variable: ln(weekly amount given to charity)

Variable	Coefficient *(s.e.)*	t ratio
ln(expenditure)	1.125 *(0.165)*	6.825
Age of head ÷ 10	0.322 *(0.038)*	8.501
No. of adults	–0.270 *(0.033)*	–8.268
Proportion of females	0.437 *(0.079)*	5.562
Dummy for presence of children	0.051 *(0.028)*	1.815
Home-owner	0.138 *(0.043)*	3.214
No. of rooms	0.075 *(0.009)*	8.701
A levels	0.379 *(0.047)*	8.074
College	0.790 *(0.072)*	11.039
Professional	0.216 *(0.043)*	5.046
White collar	0.241 *(0.039)*	6.154
Skilled manual	0.008 *(0.037)*	0.223
Self-employed	–0.105 *(0.099)*	–1.060
Not in work	0.201 *(0.058)*	3.482
South-East	–0.632 *(0.094)*	–6.712
North	–0.541 *(0.050)*	–10.850
South-West	–0.542 *(0.057)*	–9.478
Midlands	–0.664 *(0.058)*	–11.399
Quarter 2	–0.001 *(0.031)*	–0.029
Quarter 3	–0.088 *(0.030)*	–2.884
Quarter 4	0.063 *(0.031)*	2.023
1985	0.106 *(0.044)*	2.398
1986	–0.117 *(0.044)*	–2.643
1987	–0.070 *(0.045)*	–1.542
1988	–0.138 *(0.055)*	–2.498
1989	–0.064 *(0.055)*	–1.162
1990	–0.123 *(0.060)*	–2.053
1991	–0.116 *(0.058)*	–2.007
1992	–0.055 *(0.056)*	–0.991
1993–94	–0.066 *(0.060)*	–1.103
Reduced form residual	–0.882 *(0.166)*	–5.308
Mills ratio	1.186 *(0.311)*	3.809
Constant	–7.842 *(1.260)*	–6.378

References

Atkinson, A. and Micklewright, J. (1983), 'On the reliability of income data in the Family Expenditure Survey', *Journal of the Royal Statistical Society*, series A, vol. 146, pp. 33–61.

Baker, P., McKay, S. and Symons, E. (1990), 'The simulation of indirect tax reforms: the IFS simulation program for indirect taxation', Institute for Fiscal Studies, Working Paper no. W90/11.

Banks, J., Blundell, R. and Lewbel, A. (1997), 'Quadratic Engel curves and consumer demand', *Review of Economics and Statistics*, forthcoming.

Farrell, L. and Walker, I. (1997), 'It could be you! But what's it worth? The welfare gains from Lotto', Institute for Fiscal Studies, Working Paper no. 97/4.

FitzHerbert, L. (1995), *Winners and Losers: The Impact of the National Lottery*, York: Joseph Rowntree Foundation.

Goodman, A. and Webb, S. (1995), *For Richer, for Poorer: The Changing Distribution of Income in the United Kingdom, 1961–91*, Commentary no. 42, London: Institute for Fiscal Studies.

Greene, W. (1993), *Econometric Analysis*, New York: Macmillan.

Heckman, J. (1979), 'Sample selection bias as a specification error', *Econometrica*, vol. 47, pp. 153–61.

Hems, L. (1996), 'The dimensions of the voluntary sector in the UK', in *Dimensions of the Voluntary Sector 1996*, London: Charities Aid Foundation.

Johnson, P. and McCrae, J. (1996), 'Robustness of FES income data 1985–92', conference paper, Institute for Fiscal Studies.

Jones, A. and Posnett, J. (1991), 'Charitable donations by UK households: evidence from the Family Expenditure Survey', *Applied Economics*, vol. 23, pp. 343–51.

Kemsley, W., Redpath, R. and Holmes, M. (1980), *Family Expenditure Survey Handbook*, London: OPCS, Social Survey Division.

Lee, N., Halfpenny, P., Jones, A. and Elliot, H. (1995), 'Data sources and estimates of charitable giving in Britain', *Voluntas*, vol. 6, pp. 39–66.

Pharoah, C. (1996), 'Individual giving: seesaw evidence and static trends', in *Dimensions of the Voluntary Sector 1996*, London: Charities Aid Foundation.

Pudney, S. (1989), *Modelling Individual Choice: The Econometrics of Corners, Kinks and Holes*, Oxford: Basil Blackwell.

Randolph, W. (1995), 'Dynamic income, progressive taxes and the timing of charitable contributions', *Journal of Political Economy*, vol. 103, pp. 709–38.

Ribar, D. and Wilhelm, M. (1995), 'Charitable contributions to international relief and development', *National Tax Journal*, vol. 48, pp. 229–44.

Smith, R. and Blundell, R. (1986), 'An exogeneity test for a simultaneous equation tobit model with an application to labour supply', *Econometrica*, vol. 54, pp. 679–85.

Steinberg, R. (1990), 'Taxes and giving: new findings', *Voluntas*, vol. 1, pp. 61–79.

Tanner, S. (1996), 'How much do consumers spend? Comparing the FES and National Accounts', conference paper, Institute for Fiscal Studies.