

Donations

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Abstract

In this paper we address the question of why people donate. It has been argued in the economic literature that donations to charities—such as cultural institutions or the arts—can be explained by the need to cover the fixed costs necessary to reach a given level of quality, or to offer certain products. Others argue that donations are motivated by pure generosity, social status or access to special benefits donors may have. We develop an economic model where various reasons for donating are modelled and then test it using a data set from the English National Opera. The data set contains any purchase of tickets, donations and consumption of special benefits.

JEL classification: D1, D64, H41, L3.

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1 Introduction

Donations are a very diffuse phenomenon. Arts, education, cultural institutions, hospitals, political parties, foreign aid and many more non profit organizations rely heavily on donations. The question of why people donate has been addressed in various ways in the literature. Some type of donations (for example, to children in Africa) can be explained only by pure altruism. On the other hand, other type of donations may imply some benefit to the donor, where this benefit may be both direct or indirect.

The economics literature has focused more on situations where there may be a self-interest aspect. This self-interest aspect may take the form of a private good: for example, individuals may donate in order to have access to special benefits, or to have their name as donors visible. Often however there is also an aspect of “private contribution to a public good”.

There exists an extensive theoretical literature studying private contributions to a public good. This literature shows that if individuals feel that their contribution is necessary for the good itself to come into existence, they may not free-ride (or at least free-ride only partially) and contribute. There are many papers finding equilibria where individuals contribute to the provision of a public good (see, for example, Andreoni (1988, 1990)). Depending on the model, the donors may have different characteristics. For example, Bagnoli and Lipman (1989) identify Nash equilibria in which people donate the exact amount for the good to be created. In such case, any individual could be a donor, since he is pivotal for the public good to be offered. Other models, like Bliss and Nalebuff (1984) and Palfrey and Rosenthal (1984) look for the Bayesian equilibrium. In such case, people who donate are the ones who value the good most.

For example, newspapers that appeal to a limited number of readers (for example, because of their political position) are often financed through donations (since the revenues from sales would not be enough to cover the costs). Another example is contributions to political campaigns: one may donate for pure altruism (because he believes the country will be better off with this candidate), or because he will obtain some favor in returns if the candidate gets elected, or, finally, because he (among others) believes he will be better off if some policies will be implemented and feels that his contribution is important in order to achieve that end. One issue with this last type of motivation is that this will be true only if the individuals will feel somewhat pivotal, i.e. that his contribution is needed. It thus brings us back to the original question of whether people feel pivotal and free-ride only partially.

More empirical studies are needed to better understand what motivates individual donations. Many of these theories are supported by anecdotal or experimental evidence. Previous empirical studies of donations have almost exclusively used macroeconomic data on *aggregate* national donations in order to test hypothesis primarily relating to crowding out effects of government spending. This effect says that when government spending to charities increases, private contributions decrease, although only partially (see for example Weisbrod and Dominguez, 1986, and Posnett and Sandler, 1989). This suggests that individuals, when donating, have in mind a certain amount that has to be collected. But if one really wants to understand individual motivations, a more detailed study that focuses on *individual* behavior is needed.

In this paper, we want to study what motivates people to donate looking at the case of the English National Opera, which is one of the two major opera houses in London. Typically, three main reasons are given for donations to a theater (or similar institutions). The first one is pure altruism. The second one is the consumption of a private good: typically theaters offer fringe benefits, in the form of attendance to special performances, talks, social events with the performers, gala dinners, etcetera. Higher donations give access to higher quality fringe benefits. Finally, the consumption of a public good may be involved. In fact, even for situations like the arts, where the good (the performances offered) is excludable, the public good component may come from the fixed costs which have to be covered in order for the good to be produced. Donations can therefore be seen as private contribution to a public good in the sense that individuals may donate in order to make sure that the good will be produced (see Hansmann, 1980, Cornelli, 1996 and Andreoni, 1999). These different motivations imply different relationships between the donation and consumption pattern.

We develop an economic model where individuals choose how much to attend and how much to donate as a result of a utility maximization. The model implies that if individuals donate for selfish reasons or to contribute to a public good, this should show up in their consumption behavior and gives us testable empirical implications. We then use data on ticket purchases, donations, and individual donor characteristics that have been provided by the English National Opera (ENO hereafter) to test these implications.

In the context of the ENO, the private benefits are given by attendance to special performances, dress rehearsals, special talks, social events with the performers, gala dinners, etc. The higher the donation amount, the more exclusive these events are. Since booking for most of these events takes place through the box office, we can see how much various donors take advantage of this opportunity.

Similarly, it may be expected that, when individuals are motivated by the public good component, it will show in their consumption: since the justification is that their rationality is to cover the fixed costs necessary to achieve something, it is necessary to identify how an increase in donations will affect decisions of the opera house, via a larger budget. One possibility may be the quality of the opera productions (for example, the quality of the singers). However, there may be two reasons for which this would not give us useful empirical predictions: first of all, a change in the overall quality may take place only slowly, second, since we have data only from one opera house, it is difficult to capture different appreciation for opera. Instead, we can use a much more precise prediction. Typically, an opera house, when the budget is low (high) will cancel (add) new productions. The ENO has several productions in repertory, where all sets, costumes and stage designs have already been paid for and stored for future use. Every year, however, it will commission some new productions, which imply extra costs. The English National Opera will not stop offering performances if in one year it has less money than expected, but it may decide not to finance the costs necessary to stage some new productions.

Staging new productions can also be interpreted as an investment in quality, since it is an opportunity for the opera house to use some of the “hottest” directors or costume designers and remain cutting edge. Moreover, the English National Opera has a reputation for staging modern operas that were never staged before. The new productions can therefore be interpreted as the public good which needs the contribution of private donations to be

produced. Indeed, new productions are sometimes officially sponsored by the “Friends of ENO” and letters soliciting donations always mention new productions that the ENO intends to stage in the next year, to reinforce the connection between donations and new productions (see Figures 1 and 2).

Individuals who only want to consume the fringe benefits will only donate the minimum necessary to obtain these fringe benefits and then consume as much of them as they are able. Finally, individuals who are motivated simply by altruism will not show any of these patterns.

The dataset we work on is unique. We know the donations of each individual over more than a decade. We also can observe any purchase of tickets to attend performances or any booking of dress rehearsals of special events. Last, but not least, we can construct a proxy of their income, using their postcode.

We find two patterns of behavior, which are consistent with the predictions of the model. First, general attendance, attendance of new performances and dress rehearsals (the most common form of fringe benefits) are the best predictors that an individual will become a donor. While general attendance is not surprising, attendance to new performances does suggest that donations have at least partially the aspect of a private contribution to a public good. Income is relevant at the lower end, i.e. for people who are probably budget constrained and not important for high income people. These results suggest that the motivation for donating is not altruism but the desire to consume either the private or the public good. Moreover, in general customers follow two patterns of behavior. Individuals buying inexpensive tickets appear to be budget constrained: the higher their income the more they tend to donate. Also, although preference for new production is correlated both with the probability to become a donor and the amount donated, this result is less strong than for individuals buying expensive tickets. These individuals are not limited by their income and the best predictor of their gift amount is not the dress rehearsals but the attendance of new performances. As opposed to the previous class of individuals, the reasons of donation appear to be different and more linked to the financing of a public good.

We also look at the donations within each class of donors and look at the “excess donation” i.e. the amount donated in excess to the minimum to be in that class. In this way we also take into account an additional reason for donations that is often suggested: to have their name appearing as a donor. Since the name appear just as belonging to a class, any donation in excess to the minimum to be in that class cannot be explained by such reason.

2 A Model of Individual Donations

This section develops a model of an individual’s choice of how many performances to attend at the opera theater, how much to spend in tickets, and how much to donate. We also point out several empirical implications which we test in the next sections.

An individual i can choose how often to attend performances at the opera, at what price and how much to donate. The total number of performances offered in one year is N . We distinguish between two types of seats, high and low quality. We define n_1 as the number of performances attended in low quality, low price seats, and n_2 as the number of performances attended in high quality, high price seats.

The utility individual i derives from attending the opera depends on a parameter which is private information, v_i , and on the general level of quality q . Moreover, a performance can be a replica of an existing production or it can be a new production. Some individuals prefer new productions, for example because they are more modern or because they have already seen all the repertory productions and want some novelty, while others do not have any special preference for new productions. Each year the opera produces S new productions (out of the total number N), where S can vary each year. We model the preference for new productions by introducing a dummy variable ϕ which takes value $\phi > 0$ if i prefers new productions and 0 otherwise. In other words, ϕ is the additional marginal benefit from attending a new production rather than a regular production. In principle, an individual who prefers new productions always chooses to attend as many new productions as possible and he purchases seats for regular shows only if he is attending more than S performances. However, this would clearly not be realistic, because it would ignore two aspects. First of all, we are treating all performances as perfect substitutes, whether it is Puccini or Wagner or a modern composer. Second, the choice of performances is affected by the day or period in which the opera is offered. In general, individuals have preferences among different operas and timing constraints, so they do not necessarily attend only new performances. To capture these aspects, we assume that an individual i will be able to attend only a number of new production equal to a fraction $g(S)$ of the total productions attended, where this fraction is larger the larger is the number of new production offered, $g'(S) > 0$.

Finally, an individual can choose whether to make a donation d_i . There is a minimum amount which can be donated \underline{d} .¹ If he donates a positive amount, he can attend special events. Special events are either dress rehearsals or cocktail parties, special recitals, gala dinner and similar events to which only donors have access. We define r as the number of special events attended and R as the total number of special events available.

The timing is the following: at time $t = 0$ each individual chooses how much to donate to the opera. At time $t = 1$, after observing total donations, the opera house chooses: (a) the overall quality of productions q , and (b) the number of new productions S . Finally, at time $t = 2$ each individual, depending on the fact that he/she donated or not, decides how much to attend and in what type of seat. A donor can also choose how many special events to attend.² The reason for such a choice in the timing of the model is due to the fact that donations campaigns in one year typically affect production decision the following year and individuals choose their attendance knowing the program and therefore the quality.

The utility function of individual i is quadratic in consumption:

$$\begin{aligned} & U(n_1, n_2) + (\gamma_i Rr - r^2)I\{d_i \geq \underline{d}\} = \\ & = v_i q [\alpha n_1 - n_1^2 + \beta(\alpha n_2 - n_2^2) + \phi g(S)(n_1 + n_2)] + (\gamma_i Rr - r^2)I\{d_i \geq \underline{d}\} \end{aligned} \quad (1)$$

where $\beta > 1$. Since special events can be consumed only by donors, the consumption of

¹For example, at the English National Opera the minimum amount (25 pounds) is what is requested to become "friends of the ENO".

²Many of the special events are dress rehearsals. This suggests that they may be substitutes for regular performances. We abstract from that. Also we assume that special events are free. They may also sometime have a cost, but it is usually so small that it is irrelevant.

these events is multiplied by I , the indicator function.³

If an individual has no special preference for new productions ($\phi = 0$), then we can model the maximization simply as a choice between n_1 and n_2 . If instead this individual has a preference for new productions, then $\phi > 0$ and he will prefer to attend new productions rather than regular productions. The way we model new productions implies that the additional utility is not affected by the type of seats the individual buys.

We have also to impose that

$$n_1 + n_2 \leq N \quad (2)$$

Each individual i has a budget constraint:

$$p_1 n_1 + p_2 n_2 \leq \bar{y}_i - d_i \quad (3)$$

where \bar{y}_i is individual i 's income.⁴ We normalize $p_1 = 1$ and assume that $p_2 > \beta$, otherwise no one would buy the low quality seats.

For simplicity, we assume that seat prices are exogenous. In general, when the opera house chooses variables such as overall quality and the number of new productions, it could also choose the prices in order to maximize its revenues. Although making the seat prices endogenous would affect the equations of our model, it would not affect, in an essential way, the choice individuals make about consumption and donation, therefore we abstract from it.⁵ Moreover, in reality an opera house does not have complete freedom when setting the price, since it competes with other entertainment establishments (such as theatres or concerts) and therefore the assumption that prices are given is not too far fetched.⁶

We now solve the model backward. In the last stage, each individual i , having donated $d_i \geq 0$ and knowing q , S and R , chooses n_1 , n_2 and r in order to maximize (1) subject to (2) and (3).

When maximizing with respect to n_1 and n_2 we have to consider whether constraint (3) is binding or not. If constraint (3) is binding, we can substitute in the objective function

$$n_1 = (\bar{y}_i - d_i) - p_2 n_2. \quad (4)$$

The first order conditions with respect to n_2 and r are

$$-\alpha p_2 - 2n_2 p_2^2 + 2(\bar{y}_i - d_i) p_2 + \beta \alpha - 2\beta n_2 + \phi g(S)(1 - p_2) \geq 0 \quad (5)$$

$$R\gamma_i - 2r = 0 \quad (6)$$

where ϕ can be equal to 0 if the individual does not especially like new productions or be positive in the other case. The fact that ϕ enters the first order conditions means that the

³We introduced R in the utility function so that an individual never wants to attend more special events than the one actually offered and the solution is always an interior solution. This is just for simplification and has no bearing on the results.

⁴More precisely, \bar{y}_i should be the income available for entertainment expenditure. The fraction of income dedicated to entertainment expenditure should depend on individual preferences. For simplicity, we abstract from this aspect and assume it is a constant fraction of the income.

⁵Note also that we are not allowing for different prices for new productions and regular productions. In fact, ENO does not set different prices.

⁶In particular, the English National Opera in London has to compete not only with theatres and concert houses, but also with the Royal Opera House at Covent Garden and the occasional touring opera companies.

marginal attendance is the attendance of a new production. In other words, this assumes that $g(S) < 1$. If this is not true, the first order conditions will not have the term with ϕ .

The number of special events attended by a donor is

$$r^* = \frac{\gamma_i R}{2} \quad (7)$$

individuals with a higher γ_i will attend more special events (if they are donors).

To find the optimal number of attendance n_1^* and n_2^* we distinguish two cases, which depend on $\bar{y}_i - d_i$. In the first case

$$\bar{y}_i - d_i \leq \frac{\alpha(p_2 - \beta) + \phi g(S)(p_2 - 1)}{2p_2}. \quad (8)$$

These are individuals with low income \bar{y}_i (or who donated a high amount d_i relative to their possibilities). In this case, n_1 and n_2 are given by

$$n_1^* = \bar{y}_i - d_i \quad (9)$$

$$n_2^* = 0. \quad (10)$$

These are individuals who are budget constrained and spend all their money buying cheap seats.

If (8) is not satisfied, then

$$n_2^* = \frac{2p_2(\bar{y}_i - d_i) - \alpha(p_2 - \beta) - \phi g(S)(p_2 - 1)}{2(p_2^2 + \beta)} \quad (11)$$

and

$$n_1^* = \bar{y}_i - d_i - p_2 n_2^* \quad (12)$$

If n_2^* as defined in (11) is such that $p_2 n_2^* \geq \bar{y}_i - d_i$, then $n_2^* = \frac{\bar{y}_i - d_i}{p_2}$ and $n_1^* = 0$.

Finally, if constraint (3) is not binding then it is easily shown that:

$$\begin{aligned} n_1^* &= \frac{\alpha + \phi g(S)}{2} \\ n_2^* &= \frac{\alpha + \phi g(S)}{2} \end{aligned} \quad (13)$$

However, we will show later that this last case will never happen in equilibrium (i.e. constraint (3) will always be binding).

Note that the choice between high or low quality seats is determined only by the income (net of donations) and not by how much they value opera: high income individuals buy expensive seats, low income individuals buy cheaper tickets. Although in practice both characteristics may influence the choice, this feature seems consistent with the observation that opera lovers often buy cheap seats and people with high income buy expensive seats even if they go to the opera only once in their life.

Moreover, note that constraint (3) is satisfied more easily when $\phi > 0$. The intuition is the following: the marginal utility from attending one more (new) production is higher

for individuals who like new productions and therefore they are more likely to buy cheap tickets in order to attend once more.

Therefore, we have the following empirical implication:

Hypothesis 1: *Individuals who attend a large number of new productions are more likely to buy more tickets and to spend less per seat, conditional on their income.*

Now that we solved the last stage, we can look at the opera house decision process, for given prices p_1 and p_2 . The opera house can choose the overall quality q and the number of new productions S . We assume that the number of special events R is exogenously given. In general, the special events are either dress rehearsals (and therefore their number is exogenously given by the number of performances N) or other events such as lunch meetings with singers, cocktail receptions, etcetera. It is likely that the choice is determined by exogenous circumstances, such as availability of singers or similar considerations. In general, what is important is that special events are not very costly with respect to the staging of an opera, so the number of special events offered does not depend on the resources. Therefore, we do not enter the special performances in the opera house budget constraint. Given that it is a non-profit organization, the opera house maximizes welfare subject to the break-even constraint and therefore sets q and S as high as possible compatibly with its budget constraint. Let us assume that each new production has the same fixed cost M . Then the break even constraint is

$$SM + C(q) = Rev + \sum_i d_i \quad (14)$$

where, because of the timing, Rev are the revenues from the ticket sales from the year before and are given.⁷ In other words, the opera knows how much it has collected through donations and, given the revenues from the sale of the tickets, it chooses how much money to spend so that it breaks even.

$C(q)$ represents the cost of producing N productions of quality q . Clearly, the total costs of the opera house are a function also of the number of regular performances N . However, since the number of performances is given (only the proportion of new productions has to be decided), they are immaterial for the equilibrium solution of the model and we just write C independently of N . M is the additional cost of producing a new production instead of a repertory production.

Therefore, q and S are an increasing function of total donations only. In particular, if we take for given q , $\frac{dS}{dd_i} = \frac{1}{M}$. That implies that an increase in donations has a positive and linear impact on the number of new performances offered. If instead we consider also q , then $\frac{dS}{dd_i}M + C'(q) = 1$. If donations increase, at least q or S will increase, in general, they will both increase. If we exclude situations in which q or S is so high that the marginal benefit from increasing it is very low, or in which the marginal cost from increasing one is very high, both will increase.

⁷We are ignoring the possibility that the opera house uses an intertemporal budget. However, this type of consideration will make the rules more complex but in general will not affect the basic result that S and q increase with donations.

Let us now study the first stage, when individuals choose their donations. Each individual i chooses d_i in order to maximize (1) with respect to d_i , subject to (3) and (14), with $n_1 = n_1^*$ and $n_2 = n_2^*$.

Since the last term in the utility function to be maximized is multiplied by the indicator function, we proceed in the following way: when taking the first order condition, we first ignore that last term. If the first order condition implies a donation larger or equal to \underline{d} even without that last term, then we can safely disregard it. If instead they are negative (or imply a donation smaller than \underline{d}) then we consider that additional term.

Generically, the first order condition with respect to d_i is given by:

$$\frac{\partial U}{\partial q} \frac{dq}{dd_i} + \frac{\partial U}{\partial n_1} \frac{dn_1^*}{dd_i} + \frac{\partial U}{\partial n_2} \frac{dn_2^*}{dd_i} + v_i q \phi g'(S) \frac{dS}{dd_i} (n_1^* + n_2^*)$$

The terms will be different depending on whether the individual is only buying cheap tickets (i.e. his consumption choice is given by (9)) or he is buying expensive seats (i.e. his consumption choice is given by (11) and (12)). However, the choice of the type of tickets to buy depends on d_i (since a larger donation can reverse the inequality in (8) or make the constraint (3) binding). Therefore, we proceed in the following way: first we write the first order condition for the three cases separately. Then we start by looking at the consumption choice of an individual donating \underline{d} . If at \underline{d} this individual is consuming only n_1^* , then the first order conditions corresponding to this choice are the only ones which matter, since as d_i increase he will be more and more budget constrained and therefore he will continue to buy low quality seats. If instead when donating \underline{d} he is buying also high quality seats, then we have to consider the possibility that he increases his donation so much that he ends up buying only low quality seats.

Let us start with the case in which (3) is binding and (8) holds with a strict inequality. In this case, $n_1^* = \bar{y}_i - d_i$, $n_2^* = 0$ and the first order conditions are given by

$$v_i \frac{dq}{dd_i} [\alpha n_1^* - n_1^{*2} + \phi g(S) n_1^*] + v_i q [-(\alpha + \phi g(S)) + 2(\bar{y}_i - d_i)] + v_i q \phi g'(S) \frac{dS}{dd_i} n_1^* \quad (15)$$

the first term captures the complementarity between donations and attendance ($\frac{\partial U}{\partial q} \frac{dq}{dd_i}$): an individual who goes often to the opera cares about its overall quality level and therefore is more likely to donate to increase q . The second term ($\frac{\partial U}{\partial n_1} \frac{dn_1^*}{dd_i}$) is the effect of d_i on the number of performances attended, n_1^* , and, since (3) holds, $\frac{dn_1^*}{dd_i} = -1$ and the term is always negative. The intuition is that for these individuals the budget constraint is always binding and an increase in the amount donated always reduces the expenditure on performances. This term therefore captures the substitution effect between donations and attendance.

The third term captures the fact that a larger amount of donations will influence the opera house to increase the number of new productions. This term is positive only if $\phi > 0$, i.e. if the customer has a special preference for new productions.

Let us now look at an individual who also buy expensive seats but for whom constraint (3) is still binding. Then he maximizes (1), given n_1^* and n_2^* . Using implicit function

theorem, his first order conditions are:

$$v_i \frac{dq}{dd_i} [\alpha n_1^* - n_1^{*2} + \beta(\alpha n_2^* - n_2^{*2}) + \phi g(S)(n_1^* + n_2^*)] + v_i q \left[(\alpha + \phi g(S) - 2n_1^*) \frac{dn_1^*}{dd_i} \right] + (16) \\ + v_i q \phi g'(S) \frac{dS}{dd_i} (n_1^* + n_2^*)$$

where $\frac{dn_2^*}{dd_i} = -\frac{p_2}{p_2^2 + \beta} < 0$, $\frac{dn_1^*}{dd_i} = -1 - p_2 \frac{dn_2^*}{dd_i} = -1 + \frac{p_2^2}{p_2^2 + \beta}$. The first term is still the effect on the overall quality, while the second is the substitution effect. The intuition for the substitution effect is the following: since the budget constraint is binding, when increasing his donation, the individual will have to reduce his expenditure in two ways: the individual is in part reducing overall attendance and in part shifting from expensive to cheap seats. The overall effect on n_1^* is still negative, but it is lower than the one in (15). Moreover, by implicit function theorem, the effect on n_2^* can be disregarded.

Finally, if constraint (3) is not binding the first order conditions are:

$$\frac{\partial U}{\partial q} \frac{dq}{dd_i} + v_i q \phi g'(S) \frac{dS}{dd_i} (n_1^* + n_2^*) \quad (17)$$

In this case, since the solution is entirely an interior solution, by implicit function theorem there is no substitution effect. Notice that since this first order condition is always positive, the individual will always increase d_i up to the point in which constraint (3) is binding. Therefore, this pattern of consumption is never observed in equilibrium.

From the first order condition we see that there are three different motivations to donate: (1) to increase the overall level of quality q , (2) to increase the number of new productions, (3) to consume the fringe benefits.

First of all, notice that both the first and last term increase with attendance. The substitution effect (which is negative) is instead smaller—in absolute value—the larger is the attendance. In fact, since the utility is concave, $\frac{\partial U}{\partial n_i}$ is lower the higher is n_i . Therefore, the larger is the attendance the higher is the probability that the first order conditions are positive and, if they are positive, the larger is d^* . This gives us the following empirical implications:

Hypothesis 2: *Attendance is positively related to the probability to become a donor and to the amount donated for all types of individuals.*

Hypothesis 3: *There is a substitution effect between donations and consumption.*

Also, the first order condition increases when y_i increases, therefore:

Hypothesis 4: *Income is positively related to the probability to become a donor and to the amount donated for all type of individuals.*

Let us now consider the second reason for donating. If $\phi > 0$ the first term in the first order condition is higher and there is an additional term, which is equal to $v_i q \phi [g(S) \frac{dn_1^*}{dd_i} + g'(S) \frac{dS}{dd_i} (n_1^* + n_2^*)]$. The first term is negative, while the second is positive: an individual

who cares for new productions has an additional reason to donate (since it may increase the number of new productions offered) but it will also suffer more from the reduction in attendance if this implies cancelling a new productions. We assume that the sum of these two effects is positive. Note that, in any case, the negative term may be equal to zero if the reduction in attendance can take place by going to less regular productions (instead of new productions).

This gives us:

Hypothesis 5: *The probability to become a donor and the amount donated are positively correlated with the number (or percentage) of new performances attended.*

Moreover, notice that this term is smaller for individuals buying only low quality seats. That is because the substitution effect is larger for those individuals. This gives us:

Hypothesis 6: *The positive correlation between the amount donated (or the probability to become a donor) and the number (or percentage) of new performances attended is stronger for individuals buying expensive seats than for individuals buying cheap seats.*

Let us now consider the third reason for donating, i.e. the consumption of fringe benefits. Assume that the first order condition described above were negative when computed at $d_i = \underline{d}$. Then the only reason an individual may donate is to be able to attend special events. Therefore, an individual who donates for this third reason will never donate more than the minimum amount \underline{d} and he will donate if and only if the utility from donating \underline{d} and consuming fringe benefits (but having only $\bar{y}_i - \underline{d}$ to spend in attendance) is larger than the utility from not donating and having \bar{y}_i to spend in attendance. This can be reduced to the following condition:

$$\frac{(\gamma_i R)^2}{4} \geq v_i q \underline{d} [\alpha + \underline{d} + \bar{y}_i] \quad (18)$$

If (18) is not satisfied, then $d_i^* = 0$. If instead it is satisfied, then the individual donates the minimum amount \underline{d} . Note that (18) is more likely to be satisfied the higher the individual's income and the less he appreciates opera. This last feature is due to the fact that these customers are budget constrained and donations reduce the budget for attending the opera. This gives us the following empirical implications:

Hypothesis 7: *Individuals who donate the bare minimum to be in a specific donation class are the most sensitive to the consumption of dress-rehearsals and other fringe benefits.*

Hypothesis 8: *The probability to become a donor is positively correlated with the number of dress rehearsals attended.*

3 The Data Set

The data set that we analyze was obtained from the English National Opera (ENO). The English National Opera is a British registered charity. On average, ENO stages 18 operas per year, for a total of about 190 performances (see Table 1). Of these operas, usually 7 or 8 are new productions. The English National Opera obtains financial support from the Arts Council of England and many corporations, but it is also characterized by a more direct appeal to the public for financial support than other UK institutions. Moreover, as one can see from Table 2, the total revenues from donation are a large part of the budget (larger than the revenues from ticket sales). For instance, in 1997 revenues from ticket sales amounted to 7.5 million while donations amounted to 10.2 million. The importance of donations is even more clear if one considers that the current endowment of the ENO is 14.1Ml. Without donations, given that the current level of expenditures is 25Ml, the ENO would find very difficult to finance two opera seasons, even using all the endowment. If we compare ENO to the other major opera house in London, we can notice that although ENO has a level of expenditure comparable to Covent Garden, which is 45Ml. which includes the expenditure for the ballet, the endowment of Covent Garden is 10 times larger. Therefore, donations are a crucial element of the ENO budget.

Individual donations⁸ are larger than corporate donations. For instance, in 1997 corporate donations were 2.9 million versus 7.3 million of individual donations. These aspects of the data are consistent with the fact that in the model individual donations are an important part of the budget and affect ENO’s decisions about future productions.

Table 3 describes the Gift Program of ENO. The ENO has four levels of “Friends” programs. The minimum donation required to be part of the lowest level of friend is 25 pounds. In addition, there are four levels of membership in the more expensive “General Directors Circle” and “Production Syndicates”. The production syndicates are created to enable groups of people to combine together in order to support a specific production. Other programmes are targeted to donors who might wish to explicitly support either the development of aspiring singers or members of the orchestra. Associated with this sophisticated structure are similarly graduated packages of fringe benefits. These include advance information about performances at the ENO—at the lowest end of giving—, access to rehearsals and invitations to talks—at the middle level of giving—, invitations to the “Annual Fellows’ Dinner” hosted by the General Director and the Chairman of the Board—at the highest levels of giving.

In Table 4 we present all the performances offered by the ENO between 1994 and 1999. We distinguish between three types of productions: regular productions, sponsored revival and new productions. A *regular production* is the staging of an opera which has already been offered in past years and is in the repertory. A *new production* is the new staging of an opera. The ENO is well know for being quite active in developing new productions. These are typically more expensive than regular productions since the ENO commissions the work to a director, a set designer, a costume designer and a lighting designer. In the case of regular productions, these things would have instead already been paid in previous years. In addition, ENO is committed to present operas in English, so that for most of the new productions it also commissions a translation of the original libretto. Finally, a

⁸We focus our analysis on individual donations.

sponsored revival is an old production which is being renewed: as such the ENO commissions a revival director. A sponsored revival would therefore have extra costs but less than a new performance. For simplicity, we treat sponsored revivals and new productions together. In addition, a series of events are reserved for the donors.

To show what advantages are typically presented to a potential donor, in order to convince him to donate, we reproduce in Figures 1 – 3 two letters to a potential donor and part of a leaflet representing the advantages of becoming a Friend. The advantages includes access to special events including lunchtime and evening talks, recitals and dress rehearsals. Of all these special events, dress rehearsals are numerically much more important. The cost of these rehearsals is very low and they are usually held in the afternoon. Both the letters and the leaflet emphasize how one of the role of friends is to support new productions.

Figure 1, 2, and 3 about here

Since 1994, the ENO has been tracking donations and ticket consumption and, as a result, has compiled a data base which tracks individual donation and consumption patterns. In order to enable this analysis, the ENO assigns each customer a unique ID number (more specifically, the ID number is assigned to the entire household) and each performance a unique alpha-numeric code. For each customer, the ENO also keeps track of donation sizes pledged and actually paid by pledge date and payment date. As a result, we have been able to construct a data-set covering the period from 1994 to 1999 and we know for which performances an individual bought tickets, how many seats and at what price, in addition to any donation (or commitment to future donations) he made. With this data-set we are able to study donor behavior. Since we do not have the identity of all the individuals that made purchases and donations to the ENO, we do not know their income. However, we have their postcodes. The UK postcode is a very accurate description of a particular address. For addresses in central London, a postcode identifies a household to the precision of a single building. For other rural areas in England, a postcode identifies a set of at most 80 households. We have obtained a data set from the UK Bureau of Consumption which associates to each postcode the average household expenditure and is therefore a proxy for income. The data set is very detailed since it associates average expenditure to a postcode up to the last two digits (for example NW1-4). In central London this corresponds to the average expenditure of a block.

The difference of the U.K. tax rules on donations with respect to the U.S., during the sample period, is an important advantage of this data set, given the focus of our analysis. In 1990, the United Kingdom introduced the so called "Gift Aid" scheme, modified in 1991. According to this scheme, a donor can claim tax relief on the amount donated for the difference between his/her marginal tax rate and the basic-rate. The basic-rate tax relief can instead be reclaimed by the charities. However, between 1993 until April 2000 (i.e. for the entire sample period of our data set) this tax relief was available only for donations above 250 pounds, which is an extremely high threshold with respect to the average size of the gifts to the ENO. Moreover, in order for the the donations to be tax deductible the fiscal identity of the donor had to be certified: phone and internet donations were not effectively accepted as part of the "Gift Aid" scheme. These restrictions imply that about 97.8 of the donations in our data set are unaffected by tax implications.

4 Summary Statistics

In this section we look at the summary statistics about individual behavior. In order to avoid the effect of individuals that may be acting as agents, we restrict the analysis to individuals buying at most 6 tickets for the same event. We obtain a data set composed of 72,193 donors (more specifically, households who donated) and 285,833 non-donors (more specifically, households who did not donate). To avoid outliers problems, we further drop the top 2% of all donations. This implies to drop all donations above 330 pounds. Figure 4 shows the distribution of all donations before dropping the top 2%. It is clear that less than the 0.05% of the donations are above 1000 pounds.

Figure 4, about here

In Table 5, we show some summer statistics about the average annual expenditure, the number of tickets bought and the average price paid per seat by each individual. We distinguish between attendance to regular productions (i.e. repertory productions) and new productions (which also includes sponsored revivals).

For both regular and new performances, the average expenditure by donors is more than twice as large as the average number of performances attended by donors is almost twice as large as the the average expenditure by non-donors. This difference is particularly high for new performances. On average, donors spend 114 pounds for both regular and new performances. This compares to 51.20 pounds and 31.77 pounds, respectively, for non-donors. The number of performances attended presents the same differences, although not as strongly. On average, donors buy 4 tickets for both regular performances and new performances. This compares to 2 and 1, respectively, for non-donors. These differences are statistically significant. These results are consistent with Hypothesis 2: individuals who attend a larger number of performances are more likely to become donors. Also the average and median price per seat are higher, although the difference is smaller.

Table 5, about here

The difference in attendance to new and regular productions between donors and non donors can also be seen in Figure 5, where we show the histogram of the distribution of the attendance of new productions by donors and non donors. We see that the distribution of non donors is characterized by a large number of individuals, namely 53%, who never went to any new productions in the same year. The distribution of the donors has instead a rightward shift. Only 19% of the donors did not go to any new productions. Moreover, if we consider those individuals who go with high frequency to new productions we can find a substantially higher proportion of donors. For instance, 8% of the donors purchase 8 tickets for New Productions, while only 2% of the non-donors display the same behavior.

Figure 5, about here

We then stratify the sample in two parts, according to the cost of the seat. We first compute the average expenditure during each opera season for each individual account. We rank the accounts according to their average expenditure and say that an individual buys

“expensive” seats if its average cost is in the top three deciles of the price distribution. Symmetrically, we say that an individual buys “cheap” seats if its average cost is in the bottom three deciles of the price distribution (in other words, we consider only individuals buying the most expensive and the cheapest seats). In Tables 6 we compare the amount donated and number of tickets bought by individuals who buy cheap and expensive seats. The average (annual) donation by individuals buying expensive seats is smaller than the one by individuals buying cheap seats, although this difference is not large. In both subsamples it remains true that donors attend more performances than non-donors and the result is actually strengthened. Among those individuals who buy low quality seats, the median number of performances increases from 2 (non-donors) to 4 (donors), for both regular and new productions. The same results hold for individuals purchasing high-quality seats: the median goes from 2 (non-donors) to 3 or 4 (donors) for, respectively, regular and new performances. These differences are statistically significant.

Table 6, about here

Finally, we stratify the sample with respect to the income. In Table 7 we look at the people with the lowest income (bottom 30%) and the people with the highest income (top 30%). The average seat expenditure is higher for high income individuals, with a median expenditure of 25 pounds versus 22 pounds for low income individuals. We do not find significant difference in attendance. This is consistent with the features of the model, where income mainly affects the choice of the seat’s quality. Finally, high income individuals donate more, which is consistent with hypothesis 4 of the model.

Table 7, about here

In all these tables, the average and median donation are very low. In Figure 4 we can see that the distribution is heavily skewed to the left, which explains the low mean and medians. Notice that a large part of the donations is below 25 pounds. This is important because 25 pounds is the minimum necessary to be able to attend dress rehearsals and some special events. In the next section, therefore, we will have to take that into account.

5 Regression Analysis

In this section, we use simple econometric tools to explore the relationship between the choice of making a donation and the choice of consuming goods whose quality or availability may depend on such donation. We analyze this relation in stages. First, we look at the binary decision of becoming a donor using Probit regressions. Second, we look at the choice of how much to donate, conditional on becoming a donor. In this second part we use standard multiple regressions.

5.1 Probit Analysis: the choice to become a donor

In this section, we run probit regressions of the binary choice of an individual to become a donor as a function of his consumption pattern. In Tables 8, 9 and 10 we present the results of the probit regressions: in Tables 8 and 9 the main explanatory variable is the number

of performances attended while in Table 9 it is the annual expenditure.⁹ We consider as donors only those who donated more than 25 pounds. In the next subsection, when we look at the choice of how much to donate, we consider all donors, also the ones who donated less than 25 pounds. However, in this section we consider as one of the reasons to donate attendance to dress rehearsals, which is possible only for individuals who donate more than 25 pounds. As a consequence, we consider only the choice to donate 25 pounds or more. We have conducted the analysis also looking at the choice to become a donor for any amount and the results are actually stronger (except, of course, for dress rehearsals and special events).

In Table 8, we first present the results for the entire sample. Then, we explore the subsample of individuals buying cheap tickets and individuals buying expensive tickets. An individual is defined to buy cheap (expensive) tickets if the average price per seat paid is in the bottom (top) three deciles of the distribution of the cost per seat. For each case, in the first three regressions we explore the relation between the choice of becoming a donor and the attendance to new and regular (not-new) productions. Because of the potential collinearity between attendance to new and regular production, we also present a second set of three regressions, where we use as variables total attendance and a factor capturing the marginal impact of attendance to new productions. This last explanatory variable is defined as the percentage of attendance to new productions with respect to total attendance¹⁰. In principle, there could be a collinearity problem also between these two variables. However, we checked and the correlation between total number of performances attended and percentage of new productions is only 4.84%. Other explanatory variables are the attendance to dress rehearsals, special events (i.e. all other fringe benefits offered to donors in addition to dress rehearsals) and the income. Since the attendance to dress-rehearsals and special events is endogenous with respect to the decision of becoming a donor (in the sense that if an individual does not become a donor he cannot attend dress rehearsals), in Table 9 we will conduct the analysis with instrumental variables. A robust estimator of the variance-covariance matrix is obtained using the Huber-White estimator.

Table 8, about here

Table 8 shows that the consumption pattern has strong predictive power on the decision to become a donor. The pseudo R^2 of the probit regression run on the entire sample is 17%. In the subsample of individuals consuming cheap and expensive tickets the R^2 is, respectively, 21% and 16%. All the slope coefficients are positive and significantly different from zero at the 1% confidence level, with the exception of a few income coefficients for the expensive seats subsample.

In the overall sample, we can conclude that there is a positive correlation between the probability to become a donor and attendance (Hypothesis 2), the preference for new pro-

⁹By number of performances we mean the number of *different* performances attended, independently on the number of tickets bought for each performance. The reason is that we want to abstract from the possibility that an individual would buy tickets also for friends (and will get reimbursed). We have conducted the same analysis of Table 8 using, as a measure of attendance, the number of tickets bought and there was no qualitative difference.

¹⁰More precisely, because the effect of this percentage is non-linear, we use the logarithm of one plus the percentage of performances attended which were new productions.

ductions (Hypothesis 5), dress rehearsals (Hypothesis 8) and the income level (Hypothesis 4). In the first three regressions, the correlation with the preference for new productions can be inferred from the difference in the pseudo R^2 and from the fact that attendance to regular performances has much less impact than attendance to new production, as it can be seen by looking at the coefficient, which is three times as high for new productions. This result is further confirmed by the fact that the percentage of new performances is positively correlated with the probability of becoming a donor. Dress rehearsals and special events are also positive and significant and they are the most important attendance variable in terms of the size of the coefficient (the coefficient of the percentage new is actually higher, but since it is a percentage it cannot be directly compared to the other variables)¹¹ We also find that income is positive and significant.

When we stratify the sample with respect to the average quality of the seats purchased (bottom and top three price deciles), we find some interesting differences. Both the coefficients for total attendance and for the percentage of attendance to new productions are significantly higher for individuals buying expensive seats than for individuals buying cheap seats. Moreover, the income variable is positive and significant for individuals buying cheap seats while it is negative and sometimes non significant for individuals buying expensive seats. These results are consistent with the model. Individuals buying cheap tickets are more budget constrained, so that income is important for the choice of becoming a donor. Individuals buying expensive tickets are less budget constrained, so that the choice of donating at least the minimum amount is less likely to be dependent on income. The negative coefficient is probably due to a non-linearity in the relation. Moreover, preference for new productions is a less important motivation for becoming a donor for individuals who buy cheap seats (Hypothesis 5).

The coefficient of dress rehearsals and special events is significantly larger for individuals buying cheap seats. This is surprising, since the model would imply the opposite. However, since the attendance to dress-rehearsals and special events is endogenous with respect to the decision of becoming a donor (in the sense that if an individual does not become a donor he cannot attend dress rehearsals), this variable is correlated with the residuals. This can potentially be a source of bias in the estimators. We correct for this problem by using Instrumental Variable Probit regressions.

To instrument for the attendance to dress-rehearsals and special events, we proceed in the following way. First, if an individual was a donor at time $t - 1$, we instrument the attendance to dress-rehearsals (special events) at time t with the lagged attendance to dress-rehearsals (special events), a dummy variable for the lagged decision of being a donor, the attendance to the total number of performances and the level of income. If instead at time $t - 1$ the individual was not a donor, then we compute how many dress rehearsal (special events) he would have attended if it had been a donor, based on the attendance to the total number of performances and the level of income at time $t - 1$ and the regression estimated for repeated donors. These results are presented in Table 9.¹²

¹¹Note that the non perfect correlation between dress rehearsals and being a donor implies that not all donors attend dress rehearsals. In the model we presented there was no cost in attending dress rehearsals and therefore this could not happen. If we introduce an opportunity cost of time, the result is perfectly understandable.

¹²We have also conducted the analysis by restricting the sample to the subset of individuals who donated

Table 9 about here

Most of the results are unchanged: the variable capturing preferences for new production is stronger and the difference between the slope coefficients for this variable between expensive and cheap seats has become larger. The main change is that the difference in the coefficients of dress rehearsals and special events for cheap and expensive seats is reversed: the coefficient for cheap seats is significantly larger than the coefficient for expensive seats.

The Probit analysis seems therefore to confirm our hypothesis that there are two main motivations: some individuals donate mostly in order to attend dress rehearsals, while other individuals, mainly the one buying expensive seats, donate mostly in order to support new productions. The relative importance of these two motivations is influenced by the income: individuals with high income (who buy expensive seats) are more likely to donate because they want to support the production of new operas (i.e. they want to contribute to the public good production); individuals with low income (who buy expensive seats) may also feel this motivation but, given that they are budget constrained, this may not be enough of an incentive and they may donate mainly in order to attend dress rehearsals.

In Table 10 we report the regression results based on the expenditure per seats (without instrumental variables).

Table 10 about here

The results for the overall sample are consistent with the results in Table 8. We then partition the sample in two subsamples of individuals with high and low income. Consistently with what we found in Table 8, the coefficient for the percentage of attendance to new productions is significantly larger for high income individuals.

5.2 The choice of how much to donate

Now that we have seen which variables affect the binary choice of becoming a donor, we can study the choice of the amount to donate. In Tables 11 through 14 we look at the relation between the amount donated and the level of consumption of new and regular performances, and of dress-rehearsals. We measure the consumption both as the number of performances attended and as the expenditure in dollar terms. We restrict our attention to the subsample of donors only. In fact, the regressions for the entire sample would capture also the effect of the choice to become a donor, while the regressions for the subsample of donors answers a different question: conditional on having decided to become a donor, is the amount donated positively correlated with these variables?¹³ The right-hand-side variables are income, dress rehearsals and special events, which are the other events (in addition to dress rehearsals) that can be attended only by donors. We consider as donors all the individuals that donated a positive amount, also less than 25 pounds.

at least once and look at the probability that they donate again (more than 25 pounds). In this way we could always use the lagged dress-rehearsals (special events) attendance as an instrument). The results are qualitatively similar.

¹³We have conducted the analysis also for the sample of donors and non-donors and the predictive power is, as expected, stronger, but there are no qualitative differences.

Table 11 about here

Table 11 presents the results on attendance and show a positive and statistically significant relation between attendance and amount donated. The coefficient of the attendance of new performances is positive and significantly larger than the coefficient of the attendance to regular performances. Moreover, when we control for the total attendance and consider the percentage attendance to new productions we find that the coefficient of this last variable is positive and significant. Once again, this is consistent with Hypothesis 5 which argues that preferences for new productions was correlated not only with the probability to become a donor, but also with the amount donated.

When we stratify the sample with respect to seat quality we find that the slope coefficients for new and regular performances are substantially larger for those who purchased expensive tickets: the coefficient of new performances is approximately twice the coefficient of regular performances. Moreover, when we separate between total attendance and percentage of new performances attended we see that the coefficients of this last variable is positive and significant only for expensive seats. This is consistent with Hypothesis 6, i.e. there is a positive correlation between the amount donated and the percentage of new performances attended.

We also find that the coefficients for income, dress rehearsals and special events are positive and significant. The positive and significant correlation of the amount donated with dress rehearsals is very surprising, since in order to attend dress rehearsals it is sufficient to donate the minimum threshold level and it is not clear why we should find this positive correlation. However, this is due to the fact that we are including as donors individuals who donated an amount lower than 25 pounds: these individuals, who are donating the lowest gifts, cannot attend dress rehearsals and therefore the attendance is necessarily equal to 0, artificially creating a positive correlation. Although we do not report the results, we have conducted the same analysis looking only at individuals who donated at least 25 pounds and the coefficient is not significant. Instead, the fact that the coefficient of special events is positive and significant is not surprising, since access to some of those events requires to be in a higher class of donors.

Also here the dress rehearsals and special events variable is correlated with the residuals and we in Table 12 we use instrumental variables to correct for this.

Table 12 about here

The results are the same, actually stronger (for example the difference between cheap and expensive seats). These results may suggest that the individuals who bought low quality seats are budget constrained and donate mainly for the purely selfish motive of consuming fringe benefits. In fact, attendance is less important and the percentage of new performances attended is not significant. Instead, individuals who bought expensive tickets are not budget constrained and are more likely to become donors and to donate a large amount since they care for the opera (and in particular for new performances).

In Table 13 we look instead at the expenditures and the same results are confirmed.

Table 13 about here

We also consider two other possibilities. First of all, the results we find could be due simply to a time issue. In fact, from Table 4 one could see that the number of new productions, dress rehearsals and special events offered has been increasing over the years. We therefore introduced a dummy variable for each year covered by our data set, to correct for any possible such event.

Second, the reason people who donate attend a higher number of new productions could simply be due to the fact that they have already seen all the regular productions. Notice that per se this does not contradict our thesis: in fact we do not say why an individual prefer new productions. If the reason is that he has seen old productions and wants to see new ones, this is perfectly consistent with our story, since he is donating to support new productions (which are a public good, because other people care for new production and the fixed costs are indivisible). However, we still check for this. Since we cannot go back too much in time, we cannot identify perfectly old customers. We however try to capture them by introducing a variable called “cumulative performance” which is all the performances attended up to the donation moment.

The results including both effects (and having instrumental variables) are presented in Table 14.

Table 14 about here

6 Excess Donations

In the previous section we tested the empirical implications of the model by looking at differences in the pattern of donations depending on income and consumption. The amount donated was considered as a continuous variable, and an increase in the amount donated was treated in the same way, independently from the initial amount. However, in Table 3 we showed that donations are divided into different categories. Each category has a minimum and maximum donation amount and some fringe benefits related to it: the larger is the amount donated the more the fringe benefits that are available. In order to be able to consume these fringe benefits, an individual has to donate just the minimum amount for that category. In this section, therefore, we look at donations in excess of the minimum amount to enter a certain category. Any additional amount donated does not increase the right to have access to additional private goods.

We first divide donors within each class of donation, say GBP25 to GBP 50, into four groups: (a) the group that has donated the minimum amount to be in that class, for example GBP25 to GBP27.50, (b) two groups for those who donated in excess to the minimum amount, with a donation amount that falls in between two consecutive thresholds, say 27.50 to 35.00 and 35.00 to 42.50 and (c) the group that has donated substantially more than the minimum for that donation class, say 42.50 to 49.99. Each of these subgroups has the same rights to attend special performances. Then, we summarize the attendance to dress-rehearsals by donors for each donation category, see Figure 5. Two patterns are

evident: (a) the individuals who donate the bare minimum to be in a particular donation category are the ones who attend more dress rehearsals. For instance, we find that 16% of those who donated an amount between GBP25 and GBP27.50 attend dress-rehearsals. The frequency of attendance of those who donated between 42.50 and 49.99 is almost three times lower, i.e. 6%. A similar pattern is found for the GBP50 to GBP100 class and also for the GBP100 to GBP175 class. (b) When we focus only on the individuals donating the minimum for a category, the attendance to dress rehearsals decreases as the category's minimum increases and the difference in attendance between those who donate the minimum and those who donate the maximum within one category decreases. The fact that individuals who donate the bare minimum in the lowest category attend many more dress rehearsals than individuals donating more is exactly what we argued until now: if an individual becomes a donor only in order to attend dress rehearsals, he will donate the minimum necessary to be able to attend. The fact that we find this pattern also in higher categories is instead at first sight perplexing: one may argue that since this amount is more than the minimum necessary in order to attend dress rehearsals in any case, we should not find this pattern at all. However, we think this pattern can be explained well if we interpret attendance to dress rehearsals as a proxy for interest in fringe benefits. In other words, if an individual donates mainly in order to consume fringe benefits, he will donate only the minimum amount to reach a given category (where the category will be chosen on the basis of the trade-off between the amount paid and the fringe benefits obtained). That individual therefore will consume more fringe benefits than other donors in that category. Dress rehearsals are part of these fringe benefits and, although they did not require such a high donation, may indicate that the individuals is particularly keen on consuming fringe benefits¹⁴. On the other side, the higher the category, the less the dress rehearsals are an important fringe benefit, and that is why we observe less and less attendance and less difference between those who donate the minimum and those who donate the maximum.

Table 15 about here

This result can be seen also in Table 15. There we present the results of a regression of the excess donation over the consumption pattern. The excess donation is defined as the difference between the actual amount donated and the threshold level that defines each donation class. The threshold levels are £25, £50, £100 and £175 and each class of donation has different types of fringe benefits. For each class of donation, we regress the excess donation onto the attendance to special events, dress-rehearsals and new performances, where this last variable is meant to capture preference for new performances as a motive for donations and is measured in three different ways: the number of new performances attended, the percentage of performances attended which are new productions and a dummy which takes value one if the individual has attended more new production than the mean.

Let us first focus on the first class (with the lowest level of donation): the amount donated in excess of the threshold level is positively correlated with the consumption of

¹⁴In principle, we could look at the consumption of the additional fringe benefits that one individuals obtain by taking part in one category. However, as one may see from Table ??, the special events for higher categories often are events such as a dinner or a gala and are not recorded by the box office. Therefore, it is difficult to have a complete information about their consumption of special events.

special events and of new performances, while the correlation with the attendance to dress rehearsals is not significant in the first class and it then becomes negative and significant. As we go up in the level of the classes (i.e. we increase the minimum donation to be in that class), everything loses significance. Only the attendance to dress rehearsals is still negative and significant for a few classes and then becomes insignificant.

This suggests that those who donate to have access to the fringe benefits associated to each class of donation self-select by donating the minimum level that allow them to belong to a particular class of donations. When they donate more, they are motivated by the new productions. As the amount donated becomes larger and larger, however, the excess donation is not explained by these variables and it looks more like pure generosity.

7 Repeated (and Interrupted) Donations

Although the model presented in Section 3 is a one period model, we have several years of data and we can actually observe whether people donate only once or continue donating over the years. Looking at differences of an individual behaviour over the years allows us to test the model from a different perspective.

First of all, looking at repeated donations allows us to distinguish between an individual who donates one year only and an individual who keeps donating. This is important, because an individual who donates only once and then changes his mind may have stopped because his consumption may have turned out to be different from the one anticipated.

Moreover, so far we compared donors to non-donors, but we can also extend the analysis to individuals who changed their pattern of consumption. For instance, we can study the consumption of individuals before and after they start donating (or after they stopped donating). This may also allow to isolate the income effect we showed in the model, i.e. the fact that an increase in donations reduces the budget for buying tickets.

In Table 16 we present summary statistics of all the events consumed by donors in four different periods: the year before they donate for the first time, the first year in which they donate, the second consecutive donation year and the first year in which they stopped donating.

First, we compare an individual's average seat expenditure (for different performance categories) in the year before he donates with the one in the first year he donates. We find that it decreases for both new and regular productions. Moreover, it increases when the individual stops donating. This may suggest there is a substitution effect between consumption and donations.

Second, average attendance increases from the year before he donates to the following year, mainly for new seats (although it does not decrease when the individual stops donating. In fact, we can see that the proportion of new performances attended ($\frac{\text{new seats}}{\text{not new seats}}$) is higher when the individual starts donating and is even higher for those who continue to donate.

The attendance to dress rehearsals (special events) is three times (twice) higher for continuing donors. This suggests that if instead of looking at all donors we focus on repeated donors (and drop those who stopped donating after one year) we can find even stronger support to the features of our model.

In Table 17 we look at how the consumption choice of an individual changes when he starts or stops donating (if he does). In particular, we look at the change in the average seat price, expenditure, percentage of new production attended, total attendance and total attendance including dress rehearsals. Panel A looks at individuals' behaviour in the year in which they start donating and Panel B in the year in which they stop donating. In panel A the dummy takes value 1 if the individual, who was not a donor at time $t - 1$, becomes a donor at time t . In panel B the dummy takes value 1 if the individual, who was a donor at time $t - 1$, stops donating at time t . Interestingly when the dependent variable is the average price per seat, the dummy is negative and significant in Panel A and positive and significant in panel B. This suggests that there is a substitution effect between consumption and donations, as in the Hypothesis 3 of the model: the individual, having donated money, is more budget constrained, and therefore reduces his expenditure in buying tickets.

One may also ask how this reduction in the expenditure is realized. Does an individual reduce his attendance to the opera or the average price he pays? When we look at the change in total attendance, we find that the dummy is not significant. But when we add also the attendance to dress rehearsals we find that the dummy is positive and significant. In other words, it looks like individuals may substitute dress rehearsals (which are cheaper) with attendance to evening performances, reducing in this way the amount they spend, without reducing their attendance. This is consistent also with the fact that in the regression on the reduction in expenditure the coefficient of dress rehearsals is negative and significant.

When the dependent variable is the percentage of new performances attended, the dummy is positive and significant in Panel A and negative and significant in panel B. This suggests once again that one of the motivations to donate is to support new productions. In that regression, the donation amount is negative correlated with the change in percentage of new performances attended. This suggests that, even if a larger gift amount is positively correlated with a larger percentage of new performances attended, this relation is concave: as the amount donated becomes larger and larger, the variation in the percentage of new productions attended is less. This may be consistent with what we claimed in the model, i.e. that, although people have a preference for new productions, time constraints and preferences across operas may limit their ability to increase the number of new performances attended as much as they would like.

These results confirm the view that, on the one hand, donations and consumption are complementary: individuals donate because they want to attend more new productions; on the other hand, through the budget constraint, they are substitute.

Finally, we can look at the intertemporal dimension of donations from yet another perspective. Previously, we mentioned the fact that in the model all variables are determined endogenously. In particular, when one individual chooses to donate, he does so because he anticipates his future consumption. In particular, the consumption of new productions, which will increase because of the donation.

Until now we looked at attendance at performances in the same year as the donation. However, in general donations affect the choice of new productions in the following year. Therefore, in Tables 19 and 20 we conduct the same analysis as in Tables 11, 12, 13, but take into account the lag in the donation.

Therefore we consider the donation at time t and the attendance of performances (and the consequent expenditure) in year $t + 1$. Because of the temporal lag, we distinguish

between individuals who at time $t + 1$ are also donors and those individuals who are no longer donors.

The first point of interest we notice is that even for individuals who stopped donating we find a strong positive correlation between current year donation and following year consumption of seats for new performances. This is stronger than the correlation with regular performances, suggesting that Hypothesis 3 is valid also from an inter-temporal point of view: donors anticipate consumption in the following years.

Moreover, the donors that continue to donate are especially sensitive to New Productions, both in absolute terms and in relative terms:

- In relative terms, the ratios of the slope coefficients is $\frac{0.64}{0.21} = 3.0476$ for individuals who continue to donate, while it is $\frac{0.23}{0.10} = 2.3$ for individuals who stopped donating.
- In absolute terms the donors who continue to donate have slope coefficient for new performances of 0.64 versus 0.23

The results hold true especially for those who buy expensive tickets. In this category, the slope is 1.59 (New) and -0.05 (Old). For those who buy cheap tickets the slope coefficients flip sign, however these are not statistically significant.

These results confirm the idea that individuals who keep donating are the ones with the characteristics described in the model.

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Friends of English National Opera

London Coliseum, 51 Marsh's Lane, London WC2N 4ES Membership Office 0171 8360111 ext 420
Fax 0171 379 1284

05 March 1998

Personal reference number: 20059296

Dear

You may recall that we wrote to you last year and asked you to renew your membership of the Friends of ENO. We do not yet appear to have received a response from you - I wonder if the letter reached you safely?

As you know, your support is vital to ENO. Our Friends play a crucial role in ensuring that we can continue to stage exciting, accessible opera such as this season's hugely successful new productions of *Falstaff*, *The Flying Dutchman* and *From the House of the Dead*.

Under the artistic leadership of Paul Daniel, ENO is set to go from strength to strength. However, with a major government review into the provision of opera in London underway, we need to work harder than ever to ensure the Company's unique identity is preserved. The importance of our Friends at this time cannot be overstated and I do hope you will choose to continue your involvement with ENO by renewing your membership today.

With best wishes,

Yours sincerely,



Anna Caldicott
Friends Manager

Figure 1. Letter of solicitation by the English National Opera to renew the donations.

Because of our commitment to low seat prices, ticket revenue can only cover around a third of the costs of running a world-class opera company.

We therefore rely on government grants, sponsorship and, most importantly, the support of our Friends to make up the difference.

Become a Friend and support new productions

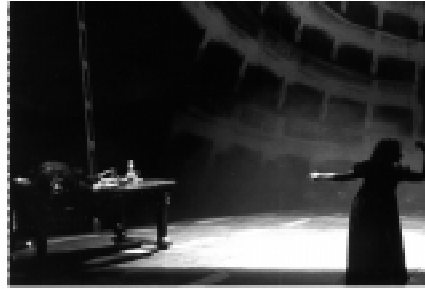
The financial support of the Friends of ENO is vital to our success. When you become a Friend, a substantial proportion of your membership fee goes directly towards the staging of new productions. Friends have recently supported new productions of *Lulu* (1993/4), *Anna* (1994/5) and *The Merry Wives* (1995/6).

You can join the Friends of ENO at one of four levels, as a Friend, Bronze Friend, Silver Friend or Gold Friend. Choose any level of membership and you can provide an invaluable contribution to our work, enabling us to continue making quality opera accessible to a wide public. *Your support is a vote of confidence in ENO. Please join today.*

Join us behind the scenes

As a Friend you gain unique access to the Company and those most closely involved with our work. Different levels of involvement as a Friend offer various benefits including the opportunity to see behind the scenes, getting to know our conductors and directors, the ensemble of singers, our orchestra and the many people who contribute to ENO's high quality productions. Friends also enjoy priority booking for ENO performances at the Coliseum and for a variety of special events including lunchtime and evening talks, recitals and specially-priced Dress Rehearsals.

Photo: © J. Brown for English National Opera. © 1995 ENO. All Rights Reserved.



Benefits include

Friend £25-49*

- Advance information about performances at the Coliseum
- Priority booking for ENO performances^{††}
- Priority booking for a variety of events including talks and recitals
- Priority booking for up to 15 Dress Rehearsals each season
- A subscription to ENO's *Coliseum* magazine, published 3 times a year
- A personalised membership card

Bronze Friend £50-99

Bronze Friends receive all of the Friends' benefits, plus an invitation to a special pre-rehearsal talk.

Silver Friend £100-139

- Silver Friends receive all of the Bronze Friends' benefits, plus an invitation to an annual reception to meet Company members and performers.

Gold Friend £175-249

- Gold Friends receive all of the Silver Friends' benefits, plus an exclusive opportunity to attend a music rehearsal.

We also offer opportunities for patrons wishing to make contributions in excess of £249. Please ring the Development Office on 0171 893 0111 x429 for further information.

*Single citizens can purchase £25 membership for £28.

^{††}except priority booking during gala

Figure 2. “Become a Friend and Support New Productions”: a letter of solicitation by the English National Opera.

English National Opera

London Coliseum, St Martin's Lane, London WC2N 4ES Telephone 0171 836 0111 (44 171 836 0111 International)
General Director Fax 0171 240 0881 Artists Administration Fax 0171 836 8379 Theatre Management Fax 0171 836 5180

13 May 1999

Personal Reference Number:20059296

E
C

Dear

Thank you for requesting information on English National Opera. Please find enclosed the following leaflets:

Repertory Leaflet and Subscription Booking Form

ENO's thrilling 1998/99 season includes eight new productions by leading directors and ten revivals of some of our best-loved work. If you choose to subscribe to a series of at least three operas in the same booking period you can save up to 25% on regular prices.

Friends of ENO

Membership starts at only £25 (£20 for seniors). Friends contribute to the staging of new productions and have the opportunity to see behind the scenes at the Coliseum. Involvement includes priority booking, a subscription to Coliseum magazine and access to special events including lunchtime and evening talks, recitals and Dress Rehearsals.

debut

debut is ENO's new membership scheme for the 16-26 year olds. Members will have the chance to get more involved with the company through special events and access to Dress Rehearsals, as well as many more great opportunities!

Mailing List

Should you wish to receive advance information and priority booking before the general public, our Mailing List is available at only £7.50 per year.

Call the Box Office on 0171 632 8300 to book tickets, join the Friends or for further information. When you contact the Box Office please quote your personal reference number noted at the top of this letter. This will speed up the booking process and help us to improve our service to you.

I hope that we shall be able to welcome you to the Coliseum in the near future.

Yours sincerely



Box Office

Enc: Friends application, Mailing List application, Rep. Flexible Discount Scheme

Figure 3. "Friends of the ENO": a typical letter from the English National Opera to potential donors.

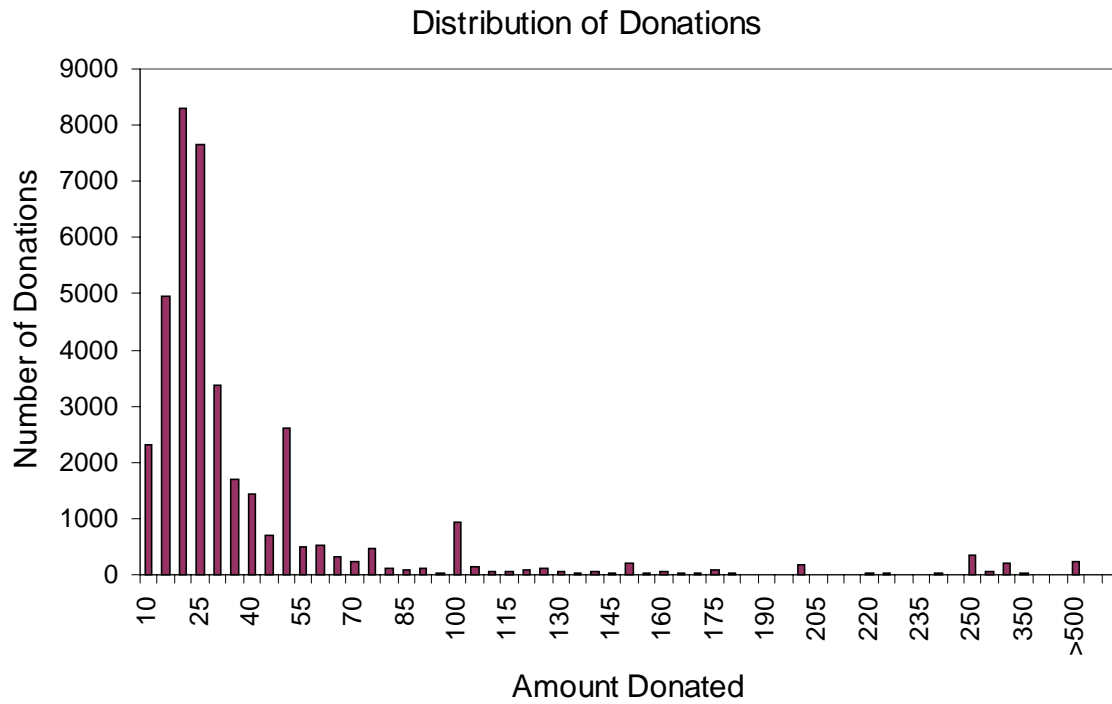


Figure 5. Distribution of the amount donated (x-axis). The vertical axis shows the absolute number of donations of a given amount.

Distribution of New Productions for Non-Donors and Donors

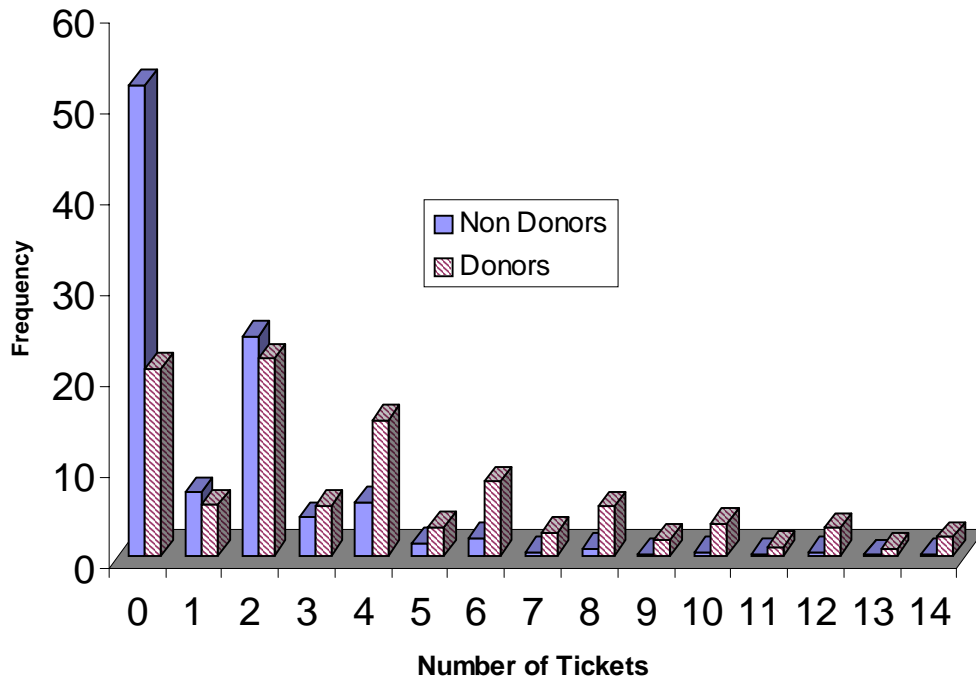


Figure 5. Non-parametric histogram of the distribution of the number of tickets for New Productions purchased by Non-Donors (left bar) and Donors (right bar).

Distribution of Donations

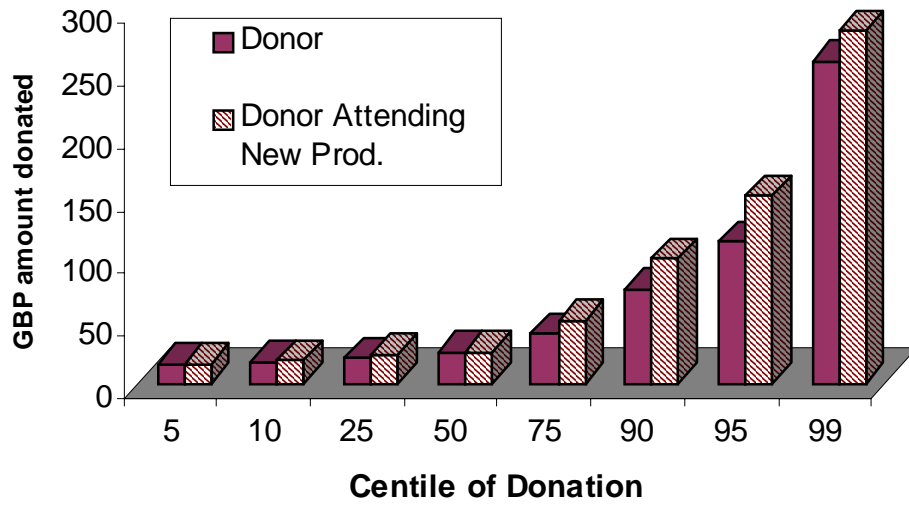


Figure 6.Plot of the amount donated at different centile levels, conditional on the donor having attended New Productions or Not.

Dress Rehearsals

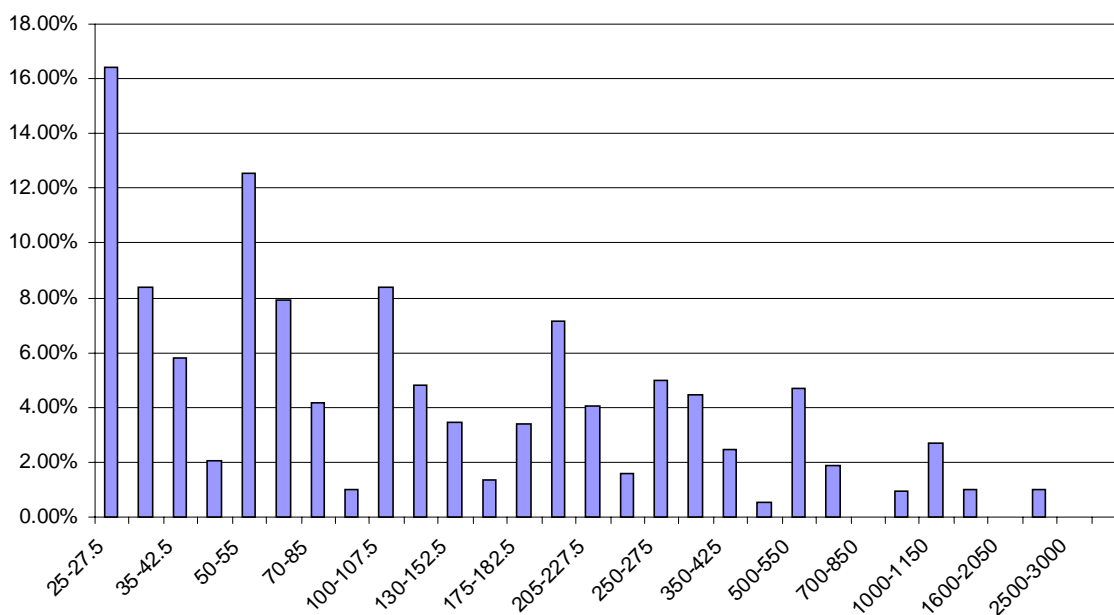


Figure 7. Distribution of attendance to Dress Rehearsals as a function of the different level of donation. Each donation class is subdivided into three groups: (a) the group that has donated the minimum amount to in that class, (b) the group that has donated an amount that falls in between two consecutive amounts and (c) the group that has donated an amount that is high with respect to the donation class. Each of these subgroups has the same rights to attend special performances.

Table 1
PERFORMANCES OF ENO

This table reports all the performances of ENO. *NN* are *Not-New* productions, *SR* are *Sponsored Revival* Productions, *N* are *New* productions, *NNDR* are *Not-New* Productions, *SRDR* are *Sponsored Revival Dress Rehearsals*, *NDR* are *New Dress Rehearsals*. In the last three rows the data are aggregated, independently of whether the production was Sponsored or not.

	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
	PERFORMANCES					
<i>NN</i>	13	25	18	19	19	16
<i>SR</i>	1	4	0	0	0	1
<i>N</i>	1	12	8	6	8	6
<i>NN DR</i>	5	7	5	12	11	10
<i>SR DR</i>	1	2	0	0	0	0
<i>N DR</i>	0	3	4	6	7	6
New Total	1	12	8	6	8	6
Not New Total	14	29	18	19	19	17
Dress Rehearsal Total	6	12	9	18	18	16

SPECIAL PERFORMANCES

- **WORKSHOP**

These are workshops associated with different operas. There are 6 different events, for which we have altogether 9 buyers. Eight of these are corporate buyers and are excluded from our analysis since the number of seats bought ranges from 15 to 138. Prices are either £5 or £15. None of them are donors.
- **TALKS**

There are 2 big talk events: (a) a talk given by Mark Elder with 560 buying accounts and (b) a talk by Jonathan Miller with 481 buying accounts. Moreover, there are 3 small “Enjoy the Opera Pre-performance Talk” for a total of 9 accounts. All these events are free. Out of 1,050 buying accounts, 1,010 are donors and 40 are non-donors.
- **LUNCH EVENTS**

These are lunch time events: (a) “Conversations” and (b) the “Friend’s Lunch Time Events”. There are 7 of them and 2,263 buying events. The price paid is £5 in 2,244 cases and £0 in 19 cases. 2,018 of the buying events are by donors and 245 by non-donors.
- **DINNER EVENTS**

These are dinner time events: (a) 5 unspecified evening events and (b) two “Friend’s Evening Time Events”. 2,568 are done by donors and 245 are done by non-donors. Prices are £0 in 30 cases while the rest are either £5, £7.5 or £10.
- **DIRECTOR EVENTS**

These are the “General Director Circle Events”. There are 5 different events for 397 buying accounts, of which 377 are donors and 20 are non-donors. Prices paid were £7.5 in 207 cases, £10 in 173 cases and 17 tickets are assigned free of charge to donors.
- **SILVER AND GOLD MEMBER EVENTS**

These are two receptions for the silver and gold members. The number of buying events was 35 and the prices were £15 and £10. Of the 35 buying accounts 32 were donors and 3 non-donors.
- **YOUNG FRIENDS EVENTS**

These are the “Young Friends Debut Events”. There is only one of this type of event for a total of 11 buyers, from 7 different accounts. The price was £4 for all of them and they were all donors and all of them donated £10.
- **PRE-PERFORMANCE TALK**

Under this heading we classify both the pre-performance talks but also some other miscellaneous special event such as “Coliseum Restoration Event”, “Verdi Sing Along”. There are 2,963 buying events, of which 1,250 are done by donors. 1,406 were free and the rest were sold at prices ranging from £1 to £20.
- **PROGRAM.**

About 45 different programs have been printed in association with the performances. There are 1,107 different buying events, of which 234 are done by donors. Prices were £3 in 902 cases, £6.5 in 124 cases and the rest from £0 to £6.
- **TOUR**

This is an organized tour of the Coliseum. There are 167 buying events, of which 139 were done by donors. In 158 cases the price paid was £4 and 9 tickets were assigned free of charge to donors.
- **SPECIAL EVENTS**

There are 3 unspecified “Special Events” and 3 unspecified “Friends’ Special Events”. There are 1,039 buying accounts, of which 931 were donors and 108 were non-donors. Prices paid ranged from £0, in 172 cases, to £15.
- **TRIBUTE**

This is a “Tribute to Donald Adams” for which there were 122 buying events all assigned for free. 20 were assigned to donors and the rest to non-donors.

Table 2
SOURCES OF INCOME FOR ENO

This table reports the sources of income of ENO. NNR are Not-New Regular performances; SSR are Special events; NR are New Regular performances; Total Regular are the sum of Not-New, New and Special Regular performances; NNDR are Not-New Dress Rehearsals; NDR are New Dress Rehearsals; Total Dress Rehearsals are the sum of Not-New, New and Special events Dress Rehearsals.

	1994	1995	1996	1997	1998	1999	2000
TOTAL REVENUES FROM TICKET SALE							
<i>NNR</i>	3,643,808	3,273,464	3,303,450	4,536,030	0	0	0
<i>SRR</i>	238,912	629,337	0	0	0	394,507	263,910
<i>NR</i>	652,707	2,896,145	3,815,425	2,909,396	2,575,180	3,027,249	460,396
<i>Total Regular</i>	4,535,428	6,798,947	7,118,875	7,445,427	7,600,596	8,687,169	1,517,829
<i>NNDR</i>	27,867	35,924	30,085	64,922	79,948	60,585	37,858
<i>SRDR</i>	5,022	1,021	0	0	0	8,483	8,537
<i>NDR</i>	0	16,242	23,694	35,228	54,543	58,167	15,984
<i>Total Dress Rehearsal</i>	32,889	53,188	53,779	100,150	134,491	127,236	62,378
<i>Total</i>	4,568,317	6,852,136	7,172,655	7,545,577	7,735,087	8,814,406	1,580,208
TOTAL REVENUES FROM TICKET SALE							
<i>Corp Account</i>	167,533	240,783	185,382	220,760	169,901	159,378	46,635
<i>Individual</i>	4,400,784	6,611,353	6,987,272	7,324,817	7,565,186	8,655,027	1,533,572
<i>Total</i>	4,568,317	6,852,136	7,172,655	7,545,577	7,735,087	8,814,406	1,580,208
TOTAL REVENUES FROM DONATIONS							
<i>Corp Account</i>	2,613,795	2,631,159	2,405,170	2,927,569	3,776,095	4,265,083	808,442
<i>Individual</i>	6,739,099	12,216,803	7,960,295	7,323,476	3,077,349	3,480,884	1,311,004
<i>Total</i>	9,352,885	14,847,963	10,365,465	10,251,045	6,853,444	7,745,967	2,119,446
TOTAL REVENUE							
<i>Corp Account</i>	2,781,329	2,871,943	2,590,552	3,148,329	3,945,996	4,424,461	855,078
<i>Individual</i>	11,139,875	18,828,157	14,947,568	14,648,294	10,642,535	12,135,912	2,844,577
<i>Total</i>	13,921,203	21,700,099	17,538,120	17,796,623	14,588,531	16,560,373	3,699,655
SOURCES OF REVENUE IN PERCENTAGE							
<i>Corp Account</i>	19.98%	13.23%	14.77%	17.69%	27.05%	26.72%	23.11%
<i>Individual</i>	80.02%	86.77%	85.23%	82.31%	72.95%	73.28%	76.89%

Table 3
THE ENO'S GIFT PROGRAMS

This table describes the characteristics of the fringe benefits that are offered to donors, depending on the size of the donation.

<i>Program</i>	<i>Level of Gift</i>	<i>Fringe Benefits</i>
Friend:	25-49	Advance information about performances Priority booking for ENO performances Priority booking for variety of Friends Events, including talks Priority booking for dress rehearsals A subscription to ENO's Coliseum magazine, published three times a year A personalised membership card
Bronze Friend:	50-99	All of the above plus: An invitation to a special pre-rehearsal talk
Silver Friend:	100-174	All of the above plus: An invitation to an annual reception to meet Company members and performers
Gold Friend:	175-249	All of the above plus: An exclusive opportunity to attend a music rehearsal

Table 3_b
THE GENERAL DIRECTOR'S CIRCLE

This table describes the characteristics of the fringe benefits that are offered to donors, depending on the size of the donation.

<i>Program</i>	<i>Level of Gift</i>	<i>Fringe Benefits</i>
Associate Membership:	250-499	“ENO may extend”: Advance production information Advance ticket booking Invitation to special events <i>Coliseum</i> Magazine An invitation to start a season party
Benefactor Membership:	500-999	“ENO may extend all of the above plus:” Invitation to attend works in progress and rehearsals Opportunities to explore behind the scenes at the Coliseum
Patron Membership:	1000-2499	“ENO may extend all of the above plus:” Dedicated ticket line Invitation to attend work in progress at the Contemporary Opera Studio The ability to book private rooms for entertaining guests An invitation to the annual patron's dinner Acknowledgment in the Foyer
Fellow Membership:	2,500 minimum	“ENO may extend all of the above plus:” Invitation to the Annual Fellows Dinner hosted by the General Director and the Chairman of the Board An account facility for the purchase of tickets and entertaining
Production Syndicates:	Not Stipulated	“May have the opportunity to be involved through:” Model showing with the director Access to the rehearsals Invitation to first night company party Cast post-performance supper
Major Gift	N/A	Not Articulated
Legacies:	Not Stipulated	Not Applicable

ARTISTIC SCHEMES

OperaZingers:	Not Stipulated	“May include the following opportunities”: Performances by your supported singers and the chance to meet them afterwards
Orchestra Scheme:	1000 minimum	“May be involved in the following ways” Information on the orchestra Opportunities to meet the players Attendance at orchestra rehearsals Talk from players and conductors Recognition in the program

Table 4
NEW PERFORMANCES AND SPONSORED REHEARSALS

This table describes all the opera productions by the English National Opera during the period of the data set. For each opera production, we describe whether it was a Sponsored Revival, a New Production or a Not-New Production; we provide the name of the donor; we state whether ENO staged a dress-rehearsal open to the public, a special Talk, Dinner or Lunch event with regards to this production; we give information on whether a new libretto has been developed.

<i>Year</i>	<i>Opera</i>	<i>Spons. Rev.</i> /New Perf. /Not New P.	<i>Sponsor</i>	<i>Dress Rehearsal</i>	<i>Meal /Talk</i>	<i>Libretto</i>
1994	Simon Boccanegra	NN	Not Specified	N	N	N
	Street Scene	NN	Not Specified	N	N	N
	La Boheme	N	Friends of the ENO	N	N	N
	The Rape of Lucretia	NN	Not Specified	Y	N	N
	The Barber of Seville	NN	Not Specified	Y	N	N
	Figaro's Wedding	NN	Not Specified	Y	N	N
	Lohengrin	NN	Friends of the ENO	N	N	N
	Die Fledermaus	NN	Not Specified	N	N	N
	The Two Widows	N	Guinness PLC	Y	N	N
	Xerxes	N	Not Specified	Y	N	N
	Der Rosenkavalier	N	Not Specified	N	N	N
	Falstaff	SR	Not Specified	Y	N	N
	The Pearl Fishers	NN	Not Specified	N	N	N
1995	Eugene Onegin	N	Not Specified	N	N	N
	Blond Eckbert	N	Geoffrey C. Hughes Charitable Trust	N	N	N
	The Tale Within The Tale	NN	Not Specified	N	N	N
	Cosí Fan Tutte	N	Not Specified	Y	N	N
	Peter Grimes	N	Not Specified	Y	N	N
	Jenufa	NN	Not Specified	N	N	N
	La Bohème	N	Not Specified	N	N	N
	Tosca	N	Friend's of ENO	N	N	N
	The Mikado	N	Not Specified	N	N	N
	Don Quixote	N	Not Specified	Y	N	N
	The Magic Flute	N	Not Specified	Y	N	N
	Ariadne on Naxos	NN	Not Specified	Y	N	N
	Khovanshchina	N	Not Specified	N	N	N
	Figaro's Wedding	N	Not Specified	N	N	N
	Rigoletto	SR	Not Specified	N	N	N
	King Priam	N	Not Specified	Y	N	N
	Madam Butterfly	NN	Not Specified	Y	N	N
	The Cunning Little Vixen	SR	Not Specified	Y	N	N
	Don Giovanni	N	Guinness PLC	N	N	N
	Life with an Idiot	N	Not Specified	Y	N	N
	Cosí Fan Tutte	N	KPMG/BSTIS Matching Fan Sponsorship	Y	N	N
	The Force of Destiny	N	Not Specified	Y	N	N
	A Midsummer Night's Dream	N	Fan Sponsorship	N	N	Y
	Rise and Fall of the City of Mahagonny	N	Not Specified	N	N	N
	Tosca	N	Not Specified	Y	N	N
1996	Carmen	N	Not Specified	N	N	N
	Cosí Fan Tutte	NN	Not Specified	N	N	N
	Rusalka	NN	Not Specified	Y	N	N
	The Fairy Queen	N	Not Specified	Y	N	N
	The Barber of Seville	N	Not Specified	N	N	N
	Turandot	N	Not Specified	Y	N	N
	La Belle Vivette	N	Friends of ENO	Y	N	N
	The Pearl Fishers	NN	Not Specified	Y	N	N
	The Magic Flüte	NN	Not Specified	Y	N	N
	Tristan and Isolde	N	Not Specified	Y	N	N
	Tosca	N	Not Specified	Y	N	Y
	Don Pasquale	N	Not Specified	Y	N	Y
	Orfeo	NN	Not Specified	Y	N	N
	Fidelio	N	A Syndicate of Individual Donors	Y	N	N
	Ariodante	N	Not Specified	Y	N	N
	Salomé	N	Not Specified	Y	N	N
	La Bohème	N	Not Specified	Y	N	N
	The Prince of Homburg	N	Not Specified	Y	N	N

Table 4_b
NEW PERFORMANCES AND SPONSORED REHEARSALS

This table describes all the opera productions by the English National Opera during the period of the data set. For each opera production, we describe whether it was a Sponsored Revival, a New Production or a Not-New Production; we provide the name of the donor; we state whether ENO staged a dress-rehearsal open to the public, a special Talk, Dinner or Lunch event with regards to this production; we give information on whether a new libretto has been developed.

<i>Year</i>	<i>Opera</i>	<i>Spons. Rev.</i> /New Perf. /Not New P.	<i>Sponsor</i>	<i>Dress</i> <i>Rehearsal</i>	<i>Meal</i> /Talk	<i>Libretto</i>
1997	La Traviata	N	Schroder	Y	N	N
	A Midsummer's Night Dream	NN	Not Specified	Y	N	N
	Don Quixote	NN	Not Specified	Y	N	N
	The Cunning Little Vixen	N	Not Specified	Y	N	N
	Rigoletto	N	Not Specified	Y	N	N
	Die Soldaten	N	Not Specified	Y	N	Y
	The Pearl Fishers	NN	Not Specified	Y	N	N
	The Mikado	N	Not Specified	Y	N	N
	The Italian Girl in Algiers	N	Not Specified	Y	N	N
	Der Rosenkavalier	N	Not Specified	Y	N	N
	Figaro's Wedding	N	Not Specified	Y	N	N
	Orpheus and Eurydice	N	Friends of ENO	Y	N	N
	Madam Butterfly	N	Not Specified	Y	N	N
	The Damnation of Faust	N	Not Specified	Y	N	N
	Ariadne on Naxos	NN	Not Specified	Y	N	N
	Carmen	NN	Not Specified	Y	N	Y
	L'allegro	N	Not Specified	Y	N	Y
	Dr. Ox's Experiment	N	ENO/BBC Arts Council	Y	N	N
	Don Pasquale	N	Not Specified	Y	N	Y
1998	Tosca	N	Not Specified	Y	N	N
	The Flying Dutchman	N	Not Specified	Y	N	Y
	The Mikado	NN	Not Specified	Y	N	N
	Così Fan Tutte	NN	Not Specified	Y	N	N
	Twice Through Heart	N	Friends of ENO	Y	Y	Y
	The Magic Flute	NN	Not Specified	Y	Y	N
	Falstaff	N	Not Specified	Y	Y	Y
	Eugene Onegin	NN	Not Specified	Y	Y	N
	The Elixir of Love	N	Mr. and Mrs. P.I. Espnham	Y	Y	Y
	Xerxes	NN	Not Specified	Y	Y	N
	The Tales of Hoffman	N	Idlewild Trust /Leche Trust	Y	Y	N
	La Bohème	NN	Not Specified	Y	Y	N
	Puccini's Trittico	N	Not Specified	Y	Y	Y
	The Fairy Queen	NN	Not Specified	Y	Y	N
	Manon	N	Not Specified	Y	Y	Y
	Carmen	NN	Not Specified	Y	Y	N
	Doctor Ox's Experiment	N	Mr. and Mrs. P.I. Espnham	Y	Y	Y
1999	Falstaff	N	Not Specified	Y	N	N
	Rusalka	NN	Not Specified	Y	N	N
	Otello	N	IIR Group	Y	Y	Y
	Madam Butterfly	NN	Not Specified	Y	Y	N
	Mary Stuart	N	Not Specified	Y	Y	Y
	Hansel and Gretel	NN	Not Specified	Y	Y	N
	Boris Gudonov	N	Friends of ENO	Y	Y	Y
	The Barber of Seville	NN	Not Specified	Y	Y	N
	La Traviata	NN	Friends of ENO	Y	Y	N
	Parsifal	N	A Syndicate of Donors	Y	Y	Y
	Orpheus and Eurydice	SR	Geoffrey Hughes Charitable Trust	Y	Y	N
	Maphistopheles	N	Mr. Gerard Arnhald	Y	Y	Y
	Salomé	N	Not Specified	Y	Y	N
	Semele	N	Nicholas and Judith Goodison	Y	Y	Y
	Carmen	NN	Peter Borender	Y	Y	N
	The Carmelites	N	Not Specified	Y	Y	Y
	Rigoletto	NN	Friends of ENO	Y	Y	N

Table 5
GENERAL DESCRIPTION OF THE DATA SET

This table presents summary statistics of the data set. Panel A focuses on the cross-sectional characteristics of the average annual expenditure of each individual during an opera season; panel B focuses on the number of tickets bought; panel C focuses on the average price per seat. To avoid the effect of individuals acting as agents, we restrict the analysis to individuals buying at most 6 tickets for the same event. The unit of measure of the price per seat and average annual expenditure is UK pound sterling.

<i>Event</i>	<i># Obs</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>
Annual Gift Amount:		28.21	20	41
PANEL A: Average Annual Expenditure				
Donors:				
<i>Total Expenditure</i>	36,098	228	150	240
<i>Not New Perf</i>		114	72	143
<i>New Perf</i>		114	75	143
Non Donors:				
<i>Total Expenditure</i>	284,451	83	56	98
<i>Not New Perf</i>		51.20	36	67
<i>New Perf</i>		31.77	9	61
PANEL B: Number of Tickets Bought				
Donors:				
<i>Total Attendance</i>	36,098	8.45	6	8.83
<i>Not New Perf</i>		4.28	2	5.24
<i>New Perf</i>		4.17	2	4.97
<i>Dress Rehearsal</i>		0.58	–	2.44
Non Donors:				
<i>Total Attendance</i>	284,451	3.58	2	4.34
<i>Not New</i>		2.18	2	2.83
<i>New</i>		1.39	0	2.50
PANEL C: Average Price Per Seat				
Donors:				
<i>Total Attendance</i>	36,098	29.39	28.6	12.44
<i>Not New Perf</i>		28.73	27.64	12.26
<i>New Perf</i>		29.10	28	12.51
Non Donors:				
<i>Total Attendance</i>	284,451	25.28	25	13.63
<i>Not New Perf</i>		25.98	25	13.12
<i>New Perf</i>		25.46	25	13.25

Table 6
ATTENDANCE FOR CHEAP AND EXPENSIVE TICKETS

This table presents summary statistics of the cross-sectional characteristics of the average attendance during an opera season and of the gift amounts. The dataset is stratified in two subsamples. The “cheap” ticket subsample is based on those individuals spending on average an amount which is in the *bottom three deciles* of the distribution of prices per ticket, i.e. UKP 17. The “expensive” ticket subsample is based on those individuals spending on average an amount which is in the *top three deciles* of the distribution of prices per ticket, i.e. UKP 33. To avoid the effect of individuals acting as agents, we restrict the analysis to individuals buying at most 6 tickets for the same event. The unit of measure of the price per seat is UK pound sterling.

<i>Event</i>	<i># Obs</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev</i>
Annual Gift Amount:	17,102	33.27	20	47.33
PANEL A: Expensive Tickets				
Donors:				
<i>Total Attendance</i>	17,102	8.20	6	8.23
<i>Not New Perf</i>		4.08	3	4.84
<i>New Perf</i>		4.21	4	4.81
<i>Dress Rehearsal</i>		0.40	-	1.90
Non Donors:				
<i>Total Attendance</i>	87,236	3.56	2	3.87
<i>Not New Perf</i>		2.14	2	2.52
<i>New Perf</i>		1.41	2	2.39
PANEL B: Cheap Tickets				
Annual Gift Amount:	8,426	25.82	19	34.50
Donors:				
<i>Total Attendance</i>	8,426	11.73	8	11.46
<i>Not New Perf</i>		6.04	4	6.74
<i>New Perf</i>		5.69	4	6.23
<i>Dress Rehearsal</i>		0.85	-	3.06
Non Donors:				
<i>Total Attendance</i>	82,928	4.26	2	5.54
<i>Not New Perf</i>		2.54	2	3.47
<i>New Perf</i>		1.73	2	3.02

Table 7
GENERAL DESCRIPTION OF LOW AND HIGH INCOME SUBSETS

This table presents summary statistics for the subset of the low income individuals. Low income is defined as the bottom 30% of the distribution of the income. High income is defined as the top 30% of the distribution of the income. In order to avoid the effect of individuals acting as agents, we restrict the analysis to the attendance of individuals buying at most 6 tickets for the same performance and for the same event. The unit of measure of the price per seat is UKP. Each account is treated individually over time.

	<i># obs</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev</i>
PANEL A: Low Income Subsample				
<i>Gift Amount</i>	8,605	18.46	15	13.47
Average Annual Expenditure				
Donors				
<i>Total Expenditure</i>	8,605	200.57	134	214.59
<i>Not New Perf</i>		107.30	72	131.63
<i>New Perf</i>		93.27	54	123.54
Non Donors				
<i>Total Expenditure</i>	60,638	78.21	54	89.53
<i>Not New Perf</i>		48.94	35	63.62
<i>New Perf</i>		29.27	0	55.09
Number of Attendances				
Donors				
<i>Total Expenditure</i>	8,605	8.16	5	8.84
<i>Not New Perf</i>		4.40	3	5.38
<i>New Perf</i>		3.76	2	4.87
<i>Dress Rehearsals</i>		0.37	0	1.99
Non Donors				
<i>Total Expenditure</i>	60,638	3.57	2	4.17
<i>Not New Perf</i>		2.21	2	2.81
<i>New Perf</i>		1.36	0	2.41
PANEL B: High Income Subsample				
<i>Gift Amount</i>	10,325	20.81	20	13.76
Average Annual Expenditure				
Donors				
<i>Total Expenditure</i>	10,325	258.71	170	269.07
<i>Not New Perf</i>		118.82	79	151.57
<i>New Perf</i>		139.89	90	163.48
Non Donors				
<i>Total Expenditure</i>	56,906	105.21	74	125.42
<i>Not New Perf</i>		62.22	45	82.72
<i>New Perf</i>		42.98	0	77
Number of Attendances				
Donors				
<i>Total Attendance</i>	10,325	8.71	6	8.87
<i>Not New Perf</i>		4.04	2	5.00
<i>New Perf</i>		4.67	3	5.15
<i>Dress Rehearsals</i>		0.80	0	2.85
Non Donors				
<i>Total Attendance</i>	56,906	3.90	2	4.59
<i>Not New Perf</i>		2.28	2	2.88
<i>New Perf</i>		1.62	0	2.72

Table 8
PROBIT REGRESSIONS PROBABILITIES:
NUMBER OF PERFORMANCES

This table reports the results of the univariate and multivariate Probit. The sample excludes the donations which are in terms of size in the top 2% decile. We do not consider those individuals that purchased more than 6 tickets for the same event. Huber-White robust standard errors are reported under the estimated coefficients. A single star stands for statistical significance at the 5% confidence level, while a double star stands for statistical significance at the 1% confidence level.

<i>Overall Sample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{\text{NewPerf}}{\text{Total Perf}}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.26 0.02**			0.0730 0.0009**				0.0154 0.0008	0.06
<i>Being a Donor</i>	-2.23 0.02**			0.0341 0.0011**	0.0799 0.0012**			0.0117 0.0006**	0.11
<i>Being a Donor</i>	-2.24 0.02**			0.0341 0.0011**	0.0799 0.0012**	0.1851 0.0030**		0.0093 0.0009**	0.16
<i>Being a Donor</i>	-2.24 0.02**			0.0341 0.0011**	0.0772 0.0012**	0.1601 0.0031**	0.2034 0.0082**	0.0093 0.0009**	0.17
<i>Being a Donor</i>	-2.29 0.02**	0.0501 0.0005**						0.0130 0.0008**	0.10
<i>Being a Donor</i>	-2.41 0.02**	0.0556 0.0005**	0.3195 0.0110**					0.0120 0.0008**	0.12
<i>Being a Donor</i>	-2.38 0.02**	0.0557 0.0005**	0.2839 0.0114**			0.1835 0.0030**		0.0096 0.0009**	0.16
<i>Being a Donor</i>	-2.37 0.02**	0.0545 0.0005**	0.2753 0.0114**			0.1580 0.0031**	0.2063 0.0082**	0.0095 0.0009**	0.17
<i>Cheap Seats Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{\text{NewPerf}}{\text{Total Perf}}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.42 0.05**			0.0673 0.0014**				0.0161 0.0018**	0.09
<i>Being a Donor</i>	-2.40 0.05**			0.0300 0.0019**	0.0667 0.0020**			0.0121 0.0019**	0.14
<i>Being a Donor</i>	-2.37 0.05**			0.0328 0.0019**	0.0646 0.0021**	0.1663 0.0046**		0.0082 0.0019**	0.20
<i>Being a Donor</i>	-2.37 0.05**			0.0329 0.0019**	0.0616 0.0021**	0.1426 0.0048**	0.1733 0.0117**	0.0082 0.0019**	0.21
<i>Being a Donor</i>	-2.43 0.05**	0.0472 0.0008**						0.0134 0.0018**	0.13
<i>Being a Donor</i>	-2.54 0.05**	0.0471 0.0008**	0.2782 0.0242**					0.0124 0.0019**	0.14
<i>Being a Donor</i>	-2.48 0.05**	0.0476 0.0008**	0.2189 0.0254**			0.1648 0.0046**		0.0086 0.0019**	0.20
<i>Being a Donor</i>	-2.47 0.05**	0.0462 0.0009**	0.2073 0.0255**			0.1407 0.0049**	0.1757 0.0117**	0.0085 0.0019**	0.21
<i>Expensive Seats Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{\text{NewPerf}}{\text{Total Perf}}$	<i>Not New.</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-1.79 0.03**			0.0845 0.0016**				0.0060 0.0012	0.06
<i>Being a Donor</i>	-1.81 0.03**			0.0402 0.0018**	0.0947 0.0018**			0.0016 0.0012**	0.12
<i>Being a Donor</i>	-1.80 0.03**			0.0417 0.0018**	0.0920 0.0018**	0.2081 0.0061**		-0.0001 0.0010	0.16
<i>Being a Donor</i>	-1.80 0.04**			0.0416 0.0018**	0.0892 0.0018**	0.1782 0.0063**	0.2351 0.0151**	-0.0001 0.0012	0.16
<i>Being a Donor</i>	-1.85 0.03**	0.0676 0.0009**						0.0027 0.0009**	0.11
<i>Being a Donor</i>	-1.97 0.04**	0.0668 0.0009**	0.3468 0.0169**					0.0017 0.0012	0.13
<i>Being a Donor</i>	-1.95 0.04**	0.0663 0.0009**	0.3180 0.0172**			0.2061 0.0061**		-0.0001 0.0010	0.16
<i>Being a Donor</i>	-1.94 0.04**	0.0648 0.0009**	0.3099 0.0172**			0.1759 0.0063**	0.2391 0.0152**	-0.0001 0.0012	0.16

Table 9
IV PROBIT REGRESSIONS PROBABILITIES:
NUMBER OF PERFORMANCES

This table reports the results of the Instrumental Variable Probit. *Total Perf.* are the sum of *New* and *Not New* Performances. $\frac{New\ Perf}{Total\ Perf}$ is the logarithm of one plus the percentage of New Performances attended with respect to the Total Performances attended. *Spec* are the special events attended. *Dress Re* are the Dress Rehearsals. The set of instruments for the Dress Rehearsals and Special Events are their lagged value, the total performances attended and the level of income. All the other explanatory variables are not instrumented. The sample include both donors and non-donors. The explanatory variables are measured both in terms of the number of performances and of the expenditure (UK sterlings). The sample excludes the donations which are in terms of size in the top 2% decile. We do not considers those individuals that purchased more than 6 tickets for the same event. The subset of “cheap” and “expensive” tickets are respectively the bottom and top three deciles of the distributions of individuals in terms of the average price of the tickets purchased. Huber-White robust standard errors are reported under the estimated coefficients. A single star stands for statistical significance at the 5% confidence level, while a double star stands for statistical significance at the 1% confidence level.

<i>Overall Sample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.24 0.02**			0.0312 0.0012**	0.0845 0.0011**	0.2105 0.0037**	0.2012 0.0086**	0.0092 0.0009**	0.17
<i>Being a Donor</i>	-2.37 0.02**	0.0512 0.0006**	0.2937 0.0112**			0.2065 0.0035**	0.1998 0.0086**	0.0095 0.0009**	0.17
<i>Cheap Seats Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.37 0.05**			0.0534 0.0021**	0.0601 0.0023**	0.2194 0.0041**	0.1733 0.0109**	0.0082 0.0021**	0.21
<i>Being a Donor</i>	-2.47 0.05**	0.0462 0.0009**	0.1821 0.0251**			0.2018 0.0044**	0.1757 0.0109**	0.0085 0.0016**	0.21
<i>Expensive Seats Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New.</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-1.80 0.04**			0.0184 0.0017**	0.1170 0.0015**	0.1559 0.0075**	0.2312 0.0150**	-0.0001 0.0012	0.17
<i>Being a Donor</i>	-1.94 0.04**	0.0648 0.0009**	0.3478 0.0167**			0.1593 0.0072**	0.2345 0.0159**	-0.0001 0.0012	0.17

Table 10
PROBIT REGRESSIONS PROBABILITIES:
EXPENDITURE

This table reports the results of multivariate Probit regressions, for high and low income individuals. Low income is defined as the bottom 30% of the distribution of the income. High income is defined as the top 30% of the distribution of the income. In order to avoid the effect of individuals acting as agents, we restrict the analysis to the attendance of individuals buying at most 6 tickets for the same performance and for the same event. The unit of measure of the price per seat is UKP. Each account is treated individually over time. The sample excludes the donations which are in terms of size in the top 2% decile. The explanatory variables are the dollar valued expenditure in different types of performances.

<i>Overall Sample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total Perf}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.15 0.02**			0.0031 0.0001**				0.0107 0.0008	0.08
<i>Being a Donor</i>	-2.11 0.02**			0.0017 0.0001**	0.0032 0.0001*			0.0049 0.0008**	0.14
<i>Being a Donor</i>	-2.09 0.02**			0.0018 0.0001**	0.0031 0.0001**	0.1905 0.0029**		0.0022 0.0008**	0.18
<i>Being a Donor</i>	-2.10 0.02**			0.0018 0.0001**	0.0031 0.0001**	0.1722 0.0031**	0.0246 0.0013**	0.0023 0.0009**	0.19
<i>Being a Donor</i>	-2.14 0.02**	0.0024 0.0001**						0.0058 0.0008**	0.13
<i>Being a Donor</i>	-2.25 0.02**	0.0024 0.0001**	0.3110 0.0111**					0.0048 0.0008**	0.14
<i>Being a Donor</i>	-2.21 0.02**	0.0024 0.0001**	0.2731 0.0115**			0.1886 0.0030**		0.0021 0.0009**	0.19
<i>Being a Donor</i>	-2.21 0.02**	0.0024 0.0001	0.2679 0.0115**			0.1700 0.0031	0.0248 0.0013**	0.0022 0.0009**	0.19
<i>Low Income Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total Perf}$	<i>Not New</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-2.34 0.08**			0.0035 0.0001**				0.0157 0.0041**	0.08
<i>Being a Donor</i>	-2.29 0.08**			0.0023 0.0001**	0.0032 0.0001**			0.0095 0.0042	0.13
<i>Being a Donor</i>	-2.28 0.08**			0.0024 0.0001**	0.0031 0.0001**	0.1803 0.0070**		0.0073 0.0042	0.16
<i>Being a Donor</i>	-2.27 0.09**			0.0023 0.0001**	0.0030 0.0001**	0.1609 0.0073**	0.0340 0.0031**	0.0070 0.0042	0.17
<i>Being a Donor</i>	-2.31 0.09**	0.0027 0.0001**						0.0101 0.0042*	0.13
<i>Being a Donor</i>	-2.38 0.09**	0.0027 0.0001**	0.2334 0.0219**					0.0087 0.0042*	0.14
<i>Being a Donor</i>	-2.35 0.09**	0.0027 0.0001	0.2101 0.0223**			0.2266 0.1773**		0.0066 0.0035*	0.16
<i>Being a Donor</i>	-2.35 0.09**	0.0027 0.0001**	0.2063 0.0224**			0.1578 0.0073**	0.0338 0.0031**	0.0063 0.0027**	0.17
<i>High Income Subsample</i>									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total Perf}$	<i>Not New.</i>	<i>New</i>	<i>Dress Re</i>	<i>Spec</i>	<i>Income</i>	R^2
<i>Being a Donor</i>	-1.72 0.08**			0.0026 0.0001**				-0.0013 0.0025	0.06
<i>Being a Donor</i>	-1.74 0.08**			0.0010 0.0001**	0.0032 0.0001**			-0.0048 0.0026	0.14
<i>Being a Donor</i>	-1.81 0.09**			0.0012 0.0001**	0.0031 0.0001**	0.1768 0.0045**		-0.0050 (0.0020**)	0.19
<i>Being a Donor</i>	-1.82 0.09**			0.0012 0.0001**	0.0031 0.0001**	0.1598 0.0047**	0.0287 0.0023**	-0.0046 0.0018**	0.20
<i>Being a Donor</i>	-1.75 0.08**	0.0021 0.0001**						-0.0047 0.0015**	0.12
<i>Being a Donor</i>	-1.96 0.08**	0.0021 0.0001**	0.3985 0.0197**					-0.0041 0.0015**	0.14
<i>Being a Donor</i>	-2.00 0.09**	0.0021 0.0001**	0.3538 0.0204**			0.1755 0.0045**		-0.0044 0.0016**	0.19
<i>Being a Donor</i>	-2.01 0.09**	0.0021 0.0001**	0.3477 0.0204**			0.1579 0.0047**	0.0290 0.0023**	-0.0041 0.0016**	0.20

Table 11
REGRESSIONS FOR SAMPLE OF DONORS-ONLY (NUMBER OF PERFORMANCES)

This table reports the results of the multivariate regressions of the size of the donations onto a set of explanatory variables. *Total Perf.* are the sum of *New* and *Not New* Performances. $\frac{New\ Perf}{Total\ Perf}$ is the logarith of one plus the percentage of New Performances attended with respect to the Total Performances attended. *Spec* are the special events attended. *Dress Re* are the Dress Rehearsals. The sample include only donors. The explanatory variables are measure in units of performances attended. The sample excludes the donations which are in terms of size in the top 2% decile. We do not considers those individuals that purchased more than 6 tickets for the same event. p-values are reported in parenthesis.

Overall Sample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	10.84 (0.00)			1.2763 (0.00)				0.4259 (0.00)	0.03
<i>Gift Amount</i>	11.05 (0.00)			0.7642 (0.00)	0.8814 (0.00)			0.3856 (0.00)	0.04
<i>Gift Amount</i>	11.00 (0.00)			0.7618 (0.00)	0.7981 (0.00)	3.4854 (0.00)		0.3749 (0.00)	0.05
<i>Gift Amount</i>	11.15 (0.00)			0.7893 (0.00)	0.8272 (0.00)	2.9479 (0.00)	0.6020 (0.00)	0.3453 (0.00)	0.05
<i>Gift Amount</i>	10.96 (0.00)	0.8212 (0.00)						0.3889 (0.00)	0.04
<i>Gift Amount</i>	16.63 (0.82)		3.3031 (0.00)					0.3813 (0.00)	0.01
<i>Gift Amount</i>	15.15 (0.00)						0.6886 (0.00)	0.3597 (0.00)	0.01
<i>Gift Amount</i>	11.02 (0.00)	0.8724 (0.00)	1.7329 (0.04)				1.3077 (0.00)	0.3039 (0.00)	0.05
Cheap Seats Subsample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	8.36 (0.00)			1.0300 (0.00)				0.4358 (0.00)	0.04
<i>Gift Amount</i>	8.46 (0.00)			0.7024 (0.00)	0.6330 (0.00)			0.3686 (0.00)	0.05
<i>Gift Amount</i>	8.45 (0.00)			0.6942 (0.00)	0.5422 (0.00)	3.3441 (0.00)		0.3469 (0.00)	0.08
<i>Gift Amount</i>	8.83 (0.00)			0.7219 (0.00)	0.5658 (0.00)	2.6890 (0.00)	0.8734 (0.00)	0.2992 (0.00)	0.09
<i>Gift Amount</i>	8.57 (0.00)	0.6695 (0.00)						0.3640 (0.00)	0.05
<i>Gift Amount</i>	15.80 (0.00)		1.0330 (0.55)					0.3769 (0.00)	0.01
<i>Gift Amount</i>	16.95 (0.00)						1.3145 (0.00)	0.3022 (0.00)	0.02
<i>Gift Amount</i>	9.61 (0.00)	0.6982 (0.00)	-1.3537 (0.42)				1.4997 (0.00)	0.2790 (0.00)	0.07
Expensive Seats Subsample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New.</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	18.07 (0.00)			1.7083 (0.00)				0.2861 (0.00)	0.03
<i>Gift Amount</i>	17.99 (0.00)			1.1030 (0.00)	1.3324 (0.00)			0.1722 (0.07)	0.05
<i>Gift Amount</i>	18.07 (0.00)			1.0440 (0.00)	1.2199 (0.00)	4.2806 (0.00)		0.1695 (0.00)	0.06
<i>Gift Amount</i>	18.17 (0.00)			1.0528 (0.00)	1.2253 (0.00)	3.8009 (0.00)	0.7539 (0.00)	0.1554 (0.02)	0.06
<i>Gift Amount</i>	17.74 (0.00)	1.2172 (0.00)						0.1822 (0.00)	0.05
<i>Gift Amount</i>	23.83 (0.00)		4.9832 (0.00)					0.2640 (0.00)	0.01
<i>Gift Amount</i>	25.48 (0.00)						1.6331 (0.00)	0.2492 (0.00)	0.01
<i>Gift Amount</i>	17.11 (0.00)	1.2103 (0.00)	2.8811 (0.04)		45		1.5419 (0.00)	0.1432 (0.03)	0.05

Table 12
IV REGRESSIONS FOR SAMPLE OF DONORS

This table reports the results of an Instrumental Variable linear regression of the size of the donations onto a set of explanatory variables. *Total Perf.* are the sum of *New* and *Not New* Performances. $\frac{New\ Perf.}{Total\ Perf.}$ is the logarithm of one plus the percentage of New Performances attended with respect to the Total Performances attended. *Spec* are the special events attended. *Dress Re* are the Dress Rehearsals. The set of instruments for the Dress Rehearsals are their lagged value, the total performances attended and the level of income. All the other explanatory variables are not instrumented. The sample include both donors and non-donors. The explanatory variables are measured both in terms of the number of performances and of the expenditure (UK sterlings). The sample excludes the donations which are in terms of size in the top 2% decile. We do not considers those individuals that purchased more than 6 tickets for the same event. The subset of “cheap” and “expensive” tickets are respectively the bottom and top three deciles of the distributions of individuals in terms of the average price of the tickets purchased. Huber-White robust standard errors are reported under the estimated coefficients. A single star stands for statistical significance at the 5% confidence level, while a double star stands for statistical significance at the 1% confidence level.

NUMBER OF SEATS

Overall Sample

	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	0.29 0.16			0.0988 0.0294**	1.0120 0.0326**	2.8532 0.6491**	2.4374 0.1835**	0.1457 0.0063**	0.08
<i>Gift Amount</i>	-1.26 0.18**	0.5471 0.0170**	4.2378 0.2247**			2.8717 0.6554**	2.4469 0.1847**	0.1502 0.0064**	0.08

Cheap Sample

<i>Gift Amount</i>	-1.25 0.22**			0.1043 0.0401**	0.7975 0.0428**	1.8469 0.7452*	2.3455 0.2853**	0.1165 0.0085**	0.12
<i>Gift Amount</i>	-2.36 0.24**	0.4432 0.0225**	3.0893 0.2857**			1.8479 0.7494**	2.3516 0.2871**	0.1194 0.0086**	0.12

Expensive Sample

<i>Gift Amount</i>	3.05 0.36**			0.3375 0.0634**	1.4920 0.0652**	4.8909 0.5861**	2.3086 0.2752**	0.0869 0.0134**	0.09
<i>Gift Amount</i>	0.87 0.39*	0.9203 0.0377**	5.9347 0.4838**			4.9118 0.5870**	2.3186 0.2764**	0.0903 0.0134**	0.09

EXPENDITURE

Overall Sample

<i>Gift Amount</i>	0.61 0.15**			0.0185 0.0013**	0.0455 0.0013**	0.4961 0.0498**	0.2820 0.0161**	0.0755 0.0061**	0.11
<i>Gift Amount</i>	-0.93 0.17**	0.0324 0.0008**	3.91 0.2231**			0.4984 0.0499**	0.2819 0.0162**	0.0789 0.0065	0.11

Cheap Seats

	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	-0.48 0.21*			0.0189 0.0036**	0.0501 0.0033**	0.4330 0.0595**	0.2738 0.0278**	0.0888 0.0081**	0.15
<i>Gift Amount</i>	-1.35 0.22**	0.0347 0.0017**	2.3416 0.2976**			0.4310 0.0597**	0.2735 0.0279**	0.0901 0.0081**	0.15

Expensive Seats

	<i>Const</i>	<i>Total Perf.</i>	$\frac{NewPerf}{Total\ Perf}$	<i>Not New.</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	2.33 0.36**			0.0164 0.0017**	0.0437 0.0018**	0.6586 0.0944**	0.2673 0.0336**	0.0648 0.0134**	0.09
<i>Gift Amount</i>	0.15 0.39	0.0303 0.0011**	5.8282 0.4783**			0.6610 0.0943**	0.2680 0.0337**	0.0668 0.0134**	0.09

Table 13
REGRESSIONS FOR SAMPLE OF DONORS-ONLY (EXPENDITURE)

This table reports the results of the multivariate regressions of the size of the donations onto a set of explanatory variables. *Total Perf.* are the sum of *New* and *Not New* Performances. $\frac{New\ Perf}{Total\ Perf}$ is the logarith of one plus the percentage of New Performances attended with respect to the Total Performances attended. *Spec* are the special events attended. *Dress Re* are the Dress Rehearsals. The sample include only donors. The explanatory variables are measured in terms of the expenditure (UK sterling). The sample excludes the donations which are in terms of size in the top 2% decile. We do not considers those individuals that purchased more than 6 tickets for the same event. p-values are reported in parenthesis.

Overall Sample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	11.80 (0.00)			0.0527 (0.00)				0.3785 (0.00)	0.04
<i>Gift Amount</i>	12.33 (0.00)			0.0330 (0.00)	0.0360 (0.00)			0.3183 (0.00)	0.05
<i>Gift Amount</i>	12.28 (0.00)			0.0326 (0.00)	0.0342 (0.00)	0.5240 (0.00)		0.3100 (0.00)	0.06
<i>Gift Amount</i>	12.58 (0.00)			0.0339 (0.00)	0.0352 (0.00)	0.4217 (0.00)	0.0814 (0.00)	0.2728 (0.00)	0.06
<i>Gift Amount</i>	13.43 (0.00)	0.0381 (0.00)						0.2143 (0.00)	0.06
<i>Gift Amount</i>	12.92 (0.00)	0.0381 (0.00)	2.0310 (0.01)					0.2056 (0.00)	0.06
<i>Gift Amount</i>	13.56 (0.00)	0.0389 (0.00)	1.2248 (0.14)				0.1752 (0.00)	0.1549 (0.00)	0.06
<i>Gift Amount</i>	13.45 (0.00)	0.0377 (0.00)	0.9650 (0.24)			0.4469 (0.00)	0.1160 (0.00)	0.3039 (0.00)	0.07
Cheap Seats Subsample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	8.46 (0.00)			0.0763 (0.00)				0.4164 (0.00)	0.07
<i>Gift Amount</i>	9.01 (0.00)			0.0561 (0.00)	0.0344 (0.00)			0.3513 (0.00)	0.08
<i>Gift Amount</i>	9.15 (0.00)			0.0522 (0.00)	0.0312 (0.00)	0.4932 (0.00)		0.3352 (0.00)	0.10
<i>Gift Amount</i>	9.64 (0.00)			0.0537 (0.00)	0.0319 (0.00)	0.3649 (0.00)	0.1256 (0.00)	0.2870 (0.00)	0.10
<i>Gift Amount</i>	9.60 (0.00)	0.0456 (0.00)						0.3286 (0.00)	0.07
<i>Gift Amount</i>	9.90 (0.00)	0.0455 (0.00)	-1.2320 (0.46)					0.3344 (0.00)	0.07
<i>Gift Amount</i>	11.20 (0.00)	0.0458 (0.00)	-2.9990 (0.07)				0.1966 (0.00)	0.2599 (0.00)	0.09
<i>Gift Amount</i>	11.03 (0.00)	0.0431 (0.00)	-3.1651 (0.05)			0.3672 (0.00)	0.1274 (0.00)	0.2783 (0.00)	0.10
Expensive Seats Subsample									
	<i>Const</i>	<i>Total Perf.</i>	$\frac{New\ Perf}{Total\ Perf}$	<i>Not New.</i>	<i>New</i>	<i>Spec</i>	<i>Dress Re</i>	<i>Income</i>	R^2
<i>Gift Amount</i>	19.01 (0.00)			0.0470 (0.00)				0.2485 (0.00)	0.03
<i>Gift Amount</i>	18.79 (0.00)			0.0330 (0.00)	0.0391 (0.00)			0.1058 (0.12)	0.05
<i>Gift Amount</i>	18.88 (0.00)			0.0315 (0.00)	0.0369 (0.00)	0.6503 (0.00)		0.1028 (0.00)	0.06
<i>Gift Amount</i>	18.97 (0.01)			0.0319 (0.00)	0.0371 (0.00)	0.5523 (0.00)	0.1000 (0.00)	0.0865 (0.21)	0.06
<i>Gift Amount</i>	18.44 (0.00)	0.0362 (0.00)						0.1176 (0.08)	0.05
<i>Gift Amount</i>	17.66 (0.00)	0.0361 (0.00)	2.9376 (0.00)					0.1067 (0.00)	0.05
<i>Gift Amount</i>	18.05 (0.00)	0.0361 (0.00)	2.3040 (0.10)				0.1902 (0.00)	0.0762 (0.00)	0.05
<i>Gift Amount</i>	18.09 (0.00)	0.0345 (0.00)	2.14 (0.13)			0.5519 (0.00)	0.0992 (0.00)	0.0890 (0.20)	0.06

Table 14

IV REGRESSIONS FOR SAMPLE OF DONORS
EXPENDITURE AND DUMMIES

This table reports the results of the multivariate regressions of the size of the donations onto a set of explanatory variables. *Total Perf.* are the sum of *New* and *Not New* Performances. $\frac{New\ Perf}{Total\ Perf}$ is the logarithm of one plus the percentage of New Performances attended with respect to the Total Performances attended. *Spec* are the special events attended. *Dress Re* are the Dress Rehearsals. The sample include both donors and non-donors. The explanatory variables are measured in terms of the expenditure (UK sterlings). The sample excludes the donations which are in terms of size in the top 2% decile. We do not considers those individuals that purchased more than 6 tickets for the same event. p-values are reported in parenthesis.

	<i>Overall Sample</i>		<i>Cheap Tickets</i>		<i>Expensive Tickets</i>	
	<i>OLS</i>	<i>IV-OLS</i>	<i>OLS</i>	<i>IV-OLS</i>	<i>OLS</i>	<i>IV-OLS</i>
<i>const</i>	0.2707 (0.0900)	1.4647 (0.2585)	0.2363 (0.1240)	0.4634 (0.3569)	1.3225 (0.2345)	3.8550 (0.5737)
<i>I₉₅</i>	-1.9472 (0.1073)		-1.2137 (0.1468)		-3.6683 (0.2768)	
<i>I₉₆</i>	-3.1622 (0.1094)	-3.9090 (0.2577)	-2.0855 (0.1522)	-2.9485 (0.3437)	-5.8164 (0.2778)	-5.9573 (0.5706)
<i>I₉₇</i>	-3.0846 (0.1042)	-4.0637 (0.2615)	-1.9925 (0.1455)	-3.1934 (0.3546)	-5.6452 (0.2633)	-5.9043 (0.5684)
<i>I₉₈</i>	-2.2408 (0.1037)	-1.5679 (0.2602)	-1.0674 (0.1488)	-0.6637 (0.3604)	-4.2658 (0.2639)	-2.2793 (0.5687)
<i>I₉₉</i>	-3.0777 (0.1032)	-3.5703 (0.2594)	-1.9201 (0.1487)	-3.2946 (0.3694)	-5.6685 (0.2562)	-5.1476 (0.5451)
<i>Tot Perf Expenditure</i>	0.0359 (0.0002)	0.0322 (0.0004)	0.0375 (0.0004)	0.0338 (0.0007)	0.0368 (0.0004)	0.0301 (0.0007)
$\ln\left(\frac{Exp\ New}{Exp\ Tot\ Perf}\right)$	2.3597 (0.0905)	4.0629 (0.2907)	1.1714 (0.1334)	2.4033 (0.4422)	4.0160 (0.2211)	6.1611 (0.6210)
<i>Cumulative Attendance</i>	0.0562 (0.0423)	0.0538 (0.0493)	0.0485 (0.0521)	0.0457 (0.0574)	0.0993 (0.0482)	0.0968 (0.0477)
<i>Spec Perf</i>	0.5740 (0.0120)	0.4932 (0.0207)	0.4758 (0.0137)	0.4290 (0.0242)	0.6808 (0.0253)	0.6537 (0.0422)
<i>Dress Rehearsals</i>	0.2751 (0.0041)	0.2848 (0.0096)	0.2522 (0.0056)	0.2766 (0.0127)	0.2830 (0.0102)	0.2721 (0.0227)
<i>Income</i>	0.0432 (0.0022)	0.0901 (0.0070)	0.0411 (0.0032)	0.1017 (0.0102)	0.0569 (0.0051)	0.0796 (0.0142)
<i>R²</i>	0.13	0.12	0.16	0.16	0.12	0.10

Table 15
EXCESS DONATION AND CONSUMPTION PATTERN

This table shows results of regression of excess donations, defined as the difference between the actual donation and the threshold level for each donation class. P-values are shown in parenthesis. The expenditure of special seats is defined as the total individual expenditure to participate to special events.

EXOGENOUS VARIABLES:						
<i>Endogenous Variable</i>	<i>Const</i>	<i>Number of Special Seats</i>	<i>Number of New Seats</i>	$\frac{New}{Total}$	$I_{New_i > \overline{New}}$	<i>Number of Dress Re</i>
$\pounds 25 \leq Donation < \pounds 50$	34.56 (0.00)	0.1382 (0.00)	0.0726 (0.00)			-0.0095 (0.56)
	34.92 (0.00)	0.1901 (0.00)		0.3511 (0.29)		-0.0642 (0.02)
	34.46 (0.00)	0.1404 (0.00)			0.6974 (0.00)	-0.0079 (0.00)
$\pounds 50 \leq Donation < \pounds 100$	67.45 (0.00)	-0.0484 (0.68)	0.0985 (0.01)			-0.1944 (0.00)
	68.01 (0.00)	-0.0130 (0.92)		0.2662 (0.83)		-0.1711 (0.00)
	67.34 (0.00)	-0.0397 (0.73)			0.9972 (0.02)	-0.2019 (0.00)
$\pounds 100 \leq Donation < \pounds 175$	131.40 (0.00)	0.1061 (0.77)	-0.1442 (0.12)			-0.0535 (0.83)
	131.96 (0.00)	0.3846 (0.30)		-5.6000 (0.08)		-0.1982 (0.51)
	132.19 (0.00)	0.1273 (0.72)			-2.5872 (0.04)	-0.0699 (0.78)
$Donations \geq \pounds 175$	252.61 (0.00)	0.0758 (0.93)	0.2557 (0.24)			0.0393 (0.94)
	255.54 (0.00)	0.0262 (0.97)		-0.4717 (0.95)		-0.0687 (0.91)
	253.10 (0.00)	0.2067 (0.81)			1.1575 (0.69)	0.0599 (0.91)

Table 16
AVERAGE CONSUMPTION AT DIFFERENT TIMES

This table reports the average consumption around the first year of donation. We stratify the sample with respect to the event of donation and construct four subsamples, depending on the sequence of donation events. "Before Donation" refers to the year before the individual made his first donation. "First Time Donors" refers to the year in which an individual becomes a donor. "Repeated Donors" refers to the second year of donation. "Interrupted Donors" refers to the year an existing donor stops donating. The sample includes the donors that are not in the top 2% decile of the population and those individuals who purchased more than 6 tickets for the same event.

	BEFORE DONATION	FIRST TIME DONORS	REPEATED DONORS	INTERRUPTED DONORS
<i>New Seats</i>	2.11	2.57	2.82	2.85
<i>Not New Seats</i>	3.16	2.69	2.42	2.98
<i>Percentage New</i>	40%	49%	54%	49%
<i>New Perf. Price</i>	14.48	12.41	14.17	15.90
<i>Not New Perf. Price</i>	18.88	12.98	12.48	17.73
<i>Dress Rehear. Seat</i>	-	0.58	1.20	-
<i>Special Seats</i>	-	0.08	0.15	-

Table 17
NEW AND INTERRUPTED DONORS

This table reports the results of regressions for those individuals that become donors for the first time and for the repeated donors. The variable $AvgPr$ is the average price paid during the season; $Dummy$ is a dummy variable: in Panel A, it takes the value of one if the individual is a donor at time t , i.e. if he started to donate; in Panel B it takes the value of one if the individual is *not* a donor at time t , i.e. if he stopped donating. In panel A we consider the sample of individuals who were not donor at time $t - 1$; in panel B we consider the individuals who were donor at time $t - 1$ and that either stopped donating or continued donating at time t . The sample excludes donors that are in the top 2% decile of the population and those individuals who purchased more than 6 tickets for the same event.

Panel A: Non Donors at time $t - 1$

	<i>Const</i>	<i>Dummy</i>	<i>Income</i>	<i>DressR</i>	<i>Gift</i>	<i>AvgPrice(t - 1)</i>	R^2
$AvgPr(t)$	10.93** (0.1587)	-6.31** (0.27)	0.0874** (0.0055)	-0.6053** (0.0614)	0.0290** (0.0053)	0.64** (0.0030)	0.37
$\Delta AvgPr(t)$	1.74** (0.14)	-7.92** (0.30)	0.0099 (0.0059)	-0.0176 (0.0662)	-0.0010 (0.0057)		0.02
$\Delta Exp(t)$	7.45** (0.97)	-3.54 (2.02)	0.14** (0.04)	-1.75** (0.45)	0.07 (0.04)		0.02
$\frac{New Perf(t)}{Tot Perf(t)}$	0.4859** (0.0031)	0.0422** (0.0075)	-0.0004** (0.0001)	0.0004 (0.0019)	0.0001 (0.0001)		0.02
$\Delta \frac{New Perf}{Tot Perf}(t)$	0.1067** (0.0041)	0.0588** (0.01)	-0.0018** (0.0001)	-0.0096 (0.0027)	-0.0005** (0.0002)		0.02
$\Delta (New + Not New)$	0.2299** (0.0434)	0.1580 (0.0901)	0.0001 (0.002)	-0.1509** (0.0041)	0.0035** (0.0438)		0.01
$\Delta (New + Not New + DR)$	0.3120** (0.0438)	0.2519** (0.0901)	-0.0030 (0.0018)		0.0043** (0.0017)		0.01

Panel B: Donors at time $t - 1$

$AvgPr(t)$	18.32** (0.36)	13.38** (0.32)	0.2500** (0.0088)	-0.7870** (0.0313)	0.0888** (0.0034)	0.50** (0.004)	0.34
$\Delta AvgPr(t)$	10.20** (0.40)	10.00** (0.37)	-0.0099 (0.0098)	-0.1982** (0.0354)	0.0180** (0.0038)		0.02
$\Delta Exp(t)$	24.69** (2.51)	23.98** (2.27)	0.03** (0.06)	-1.24** (0.22)	0.26** (0.02)		0.02
$\frac{New Perf(t)}{Tot Perf(t)}$	0.5312** (0.0070)	-0.0208** (0.0056)	0.0010** (0.0002)	0.0058** (0.0008)	0.0001 (0.0001)		0.02
$\Delta \frac{New Perf}{Tot Perf}(t)$	0.1176** (0.0108)	-0.0142** (0.0083)	-0.0015** (0.0003)	0.0001** (0.0012)	0.0002** (0.0001)		0.02
$\Delta (New + Not New)$	0.5529** (0.0926)	0.3834** (0.0796)	-0.0029 (0.0022)	-0.0190** (0.0088)	-0.0028** (0.0008)		0.01
$\Delta (New + Not New + DR)$	0.5786** (0.0988)	0.3341** (0.0849)	-0.0001 (0.0023)		-0.0020** (0.0008)		0.01

Table 18

LAGGED REGRESSIONS FOR DONORS t THAT CONTINUE TO DONATE AT $t + 1$

This table reports the regressions of the gift amount at the time t of the donations onto different consumption choices in the year $t + 1$ following the donation. This sample includes the donors the donors that have donated for two consecutive years. The sample includes the donors that are not in the top 2% decile of the population and those individuals who purchased more than 6 tickets for the same event.

	<i>New Perf.</i>	<i>Not New Perf.</i>	<i>Dress Rehears</i>	<i>Income</i>
	<i>Number of Performances (Unconditional)</i>			
<i>Gift</i>	0.64	0.21	0.50	0.03
	[0.34; 0.95]	[-0.08; 0.51]	[0.23; 0.78]	[-0.08; 0.15]
	<i>Number of Performances (Cheap Tickets)</i>			
<i>Gift</i>	0.06	0.03		-0.10
	[-0.60; 0.73]	[-0.54; 0.60]		[-0.36; 0.14]
	<i>Number of Performances (Expensive Tickets)</i>			
<i>Gift</i>	1.16	0.66		0.04
	[0.54; 1.78]	[0.03; 1.29]		[-0.17; 0.25]
	<i>Expenditure per Seat (Unconditional)</i>			
<i>Gift</i>	0.23	0.19	1.21	0.04
	[0.16; 0.30]	[0.12; 0.26]	[0.86; 1.56]	[-0.07; 0.16]
	<i>Expenditure per Seat (Cheap Tickets)</i>			
<i>Gift</i>	0.10	-0.36		0.03
	[-0.29; 0.48]	[-0.71; 0.00]		[-0.17; 0.22]
	<i>Expenditure per Seat (Expensive Tickets)</i>			
<i>Gift</i>	0.24	0.21		0.06
	[0.11; 0.37]	[0.09; 0.32]		[-0.15; 0.26]
	<i>Number of Special Performances</i>			
	<i>Seats</i>	<i>Expenditure</i>		<i>Income</i>
<i>Gift</i>	-0.03	-0.12		0.56
	[-5.15; 5.09]	[-0.86; 0.62]		[-0.10; 1.22]

Table 19
LAGGED REGRESSIONS FOR DONORS t THAT STOP DONATING AT $t + 1$

This table reports the regressions of the gift amount at the time t of the donations onto different consumption choices in the year $t + 1$ following the donation. This sample includes the donors that stop donating in the following year. The sample includes the donors that are not in the top 2% decile of the population and those individuals who purchased more than 6 tickets for the same event.

	<i>New Perf.</i>	<i>Not New Perf.</i>	<i>Dress Rehears</i>	<i>Income</i>
	<i>Number of Performances (Unconditional)</i>			
<i>Gift</i>	0.23	0.10	-0.54	0.05
	[-0.33; 0.80]	[-0.46; 0.66]	[-1.99; 0.91]	[-0.10; 0.22]
	<i>Number of Performances (Cheap Tickets)</i>			
<i>Gift</i>	-0.41	0.60		-0.02
	[-1.24; 0.42]	[-0.18; 1.39]		[-0.25; 0.22]
	<i>Number of Performances (Expensive Tickets)</i>			
<i>Gift</i>	1.59	-0.05		0.19
	[0.24; 2.93]	[-1.45; 1.34]		[-0.12; 0.51]
	<i>Expenditure per Seat (Unconditional)</i>			
<i>Gift</i>	0.25	0.24	-0.10	0.04
	[0.14; 0.37]	[0.13; 0.36]	[-1.21; 1.00]	[-0.13; 0.21]
	<i>Expenditure per Seat (Cheap Tickets)</i>			
<i>Gift</i>	-0.20	0.41		-0.05
	[-0.72; 0.32]	[-0.12; 0.94]		[-0.30; 0.19]
	<i>Expenditure per Seat (Expensive Tickets)</i>			
<i>Gift</i>	0.31	0.15		0.22
	[0.09; 0.5337]	[-0.07; 0.37]		[-0.10; 0.54]
	<i>Number of Special Performances</i>			
	<i>Seats</i>	<i>Expenditure</i>		<i>Income</i>
<i>Gift</i>	0.83	-0.23		1.59
	[-2.03; 3.70]	[-1.30; 0.83]		[-0.16; 3.33]
