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Christmas lights in Berlin: New empirical evidence for the private provision of a public good

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Christmas Lights in Berlin
New Empirical Evidence for the
Private Provision of a Public Good

Beate Jochimsen

2019

Finanzwissenschaftliches Forschungsinstitut an der Universität zu Köln

Christmas Lights in Berlin –
New Empirical Evidence for the Private Provision of a Public Good

Beate Jochimsen*

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Zusammenfassung

Weihnachtsbeleuchtung in Berlin - Neue empirische Beweise für die private Bereitstellung eines öffentlichen Gutes

Das Phänomen der Beteiligung von Privaten an der Bereitstellung von öffentlichen Gütern wird in der Literatur ausführlich diskutiert. Die empirische Überprüfung theoretischer Schlüsse ist jedoch oft nur eingeschränkt möglich, da ausreichende Daten über die Geldgeber fehlen. Die Weihnachtsbeleuchtung in Berlin wird vollständig aus privaten Mitteln finanziert. Da ausreichende Informationen über die Spender vorhanden sind, bietet dieses Umfeld die seltene Möglichkeit, ihre Charakteristika zu untersuchen. Auf einer theoretischen Grundlage werden zwei Fragen behandelt: Erstens, welche Merkmale für die Entscheidung, überhaupt zu spenden, verantwortlich sind. Und zweitens, was die Höhe der Spende bestimmt. Mit einem Heckman-Auswahlmodell zeigen wir zunächst, dass die traditionelle Theorie der öffentlichen Finanzen bestätigt werden kann. Wirtschaftlich stärkere potenzielle Mitwirkende sind eher bereit, zu spenden und höhere Beträge zu spenden. Zweitens bestimmt auch der Status die Entscheidung zu spenden. Drittens ist die Gewinnmaximierung ein weiteres Motiv zu spenden und beeinflusst den Spendenbetrag. Die Ergebnisse sind robust gegenüber verschiedenen Kontrollen. Sie bieten die Möglichkeit, potenzielle Spender gezielter anzusprechen, und sollten daher für zukünftige Bemühungen um private Spenden von Interesse sein.

Schlagworte: Private Bereitstellung eines öffentlichen Gutes, wohltätige Spenden, Motivation der Spendenden

JEL-Classification:

H41 (Public Goods), D01 (Microeconomic Behavior, Underlying Principles), D64 (Altruism), C12 (Hypothesis Testing)

Abstract

Christmas Lights in Berlin – New Empirical Evidence for the Private Provision of a Public Good

The phenomenon of private contributions to public goods is broadly discussed in the literature. However, the possibility to verify theoretical results empirically is often limited because sufficient data on donors is lacking. Christmas lights in Berlin have been completely financed with private contributions. As sufficient information on donors is available, this setting offers the rare possibility to explore their characteristics. On a theoretical fundament, two questions are addressed: First, which characteristics are responsible for the decision to donate at all, and second, what determines the size of the donation. Using a Heckman selection model we show, first, that traditional public finance theory can be confirmed. Economically stronger potential contributors are more like to donate and donate higher amounts. Second, status drives the decision to donate, too. Third, profit maximization is a further motive to donate and influences the donated amount. The results are robust to various controls. They offer the opportunity to address potential donors more specifically and, hence, should be of interest for future attempts to raise private donations.

Keywords: Private Provision of a public good, charitable contributions, motivation of donors

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1 Introduction

Traditional public finance theory predicts that privately provided public goods will be - at best - undersupplied. If the number of potential contributors is sufficiently high, they might not be provided at all. Still, we can observe many situations in which public goods are provided voluntarily. One well-known example is private donations to charity. Modern theoretical approaches capture this phenomenon by saying 'good by' to pure altruism introducing different motives for donations. Aspects that increase the individuals' utility like receiving a 'warm glow', raising one's social status or maximizing profit might motivate donations, too.

However, the possibility to verify theoretical results is often limited because sufficient data on donors is lacking. In this paper, a unique and rare empirical example for the voluntary provision of a public good with sufficient information on potential and actual donors is analyzed: the Christmas lights on Kurfuerstendamm – the most important shopping area in Berlin, Germany, that has been completely financed with private donations. Based on a theoretical fundament two questions are addressed: First, which characteristics of abutters are responsible for the decision to donate at all, and second, what determines the size of donations.

According to traditional public finance theory on the private provision of public goods – assuming inhomogeneous individuals with regard to income – the richer abutters located on Kurfuerstendamm should donate more than the less wealthy ones. Expanding this model by considering different motives for donations brings in new aspects. There exists a broad literature on the motives of donors beyond pure altruism like 'warm glow', status, prestige, respect or other social aims. This paper starts with reviewing the traditional public finance arguments and, then, concentrates on the donation motives status and profit maximization.

Using different econometric models it can be shown, first, that traditional public finance theory can be confirmed. Economically stronger abutters are more like to donate and donate higher amounts. Second, status drives the decision to donate. Third, profit maximization can be a motive to donate and might influence the donated amount. The results are robust to various robustness controls. They offer the opportunity to address potential donors more specifically and, hence, should be of interest for future attempts to raise private donations.

The paper is organized as follows. In section 2 the theoretical fundament is briefly explained. Section 3 provides information on the institutional setting including the data and derives the empirical hypotheses. The empirical model and estimation methods are presented in Section 4 and results as well as robustness checks are given and explained in Section 5. The last section offers some concluding remarks.

2 Theoretical Background

The traditional public finance model for the private provision of a public good assumes that individual utility is a function of the consumption of private goods and of the total supply of the public good. Individuals are taken to gain no utility from their contribution per se. Put differently, preferences are assumed to be purely altruistic and pure altruism is satisfied by increases in the public good no matter the source of finance (McGuire 1974). If all players have homogenous preferences and contribute simultaneously and once to the public good the result is Nash equilibrium where marginal utility of the consumption of the private goods equals marginal utility of the consumption of the public good for each player. The public good is provided at an inefficient low level because individuals have an incentive to free ride on the contributions of others.

If players are not equal in terms of income, they differ in their marginal utilities. The richer players' marginal utility of the private good will be relatively lower because they can afford to consume more of the private good than the poorer players (assuming convex preferences). In order to satisfy the equilibrium condition their marginal utility for the public good must decline; thus meaning that the richer players contribute more to the public good. In large economies, only the very rich contribute to the public good (Andreoni 1988). Under certain assumptions, the richest player will finance the entire public good and all the other agents free-ride (see Bergstrom/ Blume/Varian 1986).

However, it is generally agreed that giving is motivated by many things other than altruism (Andreoni 1988, 57). Considering various motives for donations brings in some new aspects. There exists a broad literature on the motivation of donors like sympathy, a desire for recognition, guilt. Glazer and Konrad (1996) suppose that individuals seek to signal wealth to socialize with individuals of the same or a higher social status. If donations are observable, they can signal wealth or income. There is experimental evidence (Andreoni/Petrie 2004) that the identification of donors raises overall donations, for example. The identification of other donors reduces the free rider problem even if the amount of the donation is not public. Alternatively individuals reach utility maximization by the act of donating itself not by raising the amount of the public good or the utility of a third person. They simply feel good after having donated money. This reward from giving is called 'warm glow' (Andreoni 1990; Harbaugh 1998a).

Finally, profit maximization might be a motive to contribute to public goods. If the existence of the public good rises, monetary payoffs to oneself then the utility of the public good should be part of the profit maximization function and a donation can be seen as partly equivalent to the cost of production.

Starting with the results of the traditional public finance model, this paper concentrates on the motives status and profit maximization later on.

3 Institutional Framework, Data and Hypotheses

3.1 Institutional Setting

A unique dataset on the donations for the Christmas illumination of Kurfuerstendamm in the year 2003 provides an exceptional good framework to analyze the determinants of the donation decision and the characteristics influencing donations' height. Like each fall for about 10 years, abutters of Kurfuerstendamm were asked to contribute to the annual Christmas illumination by a local nonprofit organization. The illumination shows the characteristics of a continuous local public good because no threshold amount had to be reached. Abutters did not know if they would be asked again in the following year because there had been attempts to find one large sponsor for the entire illumination for a couple of years. Since 2004, this sponsor has been found. In 2003, which afterwards turned out to be the last year, 1.288 abutters received an appeal for money. Out of them, 81 finally donated.

Additionally, 32 donations came from individuals or companies that had not been addressed by the nonprofit organization and were not located alongside Kurfuerstendamm, i.e. were not abutters. As these donations came 'out of the blue' and this analysis concentrated on the behavior of abutters that received an appeal for money, these 32 donations are neglected.

Not all abutters received the appeal for funds. However, the nonprofit organization assured that it tried to address all abutters and that the cases where abutters did not receive a letter are unsystematic mistakes. They missed, for example, roughly 10 street numbers. None of the abutters not addressed donated. There is no indication whatsoever for a selection bias concerning the sending of the appeal for funds. There is no information on reminders, only incoming payments were recorded. Furthermore, no threshold had to be reached and there was no seed money or no 'leadership giving' as, for example, described by Andreoni (2006), i.e. there was no large contribution by a single wealthy donor before the appeal for funds was sent off.

The dataset includes the names of all addressed abutters as well as the donors and their donated amounts of money. Furthermore, there is information on professional characteristics of all abutters (e.g. business sector) and on their location along Kurfuerstendamm. Additionally, a variable has been created that serves as a proxy for the size of the abutter. This variable covers the meters of the shop fronts that face the Kurfuerstendamm. I assume that shop front meters – if existing - are positively correlated with size and, consequently, profit of the companies or income of individuals.

3.2 Derivation of Hypotheses

The data provide the exceptional opportunity to investigate some of the core elements of the theoretical discussions on private financing of a public good and motives for donations. As two research questions are addressed, all four hypotheses are split in two sub-sentences referring to the selection problem and to the determinants on donations' height.

The first hypothesis can be directly derived from traditional theoretical public finance literature. Larger or richer abutters donate significantly more than smaller ones (Bergstrom/Blume/Varian 1986; Andreoni 1988). Assigned to this analysis this means that larger or richer abutters should donate relatively more than smaller or weaker ones. As economic strengths is measured in frontmeter, the hypothesis can be written the following way:

Hypothesis 1: The stronger the abutter (in terms of frontmeter) the more likely he will donate (a) and the more he will donate (b).

According to Glazer and Konrad (1996) people are willing to make charitable donations even if they will not increase provision of the public good because they want to impress other people. Their social status will (potentially) rise if others know about their donations. After the money had been collected, the names of the donors had been published in the internet in alphabetic order. Thus, only the names and not the donated amounts were published. One can assume that donors whose name starts with a letter at the beginning of the alphabet get more attention from the reader than the others do. Following the theoretical argument put forward by Glazer and Konrad, this is important because an individual is more willing to contribute to the provision of a public good the more likely is the indented audience to hear about the donation. Consequently, the position of the first letter of the name in the alphabet should have an influence on the decision to donate. However, as the donated amount has not been published abutters whose name starts with A, B, or C should not donate higher amounts than those whose name starts with O, P, or Q. The hypothesis can then be stated as follows:

Hypothesis 2: The position of the first letter of the name in the alphabet should have an effect on the decision to donate (a) but not on the size of the donation (b).

As explained above donations can also be seen as some kind of production costs and, therefore, can be motivated by profit maximization. Most abutters profit from people just walking by and spontaneously buying their products – however, to a different degree. As passerby are always unevenly distributed along Kurfuerstendamm shops

adapted to this fact. Whereas department stores and retailers approaching many passersby are more located in the East, shops that are more specialized can be found in the Western part of the street. Shopping concentration continuously declines from East to West, with far more people shopping at the “beginning” of the Kurfuerstendamm (in the East) than at the “end” in the far West. Therefore, abutters in the East of the Kurfuerstendamm – as their profit relies more on passerby – should have a significant higher interest in having a Christmas illumination at all, but also in the décor of the illumination because a nice décor might attract even more people and, consequently, their profit could rise even further. Shops at the Western part of Kurfuerstendamm have to rely on very specific clients anyway.

Hypothesis 3: Abutters located in the East of the Kurfuerstendamm should be more likely to donate (a) and should donate higher amounts (b).

Staying with the motive to donate for raising profit it is obvious that the influence of the number of passerby on profit maximizing can vary amongst different sectors. Whereas restaurants, for example, profit heavily from passerby specialized shops or individuals and offices might – if at all – depend more on regular customers. Therefore, for the former, an attractive Christmas illumination is a serious and important way to raise profits whereas this argument does not hold for the latter. Therefore, the last hypothesis is:

Hypothesis 4: Abutters for whom passerby are likely to increase profit are more likely to donate (a) and will donate more (b).

4 Empirical Model

As most abutters that were addressed did not donate, there are a lot of observations at 0, i.e., the dependent variable is limited and, as a consequence, ordinary least squares (OLS) estimates are usually biased. The empirical modeling procedure capturing this – by having two specifications, one for the decision to donate at all, and another for how much to donate, given that a donation is provided – is the Heckman selection procedure (alternatively called tobit 2). The selection estimation determines whether an observation makes it into the sample. Then, the regression estimation analyzes which characteristics are responsible for the size of donation. As only 81 out of 1,288 potential donors finally donated, the Heckman estimation based on maximum likelihood cannot be taken. Therefore, I estimate with the Heckman two-step estimation procedure.

As it turns out the Heckman model shows us that there is no selection problem. Therefore, two separate regressions, a Probit estimation for the selection decision and an OLS estimation with robust standard errors to determine the characteristics for donation

size, are more efficient. However, the main results are very robust to estimation methods and to other robustness checks.

The selection equation for both estimation methods (part of the Heckman model or probit estimation) can be written as

$$donation_i = \beta_0 + \beta_1 alphabet_i + \beta_2 front_i + \beta_3 location_i + \beta_4 sector_i + \varepsilon_i,$$

where $donation_i$ takes the value 1 if the abutter donated a positive amount of money and 0 otherwise. The unit of observation is the (potential) donor $i=1, \dots, N$, i.e., the abutters that received a letter from the non-profit organization. The variable $alphabet_i$ controls the position of the first letter of the abutter's name in the alphabet. It takes the value 1 if the name starts with a A, B, C, or D and 0 otherwise. Whether the abutter's shop or office has front meters to Kurfuerstendamm is captured by the variable $front_i$ taking the value of 1 if there are front meters and 0 otherwise. The variable $location_i$ considers the abutter's location along Kurfuerstendamm. Abutters at the very Eastern end, where there are the most passersby, get the value 1. This value increases up to 75 for abutters at the Western end of Kurfuerstendamm. The different sectors are summarized in the vector $sector_i$, which takes account of department stores (depstore), retailers, individuals and offices (indoffice), gastronomy, services, and culture. A detailed description of all the variables can be seen in Table 1.

The regression estimation – again for both estimation methods (part of the Heckman model or robust OLS estimation) – can be written as

$$donation_i = \beta_0 + \beta_1 alphabet_i + \beta_2 frontmeter_i + \beta_3 location_i + \beta_4 sector_i + \varepsilon_i.$$

As in the selection equation $donation_i$ denotes the donation. However, here donations are measures either in the natural log of real Euros because the donated amount not the donation decision is to be explained. All other variables are the same than above with one exemption. Instead of the variable $front_i$ (additionally) $frontmeter_i$ i.e., the real meters a shop faces to the Kurfuerstendamm are used. This is the proxy variable for the size or strengths of the abutter and is needed to see if larger abutters contribute relatively more to the public good (*Hypothesis 4*).

5 Results and Robustness checks

As mentioned above, out of 1,288 abutters that were asked to contribute to the illumination, 81 finally donated money. Positive donations of abutters ranged from 30 € to 17,400 € with an average of almost 1,100 €. 75% of abutters have no shop front to the Kurfuerstendamm. The shop fronts of the other 25% range between 1 and 91 meters (see for more details Table 2)

Table 3 shows the regression results. The first three columns show different specifications of the Heckman selection procedure, whereas the last one shows the OLS and Probit estimation results. Heckman 1 captures all variables in order to test all hypotheses. As the Heckman estimation requires at least one variable in the selection equation that is not in the regression estimation the variable FRONT, i.e. the pure existence of front-meter, is supposed to test hypothesis 1 in the selection estimation and FRONTMETER in the regression estimation. From a theoretical point of view, ALPHABET_abcd should have no influence on donations' height. Therefore, Heckman 2, column 2, re-estimates Heckman 1 without the variable ALPHABET_abcd in the regression estimation. In column 3, Heckman 3, only the significant variables are considered.

As regression diagnostics show the Heckman selection procedure is not the most efficient way to estimate the relevant questions. Mills lambda is never even close to an acceptable significance level, i.e. the selection decision does not influence the donated amount. Therefore, it is efficient to estimate the selection decision with a probit model, and the regression estimation with a robust ordinary least square (OLS) model. The results of these two separate estimations are shown in column 4, which will be the focus of the interpretation of results.

5.1 What determines the selection decision?

Let us begin with the report and interpretation of the selection estimation (lower part of table 3). Results reveal that the existence of shop fronts (FRONT) looking onto Kurfuerstendamm positively influences the decision to donate. In all four estimations, the coefficient shows the expected positive sign and is significant. When FRONTMETER are included, as in the Probit estimation, column 4, FRONT is significant at a 10% level and FRONTMETER – with the expected positive sign of the coefficient – are significant at a 1% level. Remember that shop front meters are taken as a proxy for size or strengths of abutters. Then, corresponding to *hypothesis 1(a)* one can formulate that stronger abutters are more likely to donate.

According to *hypothesis 2(a)* abutters whose name starts with a letter at the beginning of the alphabet should have a higher incentive to donate. In the selection estimation of

all four models the variable ALPHABET_abcd shows the expected positive sign and is significant around 7%. Abutters whose names starts with A, B, C, or D is donate with a higher probability than the others. Therefore, we find robust empirical support for the donation motive 'status'.

Following *hypothesis 3(a)* abutters in the East of Kurfuerstendamm should have a significantly higher interest in having a Christmas illumination. The coefficient of LOCATION shows the expected negative sign, i.e. the closer to the East the abutter is located, the lower is his location number within the variable LOCATION and, thus, the higher is the likelihood that she will donate. However, LOCATION is only significant in the Probit estimation. Significance in the Heckman estimation lies between 12 and 14%. So the empirical results only weakly support *hypothesis 3(a)*.

Results for sector specific differences in the donation decision are mixed. In the Heckman estimations, the only significant coefficient is DEPSTORE, meaning that department stores are more likely to donate than the rest. Thus, these estimations do not control for size, i.e. for frontmeter. When FRONTMETER are included, as in the Probit model, the significance of DEPSTORE disappears. So apparently, department stores are not more likely to donate than others. *Hypothesis 4(a)* cannot be confirmed. Interestingly, INDOFFICE and SERVICES not only show positive signs in the Probit estimations but are also significant at 5%, 10% respectively. The former might be a sign of 'warm glow'.

5.2 What determines the donations' size?

According to traditional theoretical literature richer abutters donate significantly more than smaller ones (*hypothesis 4 (b)*). The coefficient of shop front meters of the abutters that are taken as a proxy for economic strengths shows the correct positive sign and is significant at a 1%-level in all four models. Therefore, the more shop front meters an abutter has the higher is his donation. This result is very robust to various specifications of estimations.

As explained in the theoretical part status can drive the donation decision and the size of donations. However, as the donated amount has not been published in the internet but only the name of the donor, the size of the donation was irrelevant for the status motive. In fact, one might even expect abutters only donating to raise their social status to donate smaller amounts than the average because they are only interested in appearing on the donors' list. Consequently, the position of the first letter of the name in the alphabet should have no influence on the size of the donation (*hypothesis 2(b)*). Empirical results support this hypothesis because in the robust OLS and in the Heckman 1 model the coefficient of ALPHABET_abcd is far away from any acceptable significance level. Thus, it shows a negative sign which goes well in line with the assumption that only status oriented donors donate little amounts of money.

Following *hypothesis 3* the location of the abutter along Kurfuerstendamm should not only have a positive influence on donation decisions but also on the size of donations because an especially appealing décor might attract more people walking by than a standard one. The coefficient of LOCATION shows the expected negative sign. Thus, the farther abutters are away from the area with the most passersby – which is in the very East – the higher is the value of LOCATION and – as the coefficient is negative – the smaller are the amounts those abutters donate. However, the variable is not significant in the efficient OLS model and only significant at the 10%-level in the Heckman models. Therefore, *hypothesis 3(b)*, cannot really be confirmed.

In contrast to the donation decision, department stores have a significant positive influence on donation height – although in all four models FRONTMETER controls for shop size. Furthermore, RETAILERS, GASRRONOMY and SERVICE companies donate significant higher amounts than cultural and other abutters, whereas individuals and offices do not. These results are well in line with *hypothesis 4(b)* because these sectors rely more on passersby and, therefore, have a higher interest at an impressive Christmas illumination.

5.3 Robustness checks

The status-hypothesis has been controlled for with several other specifications of the alphabet variable. The variable ALPHABET, for example, takes the values 0 to 26 for the letters of the alphabet. If it is included instead of ALPHABET_abcd, it is significant at the same level and all other results do not change. Furthermore, I tested if abutters whose name starts with a letter at the end of the alphabet have a higher incentive to donate, too. One might think that people reading a list of donors do not only look at the beginning of the list but also at its end. Thus, I formed a dummy for abutters whose name begins with V, W, X, Y, or Z and added it to the list of variables. It turns out that this variable is not significant, all other variables remain unchanged. In other words, abutters whose name begins with V, W, X, Y, or Z are not significant more likely to donate. Finally, I also included dummy variables for all letters. However, results are not helpful because in all estimation models many dummy variables were dropped as there are only 81 donations all together.

To check robustness of results of *hypothesis 3* the Kurfuerstendamm was divided into up to five districts. The variable LOCATION has been split to see whether some districts influence donation probability or donation heights more than others. However, there are not enough observations of donations to control the results this way.

Finally, results were analyzed with regard to very influential observations. A large department store with many front meters located at the very Eastern end of Kurfuerstendamm donated the highest amount. Re-estimating the models without this specific observation does not change any results.¹

6 Concluding Remarks

Christmas lights on Kurfuerstendamm provide an extraordinary and rare example for the voluntary provision of a public good as it was completely financed with private donations. Based on a theoretical basis two different questions are addressed: First, which characteristics of abutters are responsible for the decision to donate or not to donate, and second, what determines the size of the donation.

The traditional public finance theory on the private provision of public goods suggests that richer abutters located on Kurfuerstendamm should be more likely to donate and should donate higher amounts than others. Here, shop front meters are taken as a proxy for size and economic strengths. We find that the decision to donate is influenced by the number of front meters and the pure existence of shop front meters. Furthermore, the donated amount increases with the number of shop front meters.

In addition, different motives for donations like status or profit maximization might influence either the decision to donate or the size of donation. We find empirical evidence for status as a motive to donate. As the names of the donors are published in the internet abutters whose name's first letter starts with A, B, C, or D get more attention and, consequently a higher social status, when other people look at the published list. Those abutters are more likely do donate but do not give higher amounts, which is well in line with the theoretical argument as the donated amount had not been published.

Abutters also try to maximize profit by contributing to the public good. As passersby are unevenly distributed along Kurfuerstendamm abutters with a high frequency of passersby have more interest in a nice Christmas illumination because the attraction of passersby can raise their profit even higher. Other shops have more specific clients and are, therefore, not so dependent on passersby. There is weak support that the location along Kurfuerstendamm matters for the size of donation, thus, supporting the theoretical argument.

Finally, sector specific characteristics can be identified. Department stores as well as retailers, gastronomy and service companies make higher donations than other sectors.

¹ All results upon request.

They also depend more on passersby than specialized shops. All results are very robust to various specifications.

These results should be interesting for any future attempt to raise private donations for financing a local public good. The potential donors can be addressed more specifically and, as a consequence, overall donations may well increase.

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8 Appendix

Table 1: Explanation of variables

DONATION	= 1, in case of a positive donation
LOGDONATION	The log of the donated amount in Euro
FRONT	=1 if the abutter has a shop front pointing to Kurfuerstendamm
FRONTMETER	Shop front to Kurfuerstendamm measured in meter
ALPHABET_abcd	Position of the first letter of the donor's name in the alphabet. = 1, if the name starts with A, B, C, or D.
LOCATION	Measurement for the East-West location of the abutter, starting with 1 in the very East and ranging to 75 in the very West
DEPSTORE	= 1, if the abutter is a department store
RETAILER	= 1, if the abutter is a retailer
INDOFFICE	= 1 if the abutter is an individual or an office like lawyers or accountants.
GASTRONOMY	= 1, if the abutter runs a business in the gastronomy sector
SERVICES	= 1, if the abutter runs a business in the service industry
CULTREST	= 1, if the abutter is a cultural institution and other remainders

Table 2: Descriptive statistics

Variable	N	mean	s.d.	min	max
DONATION	81	1,068.2	2,294.5	30	17,400
LOGDONATION	81	6.213	1.125	3.401	9.764
FRONT	1288	.25	.433	0	1
FRONTMETER	1288	2.679	6.507	0	91
ALPHABET_abcd	1288	.321	.466	0	1
LOCATION	1288	34.195	18.818	1	75
DEPSTORE	1288	.005	.074	0	1
RETAILER	1288	.278	.448	0	1
INDOFFICE	1288	.513	.500	0	1
GASTRONOMY	1288	.072	.259	0	1
SERVICES	1288	.105	.306	0	1
CULTREST	1288	.026	.160	0	1

Table 3: Estimation Results

	heckman 1		heckman 2		heckman 3		Robust OLS & Probit	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
FRONT							-.0219	.3878
FRONTMETER	.0258***	.0093	.0292***	.0091	.0270***	.0087	.0261***	.0080
ALPHABET_abcd	-.3032	.2337					-.2990	.2238
LOCATION	-.0109*	.0064	-.0116*	.0065	-.0107*	.0063	-.0109	.0071
DEPSTORE	2.260*	1.1834	2.6163**	1.1810	2.096***	.7115	2.2715***	.5287
RETAILER	.5766	.9232	.6069	.9419			.5855**	.2705
INDOFFICE	.7059	.9392	.6744	.9578			.6941	.4811
GASTRONOMY	.5821	.9783	.7229	.9928			.597*	.3420
SERVICES	1.0490	.9792	1.1805	.9940			1.0529***	.3376
Selection estimation								
FRONT	.8739***	.1854	.8739***	.1854	.5599***	.1165	.3664*	.2155
FRONTMETER							.042***	.0105
ALPHABET_abcd	.2164*	.1187	.2164*	.1187	.2227*	.1175	.2225*	.1204
LOCATION	-.0049	.0032	-.0049	.0032			-.0051*	.0029
DEPSTORE	1.5962**	.6745	1.5962**	.6745	1.2329**	.4827	1.2149	.8026
RETAILER	.2152	.4785	.2152	.4785			.4067	.4036
INDOFFICE	.6953	.4897	.6953	.4897			.8627**	.4047
GASTRONOMY	.4536	.5037	.4536	.5037			.6264	.4309
SERVICES	.6050	.4975	.6050	.4975			.79*	.425
Mills lambda	-.0193	.5838	.3489	.5201	.4378	.4895		

Notes: Dependent variable is LOGDONATION, N = 1288. In both estimations CULTREST serves as reference category. Significance levels: *** = 0.01, ** = 0.05, * = 0.10.

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